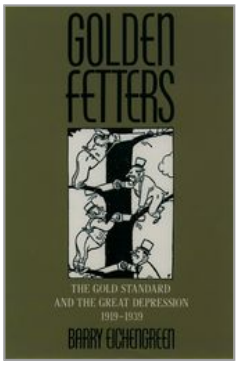
GOLDEN FETTERS

THE GOLD STANDARD
AND THE GREAT DEPRESSION
1919–1939

BARRY EICHENGREEN



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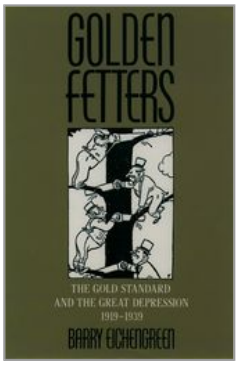
Contents



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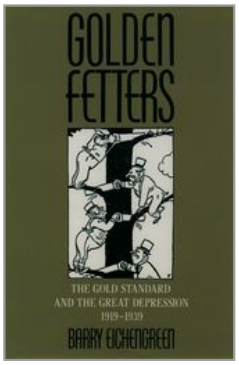
Dedication

(p.v) *To my parents* (p.vi)



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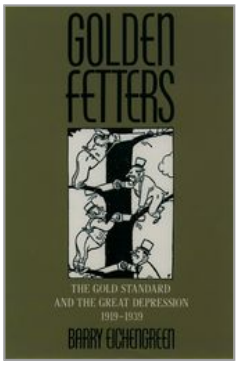
(p.viii)

(p.ix) Relation of the Directors to the Work and Publications of the National Bureau of Economic Research



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(p.ix) Relation of the Directors to the Work and Publications of the National Bureau of Economic Research

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Relation of the Directors to the Work and Publications of the National Bureau of Economic Research

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(*Resolution adopted October 25, 1926, as revised through September 30, 1974*) (p.x)

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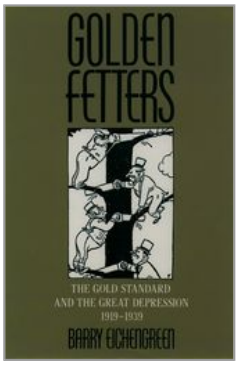

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(p.xi) Preface

The gold standard and the Great Depression might appear to be two very different topics requiring two entirely separate books. The attempt to combine them here reflects my conviction that the gold standard is the key to understanding the Depression. The gold standard of the 1920s set the stage for the Depression of the 1930s by heightening the fragility of the international financial system. The gold standard was the mechanism transmitting the destabilizing impulse from the United States to the rest of the world. The gold standard magnified that initial destabilizing shock. It was the principal obstacle to offsetting action. It was the binding constraint preventing policymakers from averting the failure of banks and containing the spread of financial panic. For all these reasons, the international gold standard was a central factor in the worldwide Depression. Recovery proved possible, for these same reasons, only after abandoning the gold standard.

The gold standard also existed in the nineteenth century, of course, without exercising such debilitating effects. The explanation for the contrast lies in the disintegration during and after World War I of the political and economic foundations of the prewar gold standard system. The dual bases for the prewar system were the credibility of the official commitment to gold and international cooperation. Credibility

induced financial capital to flow in stabilizing directions, buttressing economic stability. Cooperation signalled that support for the gold standard in times of crisis transcended the resources any one country could bring to bear. Both the credibility and the cooperation were eroded by the economic and political consequences of the Great War. The decline in credibility rendered cooperation all the more vital. When it was not forthcoming, economic crisis was inevitable.

This decline in credibility and cooperation during and after World War I reflected a confluence of political, economic, and intellectual changes. In the sphere of domestic politics, disputes over income distribution and the proper role for the state became increasingly contentious. In the international political realm, quarrels over war debts and reparations soured the prospects for cooperation. Economics and politics combined to challenge and ultimately to compromise the independence of central bankers, the traditional guardians of the gold standard system. Doctrinal disagreements led countries to diagnose their economic ills in different ways, thereby impeding their efforts to cooperate with one another in administering a common remedy. Placed against the background of far-reaching economic changes that heightened the fragility of domestic and international financial institutions, this was a prescription for disaster.

This book attempts to fit these elements together into a coherent portrait of economic policy and performance between the wars. My goal is to show how the policies pursued, in conjunction with economic imbalances created by World War I, (p.xii) gave rise to the catastrophe that was the Great Depression. My argument is that the gold standard fundamentally constrained economic policies, and that it was largely responsible for creating the unstable economic environment on which they acted.

I like to pretend that these are the final words I will write on the world economy between the wars. I recall some who questioned at the outset whether a study of a period through which they themselves had lived was properly regarded as history. “So you're an economic historian,” one of my future colleagues in the Harvard economics department greeted me

when I arrived to interview for my first academic job. “Surely you don't think that the interwar period qualifies as history.” The passage of time, if nothing else, has helped to convince skeptics that the subject of this volume qualifies as history. It is up to me, I suppose, to convince them that its treatment qualifies as economics.

The process of writing a book such as this serves as a pleasant reminder of what it means to belong to a community of scholars. It was Jeff Sachs who first suggested that I write this book rather than the less tractable volume I initially envisaged. He will detect here the influence of a series of conversations begun nearly ten years ago. I also received valuable encouragement, both written and verbal, from innumerable other friends and colleagues. Without denigrating the gratitude I feel to any of those individuals who devoted their scarce time to reviewing drafts of the manuscript and who provided other forms of valuable assistance, I must single out three with whom I had very extended conversations. Peter Temin's thoughtful comments were especially important for shaping the book's final form. My initial impulse, as always, was to resist Peter's challenges to what I regarded as my impeccable logic. I should know by now that however much I am inclined to resist them, I will feel compelled in the end to address Peter's points as best I can. That his comments were accompanied by lox, bagels, and strong coffee made them go down easier. Jeff Frieden, who critiqued the political aspects of the argument, has all the good instincts of an economist plus the good sense not to be one. Conversations with Michael Bordo, who is the product of a different intellectual tradition than I, continue to demonstrate that doctrine need be no barrier to the search for understanding in history and economics.

The author of a work of synthesis risks offending specialists. Instead of protecting their turf, experts on aspects of international finance, international relations, and economic history that I had not broached before encouraged me to stray onto unfamiliar turf, graciously pointing out errors of fact and interpretation that I threatened to commit along the way. I can vividly remember opening a fifteen-page single-spaced letter from Peter Kenen and making a mental note to call my editor

and announce that the manuscript would be delayed. Others who responded with great care, and to whom I am deeply grateful, include Alberto Alesina, Ben Bernanke, Charles Calomiris, Marcello de Cecco, Brad DeLong, Trevor Dick, Stanley Engerman, Charles Feinstein, Peter Hall, Gary Hawke, Carl-Ludwig Holtfrerich, Susan Howson, Toru Iwami, Harold James, Lars Jonung, Charles Kindleberger, Adam Klug, Robert Keohane, Diane Kunz, Maurice Levy-Leboyer, Peter Lindert, Charles Maier, Donald Moggridge, Douglass North, John O'Dell, Ronald Rogowski, Christina Romer, Anna Schwartz, Mark Thomas, Gianni Toniolo, Eugene White, and Elmus Wicker. Where we continue to differ, I hope that they (p.xiii) will see that I have done my best to indicate clearly my rationale for advancing interpretations and analyses with which they disagree. In addition to providing general reactions, Ian McLean and Steve Webb graciously responded to data questions. Gerald Feldman shared portions of his as yet unpublished study of the German hyperinflation, which helped me to clarify aspects of Chapter 5. Theo Balderston's unpublished manuscript similarly helped to clarify portions of Chapters 8 and 9. I thank them as well for comments on the manuscript.

The final version of the manuscript is considerably changed—I like to think improved—from the version read by and reacted to by all those persons mentioned above. This is my unsubtle plea that they read this version before dispatching their devastating reviews.

In what is intended as a work of synthesis, I have tried to keep to a minimum references to unpublished sources. Inevitably I have been forced back to the archives, however, where the secondary literature is contradictory or incomplete. For permission to cite materials in their possession, I am grateful to the Federal Reserve Bank of New York (Strong Papers and related documents), Columbia University's Butler Library (Harrison Papers), Harvard University's Baker Library (Lamont Papers), the League of Nations Archives at the United Nations in Geneva, the French Ministry of Finance, the Bank of France, and the British Public Record Office.

Similarly, I have tried to keep as unobtrusive as possible the jargon and mathematical apparatus characteristic of research in economics. Recent developments in economics, I am convinced, help to clarify our understanding of several disputed aspects of the gold standard and the Great Depression. Work on the time consistency of economic policy, game theoretic treatments of international policy coordination, and stochastic models of exchange-rate target zones are three examples of literatures that bear directly on the issues this book is concerned with and that lend structure to its arguments and interpretations. Theoretical formulations and statistical relationships inevitably inform all analyses of this kind. But I have tried to state them nontechnically and keep them from interrupting the narrative. For formal statements of the models and econometric tests, readers may refer to journal articles cited in the notes. I thank my editor at Oxford, Herb Addison, for guiding my quest to bag the elusive general reader.

Enthusiastic and capable research assistants tirelessly hunted up statistics and references and helped with the production of tables and charts. I am particularly grateful to Kris Mitchener and Carolyn Werley, who stuck by me and my hydraheaded project for a period of years. Their work and mine was facilitated and financed by both intra- and extramural sources. The Institute of Business and Economic Research and the Institute of International Studies of the University of California at Berkeley supported the labors of my research assistants. Another benefit of my affilitation with IBER was the assistance of Margo Secarsz, whose trusty Apple Laser Writer produced successive versions of the manuscript. My assistant, Pamela Fox, provided much-appreciated logistical support and artistic advice. The Economics Division of the National Science Foundation provided support for much of the underlying research. The German Marshall Fund financed a semester of release time that made possible preparation of the final draft.

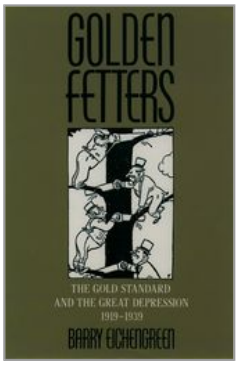
(p.xiv) I am gratified by the book's appearance in a National Bureau of Economic Research series edited by Robert Fogel and Clayne Pope. I owe an especially heavy debt of thanks to the Bureau, and particularly to Martin Feldstein and Geoffrey Carliner. NBER provided financial and moral support when it

was needed most, and an exemplary research environment. I hope that the Bureau finds here some justification for its long-term investment.

B.E.

Berkeley

March 1991



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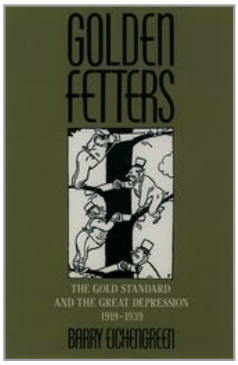

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Figures

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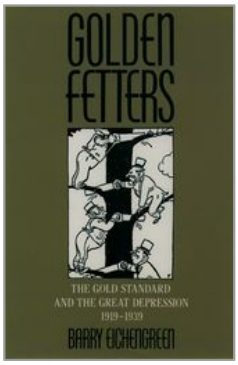

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Introduction

Barry Eichengreen (Contributor Webpage)

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Abstract and Keywords

The gold standard is conventionally portrayed as synonymous with financial stability, and its downfall, starting in 1929, is implicated in the global financial crisis and the worldwide depression. A central message of this book is that precisely the opposite was true: far from being synonymous with stability, the gold standard itself was the principal threat to financial stability and economic prosperity between the World Wars I and II. To understand why, it is necessary first to appreciate why the interwar gold standard worked so poorly when its prewar predecessor had worked so well, next, to identify the connections between the gold standard and the Great Depression, and finally, to show that the removal of the gold standard in the 1930s established the preconditions for recovery from the Depression. These are the three tasks undertaken in the book (which is arranged chronologically), and they are summarized in the sections of this introductory chapter.

Introduction

Keywords: economic instability, economic stability, financial instability, financial stability, gold standard, Great Depression, interwar period, World War I, World War II

“Finance is the nervous system of capitalism,” observed Ramsay MacDonald, intermittently Britain's prime minister between 1924 and 1935. If so, then the capitalist system in MacDonald's years suffered from a chronic neurological disorder. The 1929 Wall Street crash was followed by the collapse of financial institutions and an implosion of activity on financial markets. The subsequent downturn became the Great Depression—the great economic catastrophe of modern times.

That catastrophe was a global phenomenon. Contrary to the impression conveyed by much of the literature, which focuses on the United States, the Great Depression was so severe precisely because so many countries were affected simultaneously. No national economy was immune. All suffered financial difficulties and many experienced debilitating financial crises. It is therefore logical to seek the key that unlocks the puzzle of the Depression in the institutions linking the financial markets of different countries.

Here the gold standard enters the story. For more than a quarter of a century before World War I, the gold standard provided the framework for domestic and international monetary relations. Currencies were convertible into gold on demand and linked internationally at fixed rates of exchange. Gold shipments were the ultimate means of balance-of-payments settlement. The gold standard had been a remarkably efficient mechanism for organizing financial affairs. No global crisis comparable to the one that began in 1929 had disrupted the operation of financial markets. No economic slump comparable to that of the 1930s had so depressed output and employment.[1]

The central elements of this system were shattered by the outbreak of World War I. More than a decade was required to complete their reconstruction. Quickly it became evident that the reconstructed gold standard was less resilient than its prewar predecessor. As early as 1929 the new international monetary system began to crumble. Rapid deflation forced countries producing primary commodities to suspend gold

convertibility and depreciate their currencies. Payments problems spread next to the industrialized world. In the summer of 1931 Austria and Germany suffered banking panics and imposed exchange controls, suspending the convertibility of their currencies into gold. Britain, along with the United States and France, one of the countries at the center of the international monetary system, was (p.4) next to experience a crisis, abandoning the gold standard in the autumn of 1931. Some two dozen countries followed suit. The United States dropped the gold standard in 1933; France hung on until the bitter end, which came in 1936.

The collapse of the international monetary system is commonly indicted for triggering the financial crisis that transformed a modest economic downturn into an unprecedented slump. So long as the gold standard was maintained, it is argued, the post-1929 recession remained just another cyclical contraction. But the collapse of the gold standard destroyed confidence in financial stability, prompting capital flight which undermined the solvency of financial institutions. The financial crisis leapfrogged from country to country, dragging down economic activity in its wake. Removing the gold standard, the argument continues, further intensified the crisis. Having suspended gold convertibility, policymakers manipulated currencies, engaging in beggar-thy-neighbor depreciations that purportedly did nothing to stimulate economic recovery at home while only worsening the Depression abroad. The world of finance was splintered into competing currency areas, disrupting international trade, discouraging foreign investment, and generally impeding recovery.

The gold standard, then, is conventionally portrayed as synonymous with financial stability. Its downfall starting in 1929 is implicated in the global financial crisis and the worldwide depression. A central message of this book is that precisely the opposite was true. Far from being synonymous with stability, the gold standard itself was the principal threat to financial stability and economic prosperity between the wars.

To understand why, we must first appreciate why the interwar gold standard worked so poorly when its prewar predecessor had worked so well. Next, we must identify the connections between the gold standard and the Great Depression. Finally, to clinch the argument we must show that removal of the gold standard in the 1930s established the preconditions for recovery from the Depression. These are the three tasks undertaken in this book. The remainder of this chapter describes the connections between them and summarizes the evidence presented.

How the Gold Standard Worked

Considerable agreement exists on the reasons for the contrast between the stability of the classical gold standard and the instability of its interwar counterpart. The dominant explanation is expressed most clearly in the work of Charles Kindleberger. Kindleberger argues that the stability of the prewar gold standard resulted from effective management by its leading member, Great Britain, and her agent, the Bank of England. The British capital market is said to have increased its foreign lending whenever economic activity turned down, damping rather than aggravating the international business cycle. The Bank of England is said to have stabilized the gold standard system by acting as international lender of last resort. Kindleberger contrasts the prewar situation with the interwar period, when Britain was too weak to stabilize the system and the United States was not prepared to do so. In an application of what has come to be known as the *theory of hegemonic stability*, Kindleberger concludes that the requisite stabilizing influence was adequately supplied (p.5) only when there existed a dominant economic power, or hegemon, ready and able to provide it.[2]

Chapter 2 challenges this argument. It suggests that the interwar period was hardly exceptional for the absence of a hegemon. Nor was there a country that singlehandedly managed international monetary affairs prior to World War I. London may have been the leading international financial center, but it had significant rivals, notably Paris and Berlin. The prewar gold standard was a decentralized, multipolar

system. Its smooth operation was not attributable to stabilizing intervention by one dominant power.[3]

The stability of the prewar gold standard was instead the result of two very different factors: credibility and cooperation.[4] Credibility is the confidence invested by the public in the government's commitment to a policy. The credibility of the gold standard derived from the priority attached by governments to the maintenance of balance-of-payments equilibrium. In the core countries—Britain, France, and Germany—there was little doubt that the authorities ultimately would take whatever steps were required to defend the central bank's gold reserves and maintain the convertibility of the currency into gold. If one of these central banks lost gold reserves and its exchange rate weakened, funds would flow in from abroad in anticipation of the capital gains investors in domestic assets would reap once the authorities adopted measures to stem reserve losses and strengthen the exchange rate. Because there was no question about the commitment to the existing parity, capital flowed in quickly and in considerable volume. The exchange rate consequently strengthened on its own, and stabilizing capital flows minimized the need for government intervention. The very credibility of the official commitment to gold meant that this commitment was rarely tested.[5]

(p.6) What rendered the commitment to gold credible? In part, there was little perception that policies required for external balance were inconsistent with domestic prosperity. There was scant awareness that defense of the gold standard and the reduction of unemployment might be at odds. Unemployment emerged as a coherent social and economic problem only around the turn of the century. In Victorian Britain, social commentators referred not to unemployment but to pauperism, vagrancy, and destitution. In the United States such persons were referred to as out of work, idle, or loafing but rarely as unemployed. In France and Sweden the authorities referred not to unemployment but to vagrancy and vagabondism. These terms betray a tendency to ascribe unemployment to individual failings and a lack of comprehension of how aggregate fluctuations, referred to by

contemporaries as the *trade cycle*, affected employment prospects.[6]

Even observers who connected unemployment to the state of trade rarely related aggregate fluctuations to interest rates or monetary conditions. They had limited appreciation of how central bank policy affected the economy. There was no well-articulated theory of how supplies of money and credit could be manipulated to stabilize production or reduce joblessness, like the theories developed by Keynes and others after World War I. Those who focused on changes in money and credit, such as Ralph Hawtrey, argued that these perversely amplified the trade cycle.[7] Rather than advocating active monetary management to stabilize the economy, the majority of observers advised a passive and therefore predictable monetary stance.

The working classes, possessing limited political power, were unable to challenge this state of affairs. In many countries, the extent of the franchise was still limited. Labor parties, where they existed, rarely exercised significant influence. Those who might have objected that restrictive monetary policy created unemployment were in no position to influence it. Domestic political pressures did not undermine the credibility of the commitment to gold.

The point should not be exaggerated. By the first decade of the twentieth century, unemployment had become a prominent social issue. The spread of unionism and extension of the franchise had enhanced the political influence of those most vulnerable to loss of work. There was a growing consensus that high interest rates discouraged investment and depressed trade. Central bankers were not insensitive to these considerations. Still, when forced to choose between external and internal targets, they did not hesitate.

Nor did policymakers believe that budget deficits or increased public spending could be used to stabilize the economy. Since governments followed a balanced-budget (p.7) rule, changes in revenues dictated changes in the level of public spending. Countries rarely found themselves confronted with the need to eliminate large budget deficits in order to stem gold outflows.

Firmly established norms existed concerning the distribution of the fiscal burden. For revenues, central governments relied primarily on import duties; taxes on income or domestic activity were still costly to collect. The individuals required to pay import duties, often purchasers of imported foodstuffs and other consumer goods, tended to be wage earners with relatively little political say. When revenue needs fluctuated, import duties could be adjusted accordingly. The need to eliminate a budget deficit did not automatically open up a contentious debate over taxation. Governments could credibly promise to direct fiscal as well as monetary instruments toward balance-of-payments targets.

Thus, a particular constellation of political power, reinforced by prevailing political institutions, and a particular view of the operation of the economy provided the foundation for the classical gold standard system. This combination of factors—political institutions and influence on the one hand, the prevailing conceptual framework on the other—was the basis for the system's credibility.[8]

Ultimately, however, the credibility of the prewar gold standard rested on international cooperation. When stabilizing speculation and domestic intervention proved incapable of accommodating a disturbance, the system was stabilized through cooperation among governments and central banks.[9] Minor problems could be solved by tacit cooperation, generally achieved without open communication among the parties involved. When global credit conditions were overly (p.8) restrictive and a loosening was required, for example, the requisite adjustment had to be undertaken simultaneously by several central banks. Unilateral action was risky; if one central bank reduced its discount rate but others failed to follow, that bank would suffer reserve losses and might be forced to reverse course to defend the convertibility of its currency. Under such circumstances, the most prominent central bank, the Bank of England, signaled the need for coordinated action. When it lowered its discount rate, other central banks usually responded in kind. In effect, the Bank of England provided a focal point for the harmonization of national monetary policies. By playing follow the leader, the

central banks of different countries coordinated the necessary adjustments.[10]

Major crises, in contrast, typically required different responses from different countries. The country losing gold and threatened by a convertibility crisis had to raise interest rates to attract funds from abroad; other countries had to loosen domestic credit conditions to make funds available to the central bank experiencing difficulties. The follow-the-leader approach did not suffice, especially when it was the leader, the Bank of England, whose reserves were under attack. Such crises were instead contained through overt, conscious cooperation among central banks and governments. Central banks and governments discounted bills on behalf of the weak-currency country or lent gold to its central bank. Consequently, the resources any one country could draw on when its gold parity was under attack far exceeded its own reserves; they included the resources of the other gold standard countries. This provided countries with additional ammunition for defending their gold parities.

What rendered the commitment to the gold standard credible, then, was that the commitment was international, not merely national. That commitment was activated through international cooperation.

This theme of cooperative management is different from the conventional focus in the gold standard literature, which emphasizes the Bank of England's hegemonic role. The incompatibility of the two views need not be overstated, however. One way of reconciling them is to observe that their relative importance varied with time and circumstances. In relatively tranquil periods, the Bank of England's tacit leadership provided the organizing framework for international cooperation. In times of crisis, in contrast, international cooperation was key. The Bank of England lost her leadership status. During crises she became no more than one of several central banks whose collective intervention was needed to stabilize the gold standard system. At worst, she lost even her capacity to contribute to international support operations. During the most serious crises, notably in 1890 and 1907, the critical stabilizing role was exercised by other

central banks. The Bank of England herself became a hostage to international cooperation. Far from international lender of last resort, she was international borrower of last resort, reduced to dependence on the assistance of the Bank of France, the German Reichsbank, and other European central banks.

(p.9) In the decade leading up to World War I, such international cooperation became increasingly frequent and regularized. The leading role of the Bank of England was challenged, and international cooperation became increasingly prevalent. It is commonplace to assert that the gold standard was a managed system; the point here, which is a departure from the existing literature, is that much of that management, especially in times of crisis, was undertaken collectively by several countries. Though it is important to acknowledge that Bank of England leadership as well as international cooperation figured in the functioning of the prewar system, to concentrate on the leadership and neglect the cooperation is to fundamentally misunderstand its operation.

The two linchpins—credibility and cooperation—that had held the prewar gold standard in place were eroded by World War I. Credibility was challenged by an array of political and economic changes that shattered the particular constellation of political power upon which policy decisions had been predicated before 1913. Adopting the corporatist strategy for securing labor peace, wartime governments encouraged the spread of unionism. Issues that had previously remained outside the political sphere, such as the determination of levels of wages and employment, suddenly became politicized. Extension of the franchise and the growth of political parties dominated by the working classes intensified the pressure to adapt policy toward employment targets.[11] When employment and balance-of-payments goals clashed, it was no longer clear which would dominate. Doubt was cast over the credibility of the commitment to gold. No longer did capital necessarily flow in stabilizing directions. It might do the opposite, intensifying the pressure on countries that were losing reserves. The erosion of credibility rendered the interwar system increasingly vulnerable to destabilizing shocks.

The decisions of central bankers, long regarded as obscure, became grist for the political mill. The monetary authorities were attacked from the left for upholding outdated monetary doctrines and from the right for pandering to the demands of the masses. They consequently lost much of the insulation they once enjoyed.

Where the independence of monetary policymakers was most seriously compromised, explosive inflations ensued. Unable to balance government budgets, politicians enlisted the central bank's monetary printing presses to finance their deficits. In some countries the resulting episode of inflationary chaos and economic turmoil lasted until 1926. The lesson drawn was the need to insulate central banks from political pressures. In France, Germany, and other countries, steps were taken to bolster the independence of the monetary authorities. The new statutes sometimes tied the central bankers' hands so firmly that they were prevented from extending a helping hand to foreign banks in need. Legislative reform designed to enhance the credibility of the gold standard thus had the perverse effect of thwarting cooperation.

(p.10) Those responsible for fiscal policy generally enjoyed even less insulation from political pressures than their counterparts in central banks. The war shattered the understandings regarding the distribution of the fiscal burden that existed before 1913. The level and composition of taxes were radically altered. Incomes were redistributed wholesale. The question was whether to retain the new distribution of fiscal burdens or to restore the old order. Economic interests fought a fiscal war of attrition, resisting any increase in the taxes they paid and any reduction in the transfers they received. Each faction held out in the hope that the others would give in first.[12] Even in countries where central bankers retained sufficient independence from political pressures that they could be counted on to defend gold convertibility, fiscal policy became politicized. Absent a consensus on the distribution of fiscal burdens, there was no guarantee that taxes would be raised or government spending cut when required to defend the gold standard. Credibility was the casualty.

The connection between domestic politics and international economics is at the center of this book. The gold standard, I argue, must be analyzed as a political as well as an economic system. The stability of the prewar gold standard was attributable to a particular constellation of political as well as economic forces. Similarly, the instability of the interwar gold standard is explicable in terms of political as well as economic changes. Politics enters at two levels. First, domestic political pressures influence governments' choice of international economic policies. Second, domestic political pressures influence the credibility of governments' commitment to policies and hence their economic effects.

With the erosion of credibility, international cooperation became even more important than before the war. Yet the requisite level of cooperation was not forth-coming. Three obstacles blocked the way: domestic political constraints, international political disputes, and incompatible conceptual frameworks. Domestic interest groups with the most to lose were able to stave off adjustments in economic policy that would have facilitated international cooperation. The international dispute over war debts and reparations hung like a dark cloud over all international negotiations, contaminating efforts to redesign and manage the gold standard system cooperatively. The competing conceptual frameworks employed in different countries prevented policymakers from reaching a common understanding of their economic problem, much less from agreeing on a solution.

The nature of these conceptual frameworks can be explained in terms of the historical experiences of the nations concerned. Different experiences with inflation created different views of the connections between finance and the economy and of the role for monetary management. In countries like France that suffered persistent inflation, discretionary monetary management came to be seen as the source of financial instability rather than the solution. In countries like Britain that had avoided persistent inflation and restored their prewar parities, the increasingly multipolar nature of the world economy and the growing prominence of foreign exchange reserves heightened the importance attached to intervention and cooperation. In the eyes of the

French, excessive credit creation in violation of the gold (p.11) standard constraints, which had been circumvented by international cooperation, had set the stage for the economic collapse that started in 1929. In the eyes of the British, the problem instead was inadequate liquidity resulting from slavish adherence to the gold standard. Policymakers found it hard to agree on a diagnosis of the problem, much less a remedy. Hence they found it impossible to cooperate in stabilizing the gold standard and countering the economic slump.[13]

It is not entirely accurate to characterize these conceptual frameworks in such monolithic terms. Doctrinal divisions existed within countries as well. In the United States, which finally established a central bank in 1914, officials of the Federal Reserve Bank of New York, the seat of international finance, were better attuned to the advantages of international cooperation than their counterparts on the Board of Governors in Washington, D.C. The arrival of the Fed on the international scene was a significant departure from the prewar era. Disputes between New York and Washington rendered the new institution unpredictable. Until the Banking Act of 1935 consolidated power, considerable influence was wielded by reserve city bankers from the interior of the country with little exposure to or sympathy for international considerations.[14] The brash newcomer disrupted the clubby atmosphere in which European central bankers had managed the prewar system. Prior to World War I, cooperation among the few important national participants in international markets could be arranged on an ad hoc basis. But with the addition of new participants, ad hoc agreements proved increasingly difficult to reach.

A formal venue might have helped. In the 1920s international institutions embodying every important function of the organizations established at Bretton Woods in 1944 were proposed by economists and other experts both in and out of government.[15] Governments sent delegates to international conferences at Brussels in 1920 and Genoa in 1922 in the hope of designing an institutional basis for cooperation. Incompatible conceptual frameworks and the dispute over war debts and reparations frustrated their efforts. The single most

notable attempt to institutionalize international economic cooperation, founding the Bank for International Settlements (B.I.S.) in 1930, was of no consequence. Ongoing international political disputes, still connected mainly with war debts and reparations, prevented the B.I.S. from serving as a significant venue for international monetary cooperation. The initial responsibilities of the B.I.S. focused on German reparations; given the linkage between the reparations owed by Germany and the war debts owed to the United States, the U.S. Congress refused to permit the Fed to join.

It was still possible for central bankers to meet informally and for governments to consult. But international political disputes could be equally disruptive of ad hoc efforts to cooperate, as in attempts to arrange French, British, and American loans to Austria and Germany in 1931. The Austrian loan foundered over French insistence (p.12) that the supplicant renounce its prospective customs union with Germany. The German loan negotiations were disrupted by the dispute over reparations. Moreover, when contemplating policy trades that might enhance the welfare of all the nations involved, policymakers were hamstrung by domestic political opposition motivated on other grounds. A concession by domestic policymakers that elicited a matching concession abroad, even if it rendered both nations better off, still might be opposed by entrenched minorities within both countries. For example, an international agreement for reducing interest rates in order to stimulate output and employment in both countries might be opposed by lenders and other beneficiaries of high interest rates. Minorities in a strategic political position succeeded repeatedly in blocking cooperative agreements.

The argument, in a nutshell, is that credibility and cooperation were central to the smooth operation of the classical gold standard. The scope for both declined abruptly with the intervention of World War I. The instability of the interwar gold standard was the inevitable result.

The Causes of the Great Depression

Given this explanation for the instability of the interwar gold standard, it remains to link the gold standard to the Great

Depression. That link stretches back to the changes in the pattern of balance-of-payments settlements bequeathed by World War I. The war greatly strengthened the balance-of-payments position of the United States and weakened that of other nations. In the mid-1920s, the external accounts of other countries remained tenuously balanced courtesy of long-term capital outflows from the United States. But if U.S. lending was interrupted, the underlying weakness of other countries' external positions suddenly would be revealed. As they lost gold and foreign exchange reserves, the convertibility of their currencies into gold would be threatened. Their central banks would be forced to restrict domestic credit, their fiscal authorities to compress public spending, even if doing so threatened to plunge their economies into recession.

This is what happened when U.S. lending was curtailed in the summer of 1928 as a result of increasingly stringent Federal Reserve monetary policy. Inauspiciously, the monetary contraction in the United States coincided with a massive flow of gold to France, where monetary policy was tight for independent reasons.[16] Thus, gold and financial capital were drained by the United States and France from other parts of the world. Superimposed on already weak foreign balances of payments, these events provoked a greatly magnified monetary contraction abroad. In addition they caused a tightening of fiscal policies in parts of Europe and much of (p.13) Latin America. This shift in policy worldwide, and not merely the relatively modest shift in the United States, provided the contractionary impulse that set the stage for the 1929 downturn. The minor shift in American policy had such dramatic effects because of the foreign reaction it provoked through its interaction with existing imbalances in the pattern of international settlements and with the gold standard constraints.

This explanation for the onset of the Depression, which emphasizes concurrent shifts in economic policy in the United States and abroad, the gold standard as the connection between them, and the combined impact of U.S. and foreign economic policies on the level of activity, has not previously appeared in the literature. Its elements are familiar, but they

have not been fit together into a coherent account of the causes of the 1929 downturn.[17]

To understand how those elements coalesce, it is necessary to return to the economic effects of World War I. The war strengthened the competitive position of American producers in international markets for manufactured goods. This, together with an exceptionally productive agricultural sector, pushed the U.S. trade balance into surplus. Capital transactions reinforced these trends. After the war, reparations began to flow westward from Germany to the victorious Allies and from there, in repayment of war debts, to the United States. American lending to Central Europe was needed to recycle these westward flows. Imported capital was required by Latin American countries seeking to adjust to the slump in primary commodity prices and by Western European nations rebuilding their war-torn economies. American loans were essential for both processes. So long as American lending continued, the gold standard remained viable and did not pose a threat to prosperity. But when U.S. capital exports were curtailed, the gold standard was at risk. The policies required to defend it proved inconsistent with economic stability.

At first, the process worked smoothly. Generous U.S. lending enabled the nations of Western Europe to repair their devastated economies. Germany and the new nations of Eastern Europe, rewarded for their adoption of austerity measures by a surge of foreign loans, were able to halt their postwar hyperinflations without plunging their economies into extended recessions. Inflows of capital and gold enabled countries like Britain to restore the prewar gold standard parity at relatively low cost. Each of these achievements was facilitated by low interest rates and expansionary monetary policy in the United States. Low domestic interest rates encouraged (p.14) abundant U.S. financial capital to seek more remunerative employment overseas. The expansion of domestic credit minimized U.S. acquisition of gold and in some periods, like the second half of 1927, encouraged American gold to flow abroad.

Accommodating U.S. monetary policy between 1924 and 1927 is not usually cast in this favorable light. More commonly, it is blamed for igniting the Wall Street boom, thereby setting the stage for the crash that would initiate the Depression. In fact, there is no evidence that monetary policy played a significant role in the great bull market of the 1920s.[18] It is more plausible to argue that the Wall Street boom influenced monetary policy rather than the other way around. Starting in 1928, Federal Reserve officials concluded that an orgy of financial speculation was diverting money from productive uses. They began tightening monetary policy, increasing the likelihood that the economy would fall prey to recession.

Steadily rising domestic interest rates curtailed U.S. foreign lending. The debtor nations, heavily reliant on capital imports, felt the effects starting in the summer of 1928. As their payments positions weakened, they were forced to adopt increasingly stringent monetary and fiscal policies to defend their gold parities and maintain service on their external debts. Sometimes even the most draconian measures did not suffice. The debtors were forced off the gold standard, one after another, starting in 1929.

Debt service was maintained in the hope of renewed access to foreign capital following the Wall Street boom. But the Great Crash was followed by the Great Depression and the collapse of U.S. lending. World trade imploded. Protectionism in the United States and other industrial countries intensified the primary producers' balance-of-payments problems. Continued difficulties led to default in Latin America in 1931, in Central Europe in 1932, and in Germany in 1933. Default was a rude shock to the creditors. For countries like Britain, heavily dependent on interest earnings from abroad, it contributed to the deterioration in the balance of payments, setting the stage for the 1931 sterling crisis. Thus, the same recycling mechanism that underpinned the pattern of international settlements in the 1920s undercut its stability in the 1930s.

The initial downturn in the United States enters this tale as something of a deus ex machina, lowered from the rafters to explain the severity and persistence of difficulties in other parts of the world. To some extent this is inevitable, for there

is no consensus about the causes of the downturn in the United States. The tightening of Federal Reserve policy in 1928–29 seems too modest to explain a drop in U.S. GNP between 1929 and 1930 at a rate twice as fast as typical for the first year of a recession. Hence the search for other domestic factors that might have contributed to the severity of the downturn, such as structural imbalances in American industry, (p.15) an autonomous decline in U.S. consumption spending, and the impact of the Wall Street crash on wealth and confidence.[19]

The debate over the role of such factors remains far from resolution. This is not surprising, since by focusing exclusively on events internal to the United States the literature misses a critical facet of the story. It is not possible to understand the causes of the American slump so long as they continue to be considered in isolation from events in other parts of the world. The downturn that began in the United States in the late summer or early autumn of 1929 was already evident elsewhere, and had been so for as long as 12 months. Consequently, U.S. exports peaked before U.S. industrial production. When domestic demand in the United States weakened, it reinforced the previous decline in export demand. American producers did not have the option of sustaining their profits by diverting sales from domestic to foreign markets—they had no choice but to curtail production.[20] Hence the initial downturn in the United States was unusually severe.

Thus, the debilitating downturn of 1929–30 was not simply the product of a contractionary shift in U.S. monetary policy but of a restrictive shift in policy worldwide. Policies in other countries were linked to policy in the U.S. by the international gold standard. Given the pattern of international settlements, a modest shift in U.S. policy could have a dramatic impact on the payments positions of other countries, provoking a greatly magnified adjustment in their economic policies. Monetary authorities outside the United States were forced to respond vigorously to the decline in capital inflows if they wished to stay on the gold standard. Fiscal authorities had to retrench to compress domestic spending and limit the demand for merchandise imports.

American policymakers, in contrast, were not required to react to the improvement in the U.S. balance of payments by loosening the economic reins. So long as the Wall Street boom persisted, the Fed continued to raise interest rates instead of allowing them to fall. Rather than being cushioned by a decline in U.S. interest rates, the rise in rates in Europe and Latin American was thereby reinforced. With the Fed's failure to repel capital inflows, other countries were forced to redouble their restrictive efforts. The asymmetry in the gold standard system under which countries in surplus can shift the burden of adjustment to countries in deficit, forcing them to deflate, was the last thing needed in 1928–29.

However devastating this initial disturbance, one would think that at this point the self-equilibrating tendencies of the market would have come into play. Wages (p.16) and other costs should have fallen along with prices to limit the rise in unemployment and the decline in sales. They did so only modestly. The explanation lies in the “stickiness,” in money terms, of other important variables. Mortgages were fixed in nominal terms and ran for years to maturity. Rents also were fixed in nominal terms for extended periods. Bonds paid coupons that were fixed in nominal terms. Claimants to these sources of income—rentiers, capitalists, and workers—each would have accepted a reduction in their incomes had they been assured that others were prepared to do the same. Without a mechanism to coordinate their actions, no one group was prepared to be the first to offer concessions.[21]

None of this explains why governments were so slow to respond as the Depression deepened. If wages failed to fall, officials could have used monetary policy to raise prices.[22] If private spending collapsed, they could have used public spending to offset it. Yet monetary policy in the United States, France, and Britain remained largely passive. Fiscal policy turned contractionary, as governments raised taxes and reduced public spending. Policy thereby reinforced rather than offset the decline in demand.

The response may have been perverse, but it was not paradoxical. It is hard to see what else officials in these countries could have done individually given their commitment

to gold. Unilateral monetary expansion or increased public expenditure moved the balance of payments into deficit, threatening the gold standard.[23] So long as they remained unwilling to devalue, governments hazarding expansionary initiatives were forced to draw back. Britain learned this lesson in 1930, the United States in 1931–33, Belgium in 1934, France in 1934–35. Thus, not even the (p.17) leading proprietors of gold, the United States and France, escaped the external constraint.[24]

The dilemma was whether to sacrifice the gold standard in order to reflate, an option most policymakers continued to oppose, or to forswear all measures that might stabilize the economy in order to defend the gold standard. Finessing this choice required international cooperation. Had policymakers in different countries been able to agree on an internationally coordinated package of expansionary initiatives, the decline in spending might have been moderated or reversed without creating balance-of-payments problems for any one country. Reflation at home would have reversed the decline in spending; reflation abroad would have prevented the stimulus to domestic demand from producing trade deficits and capital flight. Under the gold standard, reflation required cooperation. Without cooperation, reflation was impossible.

This lesson was learned the hard way. Repeatedly, domestic political pressures compelled governments to attempt reflationary policies. Quickly the gold standard was threatened, and they were forced to draw back. Large as well as small countries were constrained. This is clearly evident in the French experiment with reflationary initiatives under Flandin and Laval in 1934–35. Not even the United States could reflate unilaterally, as the open market purchases and reserve losses of the spring and summer of 1932 would reveal. The problem was not a lack of U.S. leadership, since effective leadership was impossible. It was the failure of cooperation.

The one significant opportunity to coordinate reflationary initiatives, the 1933 London Economic Conference, was an utter failure. All the obstacles to cooperation that had disrupted the operation of the gold standard were thrown up again. The question of war debts, still unresolved, continued to

complicate negotiations. Minority interests blocked international policy trades that would have benefited each of the participating nations. Policymakers in different countries continued to diagnose the crisis in different ways. The British, having endured high interest rates since 1925, perceived the Depression as a consequence of excessively restrictive monetary policies. The French, having suffered double-digit inflation as recently as 1926, blamed the Depression on overly expansive policies that had provoked an unsustainable boom, a devastating crash, and a lingering slump. The American position resembled that of France while Herbert Hoover was president before gravitating toward that of Britain once Franklin Roosevelt took office. Different diagnoses of the problem led to different prescriptions of the appropriate monetary remedy and to an inability to agree on a coordinated response.

So far we have an explanation for the destabilizing impulse and its propagation. The impulse was the restrictive monetary policy pursued by the Federal Reserve for (p.18) domestic reasons, in conjunction with the restrictive policies induced abroad by the operation of the gold standard. It failed to die out quickly because decentralized markets were unable to coordinate an immediate adjustment of money wages and prices, and because the gold standard constraints prevented governments from pursuing a reflationary monetary response.

But what amplified this destabilizing impulse to the point that a modest monetary correction in 1928–29 gave rise to the great economic contraction of modern times? The answer lies in the spread of financial instability starting in the second half of 1930—the bank failures and financial chaos that led to the liquidation of bank deposits and disrupted the provision of financial services. The role of banking crises in the Great Depression is widely accepted for the United States, although the channels through which they affected the economy remain in dispute. But bank failures played an important role in other countries as well.[25] Commercial banks around the world pursued strategies of aggressive expansion that heightened their vulnerability when the Depression struck. If allowed to spread, bank runs threatened to disrupt the functioning of financial markets. Shattering confidence, discouraging

lending, freezing deposits, and immobilizing wealth, they amplified the initial contraction.

This answer to the question of what amplified the destabilizing impulse only suggests another question: Why didn't policymakers intervene to head off the collapse of their domestic financial systems? They failed to do so because the gold standard posed an insurmountable obstacle to unilateral action. Containing bank runs required policymakers to inject liquidity into the banking system, but this could be inconsistent with the gold standard rules. Defending the gold parity might require the authorities to sit idly by as the banking system crumbled, as the Federal Reserve System did at the end of 1931 and again at the beginning of 1933.

Even when central bankers risked gold convertibility by intervening domestically as lenders of last resort, the operation of the gold standard could render their initiatives counterproductive. The provision of liquidity on a significant scale signaled that the authorities attached as much weight to domestic financial stability as to the gold standard. Realizing that convertibility might be compromised and that devaluation might cause capital losses on domestic assets, investors rushed to get their money out of the country. Additional funds injected into the banking system leaked back out as depositors liquidated their balances. Perversely, the banking crisis was intensified. International reserves were depleted as domestic currency was sold for foreign exchange, forcing the authorities to intervene in support of the exchange rate. Once the balloon was punctured, blowing in additional air only widened the tear and left the central bank gasping for breath.

These destabilizing linkages between domestic and international financial systems operated most powerfully where foreign deposits were most prevalent. Europe's banking systems were interconnected by a network of foreign deposits. (p.19) German banks and companies maintained deposits in Vienna. Austrian banks and companies held deposits in Berlin. By their nature, these balances were the most mobile internationally. Disturbing revelations about the condition of a national banking system might cause foreign depositors to repatriate their funds. The capital account of the balance of

payments would weaken and the banking crisis would lead to a convertibility crisis. Equally, disturbing news about the balance of payments could spill over into an attack on the banking system. Anticipating devaluation, foreigners converted their bank deposits into currency and requested the authorities to convert that currency into gold. The simultaneity of banking panics and convertibility crises was systematic, not coincidental.

Germany provides a classic illustration of these mechanisms at work. Under the gold standard, the Reichsbank was required to maintain a gold cover (essentially, the ratio of gold reserves to notes and coin it issued) of at least 40 percent.[26] Due to the weakness of Germany's balance of payments, the cover ratio was uncomfortably close to that minimum even before the financial crisis of 1931. The banking crisis in neighboring Austria was merely the straw that broke the camel's back. German deposits in Vienna were frozen. The banking crisis spread quickly to Hungary and other parts of Central Europe. Disturbing revelations about the state of the German banking system led investors to pessimistically revise their assessment of the condition of German banks. French and British deposits were withdrawn. The Reichsbank began to provide liquidity to the banking system, but capital flight only accelerated. The gold cover quickly fell to its legal minimum. To reduce it further threatened to rekindle inflationary fears and antagonize the reparations creditors, who had written into the 1930 Hague Treaty a provision requiring Germany to secure permission from the Bank for International Settlements or the Young Plan Arbitral Tribunal before modifying its gold standard law. The Reichsbank was forced to draw back and let the banking crisis run its course.[27]

Analogous forces came into play in the United States in 1933 and in Belgium in 1934, to cite only two examples. In contrast, countries already off the gold standard had more freedom to act. In Denmark and Sweden, which left gold in September 1931, officials were able to use their room for maneuver to contain incipient banking crises, in Denmark in the final months of 1931 and in Sweden in early 1932. Far from being a bulwark of financial stability, the gold standard was the main impediment to its maintenance.

Once again, escaping this dilemma required international cooperation. Loans from other gold standard countries could have replenished the reserves of central (p.20) banks confronted with banking crises. The longer creditor countries vacillated, the larger the requisite loans became. The loan requested by the Reichsbank in the summer of 1931 would have all but exhausted the free gold possessed by the United States. Clearly, any such loan had to be provided collectively. But again a variety of obstacles—reparations, diplomatic disputes, and doctrinal disagreements among them—thwarted cooperation.

The special structure of the interwar gold standard heightened the vulnerability of national financial systems. The interwar system was a gold-exchange standard with multiple reserve currencies. Central banks were authorized to hold, in addition to gold, a portion of the backing for domestic liabilities in the form of convertible foreign exchange. They held primarily U.S. dollars, French francs, and British pounds. Altering the foreign exchange portfolio entailed negligible costs. Central banks had every incentive to hedge their bets—to sell a weak currency as soon as the country of issue experienced difficulties. A minor deterioration in the external position could be amplified quickly if foreign central banks chose to alter the composition of their foreign reserves.

Supplementing gold with foreign exchange was no recent innovation. In response to postwar fears of inadequate liquidity, however, the practice was generalized and extended. By the late 1920s the share of foreign exchange in international reserves was at least 50 percent above prewar levels.[28] As exchange reserves grew large relative to monetary gold, the capacity of the reserve countries to maintain gold convertibility was cast into doubt. Avoiding deflation required continual growth of international reserves. Given the inelasticity of gold supplies, this implied the growth of foreign currency balances. The problem emphasized by Robert Triffin after World War II—the dynamic instability of a system predicated on gold convertibility but dependent on foreign exchange for incremental liquidity—also arose in the 1920s.[29] If anything, it was more vexing in the 1920s because of the multiplicity of reserve currencies. In Triffin's era, central

banks held mainly dollars with the option of converting them into gold. In the 1920s they were not forced to choose between interest earnings and security; they could simply convert one reserve currency into another.

This discussion of mutually reinforcing threats to the gold standard and domestic banking systems is an example of one of the methodological themes of this book: the need to treat the gold standard as one of a range of factors contributing to the Great Depression and to relate those factors to one another. Some authors have analyzed the role of the gold standard in the Depression, others the role of domestic banking panics. The point here is that domestic and international finance were intimately (p.21) connected. Problems in one sphere cannot be understood in isolation from problems in the other.

The End of the Gold Standard and the End of the Depression

If the gold standard contributed to the severity of the slump, did its collapse free the world from Depression's thrall? According to the conventional wisdom, the currency depreciation made possible by abandoning the gold standard failed to ameliorate conditions in countries that left gold and exacerbated the Depression in those that remained.[30] Nothing could be more contrary to the evidence. Depreciation was the key to economic growth. Almost everywhere it was tried, currency depreciation stimulated economic recovery. Prices were stabilized in countries that went off gold. Output, employment, investment, and exports rose more quickly than in countries that clung to their gold parities.

The advantage of currency depreciation was that it freed up monetary and fiscal policies. No longer was it necessary to restrict domestic credit to defend convertibility. No longer was it necessary to cut public spending in countries where expenditure was already in a tailspin. “There are few Englishmen who do not rejoice at the breaking of our gold fetters,” as Keynes put it when Britain was forced to devalue in September 1931.[31]

It was not only the gold standard as a set of institutions that posed an obstacle to economic recovery, however, but also the gold standard as an ethos. Though abandoning gold convertibility was necessary for adopting reflationary policies, it was not sufficient. A financial crisis might force a country to abandon gold convertibility, but it did not cause it to abandon financial orthodoxy. Only when the principles of orthodox finance were also rejected did recovery follow.

Where devaluation was seen as an opportunity to expand domestic credit, as in Belgium, recovery was propelled by domestic spending. Output and employment responded quickly to demand. Since credit expansion drove up domestic prices, little change occurred in the real exchange rate (the cost of foreign goods expressed in domestic currency, relative to the cost of their domestic counterparts). There was little improvement in international competitiveness. Exports rose slowly if at all, and the trade balance strengthened marginally at best.

Where currency depreciation did not occasion an expansion of domestic credit, as in Czechoslovakia, exports played a larger role. Recovery was still possible, since devaluation raised the price of foreign goods relative to those produced at home, switching demand to the latter. But less domestic credit expansion meant less inflation. By making exports more competitive, depreciation therefore strengthened the balance of payments. The increased demand for credit that accompanied recovery was accommodated by gold imports. But with less domestic demand, output and (p.22) employment were slow to recover. Some countries, like Britain, followed a course midway between these extremes. Others, like France, once they finally depreciated their currencies perversely adopted measures that neutralized the benefits.

Most countries were slower to abandon the gold standard's ethos than its institutions. There was little tendency, after suspending gold convertibility, to initiate reflationary action. Six months to a year had to pass before officials took steps to expand the money supply. The interlude was necessary to convince the public and policymakers alike that abandoning

gold did not pose an inflationary threat, which was a necessary precondition for questioning financial orthodoxy. Only then did governments initiate policies that finally launched their economies on the road to recovery. This explains why currency depreciation did not prompt a more rapid return to full employment.

Thus, the failure to pursue more expansionary policies, and not currency depreciation itself, was responsible for the sluggishness of recovery. This emphasis on the salutary effects of depreciation is very different from the negative assessment that pervades the literature. In at least one respect, however, the revisionist view presented here is compatible with previous accounts. Prior authors have emphasized the damaging foreign repercussions of competitive depreciation—the notorious “beggar-thy-neighbor” effects. Those effects did operate. Depreciation stimulated recovery in the initiating country partly by altering relative prices and switching demand from foreign to domestic goods. At the same time that it increased demand for domestic products, it exacerbated competitive difficulties abroad. The magnitude of the beggar-thy-neighbor effects depended on the nature of the policies that accompanied devaluation. The more the depreciating country expanded domestic credit, the greater the level of domestic spending on imports as well as other goods. The more it expanded domestic credit, the smaller the capital inflow following devaluation. Countries still on the gold standard suffered smaller reserve losses and were not forced to contract their money supplies to the same extent.[32]

Foreign countries may have suffered, but the choice was theirs. Indeed, they had the capacity to avoid the damaging repercussions entirely. They too could have chosen to go off gold and reflate. It did not follow that the beneficial effects were eliminated if every country devalued. Every country, once off the gold standard, could initiate expansionary monetary and fiscal measures. In the absence of gold standard constraints, international cooperation was no longer essential. Even if the devaluation cycle, once complete, left exchange rates between currencies at their initial levels, it permitted more expansionary monetary and fiscal policies all around.[33]

Admittedly, the haphazard manner in which devaluation took place amplified its beggar-thy-neighbor effects. Countries still on gold responded to their loss of competitiveness by raising tariffs and tightening quotas. Frequently these measures (p.23) were justified as retaliation against devaluation abroad. Though the aggregate effects were not large, protectionism was a further impediment to cooperation. Once entrenched behind protective barriers, domestic producers went to great lengths to prevent them from being dismantled. The strength of protectionist sentiment in countries like France posed a major obstacle to the negotiation of an internationally coordinated response to the Depression.

Unpredictable exchange-rate fluctuations also encouraged liquidation of foreign exchange reserves. As central banks scrambled to substitute gold for foreign exchange, pressure on the reserves of the remaining gold standard countries intensified. A more orderly devaluation, like that negotiated by France in 1936, could have minimized the uncertainty and subdued the deflationary scramble for gold. But such negotiations were inconceivable so long as countries remained wedded to the gold standard.

Ultimately, the question is why countries stayed wedded to gold for so long, and why those that abandoned the gold standard failed to pursue expansionary policies more aggressively. Why were some more inclined than others to release their gold fetters? The question brings us back full circle to the issues that began our discussion—to the importance of domestic politics for international economics and the enduring legacy of economic events in the early 1920s for economic outcomes in the 1930s. In part, different decisions across countries reflected differences in the balance of political power, between creditors who benefited from deflation and debtors who suffered, or between producers of internationally traded goods who benefited from devaluation and producers of domestic goods who were likely to be hurt.[34] Farmers, who were both debtors and producers of traded goods, were usually in the vanguard of those pressing for devaluation or, in the case of countries like Germany, for exchange control. Labor was ambivalent: workers moved freely between sectors producing traded and nontraded goods

and doubted the efficacy of measures like devaluation that promised to reduce unemployment only by cutting the living standards of the employed. The traditional opposition of financial interests to tampering with the monetary standard was defused once the gold standard was revealed as inconsistent with the stability of banking systems.

Policy decisions reflected, in addition to shifting political coalitions, the influence of historical experience. A central determinant of the willingness of governments to dispense with the gold standard in the 1930s was the ease with which it had been restored in the 1920s. Where the battle was difficult, countries had endured costly and socially divisive inflations. In extreme cases like Germany, Austria, Hungary, and Poland, price instability had degenerated into hyperinflation. In France, Belgium, and Italy, though inflation did not reach comparable heights, the legacy was still the same. Policymakers and the public continued to regard the gold standard and price stability as synonymous. And they continued to adhere to this view long after the 1929–31 collapse of prices had provided ample evidence to the contrary. “Depreciation” and “inflation” were still used interchangeably without awareness that their meaning was not precisely the same. The suspension of convertibility (p.24) raised the specter of an explosive rise in prices. As Heinrich Brüning, Reich Chancellor in 1930–32, explained the problem to British Prime Minister Ramsay MacDonald in June 1931, “One must either go along with deflation or devalue the currency. For us only the first could be considered, since, six years after experiencing unparalleled inflation, new inflation, even in careful doses, is not possible.”[35]

There is no little irony in the fact that inflation was the dominant fear in the depths of the Great Depression, when deflation was the real and present danger. Precisely because this fear seems so misplaced, its pervasiveness cannot be over-emphasized.

Countries like Britain, Sweden, and the United States had not experienced run-away inflation in the 1920s. The gold standard and price stability were still clearly distinguished. Though policymakers harbored fears of inflation, those fears

did not reach phobic levels. There was less trepidation that devaluation would lead inevitably to monetary instability, social turmoil, and political chaos. Elected officials in these three countries were eventually able to pursue policies designed to raise prices, at least until they had been restored to pre-Depression levels.

Politicians in countries like Germany and France were obsessed with inflation because it was symptomatic of deeper social divisions. It reflected the disintegration of the prewar settlement—specifically, the prewar consensus regarding the distribution of incomes and fiscal burdens. World War I transformed the distribution of incomes and tax obligations and destroyed long-standing conventions governing distribution. A bitter dispute erupted over whether to restore the status quo ante or to maintain the new fiscal system. So long as this dispute raged, postwar coalition governments were incapable of agreeing on a package of tax increases and public expenditure reductions sufficient to balance their budgets.

Inflation was symptomatic of this fiscal war of attrition. The longer budget deficits persisted, the less willing investors grew to absorb government bonds, and the more the fiscal authorities were forced to rely on the central bank's printing press. In the 1920s, only when inflation had risen to intolerable heights had an accommodation been reached. The gold standard was emblematic of the compromise. To abandon it threatened to reopen the dispute and ignite another debilitating inflationary spiral.

Thus, the failure in countries like Germany and France to clearly distinguish depreciation from inflation was not mere intellectual carelessness. The strong association of the two concepts derived from the common set of political pressures that had generated both phenomena in the aftermath of the war.

The war of attrition had been most destructive, and therefore exerted the most inhibiting influence on policy in the Depression, in those countries where the prewar settlement had been most seriously challenged—where fiscal institutions

were most dramatically altered, where property had been most heavily destroyed, where income was most radically redistributed. Still, virtually every European country experienced these effects to some extent. Additional considerations are therefore required to explain why they reacted in such different ways.

(p.25) Among the most important considerations was the structure of domestic political institutions. The war of attrition was most intractable where political institutions handicapped those who wished to compromise. In countries where proportional representation electoral systems prevailed, it was relatively easy for small minorities to obtain parliamentary seats. The sensible strategy for political candidates was to cater to a narrow interest group. Political parties proliferated. Every group that might suffer from the imposition of a tax had an elected representative to block its adoption. Government necessarily was by coalition. Either a formal coalition was formed of parties that together possessed a parliamentary majority, or a minority government was formed with the support of other parties. When the government attempted to redress the fiscal problem, adversely affected parties withdrew their support and the administration collapsed.

In countries with majority representation, in contrast, fringe parties were more likely to be denied legislative voice. In this electoral system, the party whose candidate receives a majority or plurality of votes cast in a district is the only one represented. Better prospects for securing a legislative majority gave political parties an incentive to moderate their positions in order to appeal to a large fraction of the electorate. A government of the majority was better able to raise taxes—not uncommonly, those paid by a minority. It was in a better position to reduce transfers—usually those received by a minority.[36]

A suggestive correlation exists between countries that suffered inflationary crises in the 1920s and those with proportional representation. The outbreak of World War I was popularly ascribed to suppressed nationalism and the mistreatment of minorities. The architects of the postwar political order therefore created several separate nations out

of what had previously been the Austro-Hungarian Empire and encouraged the adoption of proportional representation to give voice to minorities. Weimar Germany adopted a proportional system. France reformed her electoral system to incorporate a strong element of proportionality. Belgium eliminated the right of electors to cast multiple votes, thereby enhancing the proportionality of her electoral system. These were among the countries hardest hit by the inflationary crisis. In contrast, countries like the United Kingdom and the United States whose electoral systems were based on majority representation did not suffer comparable inflation.[37] It is no coincidence that, in the 1930s, France, Belgium, Poland, Italy, (p.26) and Germany, who all had employed forms of proportional representation and suffered inflation in the 1920s, remained on the gold standard or imposed exchange control, with the same stifling effects, long after other countries had gone off gold.

Countries whose institutions lent themselves least easily to political stability thus had particular reason to fear inflation and hence experienced the greatest difficulty in formulating a concerted response to the Great Depression. But even in countries like France, in which the political system was reformed late in the 1920s to moderate its emphasis on proportionality, fears lingered that abandoning gold would ignite another round of inflationary chaos. Even where no longer appropriate, views were still conditioned by the experience of the previous decade. Historical memory provided the framework through which economic events were ordered and interpreted.

Other authors have noted the tendency for policymakers to continue using history as a frame of reference even when conditions have changed fundamentally.[38] The point here is different. The public also continues to use history in this fashion. This provides even rational policymakers incentive to err in the same direction. A public that fears that abandoning the gold standard will provoke an inflationary crisis is likely to sell its financial assets if that event occurs, rendering such fears self-fulfilling. Policymakers have good reason to proceed cautiously when contemplating such actions.

Policy in general, and policy toward the gold standard in particular, played a pivotal role in the Great Depression. It was central to the Depression's onset. It was the key to recovery. But policy was not formulated in a vacuum. Policymakers resided in a particular time and place. Historical experience—first with the classical gold standard, then with the first world war, finally with inflation in the 1920s—molded their perceptions and conditioned their actions, with profound implications for the course of economic events.

The Structure of This Book

Developing these arguments is not straightforward, for three reasons frequently stated but rarely taken to heart. First, the Great Depression was a multifaceted event. Monocasual explanations are certain to be partial and misleading. For this reason, the gold standard is treated here as only one of several factors contributing to the Depression. Throughout, I attempt to relate the gold standard to these other factors and to analyze their interaction.

Second, the Great Depression did not begin in 1929. The chickens that came home to roost following the Wall Street crash had been hatching for many years. An adequate analysis must place the post-1929 Depression in the context of the economic developments preceding it. Another goal of this book is to show the insight that can be gleaned from treating the Great Depression as only one stage in a sequence of events than began unfolding in 1914.

Third, the Great Depression was a global phenomenon. The disturbances that (p.27) initiated it were not limited to the United States. The Depression's severity was due not simply to the magnitude of the errors committed by American policymakers, although these played a considerable part. Rather, it resulted from the interaction of destabilizing impulses in the United States and other countries. A goal of this book is to show how national histories can be knitted together into a coherent analysis of the international economic crisis.

The material used to develop these themes is organized chronologically to convey a sense of how events appeared to

those who made the critical decisions. Chapter 2 begins with the prewar gold standard. Besides documenting the role of credibility and cooperation in the operation of this system, it highlights differences in the functioning of the gold standard at the center and the periphery. I show that the smooth operation of the prewar system hinged on a particular conjuncture of economic and political forces—forces that were in decline even before the outbreak of World War I. I explain why interwar observers failed to appreciate the tenuous basis of the prewar system.

The war transformed the international economic and political environment. Chapter 3 analyzes the major changes in domestic and international finance and their implications for the economic balance of power. It also describes the changes in domestic political institutions that channeled the pressures felt by policymakers. The postwar boom and slump, covered in Chapter 4, provided a first indication of how radically the environment had changed, although contemporaries inadequately appreciated its lessons. The next two chapters describe the fiscal war of attrition that fueled inflation in the 1920s. That war proved most intractable in Germany, where it was fought internationally as well as on the domestic front. The German hyperinflation that resulted from this deadlock is the subject of Chapter 5. Chapter 6, which contrasts inflationary chaos elsewhere in Europe with the experience of countries that repelled the inflationary threat, shows that the same forces also operated in other countries.

The next three chapters consider the operation of the reconstructed gold standard system. Chapter 7 documents the decline in credibility and cooperation compared to the prewar era. Chapter 8 analyzes the role of the gold standard in the onset of the Great Depression and shows how in turn the slump undercut the foundations of the gold standard system. Chapter 9 describes the desperate attempts of policymakers to defend the gold standard and analyzes their role in aggravating the Depression. At the same time it suggests that the system's collapse provided new opportunities for constructive action. The Chinese character for “crisis” combines the symbols for “danger” and “opportunity.”[39] My

point in this chapter entitled “Crisis and Opportunity” is much the same.

Chapter 10 traces the consequences of the disintegration of the gold standard system, contrasting economic recovery in countries that jettisoned gold with continued depression in countries that retained it. I attempt to account for their respective policy decisions. The U.S. case emerges as something of an anomaly. Chapter 11 therefore analyzes the critical period in the spring of 1933 when American policy was reversed and the dollar devalued. Roosevelt's abandonment of gold coincided (p.28) with the London Economic Conference, a last attempt to respond cooperatively to the economic crisis. I trace the connections between the dollar's depreciation and the London Conference and explain why the latter failed.

By 1934 it was impossible to ignore the contrast between the persistence of depression in gold standard countries and the acceleration of recovery in the rest of the world. The continued allegiance to gold by several European countries, led by France, has consequently been regarded as an enigma. Chapter 12 shows how domestic politics combined with collective memory of inflationary chaos in the 1920s to sustain resistance to currency depreciation. Indeed, inflation anxiety in the gold bloc was not entirely unfounded; sometimes it proved self-fulfilling. When currency depreciation finally came to France in 1936, it was accompanied by inflation and social turmoil but not by the beneficial effects evident in other countries. Here, as in the rest of the book, historical and political factors, not just economics, bear the burden of explanation.

The legacy of the gold standard and the Great Depression continued to influence both the economic behavior of individuals and the policies of governments through the remainder of the interwar years. That influence persisted into World War II, into the postwar period, indeed right down to the present day. The concluding chapter describes some implications of that persistence for the postwar international economic order.

Notes:

(1) This is not to suggest that recessions and financial panics were absent before World War I, only that none had the global scope and severity of the one that began in 1929. Chapter 2 devotes considerable attention to the course and management of crises prior to 1914.

(2) See, in particular, Kindleberger (1973). An important precursor to Kindleberger is Brown (1940), who also emphasized the distinction between the center and periphery of the gold standard system, arguing that the inadequacies of the interwar system were attributable to the destabilizing influence of the countries at the center. The term “hegemonic stability theory” was coined by Keohane (1980).

(3) Nor does the one period in which there clearly existed a country with no significant rivals in the international economic sphere, namely the aftermath of World War II, conform readily to this paradigm (see Eichengreen, 1989a). In 1944 it was precisely the unwillingness of the dominant power, the United States, to compromise its freedom of action in the interest of international monetary stability that gave rise to the contradictions leading ultimately to the collapse of the Bretton Woods System. This is a theme I return to in chapter 13.

(4) When discussing the roles of credibility and cooperation in the operation of the prewar gold standard, I am concerned with the period between 1880 and 1913. It was exclusively in this period that the political and economic elements necessary to establish the credibility of the system and facilitate international cooperation were all present at the same time.

(5) This argument is similar to one developed by Krugman (1988) and Miller and Weller (1989) to describe the effects to target zones for floating exchange rates. Buiter and Grilli (1990) discuss some problems of applying the approach to the analysis of a gold standard. But these arguments have not been used previously as the basis for an empirical analysis of the operation of the classical gold standard. An empirical analysis of stabilizing and destabilizing international capital flows that touches on many of the same issues can be found, however, in Nurkse (1944). Here for simplicity I discuss

credibility as if it prevailed to the same extent across countries and over time. Chapter 2 goes to considerable lengths to argue that the credibility of the gold standard was significantly greater at the center than at the periphery and after 1890 than before.

(6) The argument is not that contemporary observers were unaware of the unemployed, only that they did not connect the rise and fall of unemployment to macroeconomic fluctuations. One quantitative measure of the extent to which contemporaries made this connection is Taylor's (1909) bibliography of works on unemployment. Under the categories “unemployment generally” and “causes of unemployment,” she lists fewer than 3 works per decade over the period 1820–79, but 16 works in the 1880s, 77 in the 1890s and 160 from 1900 through mid-1909. Eichengreen and Hatton (1988), pp. 3–4. On the emergence of unemployment as a social and economic problem connected not with individual failings but with the state of trade, see Keyssar (1986) on the United States, Salais et al. (1986) on France, and Harris (1972) on Britain.

(7) See, for example, Hawtrey (1913).

(8) A useful review of the literature in economics on policy credibility is Blackburn and Christensen (1989). On pages 2–3, they identify three categories of factors likely to influence the credibility of a policy: technological factors, political or administrative factors, and strategic factors. The technological considerations they cite include “the accuracy and relevance of the economic theory that policy makers use.” Political considerations include “whether an incumbent will be tempted to modify its program in response to political pressure.” Thus, my analysis of the gold standard is rooted in the technological and political determinants of credibility cited by Blackburn and Christensen, not in the strategic considerations (“the incentive for policy makers to pursue a strategic advantage and seek short-run gains by reneging on previously announced policies,” as these same authors put it) that dominate the recent literature in economics.

(9) Kenen (1990) draws a useful distinction between international economic cooperation and international

economic policy coordination. Cooperation can take various forms, such as, for example, direct financial assistance to foreign countries. International coordination is one form of cooperation in which several governments agree to modify their policies in ways that would be undesirable in isolation but improve their position when undertaken jointly. In utilizing the term “cooperation,” I have tried to highlight collaborative responses other than the mutually beneficial adjustments in domestic policies that are the focus of the policy coordination literature; these other collaborative responses include direct financial assistance and unilateral changes in domestic policy designed to relieve economic pressures abroad, although there also will be instances where I emphasize the benefits of policy coordination narrowly defined. My notion of cooperation differs from Kindleberger's “international lender of last resort” by emphasizing the multilateral nature of the requisite policies and highlighting the importance of responses other than just international financial assistance. Kenen further distinguishes collaboration that allows officials to achieve certain economic goals (improving the tradeoff between inflation and unemployment, for example) from that which preserves the economic regime (successfully defending the gold standard, for example). Much of the cooperation I emphasize was of the regime-preserving variety, although as we will see it also had important implications for the capacity of governments to achieve immediate economic goals.

(10) This is how I interpret Keynes' famous characterization of the Bank of England as “conductor of the international orchestra.” Keynes (1930), vol. 2, pp. 306–307.

(11) Among the industrial countries, the notable exception to this generalization was the United States, where changes in party alignment, the extent of the franchise, and the political influence of labor were relatively modest. Compared to Europe, the 1920s were a period of labor quiescence in the United States. But as will become clear, other events, most notably the establishment of a central bank with discretionary powers, contributed to the politicization of monetary policymaking in the United States.

(12) This sort of fiscal war of attrition has been formally modeled by Alesina and Drazen (1989). An influential historical analysis of these disputes, which I build on later, is Maier (1975).

(13) This formulation has obvious parallels with Cooper (1989), Frankel (1988), and Frankel and Rockett (1988), who argue that the inability of national policymakers to agree on the true model of the economy may pose an obstacle to international macroeconomic policy coordination. I move beyond their analysis, however, by making endogenous policymakers' choice of model.

(14) “The nature of the Federal Reserve Act practically assured a maximum of conflict and controversy” was the way Chandler (1958, p.6) put it.

(15) Two authors who advanced these views were Feis (1930) and Staley (1935).

(16) There was a dramatic increase in the demand for money in France once inflation was halted and the franc was stabilized at the end of 1926. But new statutory restrictions applied to the Bank of France prevented it from satisfying that demand by purchasing securities and injecting additional currency into circulation. The only way for the additional demand for money to be met was through gold imports. In the end, the French money supply grew quickly in 1928, but only as a result of these gold inflows. This is the sense in which French monetary policy remained restrictive in the late 1920s. For details, see chapter 7.

(17) The closest precedents lie in the work of the British economists Lionel Robbins and Ralph Hawtrey, in the writings of German economic historians concerned with the causes of their economy's precocious slump, and in Temin (1989). Robbins (1934) hinted at many of the mechanisms emphasized here but failed to develop the argument fully. Hawtrey emphasized how the contractionary shift in U.S. monetary policy, superimposed on an already weak British balance of payments position, forced a draconian contraction on the Bank of England, plunging the world into recession. See Hawtrey (1933), especially chapter 2. But Hawtrey's account focused

almost entirely on the United States and the United Kingdom, neglecting the reaction of other central banks, notably the Bank of France, whose role was equally important. Similarly, the literature on Germany, analyzed in chapter 8, emphasizes the links running from U.S. policy to the German response but fails to extend the argument to the experience of other countries. Temin (1989) stresses the gold standard as a propagation mechanism once the Depression was underway, but does not emphasize monetary policy as a factor in its onset.

(18) Another author who shares this view is Schumpeter (1939), vol. 2, p. 899. The causes of the Wall Street boom of the 1920s remain one of the great unsolved mysteries in the literature on financial history. The debate is neatly summarized by White (1990). Barsky and DeLong (1990) suggest that the bull market is explicable in terms of the expectation of investors that firms would continue paying out the high levels of dividends characteristic of the 1920s. Monetary policy does not figure prominently in their analysis of market behavior. The previous treatment that comes closest to the characterization of U.S. monetary policy emphasized here is again Hawtrey (1933).

(19) Important contributions to the literatures exploring these three factors are, respectively, Bernstein (1987). Temin (1976), and Romer (1990).

(20) It might seem paradoxical that a shift from foreign to domestic investment helped to depress the U.S. economy. Normally funds devoted to foreign investment do not stimulate domestic demand directly; in contrast, savings devoted to domestic bond purchases or bank deposits place downward pressure on interest rates and encourage domestic investment. This logic suggests that the decline in U.S. foreign lending in 1928 should have strengthened the American economy. There are two reasons why the argument does not apply. First, the shift from foreign to domestic investment was not an autonomous event. Rather, it was a response to the tightening of domestic monetary conditions and only partially offset the rise in U.S. interest rates. Second, the depressing effect of higher interest rates at home was reinforced by

increasingly restrictive monetary policies abroad, as I will soon describe.

(21) A good introduction to the literature on this problem, known as *coordination failure*, is Cooper and John (1988). The best example of its effects occurs in France in 1934–35, as described in chapter 12.

(22) If capital is perfectly mobile internationally, a still stronger statement applies: under the fixed exchange rates of the gold standard, not only are small countries constrained from expanding domestic credit by the prospect of reserve losses, but even if they possess excess reserves that provide leeway for domestic credit expansion, expansionary open market operations will still have no effect on interest rates or on the prices of nontraded goods. Under perfect capital mobility, domestic interest rates are tightly linked to foreign interest rates. Hence domestic credit expansion cannot affect interest rates, the demand for money, or investment demand, as Mundell (1963) demonstrated. Consequently, prices and economic activity will be unaffected. This case is too extreme to apply uniformly to interwar experience, however. Some countries, notably the United States, were large enough to alter interest rates worldwide when they altered domestic policies. And while interwar capital mobility was high, it was not perfect, due to default risk, capital controls, and other impediments. Eichengreen (1989e) provides evidence.

(23) Recollecting U.S. experience in the 1980s, some readers may assume that budget deficits, by raising domestic interest rates, should have attracted a capital inflow and strengthened the exchange rate, the opposite of the effect described in the text. This response is equally plausible in theory. The direction of the effect depends in practice on the substitutability of domestic and foreign interest-bearing assets, as described by Sachs and Wyplosz (1984). When domestic and foreign assets are imperfect substitutes, foreigners' demands for domestic bonds will be limited. Capital inflows will be insufficient to finance the deficit. To induce investors to willingly absorb the increased supply of domestic-currency-denominated bonds, the price of those bonds will have to decline relative to the

price of foreign bonds through a weakening of the exchange rate. This clearly is the case relevant to interwar experience.

(24) The idea that international considerations constrained American monetary policy in the 1930s is controversial. Indeed, it is a significant departure from the view that dominates the older literature on the United States (Friedman and Schwartz, 1963; Brunner and Meltzer, 1968). The previous account of American monetary policy with the most in common with the analysis that follows is Wicker (1966). It may seem perplexing that the United States, which possessed more than a third of global gold reserves in 1931, still lacked room for maneuver. Below I suggest that the Fed was constrained by the gold standard because of the peculiar structure of the U.S. gold standard statutes.

(25) Friedman and Schwartz (1963) emphasize the contractionary impact of bank failures on the money supply, while Bernanke (1983) suggests that by disrupting the provision of intermediation services, bank failures may also have had important nonmonetary effects. Bernanke and James (1991) have extended this last argument to the experience of other countries.

(26) The statutes mandating that central banks maintain a certain ratio of reserves to currency issue and other liabilities were in fact somewhat more complicated than this, as described below.

(27) Later in the summer of 1931, the Reichsbank allowed the cover ratio to slip significantly below the 40 percent minimum. But this was allowed to occur only after exchange controls were imposed and gold convertibility was effectively suspended, rendering moot the need to maintain a minimum gold cover to protect confidence. German historians will hear echoes here of the “Borchardt debate” over whether the Reichsbank was constrained to follow a restrictive policy. See Borchardt (1990). My view, as will become clear below, is essentially the same as Borchardt's for the period through the summer of 1931: namely, that the Reichsbank possessed few options so long as Germany continued to adhere to the gold standard. I suggest, however, that there was more scope for

monetary expansion following the imposition of exchange controls.

(28) The authoritative study of the question is Lindert (1969). Lindert's finding that the share of foreign exchange in total reserves was virtually identical in 1913 and 1925 is often cited to the opposite effect—to substantiate the belief that foreign reserves did not grow more important under the interwar gold standard. In fact, as will become evident, in 1925 most countries had still not returned to the gold standard. By the end of 1928, when the return to gold was complete, the share of foreign exchange in total reserves (24.5 percent) was in fact more than 50 percent above 1913 levels (15.9 percent). Lindert (1969), pp. 12–15. These matters come in for additional discussion in chapter 7.

(29) This so-called Triffin Dilemma (Triffin, 1960) could equally well be named the Mlynarski Dilemma, after Feliks Mlynarski, who made it the subject of his 1929 book. See chapter 7.

(30) The most influential expression of this view is Kindleberger (1973). In another account of the period, Nurkse (1944) concludes that the round of devaluations that took place between 1931 and 1936 on balance conferred no benefits on the countries involved.

(31) Keynes (1932), p. 288.

(32) A theoretical analysis of the domestic and cross-country effects of devaluation, under different assumptions about accompanying monetary policies, when other countries maintain a gold standard, is provided by Eichengreen and Sachs (1986). Evidence for the model appears in Eichengreen and Sachs (1985).

(33) Thus, the account here differs fundamentally from that of Nurkse (1944) in emphasizing the beneficial effects of the entire round of devaluations that took place in the 1930s, an episode that Nurkse dismisses as a fruitless “devaluation cycle.”

(34) Useful introductions to the extensive literature on this subject are Gourevitch (1984) and Weir and Skocpol (1985).

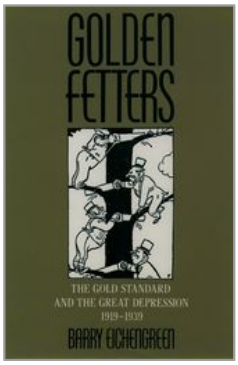
(35) Cited in Borchardt (1991), p. 133.

(36) The argument here contrasts proportional and majority representation electoral systems, not parliamentary and congressional party systems. (Britain, for example, possesses both a majority representation electoral system and a parliamentary party system.) A large literature in political science contrasts proportional and majority representation systems. See, for example, Duverger (1954), Rae (1967), Newman (1970), and Lijphart (1990). Much of this literature was originally motivated by the attempt to explain political instability in the 1920s. For precursors, see Bonn (1925) or Headlam-Morley (1928).

(37) The correlation is imperfect: the Netherlands, Czechoslovakia, and Scandinavia labored under proportional representation but escaped inflation. Experience in the Netherlands and Czechoslovakia was exceptional because of the cross-cutting nature of economic and religious cleavages, which neutralized the destabilizing effects of proportional representation. In the Scandinavian countries, which had been neutral during the war, distributional norms had not been challenged to the same extent as elsewhere, minimizing distributional conflict in the 1920s. These points are developed further in chapter 3.

(38) See, for example, Jervis (1976) and the references cited there.

(39) See Li et al. (1984).



Golden Fetters: The Gold Standard and the Great Depression, 1919-1939
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The Classical Gold Standard in Interwar Perspective

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Abstract and Keywords

This book is organized chronologically to convey a sense of how events appeared to those who made the critical decisions that led toward the Great Depression. Chapter 2 begins with the prewar gold standard. Besides documenting the role of credibility and international cooperation in the operation of the system, it highlights differences in the functioning of the gold standard at the center (in Britain, France and Germany) and the periphery (North and South America, Australia and New Zealand). It is shown that the smooth operation of the prewar system hinged on a particular conjuncture of economic and political forces – forces that were in decline even before the outbreak of World War I. The chapter finishes by explaining why interwar observers failed to appreciate the tenuous basis of the prewar system.

Keywords: Australia, Britain, credibility, France, Germany, gold standard, international cooperation, interwar gold standard, New Zealand, North America, prewar gold standard, South America, World War I

For interwar observers, the mystery of the prewar gold standard was how it worked so well. For a third of a century the gold standard had been synonymous with exchange-rate and balance-of-payments stability over much of the world. Exchange-rate stability, in the popular if dominantly British belief, had been responsible in turn for the stability of price levels and the rapid expansion of international trade that served as the basis for the impressive growth of the industrial economies. “There can be no question,” concluded T. E. Gregory, a leading academic expert, in 1935, “that the development of an international gold standard in the second half of the nineteenth century and the enormous growth of international trade and investment which then took place are no mere coincidences.”[1]

The interwar gold standard, despite resembling its prewar predecessor, shared few of these virtues. It was far from durable; if Britain's restoration of convertibility in 1925 is taken to mark the gold standard's resurrection and the devaluation of sterling in 1931 its demise, then the interwar gold standard led a short and brutish life of barely six years. Its operation did not coincide with an expansion of international trade at rates exceeding the growth of domestic production. It was far from conducive to price and income stability, as the Great Depression of the 1930s dramatically illustrated.[2]

These differences cannot be attributed solely to the tranquility of the economic environment prior to World War I. Admittedly, no prewar contraction matched the severity of the post-1929 depression. But disturbances to financial markets were commonplace. The hallmark of the prewar gold standard was precisely its ability to accommodate these disturbances without causing severe business cycle fluctuations.

Conventional accounts of the gold standard stress the singular role of the Bank of England, whose influence is said to have been so predominant that other countries had no choice but to adapt their policies to it. This resulted in a de facto

harmonization of policies that suppressed balance-of-payments problems. The Bank (p.30) of England served as international lender of last resort, helping countries such as the United States surmount isolated balance-of-payments crises. The Bank's ability and willingness to orchestrate the operation of the prewar system had been responsible, in this view, for its success.

This picture does not survive scrutiny. There is no question that the Bank of England exercised more influence over discount rates (the rates at which central banks extended credit to institutional customers) than did any other national central bank. There is no question that her discount rate provided a focal point for the harmonization of discount policies internationally. But the Bank of England was no more able to neglect changes in discount policies abroad than were foreign central banks able to neglect changes by the Bank of England.[3] It is untrue, moreover, that the Bank of England monopolized the role of international lender of last resort. More frequently than not, it was the international borrower of last resort, reduced to dependence, as we will see, on the Bank of France and other foreign sources in its battle to defend the sterling parity.

The key to the success of the classical gold standard lay rather in two entirely different areas: credibility and cooperation. In the countries at the center of the system—Britain, France, and Germany—the credibility of the official commitment to the gold standard was beyond reproof. Hence market participants relieved central bankers of much of the burden of management. If sterling weakened, funds would flow toward Britain in anticipation of the capital gains that would arise once the Bank of England intervened to strengthen the rate. Because the central bank's commitment to the existing parity was beyond question, capital flows responded quickly and in considerable volume. Sterling strengthened of its own accord, usually without any need for government intervention.[4] Speculation had the same stabilizing influence in France, Germany, and other European countries at the center of the gold standard system.

Domestic politics was largely responsible for the credibility of this system. In the core of European countries that the international system pivoted around, no significant political opposition to gold-based currencies existed. Management of the monetary standard was not within the sphere of everyday politics. Unemployed workers who might have objected to the effects of credit stringency were in no position to make their opposition known. Producers who competed with imports—notably French and German farmers—were placated by tariff protection. The situation was different at the periphery of the gold standard world, which included the United States. This contrast was especially pronounced during the period of falling prices from 1873 through 1893, when debtors and others who suffered disproportionately from deflation lobbied against the existing monetary standard. At the periphery, this different configuration of political pressures undermined the credibility of the official commitment to gold. But at the European center, the credibility of that commitment was beyond doubt.

For their commitment to the gold standard to be fully credible, however, the (p.31) authorities had to have the capacity as well as the desire to defend it. Here international cooperation was key. The Bank of England stood ready to let gold go when it was needed in the United States. The Bank of France stood ready to lend gold to the Bank of England or to purchase sterling bills when the British gold parity was endangered. The Reichsbank and the Russian Government came to the aid of the Bank of England in periods of exceptional stringency. On other occasions the favor was returned: in 1898 it was the turn of the German banks and the Reichsbank to obtain assistance from the Bank of England and Bank of France. The smaller gold standard countries of Europe—Belgium, Norway, and Sweden among them—repeatedly borrowed reserves from foreign banks and governments. Once central banks and governments, by extending loans, signaled that they stood ready to support the country in distress, the way was opened for additional loans by private bankers both domestic and foreign. Thus, the resources on which a country could draw when its gold parity came under attack far exceeded the reserves of its central bank and national treasury. This

augmented their capacity to defend the existing set of gold parities. What rendered the commitment to the existing parities credible was that the commitment was international, not merely national. That commitment was activated through international cooperation.

Recognition of the role of credibility and cooperation in the operation of the prewar system has implications for how we view the difficulties of the interwar period. Even before World War I, the basis of the prewar system was being undermined. The priority attached to defending the gold parity was no longer beyond question as increasing importance was granted to other, potentially incompatible goals of policy. Extension of the franchise, the rise of political parties dominated by the working classes, and the growing attention paid to the problem of unemployment all suggested that a time might come when the defense of the gold standard would conflict with other objectives. World War I accelerated these trends by extending the political sphere to encompass economic issues that had previously remained extraneous.

Simultaneously, the traditional basis for international cooperation was growing increasingly tenuous. The quarter of a century following 1871 had been distinguished by relatively few political and military conflicts among the Western European powers. But the spread of international political tension after the turn of the century undermined the readiness of leading European countries to cooperate. Equally important, the United States had not been party to the cooperative arrangements supporting the gold standard system. The absence of a U.S. central bank precluded American participation in these ventures. So long as the United States was not the leading user of gold reserves, as she became after the turn of the century, her failure to participate in these cooperative arrangements and the destabilizing impulses she imparted to the operation of the international system did not threaten the entire edifice. But by the first decade of the twentieth century, the United States had grown too large and too influential to remain on the fringes of the gold standard system. The traditional basis for international cooperation no longer sufficed. One rationale for creating the Federal Reserve System in December 1913 was to manage the

American gold standard more effectively. The existence of a U.S. central bank might have provided a superior basis for the requisite cooperation. Unfortunately, (p.32) the newly created Federal Reserve System proved insular and unappreciative of the advantages of cooperation.

The argument of this chapter is developed in three steps. The first analyzes the ways in which interwar observers perceived the operation of the classical gold standard. The next step, which is developed in the following two sections, examines how the classical gold standard actually did work both at the center and at the periphery. The final step draws out the implications of the divergence between interwar perception and economic reality for interwar international monetary relations.

Interwar Perceptions of the Prewar System

An obvious starting point for any discussion of the prewar gold standard is the famous analysis of David Hume.[5] The point of Hume's "price-specie flow" model was to demonstrate that policymakers could rely on the gold standard to eliminate external imbalances automatically. Consider a nation running a merchandise trade deficit, using its currency to pay for its excess commodity imports. Foreigners, with no intrinsic use for the currency of another country, would present it at the central bank of issue for conversion into gold coin, or "specie," at the price specified by the provisions of that nation's gold standard law.[6] They would present the gold they thereby obtained at their own central bank for conversion into local currency. With the currency redeemed at the first central bank no longer in circulation, prices in that country would fall, according to the model elaborated by Hume. With the increase in currency circulation in the other country, prices there would rise. The increased competitiveness of the deficit country in international markets would switch expenditure toward its goods, restoring balance to the external accounts.

Writing from the vantage point of a Briton at the middle of the eighteenth century, Hume highlighted aspects of the operation of the gold standard that seemed relevant at the time. Since gold coin circulated in Britain and bank management of credit

conditions was not far advanced, his analysis highlighted the close connection between gold movements and money supplies. With currency substitutes such as bank deposits remaining less important than they were to become subsequently, Hume emphasized the close connection between the price level and the supply of currency and coin. Since the dominant component of international transactions remained trade in goods—capital flows not having acquired the importance they were to attain in the nineteenth and twentieth centuries—Hume emphasized the impact of price movements on the balance of trade. The historical specificity of his analysis is revealed in its title: “On the Balance of Trade,” not “On the Balance of Payments.”

There is no more effective testament to the elegance of Hume's model of the gold standard as a homeostatic system nor to the ability of elegant theory to hypnotize the minds of economists than the continued dominance of the price-specie-flow model 150 years later, at the beginning of the twentieth century, despite the (p.33) extent to which circumstances had changed. Gold coin had lost its predominance in internal circulation. Central banks had been established and come to intervene systematically in the relationship between specie reserves and credit conditions. The growth of large enterprise and collusive arrangements had produced a sector in which administered prices were adjusted only intermittently and behaved in a manner fundamentally different from the prices of primary products. International capital movements assumed new importance following the rise of overseas banks in London in the 1860s, on occasion dwarfing international commodity flows. Yet despite these sweeping changes, Hume's model of the balance of trade remained the dominant paradigm for discussions of the gold standard.

When attempting to account for the contrast between the ease with which balance-of-payments pressures had been vented before 1913 and the difficulties they posed subsequently, interwar observers, preoccupied by the balance of trade, were drawn first to factors impeding commodity-market adjustment. The obvious suspect, tariffs, had an alibi.[7] Notwithstanding the explanation for the prewar system's smooth operation that emphasized freedom of international trade, by the 1880s

comprehensive import duties on agricultural and industrial goods had been adopted by all but one of the major gold standard countries. Although these barriers did not reach the heights they were to scale after World War I, the ostensible contrast between the tariff-free quarter-century before 1913 and the tariff-ridden 1920s was subject to exaggeration. Attempts to salvage the argument emphasized that one nation, Great Britain, had not joined in the protectionist movement of the nineteenth century. So long as she provided a large open market, other nations could eliminate their trade deficits by increasing exports to Britain.[8] Although in the 1920s she continued to allow free access to imports (aside from the imposition of Safeguarding Duties on a narrow range of goods), Britain no longer offered a sufficiently large market to serve as an adequate safety valve. With access to other export markets restricted, the burden of adjustment was shifted onto the imports of deficit countries. But since imports were inputs into production and raised consumers' living standards, governments hesitated to increase their price or restrict their availability, closing off another avenue of balance-of-payments adjustment.

The problem with this argument for adherents to the price-specie flow model was that the imposition of tariffs should have activated other adjustments. By reducing the imports of the tariff-imposing country and moving its trade balance into surplus, it should have attracted specie which, through conventional price-specie-flow channels, worked to restore external balance.[9] If tariffs prevented the elimination of external imbalances, therefore, they must have blocked the operation of this mechanism. One way in which they might have done so was suggested by the debate over the transfer problem.[10] The imposition of tariffs, by shrinking the market (p.34) available to exporters, could have magnified the relative price movements required to restore trade balance. The greater the number of foreign markets blockaded, the more dramatic the reduction in export prices required to achieve a given increase in export volumes. If foreign tariffs rendered the export market sufficiently small and export demand sufficiently inelastic, the fall in prices needed to raise sales might be so large that no increase in export volumes

would suffice to restore trade-balance equilibrium.[11] The 1920s saw much debate but no consensus on the extent of this transfer problem. Discussions of the role of tariffs—or, precisely, of their absence—proved inconclusive in accounting for the smooth operation of the prewar monetary system.

Even those who ascribed the smooth operation of the classical gold standard to the absence of tariffs and to the relatively small price movements consequently required for balance-of-payments adjustment were perplexed because relative prices did not seem to move in the manner predicted by the price-specie-flow model. Frank Taussig, the leading American expert on matters of trade, saw the agenda for research as explaining how external adjustment had occurred in the absence of the relative price movements that Hume's model had led observers to expect. In Taussig's view, the principal disturbances requiring adjustment were swings in foreign lending. During a period of capital outflow, the price-specie-flow model predicted a specie drain and falling prices in the lending country, rising prices in the borrowing country, and an improvement in the capital exporter's current account balance sufficient to finance the capital outflow. Yet, as Taussig complained,

> no signs of disturbance are to be observed such as the theoretical analysis premises, and some recurring phenomena are of a kind not contemplated by theory at all. Most noticeable of all is the circumstance that periods of active lending have been characterized by rising prices rather than falling prices, and that the export of goods apparently has taken place, not in conjunction with a cheapening of goods in the lending country, but in spite of the fact that its goods have seemed dearer at times of great capital export.[12]

Frustrated by the behavior of the trade balance, interwar observers turned to other components of the balance of payments. They were not ignorant of the changes since Hume's time in domestic and international financial arrangements: the rise of London as a financial center, the manipulation of central bank discount rates, the responsiveness to discount rates of short-term capital flows,

the practice of holding foreign exchange reserves. All these changes implied that more than the trade balance mattered for external adjustment. The combined balance on current and capital accounts and not merely the first component was critical for the smooth operation of the gold standard system. As the economist H.F. Fraser put it, “The successful working of the gold standard does not require the value of the goods exported and imported to balance. What it requires is that the debits and credits of (p.35) a nation should equalize one another. . . . It is not the balance of trade in the narrow sense of the word but the balance of payments which matters.”[13]

Even those who shared this realization were slow to integrate capital movements and the techniques for influencing them into formal analyses of the gold standard's operation. Since the management of reserves and domestic credit was most highly developed in Britain, the clearest statements of the role of capital movements in the gold standard developed there. In 1919, the Cunliffe Committee, in its *First Interim Report*, appended to the price-specie-flow mechanism a model of short-term capital movements and a banking system capable of magnifying the impact of incipient specie flows on the domestic economy.[14] According to the Committee, the central bank discount rate was the instrument controlling the adjustment mechanism. By raising its discount rate, known as Bank rate, the Bank of England placed upward pressure on market interest rates, which attracted capital from abroad—in the words of the Cunliffe Report, “had the immediate effect of retaining money . . . which would otherwise have been remitted abroad and of attracting remittances from abroad to take advantage of the higher rate.”[15]

If the disturbance that prompted the rise in the discount rate was temporary, the higher interest rate might suffice. If it was permanent, as even the members of the Cunliffe Committee admitted, other adjustments had to follow, since higher domestic interest rates could not attract capital indefinitely. Once investors had adjusted their portfolios to conform to the new pattern of rates, the capital inflow would taper off.[16] Even if interest rates were raised repeatedly to attract successive increments of foreign capital, eventually the volume of foreign

indebtedness would be rendered unsustainable. The requisite level of foreign debt service would exceed the capacity of the economy to transfer interest payments abroad.

Hence a rise in Bank rate could eliminate the imbalance created by a permanent disturbance only by altering domestic conditions. The mechanism worked as follows. A Bank rate increase in response to excessive domestic demand raised the cost and reduced the availability of credit. Investment projects were postponed. The consequent rise in unemployment (“decline in employment” in the Cunliffe Committee's antiseptic phrase) reduced absorption, eliminated the excess demand for traded goods, and put downward pressure on prices. Lower prices enhanced the competitiveness of domestic goods and restored balance to the external accounts.

The appeal of this model, which emphasized the role of the discount rate in promoting adjustment through its impact on capital flows and domestic credit conditions, (p.36) was its ability to reconcile the smooth operation of the gold standard with the absence of significant specie movements. By characterizing the use of Bank rate as mechanical, it conformed to the image of the gold standard as an automatic system. Because central banks played by “rules of the game,” a phrase coined by Keynes, discount rate changes in combination with the open market operations needed to render them effective reinforced instead of impeding adjustment.[17] Instead of engaging in sterilization—neutralizing the impact of reserve inflows and outflows on domestic money and credit markets—central banks were portrayed as having reinforced the impact on domestic financial markets, thereby promoting adjustment. Hence interwar observers attributed the smooth operation of the prewar system and the contrast with interwar experience to more faithful adherence to the rules of the game in the prewar period.[18]

The definitive statement of this view appeared in 1944, when the international economist Ragnar Nurkse tabulated by country and year instances between 1922 and 1938 when the domestic and foreign assets of central banks moved in the same direction, as they should have had the authorities

adhered to the rules, and when they moved in opposite directions, as they would have in the event of sterilization.[19] Finding that domestic and foreign assets moved in opposite directions in the majority of cases, Nurkse attributed the instability of the interwar gold standard to the prevalence of sterilization and, by implication, the stability of the classical gold standard to its absence. Not until 1959 did Arthur Bloomfield document that, on Nurkse's own definition, sterilization had been equally prevalent before the war.[20] But neither study was needed for interwar observers to appreciate that management of the classical gold standard had entailed more discretion than the Cunliffe Report implied. In 1934, for example, Charles H. Walker noted that central banks had responded asymmetrically to reserve losses and gains, raising their discount rates in response to outflows more frequently than they reduced them in response to inflows.[21] In 1936 Gustav Cassel observed that the practice of holding excess gold reserves had permitted prewar central banks to habitually sterilize gold losses.[22]

Richard Sayers's *Bank of England Operations, 1890–1914*, published in 1936, was explicitly designed to "correct the unduly simplified version in the Cunliffe Report."[23] Sayers's message was that even in the heyday of the classical gold standard a range of considerations, the state of trade prominent among them, influenced central banks' decisions of whether, when, and how to act. Sayers showed (p.37) that the use of discount rates to manage the balance of payments, as emphasized by the Cunliffe Committee, was a recent innovation. Since 1870, the Bank of England had struggled continuously to render Bank rate "effective"—that is, to insure that it succeeded in influencing market rates of discount and the gold flows on which they acted. Various factors had complicated this struggle. The rapid growth of British banking after mid-century had reduced the Bank of England's share of business in the London money market. Discount rate increases might further erode the Bank's market share, at the expense of income for its stockholders. To the extent that the Bank relied on discount market operations for income, it might be forced to alter Bank rate in response to movements in market rates rather than the other way around. Knowing this, market

participants speculated that movements in Bank rate away from market rates would have to be reversed, minimizing the impact of such movements on the market.

Some of these problems were solved by the growth of overseas lending in the last third of the nineteenth century. The timing of new flotations for overseas borrowers was extremely sensitive to market rates, heightening the responsiveness of the balance of payments to changes in interest rates and providing the Bank of England with a convenient lever for managing its reserve. No longer did the Bank have to rely on its ability to draw cash from the country banks, a blunter and less certain instrument. The Bank's decisive response to the Baring Crisis in 1890 made clear that it was attaching more importance to central banking functions relative to profitability. This undermined the confidence of speculators that the Bank would follow market rate rather than attempting to lead it.

Any problems the Bank of England had, the Bank of France, the Reichsbank, and the U.S. Treasury possessed in spades. The limited effectiveness of their discount policies forced French and German authorities to utilize gold-market operations.[24] Direct intervention in the gold market, employed also by the Bank of England, was used to alter the “gold points” at which it became profitable to export and import gold. The “gold devices” included modifying the prices at which the central bank paid out gold and extending interest-free advances to gold importers to compensate them for the time gold spent in transit. These devices might be used to supplement Bank rate not just when a rise in the latter was economically ineffectual but when it was politically inexpedient.[25]

What accounted for the Cunliffe Committee's undue emphasis on the automaticity of intervention? According to Sayers, it reflected the peculiar experience of Lord Cunliffe, who became Deputy Governor of the Bank of England in 1911 and Governor in 1913. In the three or four years immediately preceding the Great War, Bank of England operations “had been, to a quite unprecedented extent, standardized and automatic.”[26] In 1907 Bank rate (supplemented by foreign

assistance) had warded off the American financial crisis. With the Bank's success in surmounting (p.38) the difficulties of that year, the gold devices fell into disuse.[27] The steady expansion of trade and the buoyancy of economic activity diverted political attention from discount rate changes, freeing the Bank to raise and lower its rate in pursuit of external balance. Duly impressed, Lord Cunliffe and the members of the Committee—Treasury officials, Bank of England Directors, members of the banking and financial community, and one academic, A. C. Pigou of Cambridge University—generalized overly from this experience.

Since political considerations sometimes led central bankers to hesitate before altering the discount rate even in the final decades preceding World War I, the supposed automaticity of their intervention did not constitute an adequate explanation for the gold standard's stability. Taussig, his student Harry Dexter White, and the British economist P. B. Whale therefore offered automatic adjustment by the banking system as a substitute for automatic adjustment by the authorities.[28] They posited that the supply of money accommodated fluctuations in demand not through movements in specie but through changes in the ratio of money supply to international reserves. When for example an exogenous fall in the demand for exports moved the trade balance into deficit, demands for money and credit would fall as the lower incomes of exporters ramified through the economy. The demand for loans and advances would decline, leading the banking system to contract the volume of credit pyramided on its reserves. The requisite reduction in the domestic money supply and response of the variables affected by monetary impulses could be brought about through the operation of the banking system without a need for gold exports. No more than occasional assistance from the monetary authorities was required.

Again, the appeal of this explanation was its automaticity and ready reconciliation with the price-specie-flow model. Its limitation was that one of the principal mechanisms through which the operation of the banks ostensibly brought about external adjustment remained changes in the terms of trade, where large fluctuations were rarely observed. Moreover, in the absence of fundamental changes in the structure of the

British banking system, this model offered no explanation for the contrast between prewar and interwar experiences.[29]

Since further elements were required, Whale and others turned to capital movements. Before 1890 capital flows across borders commonly took the form of long-term lending. Short-term liabilities were less important. Foreign deposits in London and other European financial centers, which were subject to withdrawal at the slightest uncertainty, first figured importantly in the final years of the nineteenth century. According to Beach, “the slender reserves with which the Bank of England operated prior to 1892 would have been inadequate if foreign funds had been as (p.39) large as in later periods.”[30] In addition, political stability in the decades before the war minimized capital flight in response to the prospect of radical changes in government complexion.[31] Unlike various European governments of the 1920s, few if any prewar governments contemplated confiscatory taxation nor could their commitment to the gold standard be seriously questioned.[32]

Political stability, in this case outside Europe, was also thought to have facilitated long-term lending in response to external shocks.[33] Countries in the regions of recent settlement, by virtue of this stability, were able to access foreign capital and develop their capacity to export by importing capital goods and equipment. Investors had little reason to doubt that the Commonwealth countries that were the leading recipients of British capital would take whatever steps were required to continue to service their debts and thereby maintain good relations with the mother country. Unlike the 1930s, when throughout Latin America political revolution coincided with the suspension of convertibility and debt default, in preceding decades revolutions resulting in repudiation and loss of capital market access were few and far between; the Bolshevik and Mexican Revolutions were exceptions to the rule.[34]

Once again, the contrast was subject to exaggeration. Political instability and debt default—as distinct from repudiation—had been far from infrequent before 1913, and long-term foreign lending had been far from stable. In the late 1880s, for

example, political upheavals had set in motion a process that culminated in loss of capital market access for Argentina and Brazil. In the United States, the Populist Revolt against deflation and the Free Silver Movement of the 1890s posed real threats to the prevailing dollar price of gold and hence to the stability of the North Atlantic capital market. In contrast to British foreign investors, who had been largely insulated from foreign default, their French and German counterparts had suffered extensive losses. Those who emphasized political stability and freedom from default viewed the question from a peculiarly Anglocentric perspective.

The prewar system's ability to accommodate swings in the volume of long-term foreign lending epitomized the puzzle. Why had surges in French, German, and British overseas lending not led to drains of gold from their central banks and to declines in their export prices? Why had surges in U.S. and Canadian borrowing (p.40) not resulted in large gold inflows and rises in their export prices?[35] By the definition of the balance of payments, the balance on current account, the balance on capital account, and gold movements must sum to zero. This implied that swings in foreign lending could take place in the absence of large-scale gold movements only if they were followed without delay by corresponding swings in the current account and specifically in the balance of commodity trade. While the eventual response of exports and imports was to be expected, “[w]hat is puzzling,” in Taussig's words, was “the rapidity, almost simultaneity, of the commodity movements.”[36]

Perhaps the proceeds of foreign loans had been used to finance commodity imports from the capital-exporting country. Since few loans were formally tied, this would have had to reflect the operation of informal pressures or market forces.[37] Because the French were particularly inclined to encourage the use of loan proceeds for the purchase of French goods, such evidence should have been apparent there. Yet White's study demonstrated that only a fraction of French foreign loans was used to purchase French exports.[38] Barely 10 percent of the proceeds of French loans to Russia were so utilized, for example. French producers habitually pressured

officials to discourage foreign bond flotations on the grounds that such loans generated little business for domestic industry. White speculated that the link from foreign loans to commodity exports existed only where the lender was an industrial power and the borrower was undergoing rapid industrialization. Presumably he had in mind the contrast between Britain, which exported capital equipment, and France, which relied more heavily on exports of luxury goods, and between the rapidly industrializing North America in which Britain invested and the more slowly growing Russia, Austro-Hungarian Empire, Italy, Spain, Turkey, and China to which France lent.

Unfortunately for White's hypothesis, Viner already had shown that Canada, one of the principal destinations of British funds, imported its capital goods not from the United Kingdom but from the United States.[39] Upswings in British lending to Canada had been accompanied not by corresponding surges in Canadian purchases of British capital goods but by upswings in Canadian commodity imports from its neighbor to the South and in British commodity exports to the United States, Latin America, and the Orient. Capital exports could still indirectly generate a demand for British commodity exports. British investment in Canada stimulated Canadian commodity imports from the United States, thereby raising U.S. incomes and U.S. demands for imported goods. Some U.S. commodity imports came from Britain, while others derived from third countries which, enjoying (p.41) higher incomes, raised their own demands for British goods.[40] But since this process for generating exports was “roundabout,” as Taussig put it, “one would suppose that it would take time.”[41] Given that capital exports could not be transformed instantaneously into demands for the commodity exports of the creditor country, gold movements should have been required in the interim.

The solution offered in the 1930s to this problem was the “changes-in-demand-schedules” mechanism, what today is called income effects. This attempt at resolution arose out of the literature on the relative price effect of an international transfer of purchasing power, specifically the famous interchange between John Maynard Keynes and Bertil Ohlin.

Ironically, in light of Keynes's subsequent work, the substance of Ohlin's challenge centered on Keynes's neglect of income effects. As Ohlin recognized, a transfer of purchasing power would reduce spending by residents of the capital-exporting country and raise spending in the capital-importing nation. As spending by the capital exporter declined, her trade balance would strengthen by virtue of the decline in her import demands and the increase in the excess of domestic production available for export. A rise in British foreign lending, for example, would reduce the demand for British goods at home at the same time it raised demands for them abroad. Theory alone could not predict for which good an excess demand would result and in which direction relative prices would move.

This was the interpretation toward which Ohlin, Angell, and White were groping when they sought to explain why British capital exports were accompanied by neither gold losses nor deteriorating terms of trade. If Britain's demand for imports fell and foreign demands for her goods rose sufficiently, capital exports might actually raise the relative price of her goods. This would eliminate the central paradox of the prewar system's operation, that Britain's terms of trade tended to improve in periods of large-scale foreign lending.[42]

Unfortunately, this outcome required unreasonable assumptions. One had to assume that marginal propensities to import were implausibly high. When spending rose abroad and fell at home, import demands and export supplies did not change by as much. It seemed unlikely, therefore, that an increase in British lending would raise the relative price of British goods. During periods in which British foreign (p.42) investment rose, domestic investment tended to fall by approximately the same amount, and overall levels of consumption and saving remained roughly constant. Hence any reduction in domestic absorption was largely a reduction in spending on capital goods. And most of the capital goods utilized by British industry were produced at home. Ohlin's counterexample to Keynes's orthodox presumption, though theoretically consistent, failed to solve the puzzle of how the classical gold standard worked.

To a large extent, interwar observers were misled by their persistent attempts to place the burden of adjustment on individual components of the balance of payments. In fact, the burden of adjustment did not fall on any one component of the external accounts. When the capital account weakened because of a long-term capital outflow, for example, that weakness was offset by a short-term capital inflow as foreigners deposited funds they had borrowed in their London accounts and the Bank of England raised interest rates. At the same time, higher interest rates in London raised the cost of holding inventories of raw materials and agricultural goods, leading producers to dump stocks of these commodities on the market. Since these were the goods Britain imported, her terms of trade improved, strengthening her current account.[43] With the passage of time, foreign borrowers began purchasing capital equipment, directly and indirectly stimulating the exports of British industry. In other words, the challenge for observers was no longer to explain how the current account of the balance of payments adjusted to disturbances, as Hume had attempted to do 150 years before, but rather to understand the combination of current- and capital-account adjustments that accommodated balance-of-payments shocks, and in particular to analyze the capital flows that were the new and distinctive feature of the late nineteenth-century gold standard. Those capital flows depended on the credibility and cooperation that, by the 1890s, had come to provide the foundation of the international system.

The Gold Standard at the Center

A logical point of departure for an account of how the gold standard worked is the City of London. London served as clearinghouse for other nations. The early development of British commerce and the nation's emergence as the world's foremost trading nation accustomed exporters of other nations to obtain trade credit there. The inability of the precocious British banking system to quickly overcome its regional segmentation stimulated the development of a network of discount houses linking the provincial banks and bequeathed a set of institutions ideally suited to transact in foreign bills.[44] The Bank of England's readiness to rediscount bills on behalf of the discount houses and provide gold on demand were

critical for the development of that market. Exporters and importers of other nations maintained (p.43) sterling balances that they converted into gold or foreign exchange as needed to settle commercial obligations. British discount houses extended trade credit by purchasing at a discount, either directly or through the London agencies of foreign banks, bills promising to pay sterling for foreign commodities at a future date. By one estimate, 60 percent of the world's trade was settled through payment in sterling bills.[45] Thus there existed in London a pool of liquid assets greatly in excess of those in any foreign center. These assets might move rapidly in response to factors affecting interest rates or confidence.

What made sense for exporters made sense for governments. Since there was no question of the ready availability of gold at the Bank of England, foreign governments held a portion of their reserves as interest-bearing assets, to be converted into gold upon demand. London was not the only reserve center (Paris and Berlin were her chief rivals), but sterling reserves matched and probably exceeded the combined value of reserves denominated in other currencies.[46] Reliance on sterling was greatest within the British Empire. But other nations also found the practice convenient, more so since London deposits, which Britain might hold hostage in times of crisis, were a way for governments to signal to Britain their commitment to treaty obligations. A small number of countries, Russia, Japan, and India prominent among them, held the majority of overseas balances in London. If exchange reserves were less responsive to day-to-day variations in rates of return than commercial balances, they were exceedingly sensitive to confidence in the convertibility of sterling. Public and private deposits had the same implication for the operation of the system: both added to the pool of liquid assets ready to move in response to market conditions.

The maintenance of exchange reserves in London had one further implication. When Britain ran a payments deficit, foreign central banks accumulating sterling claims might deposit them in London rather than presenting them at the Bank of England for conversion into gold. A balance-of-payments deficit did not automatically drain reserves from the Bank of England. There were limits to the foreign demand for

sterling reserves—Britain was only one of several competing reserve-currency countries. An excessive accumulation of foreign liabilities in London might cast doubt on the Bank of England's ability to maintain convertibility. Notwithstanding these caveats, an important feature of the nineteenth-century system was that the balance-of-payments constraint did not always bind for its leading member.

Britain also possessed short-term capital overseas, on the order of £350 million. A rise in the differential between domestic and foreign interest rates might cause these assets to be repatriated. It is commonly presumed that Britain's short-term liabilities, namely foreign deposits in London, exceeded her short-term assets overseas. Britain is portrayed as banker to the world, borrowing short and lending long. Some have argued that the analogy is flawed, that in fact Britain was a net short-term (p.44) creditor before the war.[47] Whatever the case, British overseas assets augmented the exceptionally large pool of liquid short-term capital responsive to financial market conditions in London.

London was the leading international gold market as well. The produce of South Africa, Australia, and other major suppliers was shipped there for sale to the highest bidder. This gold was re-exported to other countries or retained in England. One of the costs of re-export was the cost of borrowed funds for the period the gold was in transit (or the implicit cost of not devoting funds already in the dealer's possession to interest-bearing uses). By exerting upward pressure on interest rates, the Bank of England could raise this cost and encourage the retention of newly mined gold.

Thus, if it could alter domestic interest rates, the Bank of England could influence gold and capital flows. Until the twentieth century, the Bank's control of market rates remained tenuous, and its ability to cope with pressure on its reserve resulted as much from the automatic response of the banking system—the mechanism emphasized by Taussig, White, and Whale—as from Bank of England management. Bank credit was more important than in most other countries, rendering the British money multiplier relatively variable over the cycle. By the end of the nineteenth century, the Bank of

England's ability to influence market rates was widely acknowledged and increasingly institutionalized. Banks first in London and then throughout the country began to index their loan and overdraft rates to Bank rate.[48] London banks fixed their deposit rates 1 ½ percentage points below Bank rate. Rates on new loans were indexed to Bank rate at a higher level, while those on fixtures (long-term loans to the discount market) were similarly indexed at ½ percent above the deposit rate.[49]

While the entire range of interest rates affected international conditions, gold movements responded most readily to the market rate of discount.[50] Bank rate influenced gold flows not just directly through its impact on market rates of discount but indirectly through its effect on the availability of credit. A change in Bank rate altered the cost of rediscounting at the Bank of England and via that channel influenced the cost of short-term accommodation, which might affect economic activity. According to Ralph Hawtrey, a leading British expert on the subject, willingness to hold inventories of raw materials and finished goods was sensitive to changes in Bank rate and in the cost of short-term accommodation to which it was linked.[51] Since short-term finance was a significant component of the cost of holding stocks, higher interest charges led dealers to delay replenishing depleted inventories. Imports of raw materials were reduced correspondingly. In a 1907 survey by (p.45) *The Economist*, dealers in jute, grain, sugar, and cotton acknowledged responding in this manner.[52] Wholesale dealers in dry goods, drugs, and other finished commodities were thought to be similarly affected. As they liquidated stocks and scaled back their replacement demands, downward pressure was placed on economic activity, prices, and imports, further strengthening the balance of payments.

This was the financial system that Britain summoned to meet disturbances to the balance of payments. Three types of disturbance can be distinguished according to the component of the external accounts on which they impinged: the balance of trade, the balance of long-term capital, and the balance of short-term capital. The balance of trade fluctuated with changes in the volume or value of British exports and imports

associated with business cycles at home and abroad. A cyclical upswing in Britain brought with it an increase in imports and exports. Exports generally moved by a greater amount; the British trade deficit narrowed during expansions and widened during contractions.[53] A first question is how the British balance of payments accommodated these disturbances to the balance of trade. The balance of long-term capital fluctuated with swings in the volume of British foreign lending, since British long-term borrowing was negligible. Foreign lending also moved procyclically, but with a longer periodicity than the trade cycle.[54] (See Figure 2.1.) A second question is how the British balance of payments accommodated these long-term capital account swings. Short-term capital tended to move with disturbances to financial markets. These disturbances were of two kinds: seasonal stringency in foreign markets, associated typically with the planting and harvest seasons, which drained liquidity from Britain; and financial panics, which typically occurred soon after the peak of the trade cycle. When seasonal and cyclical forces coincided, they occasioned a full-blown crisis marked by bank failures and panic flows of short-term funds. A third question is how the British balance of payments accommodated these short-term capital flows.

In the four decades prior to 1913, British exports were perturbed primarily by disturbances to export demand, not disturbances to export supply. Changes in the volume of exports typically preceded changes in domestic production and import demand, as if exports played a causal role in the trade cycle.[55] This is consistent with (p.46)

the behavior of Britain's terms of trade, which tended to improve when exports rose and deteriorate when they fell.[56]

The principal way in which the British balance of payments

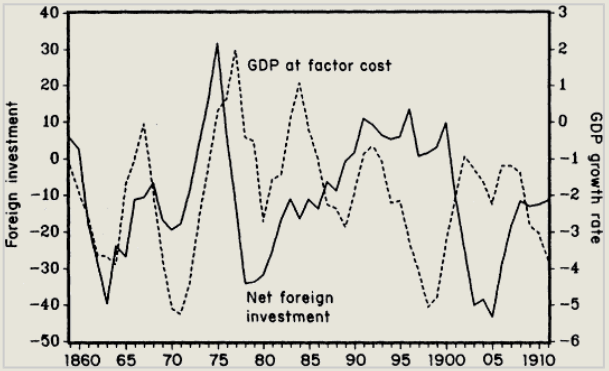


Fig. 2.1. Rates of growth of British GDP and foreign investment: Deviations from trend.

Note: Annual percentage rates of growth. Both series are expressed as deviations from 5-year moving average. British foreign investment fluctuated procyclically, especially before 1900, rising during business cycle expansions and falling during contractions.

Source: *From Edelstein* (1982), *Appendix 1*.

accommodated export fluctuations was through parallel movements in imports. A business cycle upswing abroad that raised the volume of British exports induced parallel movements in imports through two channels: first, the improvement in the terms of trade increased real incomes, while the decline in their relative price made imports more attractive; second, increased demand stimulated domestic production, increasing the need for intermediate imports and, by raising real incomes, augmenting imports of consumer goods. Thus, even when trade flows were the source of imbalance, they were also the first line of defense.

Induced changes in imports financed only a portion of autonomous fluctuations in exports, however. To limit gold

losses when exports fell, a second line of defense was required. This was provided by changes in foreign deposits and foreign security holdings. The countries Britain traded with held sterling balances in London. (p.47) When India's trade balance with Britain moved into surplus, for example, rather than converting her accumulated sterling into gold at the Bank of England, India typically invested the balance in securities in London.[57] A British trade deficit thereby generated an offsetting short-term capital inflow, especially when that deficit was concentrated within the Empire. Changes in foreign deposits only partially offset the trade deficit, since Britain's trading partners held but a portion of their reserves in London and some held none at all. Moreover, a decline in trade volumes resulting from a business cycle downturn abroad might induce foreigners to run down their commercial balances in London, which tended to weaken the capital account. Still, sterling's reserve currency status provided a second line of defense insulating the balance of payments from export-market shocks.

The third line of defense was provided by the banking system through the mechanism emphasized by Taussig, White, and Whale. When a rise in exports stimulated domestic activity and the demand for money and credit rose, some of the increment was provided by the banking system without recourse to gold imports. This mechanism did not operate with the same power at all phases of the business cycle; near the peak, when the banking system was loaned up, increases in the demand for money could not be accommodated by a banking system no longer in possession of excess reserves. Near the trough of the cycle, in contrast, the supply of bank credit was more elastic.[58] Moreover, in countries where the elasticity of bank money was lower, adjustment might still require substantial gold movements. In the United States, for instance, where the currency supply was notoriously inelastic, large gold inflows and outflows regularly occurred not just over the cycle but across the seasons.[59]

The fourth and final line of defense was provided by the Bank of England. Portraying the Bank's role in this way serves to remind that, while the British balance of payments by no means adjusted in the automatic fashion posited by simple

models of the price-specie-flow mechanism, neither did adjustment rest solely on central bank management. When necessary, however, a rise in the Bank of England's discount and advances rates (typically but not uniformly equal), restrictions on bills eligible for rediscount, borrowing from bill brokers, and ultimately open market sales might be used to apply upward pressure to market interest rates, attracting short-term capital from abroad.

Having considered the effects of autonomous fluctuations in exports, it is straightforward to analyze swings in foreign lending. The factors stabilizing the balance of payments were the same; only their relative importance differed. When a capital issue for an overseas borrower was floated in London, the proceeds were first deposited to the borrower's account. Until those deposits were drawn down to finance purchases of goods and services, foreign lending had no direct impact on the balance of payments. In the short run, in other words, the foreign deposits forming (p.48) Britain's first line of defense were the only defense required. Once the borrower began to purchase goods, British exports would rise in sympathy. The importance of this mechanism should not be exaggerated, however. Meanwhile, any decline in domestic investment due to the redirection of new capital issues from domestic to overseas borrowers would generate a sympathetic fall in British imports and an increase in the share of domestic production available for export. Thus, a strengthening of the British trade balance provided the second line of defense. Insofar as the decline in domestic spending reduced the demand for credit, the British banking system's reduction in credit supply had reinforcing effects. Finally, the Bank of England could intervene to stem any residual gold outflow.

None of this explains the rise in the relative price of British exports in periods of large-scale foreign lending. In part, the explanation lies in the impact of the Bank of England's reinforcing actions on primary commodity prices.[60] Higher interest rates increased carrying costs for traders holding inventories of raw materials. A rise in Bank rate induced them to liquidate stocks. Whether they dumped those stocks on the market or simply delayed replenishing them, the prices of primary products would be depressed. Since Britain imported

these products, Bank rate's impact on commodity markets produced a decline in import prices.

More important was that surges in British lending were often induced by overseas developments themselves tending to stimulate demands for British exports. The westward penetration of the North American railways, natural resource discoveries, and the rapid growth of agricultural and industrial production in the regions of recent settlement increased levels of economic activity and purchasing power in foreign nations and in the British Empire. As growth accelerated overseas, British savers were attracted to investment opportunities abroad, stimulating overseas issues on the London capital market. Even before this occurred, income growth overseas began to boost British export sales. British exports would rise due to both the autonomous growth of foreign incomes (autonomous from the viewpoint of the British balance of payments) and the induced rise in foreign demands provoked by British lending.

By itself, the substitution of overseas capital issues for domestic investment might reduce the demand for British manufactures, since British enterprise relied more heavily on British capital equipment than did enterprise abroad. But this substitution was accompanied by a further rise in foreign demands for British goods due to the foreign income growth to which British foreign lending responded. Meanwhile, the growth of productive capacity abroad increased supplies of those goods Britain imported, placing downward pressure on their prices. Hence overseas lending, insofar as it was prompted by developments abroad tending to increase the supply of imports to Britain and the demand for British exports, was accompanied by an improvement in Britain's terms of trade.

A different response was required in the event of financial crises. Neither trade nor foreign balances had reason to react in stabilizing fashion. The first lines of (p.49) defense were breached, and the burden fell squarely on the Bank of England. With the Bank's insulation removed, the frail skeleton it clothed was revealed. The Bank's gold reserves rarely exceeded £40 million, in contrast to the £100 million

and £120 million typically held by Russia and France respectively. The Bank's reserve amounted to a mere 3 percent of the nation's money supply.[61] In times of crisis, the Bank of England was forced to defend the sterling parity with only a “thin film of gold.[62] The success of its efforts was directly attributable to international cooperation.

The thinness of the film was revealed by the Baring Crisis of 1890, the sterling crisis of 1906, and the American financial panic of 1907. The solvency of the House of Baring, which had borrowed to purchase Argentine central and local government bonds, was threatened by the collapse of the market in these bonds following the arrival in London of news of the Argentine revolution. Confidence in other British financial institutions was disturbed, especially those from which Baring Brothers had borrowed, such as Martins and Glyn, Mills, Currie & Co. Foreign deposits were liquidated. Gold drained from the Bank of England into domestic circulation as residents shifted out of deposits.[63] In November 1890, at the height of the crisis, the Bank's reserve fell to less than £11 million. Baring Brothers alone required an infusion of £4 million to avoid having to close its doors.

Committing to domestic uses such a large share of the Bank of England's remaining reserve threatened to undermine confidence in the convertibility of sterling. “The Bank's reserve then stood at what must be regarded as a minimum,” *The Economist* noted. “It was just about sufficient for ordinary home requirements, but it was too small to meet exceptional demands.[64] Newly appreciative of its domestic lender-of-last-resort function, the Bank was torn between its internal and external responsibilities, a dilemma that would prove distressingly familiar after World War I.

The Bank raised its discount rate over the summer of 1890 in order to rebuild its gold reserves, which had sunk to £9 million in 1889. In November, as rumors surfaced of financial difficulties in the City of London, gold flowed out at a rapid rate. In the first week of the month, in response to a gold withdrawal by the Bank of Russia and anticipations of a withdrawal by the Bank of Spain, Bank rate was advanced again. This failed to stem the tide. It was unclear whether a

further increase in the discount rate would attract gold or merely signal the extent of the Bank of England's difficulties. William Lidderdale, the calm Scotsman who served as governor of the Bank, believed that a high Bank rate would significantly affect the direction of gold flows only after considerable delay.[65]

The withdrawal of gold by foreign central banks indicated that the convertibility of sterling was in doubt. It appeared that Britain would have to choose between the gold standard and the stability of the domestic banking system. Lord Salisbury, the (p.50) prime minister, reportedly was ready by mid-November to authorize suspension of the Bank Charter Act.[66]

Fortunately, the dilemma was resolved through international cooperation. The Bank of England, using Rothschilds as intermediary, solicited a loan of £2 million of gold from the Bank of France. This was not the first time the Bank of England had contracted a loan from the Bank of France; ironically, on the last occasion, in 1839, Barings itself had served as intermediary. Acting directly, the Bank of England also obtained £1.5 million of German gold coin from Russia.[67] Both loans were collateralized by a pledge of British Exchequer bonds. Both were quickly granted. Within days the Bank of France made another £1 million of gold available. The news as much as the fact of the loans did much to restore confidence; apparently it was not even necessary for the second tranche of French gold to cross the English channel. “This addition to the resources of the Bank prevented panic at a very critical moment,” concluded George Goschen, Chancellor of the Exchequer.[68] Reassured that the Bank of England now possessed the resources to stand behind Baring Brothers, a consortium of domestic banks agreed to provide most of the finance required for its reorganization.[69]

Like the Baring Crisis, the 1907 panic was the culmination of more than a year of financial turbulence. In 1906, frantic expansion in the United States led to extensive American borrowing in London and to a drain of coin and bullion from the Bank of England. It was not unusual for American borrowing to rise in the summer and autumn in advance of the harvest and crop moving seasons, as we will see below. The

peculiar feature of 1906, taken as evidence of excessive speculation, was that these borrowings were not repaid after the harvest.[70] The Bank of England responded by raising Bank rate in a series of steps. But with interest rates already high on the Continent, the measure attracted relatively little gold.

As in 1890, the threat to sterling was contained through international cooperation. Sources suggest that the Bank of France repeatedly offered a loan to the Bank of England, which the latter rebuffed.[71] The last of these offers was for 75 million francs (roughly £3 million). The Bank of England preferred to have the Bank of France instead purchase sterling bills to support the British exchange.[72] It may be that the Bank of England was still confident that a higher Bank rate would stem the tide. Perhaps it wished to avoid the "humiliation" of an open loan.[73]

French support was justified on the grounds that it was "in the interest of French (p.51) trade to prevent a possible crisis" on the other side of the channel.[74] The entry for foreign bills discounted on the books of the Bank of France rose from zero at the beginning of December 1906 to more than 65 million francs in March 1907 (almost exactly the amount of the prospective loan). The rise in the supply of francs on the market led to a corresponding drain of gold from the Bank of France. The French refrained from raising the discount rate, in order to direct this gold toward the Bank of England. French policy had essentially the same effect as an open loan but was less likely to alert speculators to the dire straits in which the Bank of England found itself. In this way, as the Governor explained to the annual meeting of Bank of France shareholders in January 1907, Paris enabled London "to traverse that difficult crisis."[75]

Over the second quarter of 1907 Britain was able to reimburse France, as the bills purchased by the Bank of France were allowed to run off on maturity. This respite came to an end in the autumn with the outbreak of the American financial panic. No shortage of causes of the panic exists: these include excessive speculation in American financial markets, the danger that prospective tariff revision would depress Federal tax revenues, and a rapid rise in federal spending. Another

possibility is that the American crisis resulted indirectly from the Bank of England's own response to the difficulties it experienced in 1906. In addition to the measures described above, the Bank had made clear to British investors holding American paper that such bills threatened the stability of the London market. They were encouraged to liquidate their American bills. More than 90 percent of this paper was allowed to run off in the early months of 1907.[76] Credit conditions tightened in the United States, bursting the financial bubble.

As business in the United States turned down, nonperforming loans turned up, and a wave of bank failures broke out. These provoked a shift out of deposits and into currency, a surge in the demand for gold in the United States, and a drain from the Bank of England. The Bank advanced its rate and restricted discounts to short-dated paper. When these measures proved inadequate, it raised Bank rate to 7 percent, its highest level since 1873. The coincidence of this policy with the Bank of England's success in surviving the crisis was what led Lord Cunliffe and his committee to attach such weight to Bank rate as an instrument of economic management.

In fact, the key to containing the crisis was not Bank of England discount policy but, as in 1890 and 1906, central bank cooperation. Without international cooperation, the Bank of England would have been forced to raise Bank rate further, to at least 10 percent according to one observer, and even that higher rate might not have sufficed.[77] Both the Bank of France and the Reichsbank allowed their reserves to decline and transferred gold to England to finance England's transfer of gold to the United States. On November 6, *The Economist* reported, the London market was reassured by news that "large amounts of gold would be released by Paris and (p.52) Berlin."[78] The Bank of France again purchased sterling bills to hasten the flow. Foreign bills discounted, according to its weekly statement, rose from zero on November 2 to more than 80 million francs on November 15.[79] Of gold shipped to the United States in November and December 1907, 40 percent was newly mined. Of the remainder, nearly £10 million originated in France, Germany, Belgium, and Russia (most of

which was trans-shipped through London). Less than £0.4 million came from the Bank of England.[80]

The willingness of other countries to part with gold was indispensable to the defense of the sterling parity. Controversy remains over whether this support was solicited by the Bank of England or volunteered by its Continental counterparts. In either case the action of the Continental central banks, and of the Bank of France in particular, represented cooperation with Britain in its role as ready supplier of gold to markets in distress. Rather than being provided by the Bank of England, the lender-of-last resort function was provided collectively.

The techniques developed in response to the difficulties of 1906 and 1907 were utilized regularly in subsequent years. Again in 1909 and 1910 the Bank of France discounted sterling bills to ease seasonal strain on the Bank of England. The difficulties of 1906–7 drove home the point that 1890 had been no anomaly—that the stability of the gold standard system hinged on cooperation and collective management. In 1907–8 the Italian financial expert Luigi Luzzatti recommended regularizing and institutionalizing the practice.[81]

The Bank of France was in a position to provide gold as needed for the operation of the international monetary system by virtue of its exceptionally large reserves. Only the United States held more monetary gold; France's share in the gold reserves of 26 countries reached 17 percent by the end of 1889.[82] By 1903 more than a third of the world's gold was in the vaults of the Bank of France or in domestic circulation. Given the characteristics of the French economy, the magnitude of France's gold holdings was anomalous. Although France's balance of payments was subjected to the same shocks as Britain's, the magnitude of the disturbances typically was less. Foreign trade constituted a smaller share of national income for France than for Britain. Foreign lending, though prominent in the operation of the Paris market, did not achieve the scale of British lending. Consequently, France was less exposed to disturbances in both the current and capital accounts of the balance of payments.

If the disturbances were less imposing, so were the defenses. Not being a leading center for international trade in primary commodities, Paris failed to attract a large volume of foreign commercial deposits. The stimulus to French exports from lending to Russia was small. France was on a “limping” gold standard, with the Bank of France retaining the right to redeem its notes in five-franc silver pieces rather (p.53) than gold. Foreign countries consequently regarded Paris as a less-than-ideal depository for official reserves. Though the governments of Russia and Italy and the central banks of Greece, Germany, and Japan maintained deposits in Paris, these were too small to offer the Bank of France much insulation from balance-of-payments pressures. The supply of money provided by the French banking system was less elastic than in Britain or even in the United States, where the inelasticity of the currency was the subject of considerable complaint. The French were notorious for their suspicion of banks and for preferring currency and coin to checks and deposits. Since the ratio of currency and coin to bank deposits was higher than in the United Kingdom, a change in the demand for money had to be satisfied to a greater extent by gold flows than by deposit creation.[83]

Finally, the Bank of France had only limited capacity to influence gold flows through intervention on the money market. Though a rise in its discount rate might increase rates on the Paris market and draw gold from neighboring countries, the market was small relative to the French economy, as was the amount of gold that a change in policy might attract. French companies in need of accommodation typically obtained it from banks, not on the money market. Neither was the French money market closely linked to foreign markets, although French banks invested some short-term funds in neighboring countries, notably Germany. The Bank of France therefore adjusted its discount rate less frequently than the Bank of England or the Reichsbank. Between 1898 and 1913 the Bank of France altered it only 14 times, compared with 79 times in Britain and 62 times in Germany. Instead, the gold market was used as a buffer. When the central bank needed to stem gold losses, it might use the gold devices to raise the effective gold price by one percent or

more, or simply refuse demands for gold in excess of a specified maximum.[84]

Where the Bank of England relied on its discount rate and the Bank of France relied on its buffer stock of gold and the gold devices, the Reichsbank used these instruments in combination. The existence of a larger money market in Berlin than in Paris enabled the Reichsbank to use its discount rate more actively than the Bank of France if less actively than the Bank of England. A larger gold reserve than the Bank of England's enabled the Reichsbank to part with gold when required by the international system. In the final months of 1907, after initially hesitating to let gold (p.54) go, the Reichsbank may have contributed as much as 40 percent of the total transferred from the Continent to the United States.[85]

An instance of the Reichsbank's use of the gold devices was November 1912, when it charged a premium of nearly ¾ percent on gold for export. In addition, it employed moral suasion, discouraging domestic investors from drawing gold at inconvenient times. The Reichsbank held foreign bills and credits, which it ran down before letting gold go. Like Britain, Germany lent long and borrowed short, notably from France. The rapid increase in the volume of trade credit extended by Germany in the decades preceding the war stimulated a growing volume of foreign commercial deposits. Countries that Germany traded with maintained balances in Berlin, although not on the scale of those in London or Paris. Thus, Berlin possessed the same layers of insulation as London: foreign commercial deposits, followed by foreign reserve balances, followed by foreign loans.[86]

Notwithstanding this arsenal of weapons, the Reichsbank was alarmed by the severity of the 1907 crisis. The most severe disturbance occurred late in the year, when the Reichsbank's resources were already taxed by the seasonal rise in demand for currency and coin for the same commercial activities as in the United States. To aid the Bank of England in 1906 and 1907, the Reichsbank had permitted its gold cover ratio to slip disconcertingly close to the statutory minimum. In reaction, the Reichsbank, emulating the Bank of France, began to build

up its cushion of reserves. Germany's acquisition of gold after 1907 is usually interpreted as a war chest accumulated in anticipation of World War I.[87] In fact, it may have also reflected the realization that a buffer was needed against destabilizing impulses emanating from the United States.

The smaller European countries were satellites revolving around these suns. When their external positions weakened, they raised their discount rates, restricted the availability of specie, and converted exchange reserves into gold. Since their money markets were small and their discount rates had limited power, they relied most heavily on the second and third of these devices. In periods of exceptional stringency, they solicited foreign assistance. Rarely did their demands for gold pose serious threats to Britain, Germany, or France.

The Gold Standard at the Periphery

Threats to the gold standard emanated instead from the periphery of the system.[88] The United States was the leading source of disturbances transmitted from the (p.55) periphery to the center. The United States was a large economy in international monetary terms: in the 1890s it already required some 15 percent of global gold reserves. Its destabilizing influence reflected the peculiar structure of the American financial system. The United States had no central bank to accommodate shifts in money market conditions, much less to coordinate its actions with European central banks. The American money supply was inelastic. An increase in the demand for money in the United States could be satisfied, therefore, only through massive gold imports. Each autumn, as the American demand for money and credit rose, pressure was placed on the international gold standard.[89] The 1907 crisis was only a particularly dramatic illustration of the destabilizing impulses regularly imparted by the United States to the gold standard system.

Much as the international gold standard linked the U.S. financial system to London, a domestic gold standard joined the interior of the country to its financial center, New York. Transactions between southern and western states were financed by New York banks and settled through transfers by

the New York clearinghouse in much the manner that the transfer of London balances settled transactions between third countries. Banks in the interior maintained balances in New York much as foreign countries and members of the British Empire held balances in London. Since the money supply was inelastic and money demand varied across seasons and cycles, when demand rose in the interior, it drew gold from New York in much the manner that foreign countries drew gold from London.

The position of the two financial centers differed in one fundamental respect, however. Since the United States was a foreign borrower rather than a lender, domestic production shocks that raised or lowered exports simultaneously raised or lowered capital imports, magnifying rather than damping disturbances to its balance of payments. Hence the United States had no choice but to absorb shocks through gold flows. The task of accommodating these pressures fell on Britain and the rest of Europe.[90]

These pressures were magnified by the incomplete credibility of the American commitment to gold. Domestic opposition to the gold standard led speculators to question whether the American authorities would ultimately take the steps required for the maintenance of convertibility. In the absence of stabilizing speculation, the burden fell squarely on official shoulders.

The gold standard was criticized as an engine of deflation by farmers with fixed mortgage obligations and exporters concerned about the international competitiveness of their goods. Such groups existed in Europe as well, of course. But the situation in the United States differed from that in Europe in two crucial respects. In the United States the opponents of the gold standard had direct access to the (p.56) political process. The rule of two senators per state vested agricultural interests with disproportionate influence in the upper house of Congress. Debtors and exporters found it easier than in Europe to form an effective coalition. Since the United States was an agricultural exporter, the two groups were largely overlapping. This was in contrast to the situation in Britain, which imported agricultural goods, and elsewhere in Western

Europe, where agriculture increasingly lost its comparative advantage as the period progressed. In Europe, debtors concentrated in agriculture and exporters concentrated in industry were two entirely different groups. Coalition building was more costly. Import-competing interests who might have opposed the gold standard could be bought off with tariff protection. The protection afforded agriculture in Germany and France illustrates the point.

The existence of a natural constituency for an alternative monetary standard, such as bimetallism or a silver-backed currency, could tip the balance. In the United States, unlike Europe, silver-mining interests exercised considerable political sway. That they were concentrated in the same sections of the country as the most highly indebted farmers again facilitated coalition formation.

The implications for the gold standard were evident in the 1890s, when the Populist Revolt and the free silver movement peaked. Deflation added to the weight of farm mortgages and other long-term debts, leading farmers and other debtors to mobilize in opposition to the monetary standard. At the root of the deflation was the tendency for the rate of economic growth worldwide to outstrip the growth of global gold supplies. The demand for gold-backed currency and coin depended on the level of economic activity, while supply depended on the vagaries of gold mining. In a period like 1873–93, when demand grew more rapidly than supply, adjustment under a gold standard took place through a decline in the price level.[91] These global forces, not the U.S. government policies emphasized by the Populists, were at the root of the deflation. As the United States was to learn in the 1890s when it attempted to counter the trend, so long as it remained committed to the gold standard, determination of the price level was largely beyond its control.

In the United States, a country where farmers and silver interests were exceptionally powerful, a significant fraction of the electorate preferred modifying or abandoning the gold standard to enduring its deflationary consequences. Populist pressure led to the Sherman Silver Purchase Act of 1890, which increased the rate at which currency was injected into

circulation. Simultaneously, expenditure rose on the military and on Civil War pensions, and tariff revenues declined. Rising expenditure and declining revenues transformed budget surpluses into deficits, which, in combination with the Treasury's silver purchases, drained gold from the United States.

With time, these imbalances could be eliminated, as they were following William Jennings Bryan's defeat in 1896. Meanwhile, defense of the dollar required foreign support. The United States did not possess a central bank to solicit a loan from its foreign counterparts. Instead, the Secretary of the Treasury, J. G. Carlisle, (p.57) arranged a loan from a syndicate of domestic and foreign banks. In January and February 1895, the Treasury contracted with the bankers to borrow some $60 million in gold from foreign countries. The syndicate was led by the Morgan and Rothschild houses in London. They advanced gold to the Treasury in return for government bonds that could be resold on favorable terms.

The loan was marketed with great success. In addition to placing U.S. Treasury bonds abroad, the bankers borrowed on their own account in Europe to make available to U.S. importers and others the foreign exchange they required. In effect, the collateralized loan (secured by U.S. Treasury bonds) was supplemented by an uncollateralized loan from the same foreign bankers. The latter was presumably a quid pro quo for the favorable terms on which the bankers received the Treasury bonds they resold.

Through this arrangement, the 1895–96 crisis was surmounted. The experience impressed contemporaries with two lessons. First, the stability of the dollar as much as the stability of sterling hinged on international cooperation. The efforts of the Belmont-Morgan syndicate were successful only because European countries were willing to part with the gold required by the United States. Second, international cooperation could be arranged in the absence of a central bank, but only through highly public and potentially embarrassing channels.

After 1896, prices worldwide began to rise, as gold discoveries and new refining techniques augmented gold supplies, and as the growing importance of foreign exchange reserves limited the demand for gold. Opposition to a gold-backed dollar declined from its 1896 peak. But this did not diminish the capacity of the United States to destabilize the international system. To the contrary, the growth of U.S. capacity to do so paralleled the rapid growth of the American economy. By 1913 the United States, to satisfy domestic demands, required nearly a quarter of worldwide gold in banks, treasuries, and public circulation. (See Figure 2.2.) It surpassed France as the leading user of gold, with the French share of the global total having fallen to less than 20 percent.

The 1907 crisis raised new doubts about whether the United States could rely on the Bank of England for additional gold. In response to the difficulties it experienced in 1906, the Bank of England had actively discouraged American borrowing.[92] Though the United States had obtained the gold it required from the Bank of France and the Reichsbank, it was clear that the Anglo-American understanding was no longer adequate to satisfy U.S. needs. Wider central bank cooperation was required. And the United States, still lacking a central bank, was poorly positioned to obtain it. Starting with the Aldrich Report in 1907 and the proceedings of the National Monetary Commission in 1910, pressure mounted for the establishment of an American central bank to manage the domestic financial system and put the United States on a par with the European nations it increasingly relied on. Only by enhancing the elasticity of domestic credit and cementing relations with European central banks could the stability of the dollar be guaranteed.

The experience of developing countries in Latin America and Asia was less happy. It was characterized by repeated and at best temporarily successful efforts at (p.58)

currency stabilization. Most of those Latin American and Asian countries that successfully went onto the gold standard did so only in the final decade preceding World War I. As producers of primary products, they were subjected to exceptionally large shocks to their export earnings. Many depended on a single commodity or a narrow range of products for the bulk of export revenues, heightening their vulnerability to fluctuations in world prices. Possessing only rudimentary banking systems, they relied primarily on metallic coin for monetary circulation. Institutions acquiring central banking functions, such as the *Banco National* in Argentina, possessed inadequate capital to risk any in rediscounting operations. Once on the gold standard, increases in the demand for money had to be accommodated by importing gold. A gold drain could produce serious domestic dislocations. Where paper money circulated, governments relied heavily on seignorage (revenue from money creation). The inflation that resulted undermined the stability of monetary systems and occasionally of governments themselves.

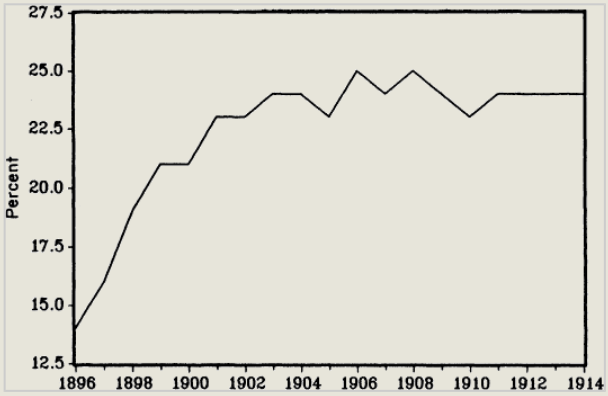


Fig. 2.2. U.S. share of world stock of monetary gold, 1896–1914.

The U.S. share of global gold reserves rose dramatically in the decade ending in 1905, magnifying the impact of events in the United States on international monetary affairs.

Source: Warren and Pearson (1935).

Like their North American neighbors, these countries were subjected simultaneously to capital- and commodity-market shocks. As economic activity and foreign trade moved into decline, creditor countries responded by reducing foreign lending, which strengthened an otherwise weakening balance

of payments. From their viewpoint, capital- and commodity-market shocks were offsetting. For the debtor countries, in contrast, capital- and commodity-market shocks were reinforcing. If the shock originated in commodity markets, causing export receipts to decline, the country was simultaneously rendered a less desirable market in which to invest. Capital inflows dried up because of growing doubts about the adequacy (p.59) of export revenues for servicing existing debts. If the shock originated in capital markets, causing foreign lending to evaporate, activity in the export-oriented sectors would suffer from the scarcity of domestic credit.

Just as in the United States, the imperfect credibility of the gold standard heightened its vulnerability. Defending this fragile mechanism was not always a high priority. In South America as in the North, depreciation was welcomed by landowners with fixed mortgage obligations and exporters wishing to enhance their competitive position. As in the United States, the two groups were frequently one and the same. The ranks of those favoring an increase in the domestic price of gold were reinforced by silver-mining interests. Because of the importance of silver mining, many Latin American countries remained officially bimetallic long after Europe converted to gold. They continued to mint silver coin despite the fall in silver's price and the depreciation of their currencies relative to those of the gold standard countries. One need not go so far as Frank Fetter, who argued that landowners consciously manipulated monetary policy to produce inflation, to agree that these groups acquiesced to inflation where and when it occurred.[93]

Argentina illustrates the special problems of capital-importing primary producers. Successive governments attempted to stabilize the currency and limit the issue of paper money. Not only did a high level of public spending complicate the task, but the national government's dependence on trade taxes rendered currency depreciation potentially destabilizing. The government succeeded in balancing its budget only when foreign trade was buoyant. If a shock to the markets was allowed to initiate a depreciation, the higher cost of imports depressed their volume and with it the government's receipts

from trade taxes. To finance fixed internal obligations the authorities printed money, which fed the depreciation. Exchange-rate fluctuations discouraged foreign investors, curtailing capital inflows and exacerbating the balance-of-payments problem. Resistance to stabilization by landowners and exporters allowed the situation to persist. Urban and rural wage earners, whose real earnings declined in periods of depreciation, favored stabilization but were poorly positioned to influence the Argentine Congress.[94]

Between 1881 and 1883 General Julio Roca's government attempted to stabilize the currency on a bimetallic basis and reestablish Argentina's access to the international capital market. But public spending remained high and inflation persistent, partly because the government relied for support on landlords who demanded cheap credit and railway subsidies. In 1885 the authorities were forced by balance-of-payments pressure and domestic bank runs to suspend convertibility and permit a gold premium to reemerge. The depreciated currency remained relatively stable until 1889 because Argentine imports and government revenues were little affected, (p.60) with inconvertibility coinciding with a surge in British foreign lending. British purchases of government debt, railway bonds, and mortgage securities strengthened the balance of payments.

But the Argentine Free Banking Law of 1887 permitted domestic banks to issue notes backed by national bonds. The bonds themselves were backed with gold only to a limited extent. The banks emitted notes at a rapid rate, between 1887 and 1890 tripling the fiduciary circulation.[95] With the outbreak of revolution, lending to Argentina fell off, declining in 1890 to less than one-fifth of 1888 levels. On top of this, Argentina suffered a 25 percent decline in the prices of her principal exports. The new government had no choice but to default on the external debt and in 1891 to permit the gold premium to widen. Bank runs in 1891 led to a general moratorium culminating in the liquidation of the *Banco National* and the Bank of the Province of Buenos Aires. Argentina did not succeed in stabilizing her currency until

1899 or in reimposing formal gold convertibility until the 1920s.[96]

Brazil had a similar record of currency instability. The coffee magnates regarded depreciation as a device for raising coffee prices relative to costs.[97] In conflict with their interests, a principal goal of the government throughout the 1880s was to restore the depreciated milreis to its 1846 par. Prior to the Empire's fall, the government had initiated steps to restore convertibility by retiring Treasury notes. Agitation by large landowners, who suffered not only from deflation and appreciation but also from the abolition of slavery in 1888, led to a republican coup in 1889. The new Republican Government quickly reversed its predecessor's policy of deflation. The money supply tripled between 1889 and 1891. The milreis then depreciated through 1898 due to domestic inflation and declining world coffee prices. By the time the foreign exchange situation reached its nadir in 1897, Brazil had lost all access to world capital markets.[98] This access was restored by the negotiation of a funding loan in 1898, one condition of which was a policy of monetary austerity. Only in 1901 was the milreis again pegged and exchange-rate stability restored.

The experience of the smaller Latin American countries was more erratic still. Like their neighbor to the north, the United States, many nations of Central America attempted to maintain both gold and silver coins in circulation. The decline in the world price of silver beginning in the 1870s induced the export of gold coin in return for a melange of silver coins and notes of other countries. Unlike the bimetallic countries of Europe, however, the small nations of Central America did not possess the gold reserves necessary to implement gold convertibility. The decline in the gold price of silver placed them effectively on the silver standard, causing their currencies to depreciate. Sometimes even silver convertibility proved impossible to maintain. In Guatemala, for example, the government borrowed extensively from the banks, generating an inflation that forced the suspension of convertibility in 1897. As the inflation continued, even copper and nickel coins were driven from circulation, placing the country on a paper standard. In Salvador, the internal circulation (p.61) of

foreign money was so prevalent that it was given legal tender status. In 1892, when Salvador attempted to follow the lead of the gold standard countries, reserves proved insufficient for the government to buy up the circulating silver coin. The persistent fall in the price of silver drove gold from circulation, leading to the suspension of gold convertibility in less than two years.[99]

Among primary-producing nations with independent currencies, only the experience of British Commonwealth members was more satisfactory. Specializing in the production of a small number of primary products, they like the nations of Latin America were buffeted by terms-of-trade fluctuations. As external debtors, they too suffered reinforcing commodity-and capital-market shocks. Yet Australia, New Zealand, and Canada maintained almost perfect exchange-rate stability and continuous gold convertibility from 1870 through 1914, as did India after silver convertibility was abandoned and the rupee was pegged to sterling in 1898.

Political factors surely contributed to this singular success. Political stability and the prominence in government of British civil servants or expatriates, whether associated with formal colonial status or not, reassured British investors contemplating the purchase of overseas securities. Capital flowed more freely than to Latin America and was not interrupted by financial crises associated with political revolution. Social homogeneity suppressed the distributional conflicts associated with exchange rate policy in Latin America. In India, which underwent silver inflation until 1898, this was less the case. Even so, political stability in conjunction with a British budgetary orthodoxy that led the administration to faithfully run balanced budgets facilitated the maintenance of stable parities.

Like the United States, neither Australia nor New Zealand possessed a central bank. But unlike the United States, both possessed banking systems whose operations helped to maintain gold convertibility.[100] One might think that, in the absence of central bank intervention, balance-of-payments adjustment could occur only through substantial gold flows, as in the United States. In fact, gold flows were negligible. In the

case of New Zealand, between 1860 and 1913 gold flowed out on only two occasions, despite the major terms-of-trade disturbances to which the economy was subjected.[101] Banks in New Zealand were required to hold gold reserves amounting to one-third of their note issue, which was convertible upon demand. In practice, they held substantial excess gold reserves. In addition, they held bank deposits, money on call, and bills receivable in London for effecting international settlements. If they wished to purchase British goods, New Zealand importers wrote drafts on domestic banks, which debited their accounts. The banks settled the outstanding drafts by paying British exporters out of their London balances. The transaction reduced both deposits in London and money supply (the sum of currency (p.62) plus deposits) in New Zealand. Since deposits in London declined, so did foreign reserves.[102]

By itself this mechanism might be expected to alter absorption, of both imports and other goods, eventually restoring external balance. But the process worked slowly and unless additional steps were taken might have exhausted the banks' London balances. The critical step was the contraction of domestic loans and investments. The banks restricted domestic credit when their London balances fell.[103] This was not merely a one-for-one reduction of loans and investments to match the decline in deposits but a multiple contraction. The banks not only decreased their money market investments in London by the decline in their balances but in addition reduced their domestic loans and investments. In effect, the banks altered domestic credit like a central bank playing by the rules of the game. But unlike a central bank, which would have relied on its discount rate to reduce the demand for credit, banks in New Zealand rationed credit, discriminating against importers in particular. This system was known as the “credit-exchange standard” to distinguish it from the conventional gold standard.[104]

The adjustment mechanism in Canada, another country with no central bank, was a hybrid of its American and Antipodean counterparts. On the one hand, Canada's banking system resembled Australia's and New Zealand's: it was highly concentrated and widely branched, minimizing the incidence

of bank runs and lending elasticity to the currency. On the other hand, Canada resembled the United States in its reliance on capital inflows—in its case from New York as well as London—to satisfy seasonal fluctuations in demands for money and credit.[105]

Jacob Viner provided the classic description of the Canadian balance-of-payments adjustment mechanism. Viner emphasized that the Canadian chartered banks, like those of Australia and New Zealand, held a substantial portion of their reserves as short-term assets in foreign financial centers. A balance of payments surplus naturally augmented the chartered banks' foreign balances. At the same time it increased the liabilities of the banking system by augmenting the domestic deposits of Canadian exporters. The rise in the money stock, according to Viner, put upward pressure on domestic prices and spending and, through the operation of the price-specie-flow mechanism, restored balance-of-payments equilibrium.

A distinguishing feature of the adjustment mechanism in Canada, according to (p.63)

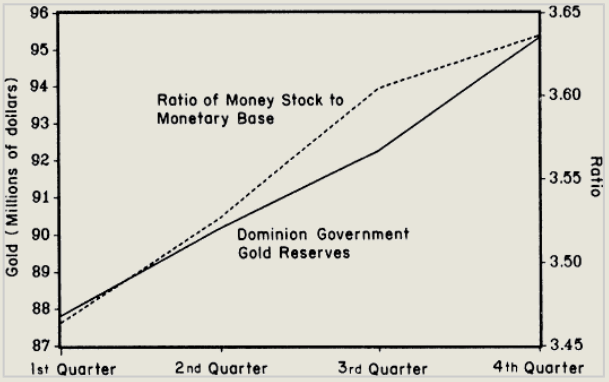


Fig. 2.3. Dominion gold and Canadian money multiplier (quarterly averages, 1901–13).

Gold typically flowed into Canada during the summer and autumn months, reflecting the increased demand for money due to transactions associated with the agricultural harvest. At the same time Canadian banks extended additional loans, raising the ratio of the money stock to the monetary base and obviating the need for further gold inflows.

Source: Rich (1988), *Table* A2.

Viner, was that the chartered banks, when acquiring reserves, did not increase their domestic loans and investments. He characterized this as the critical factor facilitating balance-of-payments adjustment.[106] Comparison with Australia and New Zealand suggests otherwise.[107] In Australia and New Zealand, when the banks acquired foreign balances, they increased loans and advances so as to magnify the impact of the payments imbalance on the money supply and to accelerate the adjustment process. In Canada, according to Viner, they did no such thing.

Recent work by Rich paints a more complicated picture in which both changes in the money multiplier, as in Australia, New Zealand, and Britain, and large-scale gold and capital flows, as in the United States, contributed to adjustment.[108] The one negligible element was changes in the note issue. Although the ability of the chartered banks to issue additional notes when the demand for currency for crop-moving purposes rose in October and November lent greater seasonal elasticity

to the currency than in the United States, there were still only small variations in note issue across the cycle.[109] During the initial stages of a cyclical expansion, the increase (p.64) in the demand for money and credit was satisfied mainly through capital inflows, as in the United States. During subsequent stages of the expansion, the Canadian banking system swung into action, increasing its loans and investments, allowing its reserve ratio to decline, and meeting the increased demand for money out of domestic sources. This had both stabilizing and destabilizing effects. It stabilized the balance of payments, since the Canadian banks, like their counterparts in Australia and New Zealand, mimicked the actions of a central bank playing by the rules of the game, expanding domestic credit by a multiple of the reserve inflow. It destabilized the domestic macroeconomy by accentuating the procyclical movement of the money supply.[110]

Once economic activity peaked, the sequence of events was reversed. The chartered banks reduced loans and investments and raised their reserve ratios, depressing the money multiplier. The supply of broadly defined money declined along with the demand, minimizing reserve losses. Again, this stabilized the balance of payments while destabilizing domestic activity. Output and the demand for money and credit continued their descent even after the banks allowed their speculative investments to run off. The remaining decline in money demand was therefore accomplished through a decline in the base, effected almost entirely by the loss of international reserves.

This Canadian system was much admired abroad. The British praised the elasticity of money and credit around business cycle peaks for relieving Canada of the need to draw additional gold from New York and hence from London, thereby preventing her from destabilizing the international system and adding to the pressure on the Bank of England. In the United States, the seasonal elasticity of Canada's note issue and the absence of bank failures were regarded as virtues to emulate. Suspicious of the problems of monopoly and political influence created by a highly concentrated banking system, U.S. politicians hoped to acquire an elastic currency not through bank mergers or interstate branching

but by establishing a central bank. We can thus understand the movement that culminated in the founding of the Federal Reserve System in 1914 in these terms.

What was inadequately appreciated was that by creating a central bank to provide an elastic currency that responded to changing demands for money not just across seasons but also over the cycle, the same measures that reduced the strains on the international balance of payments might, as in Canada, simultaneously exacerbate the cyclical instability of the domestic economy.[111] A Federal Reserve (p.65) System which, harking back to the problems of seasonal stringency and slack that dominated U.S. monetary affairs prior to World War I, used nominal interest rates to guide the formulation of monetary policy might fail to offset cyclical fluctuations that demanded a very different response.[112] Unfortunately, the Great Depression would be required to drive home this point.

Implications for Interwar Monetary Relations

The leading explanation for the contrast between the stability of the prewar gold standard and the instability of its interwar counterpart is the greater automaticity that ostensibly characterized the prewar system. Yet at no time in the prewar period did central banks mechanically obey rules of the game, automatically restricting credit in response to gold outflows and loosening it in response to inflows. Central banks retained discretion over when and how to intervene, discretion which was integral to the system's operation.

There was no question, however, that at the end of the day the authorities at the center of the system would take whatever steps were necessary to defend gold convertibility. Minimal political opposition to the gold standard, in conjunction with support for the existing distribution of incomes and fiscal burdens, rendered their commitment to its defense fully credible. Given the credibility of that commitment, market participants anticipated government action to support the monetary system. The stabilizing speculation in which they consequently engaged served to lighten the burden of official management.

Ultimately, however, the credibility of the commitment to the system rested on international cooperation. Defense of the gold standard required the collaboration of Britain, France, Germany, Russia, and other countries. International cooperation, already important as early as 1890, became increasingly frequent in the first decade of the twentieth century. Britain played a central role in the organization of these cooperative ventures. Bank rate in London served as a focal point for the harmonization of discount policies internationally; rather than having to consider the level and movement of a myriad of foreign rates, other central banks could simply follow the Bank of England's lead. Britain was the reliable conduit for flows of gold from the Continent to the United States. But in times of crisis, Britain's resources were inadequate. The system had to be defended collectively.

Though central bank cooperation was essential for the stability of the system, its leading member, Britain, could not compel it. What then induced other countries to offer it? In part, decades of experience had familiarized them with its advantages. They recognized, moreover, the pivotal role of sterling in the operation of the international system. Sterling was the linchpin of the prewar network of exchange rates. Its devaluation was sure to trigger a realignment of other currencies, overturning the entire system. Since Britain's prominence in international financial markets permitted her to play a critical coordinating role and exert a stabilizing (p.66) influence in normal periods, it was important for other countries to come to Britain's defense when sterling's own stability was threatened.

It is difficult to say how long these arrangements would have persisted in the absence of World War I. London's position was already eroding in the face of rapid growth abroad and the associated decline in Britain's share of international trade. Global financial assets, international reserves, and international settlements were expanding more rapidly than the resources of the London market and the Bank of England. This rendered foreigners hesitant to concentrate their foreign balances in sterling. Even minor doubts that sterling was as good as gold encouraged them to place some eggs in other baskets. Mounting diplomatic tension in Europe after the turn

of the century, which suggested that the long peace of the nineteenth century was drawing to a close, heightened the risks of concentrating reserves in London. There was real reason to worry about the viability of a system that looked to the Bank of England as the focal point for discount policy and as the proximate source of liquidity for countries lacking central banks and elastic currencies.

Meanwhile, the expansion of the United States economy, whose autumnal demand for gold regularly strained the resources of the Bank of England and required cooperative support operations by the Bank of France, posed a growing challenge. Anglo-French or even Pan-European cooperation no longer sufficed. Solutions to this problem were to moderate the destabilizing impulse imparted by the United States and to endow the United States with the institutional apparatus necessary to help organize cooperative ventures. Both solutions required establishment of an American central bank. Once the Federal Reserve System began operation in 1914, it succeeded in moderating the destabilizing seasonal impulses emanating from the United States. But as the three major interwar recessions would prove, establishment of a central bank did not automatically eliminate cyclical instability. And the peculiar federal structure of the new U.S. central bank, which placed considerable power in the hands of financial interests remote from international economic affairs, created an apparatus singularly unappreciative of the advantages of international cooperation. The implications would become all too apparent following World War I.

Notes:

(1) Gregory (1935), p. 10. Gregory was Cassel Professor of Economics at the University of London.

(2) The term “Great Depression” is used exclusively in this book to denote the slump commencing in 1929, not the deflation starting around 1873.

(3) Eichengreen (1987) provides evidence to this effect.

(4) This mechanism is formally modeled by Krugman (1988). See the discussion of this literature in chapter 1, footnote 5.

(5) See Hume (1752 [1898]).

(6) This stylized account of the price-specie flow mechanism necessarily glosses over important issues, for example, the fact that notes were sometimes issued by private rather than central banks. While complicating the analysis, such nuances would not alter its implications.

(7) See, for example, Cassel (1936), p. 5, and Gayer (1937), p. 44.

(8) Fraser (1933), pp. 24–25. Other countries, notably the Netherlands, also maintained open markets, although the size of those markets was relatively small. Nye (1991) has questioned the freedom of trade in nineteenth-century Britain, noting that tariff revenues were a larger fraction of the value of imports in Britain than in France prior to 1875. But in the period of concern here, from 1880 on, tariff revenue as a fraction of imports was consistently lower for Britain.

(9) Gregory (1935), p. 17.

(10) The famous exchange on this subject is that between Keynes (1929b) and Ohlin (1929).

(11) The technical term for this situation is that the Marshall-Lerner condition for trade balance stability would fail to hold.

(12) Taussig (1928), pp. 239–240.

(13) Fraser (1933), p. 6.

(14) See the *First Interim Report* of the Committee on Currency and Foreign Exchanges After the War, Cmd 9182, 1919.

(15) Ibid., paragraph 4.

(16) The fact that a single change in interest rates induces only a temporary capital inflow is implied by the portfolio-balance approach to balance-of-payments adjustment. Since a change in interest rates brings about a one-time change in desired portfolios, it should induce only a temporary capital flow. For example, if British interest rates rise, foreign

investors wish to increase the share of their portfolios devoted to now more remunerative British assets. Capital flows into Britain until foreign investors have increased the share of their portfolios devoted to British assets, at which point the capital inflow stops. A rigorous statement of this approach with application to the gold standard is Dick and Floyd (1987).

(17) The phrase was apparently first used by Keynes in “The Economic Consequences of Mr. Churchill” (1925, reprinted in Keynes, 1932, p. 259), and gained currency following its repetition by Sir Robert Kindersley, the Director of the Bank of England, before the Macmillan Committee in February 1930. Committee on Finance and Industry (1931), Question 1595, 6 February 1930.

(18) See, for example, Madden and Nadler (1935), p. 3, or Gayer (1937), p. 9.

(19) Nurkse (1944), pp. 68–69.

(20) See Bloomfield (1959). An objection to this comparison of interwar and prewar experience is that the use of annual data masks much of the intervention in which central banks engaged over shorter intervals, and at the same time misses the extent to which over longer horizons they were required to play by the rules of the game in order to stay on the gold standard. See chapter 7.

(21) Walker (1934), p. 199.

(22) Cassel (1936), p. 3.

(23) Sayers (1936), p. 136.

(24) U.S. National Monetary Commission (1910), pp. 215, 357. Moreover, the Bank of France repeatedly employed its option of paying out silver rather than gold and relied almost as heavily as the Reichsbank on moral suasion. See below, pp. 52–54.

(25) Palgrave (1903), *passim*.

(26) Sayers (1936), p. 137.

(27) I suggest below that this emphasis on the role of Bank rate in containing the 1907 crisis was a misreading of the evidence—that in fact international cooperation was key. See pp. 50–52.

(28) See Taussig (1928), White (1933), and Whale (1937). This is the same Harry Dexter White who figures in chapter 13.

(29) The British banking system in fact grew more concentrated between the prewar decades and the 1920s. But while the decline in competitiveness might account for some attenuation in the elasticity of credit supply with respect to changes in demand, it could not have eliminated that elasticity entirely.

(30) Beach (1935), p. 6. See also Cassel (1936). Though the short-term liabilities of the British banking system were still relatively unimportant, international flows of short-term capital, notably those that arose in connection with financing overseas trade, still figured in the gold-standard adjustment mechanism. By adjusting the timing of such commercial transactions in response to financial-market conditions, merchants and their bankers could alter international flows of short-term funds. But there was more scope for such adjustments subsequently when foreign deposits had reached high levels.

(31) Madden and Nadler (1935), p. 3.

(32) The debate over a nonrecurrent wealth tax, or capital levy, in the 1920s and its impact on financial markets is discussed in chapter 6.

(33) Ibid. See also Cassel (1936), p. 5.

(34) This is not to deny that default, by which we mean the periodic suspension of debt service (as opposed to outright repudiation) was widespread in the decades prior to 1913. See the contributions to Eichengreen and Lindert (1989) and the discussion that follows.

(35) These questions did not go unnoticed by contemporaries. They were the subject of a series of dissertations written at

Harvard under the direction of Professors Taussig and Young: White (1933) on France, Beach (1935) on Britain, and Viner (1924) on Canada. American experience was treated by Taussig himself in his 1928 book.

(36) Taussig (1928), p. 261.

(37) Ford (1962), for example, argued that this was the case of British loans to Argentina.

(38) White (1933), p. 144 and *passim*.

(39) Viner (1924), p. 280 and *passim*.

(40) Viner (1924), p. 280, culled a quote to this effect from the *Statist* (21 October 1905), “Canada is borrowing money in London to finance her farmers, and with the capital borrowed in London Canadian farmers are purchasing American machinery, and the capital actually passes into Canada in this form. This means that we have to remit to the United States the capital that we have lent to the Canadian farmer. But the United States do not require to import much English produce. They need silk, however, and this they purchase. And we have now to settle with Japan. Japan takes payment for the silk sold to America in raw cotton from India, and India receives payment for her raw cotton in cotton piece goods from Lancashire. Thus we export capital to Canada by exporting Manchester goods to Bombay.”

(41) Taussig (1928), p. 261.

(42) The seminal contributions were Keynes (1922, 1929b) and Ohlin (1929). See also Anderson (1921), however. Further discussion of their views in the context of the German transfer problem follows in Chapter 5. On the British transfer problem before World War I, see Angell (1926), p. 26; White (1933), pp. 17–18. Some of their arguments had been previewed in the exchange between Taussig (1917) and Wicksell (1918).

(43) On this effect of changes in interest rates in London (known as the “Triffin Effect”), see footnote 60.

(44) Another factor contributing to the regional segmentation and low level of concentration of the British banking system was government regulation limiting the number of partners and, de facto, the extent of capitalization of most British banks.

(45) Williams (1968), p. 268, is the source of the estimate of Britain's share of world trade credit. Britain's share of commodity trade was considerably lower: Maizels (1970) estimates that in 1899 Britain accounted for 35 percent of global exports of manufactures and, pari pasu, a considerably lower share of total trade.

(46) Lindert (1969), p. 12.

(47) Morgan (1952), p. 332, is representative of those who presume that Britain's short-term foreign assets exceeded her short-term foreign liabilities. On problems with the analogy, see Bloomfield (1963), p. 76; Cairncross and Eichengreen (1983), pp. 34–36.

(48) Sayers (1957), p. 17.

(49) There were exceptions to these rules, and country banks were slower than their London counterparts to respond to changes in Bank rate. Still, Bank rate, in the words of Sayers, exerted “a pull” over market rates.

(50) Sayers (1936), p. 70, and *passim*.

(51) Hawtrey (1932), pp. 155, 366.

(52) *The Economist* (23 November 1907, pp. 2022–27; 30 November 1907, pp. 2071–76).

(53) See Mintz (1959) and Ford (1962), pp. 60–62.

(54) This statement contrasts with Kindleberger's characterization of British foreign lending as countercyclical in the pre-1913 period. The basis for my statement is the analysis of Ford (1962), chapter IV, especially Figure 15 and the surrounding discussion (pp. 71–73). Kindleberger's inference may have been drawn from Ford's discussion of the trend behavior of domestic and foreign lending. Analyzing

nine-year moving averages, Ford shows that overseas issues and national income tended to fluctuate inversely. But when one considers deviations from those trends, the measures used by Ford in his discussion of the cycle, the two variables fluctuate sympathetically. The same result emerges from an analysis of rates of change. Using data from Edelstein (1982), Appendix 1, I expressed both net foreign investment and GDP in rate-of-change form, and like Ford computed deviations from moving averages (five-year moving averages in my case). The resulting series appear in Figure 2.1. The correlation between the two variables is positive, but statistically insignificant at standard confidence levels.

(55) Documentation of this regularity may be found in Eichengreen (1983), Table 2 and pp. 158–159.

(56) If British exports were driven mainly by cyclical fluctuations abroad, then a foreign upswing that stimulated overseas demands for British exports should have raised their price and increased their volume, the combination typically observed. If, in contrast, fluctuations in British exports had been driven mainly by shifts in domestic supply, an outward shift in the supply curve, given demand, would have lowered export prices while increasing export volumes, contrary to what occurred. Hence the conclusion that British export fluctuations were driven mainly by events abroad.

(57) Royal Commission on Indian Finance and Currency (1914), Appendix III, pp. 28–29.

(58) Beach (1935), p. 9. These differences in the behavior of the banking system at different stages of the business cycle figure prominently in the discussion of Canada on pp. 62–65.

(59) Again, the essential references are Taussig (1928), White (1933), and Whale (1937). The implications of seasonal swings in the U.S. demand for gold for the stability of the international system will be discussed momentarily.

(60) This response is known as the Triffin Effect, after Triffin (1964). This “Triffin Effect” is to be distinguished from the “Triffin Dilemma” which figures in Chapters 7 and 13,

concerned with the stability of an international monetary system based on both gold and foreign exchange reserves.

(61) In the latter half of the nineteenth century, this ratio sometimes fell below 2 percent. Viner (1951), p. 124.

(62) Sayers (1957), p. 18.

(63) Details are to be found in Wirth (1893) and Pressnell (1968).

(64) *The Economist* (15 November 1890), p. 1437.

(65) Pressnell (1968), p. 199.

(66) Pressnell (1968), p. 201.

(67) The Russians also agreed not to carry out their previous intention of withdrawing their deposits from Barings. Pressnell (1968), pp. 199–200.

(68) Quoted in Elliot (1911), vol. 2, p. 171. On the French gold, see Sayers (1936), p. 103.

(69) In the end, the Bank of England contributed £1 million to the bailout of Barings, private parties the other £3 million (Fulford, 1953, p. 211). But the foreign loans were still essential to the success of the operation insofar as private parties would have been unlikely to participate in the bailout had they lacked confidence in the Bank of England's support for Barings, and the Bank of England would have been unable to stand behind Barings in the absence of foreign support.

(70) Cf. “Commercial History and Review of 1906,” *The Economist*, p. 6.

(71) See Patron (1910), p. 143; White (1933), p. 195; Liesse (1910), p. 230.

(72) Sayers (1976), p. 59.

(73) *The Economist* (15 September 1906), p. 1497.

(74) So stated the Governor of the Bank of France to the assembled shareholders. Bank of France (1907), p. 7.

(75) Bank of France (1907), p. 7.

(76) Cross (1923), p. 217.

(77) Ansiaux (1910), p. 171.

(78) *The Economist* (9 November 1907), p. 1901.

(79) Sayers (1936), pp. 103, 110.

(80) Computed from Beach (1935), p. 146.

(81) Luzzatti's article of November 15, 1907 in the *Neue Freie Presse* of Vienna (pp. 1–2) is cited in Schloss (1958), p. 4. See also Luzzatti (1908) and Patron (1910), pp. 146–148.

(82) Royal Commission on Indian Finance and Currency (1914), Appendix III, p. 97.

(83) International comparisons are difficult, since banking statistics provide information on total net deposits for the United States and United Kingdom but on sight deposits only for France. In 1900, when the ratio of currency in the hands of the public to total net deposits was 0.13 in Britain and 0.23 in the United States, the ratio of currency and coin to sight deposits was 0.70 in France. British and American estimates are from Capie and Webber (1985), p. 76, and Friedman and Schwartz (1963), p. 705, respectively. Components of M1 for France are from Saint Marc (1984), p. 37. Immediately after World War I, sight deposits were roughly half of total deposits in Britain and one-third the total in the United States. Since these shares are likely to overstate the importance of time deposits in the prewar years, they suggest doubling the British figure of 0.13 and increasing the American figure of 0.23 by 50 percent to render them applicable to France. This shows how much less important bank deposits remained in France.

(84) *The Bankers' Magazine* reported in December 1911, p. 794, for example, that during the previous month “no gold was handed across the counter at the Bank of France except on the most urgent demand,” and then the highest sum paid in gold was 300 francs per head. Cited in Keynes (1913), p.21.

(85) *The Economist* (23 November 1907), p.2040.

(86) Details on German trade credit and its development are provided by Wolfe (1910). On the Reichsbank's holding of foreign bills and credits, see Keynes (1913), p.22. On reserve balances in Germany, see Lindert (1969).

(87) See, for example, de Cecco (1984).

(88) My discussion of the gold standard at the periphery is selective. I focus on those countries—the United States, Canada, Argentina, Brazil, Australia, and New Zealand—that figure prominently in my analysis of the Great Depression of the 1930s, since their international monetary experience before 1913 continued to influence their behavior under the interwar gold standard.

(89) After the turn of the century the Treasury began to experiment with management of its deposits at commercial banks as a way of restricting or augmenting credit. But, with negligible exceptions, the Treasury could not issue notes. Nor could it rediscount commercial paper or lend against securities. See Eichengreen (1984a).

(90) Capital inflows responded to the attractiveness of domestic investment, which covaried positively with the productivity of capital in place. Hence the positive correlation between domestic production shocks and capital inflows in the U.S. case. For a discussion of the strains thereby placed on the international system, see de Cecco (1984), pp. 110–117.

(91) Theoretically, adjustment could have also taken place through an increase in the velocity of monetary circulation. But as Bordo and Jonung (1987) demonstrate, the late nineteenth century was in fact a period of declining velocity, as parts of the western European economies previously detached from the monetized sector became increasingly integrated with it.

(92) See above, p. 51.

(93) There were enough inflationary tendencies in the operation of domestic banking systems and national development policies to place upward pressure on prices. “Thus,” writes Subercaseaux (1922, p. 87) of Chile in the

1870s, “the banks were surrounded, on the one hand, by a public which was eager for money and at the same time full of distrust, and on the other hand by a government which was having recourse to its reserves for the covering of its deficits.” Fetter (1931), p. vii and *passim* is the *locus classicus* of the view that inflation was a product of pressures applied by the large landowners. Skeptics include Hirschman (1963) and Fishlow (1987).

(94) Ford (1962), p. 91.

(95) Fishlow (1987), pp. 4–5.

(96) For details, see Williams (1920) and Ford (1956).

(97) See Fritsch (1989).

(98) Fishlow (1986), *passim*, and Randall (1977), vol. 3, p. 141.

(99) See Young (1925a).

(100) This statement refers to the stabilizing activities of the banks, not to the stability of the banking system. As Pope (1989) makes clear, Australia for one had serious problems with bank failures under the classical gold standard.

(101) Simkin (1951), p. 76. The discussion that follows concentrates on the case of New Zealand, which is less complex than that of Australia. Most of the conclusions carry over. See Copland (1925).

(102) An Order-in-Council of 1916 modified banking regulations to allow the banks to count securities held in the United Kingdom as required reserves (Hawke, 1971, p. 49). Before that, these securities served as secondary, or excess, reserves. In addition to holding foreign assets in London, New Zealand banks also had foreign liabilities, namely London deposits of British residents. See footnote 104. Gary Hawke's estimates suggest that the foreign assets first exceeded the foreign liabilities at the beginning of the twentieth century.

(103) Pope (1989) cites sources making clear that this same mechanism operated to stabilize the Australian gold standard.

(104) Simkin (1951) and Hawke (1971) note that the dependence of the New Zealand banks' sterling balances on fluctuations in New Zealand's overseas trade varied over time. Before 1890, the London branches of the New Zealand banks accepted time and demand deposits from British residents. Hence their sterling position depended on this as well as on debits by their New Zealand customers. After 1890 this practice became less common, and the sterling position of the banks fluctuated closely with New Zealand's overseas trade. Australia and New Zealand resorted again to the credit-exchange standard device described in the text starting in 1929. See chapter 8.

(105) See Johnson (1910) and Viner (1924) for surveys of Canadian arrangements.

(106) See Viner (1924, 1937).

(107) Different criticisms of Viner's analysis appear in Dick and Floyd (1987).

(108) See in particular Rich (1988), chapter 3. Rich (1984) provides a short summary of the argument.

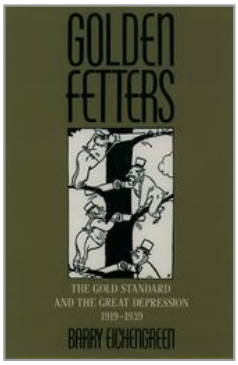
(109) A comparison of the seasonal elasticity of bank note issue in the United States and Canada can be found in Beckhart (1929), p. 376. The cyclical responsiveness of the note issue is documented in Rich (1988), Table 3.3.

(110) The evidence cited here is from Rich (1988), Table 3.6. The statement in the text is similar to the arguments about the destabilizing impact of the Canadian money supply advanced by Rich (1988). Pope (1989) suggests that bank management of the Australian gold standard had a similar tendency to destabilize that economy prior to 1913.

(111) Miron (1986) argues that following its establishment the Fed immediately undertook to moderate seasonal swings in money and credit conditions, and in Miron (1989) he indicts the new institution's preoccupation with stabilizing nominal interest rates for having exacerbated the cyclical instability of the U.S. economy in the 1920s and 1930s. This argument has been challenged by Clark (1986) on the grounds that interest

rate seasonals diminished not only in the United States but in Europe as well starting in 1914. Barsky et al. (1988) suggest that this was due to the response to the new U.S. policy of European central banks wishing to minimize international gold flows. The attitude of central banks to wartime gold flows is discussed in chapter 3.

(112) The Fed's tendency to use nominal interest rates to guide monetary policy in 1930–31 is discussed in chapter 8.



Golden Fetters: The Gold Standard and the Great Depression, 1919-1939
Barry Eichengreen

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The Wartime Transition

Barry Eichengreen (Contributor Webpage)

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Abstract and Keywords

World War I transformed the international economic and political environment. This chapter analyzes the major changes in domestic and international finance and their implications for the economic balance of power. It also describes the changes in domestic political institutions that channeled the pressures felt by policy makers. The six sections of the chapter look at the disintegration of the prewar international monetary system based on the gold standard, domestic finance, foreign finance, trade and competitiveness, domestic political changes, and the implications for postwar international monetary relations.

Keywords: competitiveness, domestic finance, domestic political change, economic balance of power, foreign finance, gold standard, international finance, international monetary relations, international monetary system, political change, trade, World War I

World War I unleashed forces that continued to shape international economic relations for decades. The war destroyed and distorted industrial capacity across Europe while stimulating manufacturing on other continents. In its aftermath national borders were redrawn, altering the structure of national industries and the pattern of trade. Nowhere were its effects more profound than in the international monetary sphere. One can speculate about how long the gold standard system would have persisted in the absence of the war. Whatever the answer, the outbreak of hostilities ended it abruptly.

Four sets of wartime changes had profound implications for the world economy of the 1920s and 1930s: those in the spheres of domestic finance, international finance, commerce, and politics. The imperatives of war finance shattered the prewar fiscal system, inaugurating the contentious debate over taxes and public spending that plagued governments and societies throughout the interwar years. The wholesale liquidation of foreign assets and the accumulation of new foreign liabilities transformed the structure of international finance. International trade was redirected, with European exports declining at the expense of the products of other parts of the world. Finally, domestic politics were restructured by the rise of labor, the extension of the franchise, and the reform of electoral systems. In combination, these changes promised to fundamentally transform the international monetary system and the world economy once peace was restored.

Disintegration of the Prewar System

The preferred international monetary strategy of countries engaged in hostilities was to maintain the appearance of the gold standard even when forced to suspend the reality. The gold content of coins remained officially unchanged even where gold coins could no longer be obtained. Bullion exports were still officially permitted even where government officials placed insurmountable bureaucratic obstacles in their way. Exchange rates were pegged at levels rendered wholly unrealistic by persistent inflation. This policy of maintaining the facade of the gold standard even though the economic and political bases of the institution had been fundamentally

transformed guaranteed that major adjustments would be required after the war.

The international monetary system's wartime transformation mirrored the peculiar strengths and weaknesses that had characterized its peacetime operation. (p.68) Initial pressures resulted not from trade imbalances or changes in relative prices but from shocks to confidence and capital flight. As in peacetime, foreign debtors were least able to protect themselves. The United States, as a debtor, was vulnerable to capital outflows associated with the liquidation of foreign-owned dollar-denominated assets. As soon as war broke out, the dollar declined precipitously against the European currencies. With the passage of time, the liquidation of dollar-denominated assets receded and economic fundamentals reasserted themselves. The United States became the source of matériel for the European war machine. The American trade balance moved into surplus, and the problem for international monetary policymakers became an overly strong dollar instead of a weak one.

Treasuries and central banks attempted to damp these exchange-rate fluctuations, first through gold shipments, then through exchange-market intervention, finally through direct controls. Wartime pressures and the measures governments adopted in response redistributed wholesale the gold, foreign exchange reserves, and foreign investments on which prewar monetary arrangements had been based and transformed the markets in which those assets were traded. More than the two decades that intervened before the next great war would be needed to adapt fully to the new position.

Government officials were painfully aware of the deterioration in political stability in the months leading up to the war. They began liquidating foreign exchange reserves, whose ready convertibility was increasingly dubious. For some years the German Reichsbank had been seeking to build up a war chest of gold. In early 1912 the Bank of France initiated steps to augment its gold reserves. By the spring and summer of 1914 Russia began doing likewise. In the eighteen months preceding the declaration of war, the three countries

increased their gold holdings by some $360 million, largely at the expense of the United States.[1]

Once shots were fired at Sarajevo on June 28, the scramble for liquidity was on. On July 13, panic sales of securities culminated in a crash on the Vienna stock exchange. The sell-off spread to Berlin, Paris, London, and New York.[2] In the week following July 28, when Austria declared war on Serbia, the Berlin, Paris, London, and New York stock markets were closed one after another to protect the solvency of banks that had extended brokers loans and figured the securities as collateral.[3]

In London, pressure centered on the acceptance houses and bill brokers, especially those who had advanced funds to German firms and were now unable to collect.[4] It intensified as the joint-stock banks, anticipating demands for accommodation (p.69) and wary of a possible large-scale withdrawal of deposits, called in loans to the discount market and the stock exchange. The same credit crisis beset intermediaries in other countries. Governments responded by giving debtors additional time to settle their accounts, by state decree in Germany, France, Britain, and Russia, by informal arrangement in the United States.[5] In Britain, the August 4 Bill Moratorium permitted payments to be postponed for a month. In France, withdrawals from bank accounts were limited to 5 percent of the balance.[6] European central banks went to extraordinary lengths to rediscount the paper of banks and bill brokers encountering difficulties. The Bank of England, upon receiving a government guarantee against losses on bills it rediscounted, immediately provided extraordinary rediscounting facilities of more than £30 million.[7] Following a short holiday, British banks reopened without incident. The New York banks, without a lender of last resort to extend assistance (the Federal Reserve banks not being scheduled to come into operation until November), relied instead on clearinghouse cooperation. They pooled their reserves at the clearinghouse, which issued certificates for use in settlements among member banks. The Treasury issued emergency currency.

The shock to the dollar exchange rate was powerful not only because the United States was a net foreign debtor but also because the crisis occurred in summer. The American trade balance typically was in heavy surplus following the harvest and in deficit other times of the year. Ordinarily Britain extended credit over the summer in anticipation of autumnal surpluses. But with the scramble for liquidity, trade credit evaporated, creating a massive excess demand for foreign currency.

After an interlude during which organized trading in foreign currencies was suspended, transactions recommenced, first in Amsterdam and Zurich and then in London. The dollar fell to a 3–4 percent discount against the British pound and the French franc. (See Figure 3.1.) Movements in the sterling-dollar rate normally were limited by the gold points, at which it became profitable to export bullion. But with Britain's declaration of war on Germany, shipping was rendered hazardous and insurance became impossible to obtain. International arbitrage in the gold market no longer insured the same degree of exchange rate stability. Congress appropriated $35 million of gold to be ferried on the cruiser *Tennessee* to American tourists stranded in Europe, but list prices for sterling rose nonetheless from $4.86 to $5.50. Reports cited prices as high as $7.00 and daily fluctuations as large as 30 percent.[8] Despite the hazards, the United States continued to export large amounts of gold, (p.70)

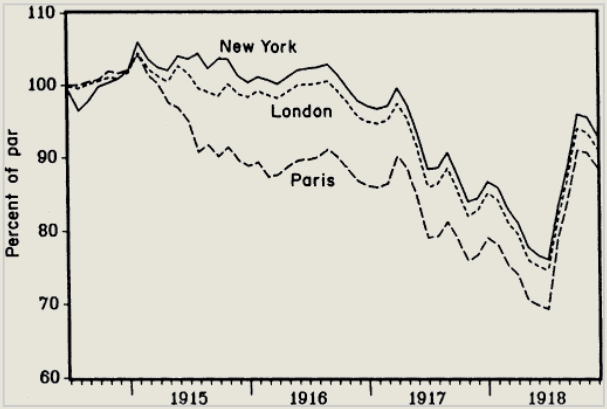


Fig. 3.1. Dollar, pound and franc exchange rates during World War I.

The U.S. dollar fluctuated around its traditional gold standard parity until America entered World War I in 1917. The British pound was pegged to the dollar at a 2 percent discount, while the French franc declined to considerably lower levels.

Source: Federal Reserve Bulletin.

$44 million in October alone. The process accelerated once the Bank of England circumvented the shipping constraint by establishing an account in Ottawa. Between August and November 1914, England's gold reserve nearly tripled. Eventually, shipments of raw materials and manufactured goods overwhelmed these financial flows. The dollar value of U.S. monthly exports tripled between August 1914 and the spring of 1915. As early as December, shipments of American commodities to Europe expanded sufficiently so that the United States enjoyed a small gold inflow. In 1915, the U.S. trade surplus exceeded $1 billion for the first time in history. As the surplus mounted, the dollar rode the crest. The dollar glut gave way to dollar shortage for the duration of the war.[9]

To reassure domestic investors and international markets, governments sought to preserve the gold standard facade. It was straightforward to leave the gold content of coins unchanged. Free melting, coinage, redemption, and export were more problematic. Since gold was a scarce resource of value to the war effort, governments discouraged hoarding by

citizens and export for profit. To reinforce export prohibitions, restrictions were placed on domestic convertibility. Russia and Germany suspended specie payments in the opening week of the war. The Bank of France, which never had been legally obliged to convert notes into gold, provided (p.71) specie only under exceptional circumstances until an official gold export embargo was imposed in the second half of 1915.[10] In September 1914 the U.S. government induced the major New York banks to refrain from shipping gold for profit and to establish a $100 million gold pool for financing balance-of-payments settlements. Though convertibility was officially preserved even after the United States entered the war, appeals to patriotism and bureaucratic impediments rendered the right difficult to exercise.

Aside from in the United States, modifications of the gold standard were least extensive in Britain. The gold content of the sovereign remained unchanged and citizens retained the right to demand gold in return for Bank of England notes. Emergency currency notes issued by H. M. Treasury also were officially convertible. The right to export gold was not legally restricted until May 1917. The only statutory changes in Britain's gold standard were those permitting the authorities to impound gold imports and prohibit melting.[11] Appeals to patriotism, bureaucratic red tape, and the difficulty of obtaining insurance were relied on to discourage conversion and exports except by the most resolute.

Notwithstanding the hazards of transport, gold tended to flow toward neutral countries as their trade balances strengthened and they emerged as safe havens for foreign funds. To minimize domestic inflation and avoid antagonizing the belligerents, they attempted to repel gold inflows, especially those resulting from foreign capital flight. The Netherlands Bank, for example, adopted a policy of not purchasing gold or accepting it for deposit except when deemed in the national interest. The Swedish Riksbank refused to transform gold bullion into coin. Spain reduced its buying prices for foreign coins.[12]

The belligerents saw currency depreciation as a threat to both financial stability and military security. Depreciation raised

the cost of imported supplies and aggravated consumer price inflation. Officials, particularly in countries dependent on imports from the United States, therefore took steps to stem the dollar's rise.

For the Allies, the sterling/dollar rate was key.[13] Pegging sterling to the dollar created a sizeable currency area comprised of the United States, the United Kingdom, and the British Empire and Commonwealth. Since the Allies relied on the United States and the British Empire for the bulk of their supplies, pegging to the dollar insulated import costs from exchange rate fluctuations. This sterling-dollar area also provided a stable core to which other currencies might adhere.

Policies to stabilize exchange rates developed in stages. Initially, governments relied on the conventional gold standard technique of raising the discount rate to attract short-term capital. But with the disruption of discount markets and the tendency for swings in confidence to swamp the impact of discount rates on financial (p.72)

flows, the instrument was rendered ineffectual. There was no choice but to rely on gold shipments. In the first stage of the stabilization process, spanning calendar year 1915, Britain shipped gold to New York from London and Ottawa. But gold shipments were regarded as undesirable even by the gold-importing countries, which feared their inflationary consequences. Hence in September 1915 an Anglo-French delegation was dispatched to the United States to negotiate a $500 million stabilization loan. Enthusiastically absorbed by the American public, the loan was secured by the deposit of U.S. securities owned or borrowed by the British and French Treasuries.[14]

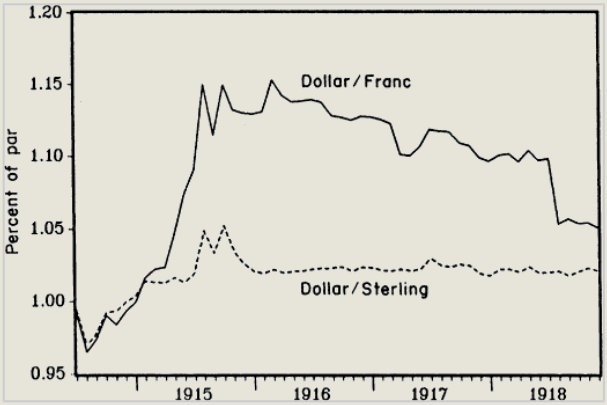


Fig. 3.2. Dollar/sterling and dollar/franc exchange rates during World War I.

The U.S. dollar declined against the British pound and the French franc in the summer of 1914, as the European belligerents liquidated their dollar assets in order to mobilize resources for the war. By early 1915 this period of dollar weakness had given way to a period of dollar strength that persisted for the war's duration.

Source: Federal Reserve Bulletin.

Using the proceeds of the U.S. loan, sterling was pegged to the dollar at a 2 percent discount. On behalf of the British government, J. P. Morgan & Co. purchased sterling exchange at an average rate of $10 million a day.[15] The small discount left little incentive for private gold shipments because of the wartime rise in freight rates and because the British government controlled insurance rates and had no reason to favor gold exporters.[16]

In the second phase of the stabilization process, the French franc was attached (p.73) to sterling and thereby linked indirectly to the dollar. France was more hesitant than Britain to part with gold, given the weight French opinion attached to gold reserves. Gold exports were permitted only when the international financial situation grew perilous. When the franc began to decline precipitously in the spring of 1915, for example, the Bank of France shipped £20 million worth of gold to Britain in return for £42 million in credit to the French Treasury from its British counterpart.[17] The process was repeated and culminated later that year in a pact under which the British and French governments agreed to stabilize the sterling-franc rate. To collateralize British support operations, France provided gold, securities of neutral countries, and French treasury bills.[18] Intervention narrowed the gap between the franc-dollar and sterling-dollar rates, with the franc rising to within percentage points of the pound in the final months of hostilities.

Following U.S. entry into the war, exchange rate policy entered a new phase dominated by direct control. Though many countries, including France, Germany, and Austria, had already imposed exchange restrictions, the United States elevated them to new heights. Regulations of January 1918 effectively prohibited Americans from engaging in foreign exchange transactions and trading securities with foreigners without Federal Reserve Board consent.

To minimize the cost of imported supplies, Germany and Austria also attempted to stem the depreciation of their currencies, although their limited dependence on imports from outside Central Europe placed exchange rate fluctuations in a less urgent light. German exchange control operated more effectively than its Austrian counterpart, although neither country succeeded in preventing its currency from depreciating significantly against the dollar.

All the belligerents, and even the neutrals, suffered persistent inflation during the war. The belligerents simply printed unbacked paper money; the neutrals, in contrast, imported gold in exchange for war matériel and saw the circulation of gold-backed currency rise. Price levels more than doubled in

the United States and Britain, tripled in France, quadrupled in Italy. But due to the exchange market operations just described, European exchange rates against the dollar did not depreciate at rates approaching the excess of European inflation over American inflation. This reduced the prices of U.S. goods relative to those produced in Europe.

The change in relative prices was regarded favorably by the British and the French since it minimized the rise in the cost of imported matériel. By July 1915, British and French real exchange rates (computed using wholesale price indices) had appreciated by 20 percent against the dollar. As U.S. inflation accelerated starting in the summer of 1916 and the cost of American imports rose, British and French real exchange rates gave back some of the ground they had gained. Thereafter, French inflation accelerated without much accompanying movement in the franc-dollar exchange. French and British real exchange rates against the dollar diverged; the British rate weakened, the French strengthened. At the war's conclusion sterling was overvalued against the dollar by perhaps 10 percent, while the franc may have been overvalued by as much as 35 percent (see Figure 3.3). With the termination of support operations, both currencies clearly would have to fall. (p.74)

Domestic Finance

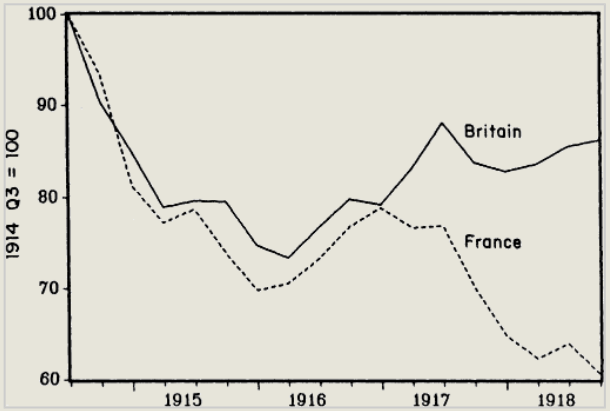


Fig. 3.3. French and British real exchange rates against the U.S., 1914–18 (1914 Q3 = 100).

The sterling/dollar and franc/dollar exchange rates were not allowed to depreciate by the differential between European and American inflation rates. This implied a fall in the prices of French and British goods relative to the (exchange rate adjusted) price of American goods, adding to the competitive difficulties of French and British producers.

Source: Federal Reserve Bulletin.

Reversing these wartime trends would be no easy matter. Restoring prices and exchange rates to 1913 levels required government budget balance and even current surpluses to raise the resources needed to retire the additional money injected into circulation. But the radical changes in tax and expenditure policies required by wartime exigencies destroyed any consensus that might have existed on the question of how this should be done. The need to service the additional domestic debt issued between 1914 and 1918 only increased the fiscal burden.

But these were questions for the future. The immediate problem was war finance. Governments could address it using a range of options. They could raise taxes to finance their current spending and devote the revenues to purchases of domestic goods. To finance still more expenditure, they could

borrow domestically while continuing to spend the revenues on domestic purchases, thus preventing a deterioration in the balance of trade. Limits on their ability to tax and borrow domestically forced them to print money as an additional means of defraying domestic expenses. To import additional supplies, they could run down their gold and foreign exchange reserves. Lacking reserves, they could borrow abroad.

Officials had recourse to little advance planning when picking their way through this thicket. According to the story current in London, the British authorities had done their preparatory work with respect to the Army, the Navy, transport, and (p.75)

Table 3.1. Government Budget Surpluses or Deficits as Shares of Expenditures, 1914–18

	U.K.	France	Germany	Italy	U.S.
1914	−61.3	−54.8	−73.5	−6.1	−0.1
1915	−79.8	−79.4	−94.4	−45.3	−8.4
1916	−75.0	−86.6	−92.7	−64.9	6.7
1917	−76.1	−86.1	−90.8	−69.6	−43.7
1918	−69.2	−80.0	−93.8	−70.2	−71.2

Notes: Negative numbers denote deficits, positive numbers denote surpluses.

Source: Computed from Balderston (1989) for U.K. and Germany, Young (1925b) for France and Italy, and U.S. Department of Commerce (1976) for the United States.

provision and were planning finally to turn to finance when war was declared. No government foresaw how costly the conflict would be. British war planning, for example, was predicated on the assumption that the navy could supply Britannia's allies and blockade her enemies, obviating the need for a large standing army. The German General Staff thought that fighting would be over in two years at most. The belief that the war would be short and cheap led governments to delay raising taxes. Refusing to raise taxes had propaganda value: Germany and France both preferred to refrain from tax increases to demonstrate their financial strength. Mindful of the precedent set by the 1870 Franco-Prussian

conflict, reparations figured in their calculations. Both governments financed the war by borrowing and printing money in the expectation that the enemy would ultimately service the obligations and retire the notes. As Karl Helfferich, the Conservative economist who was German Finance Minister for most of the war, put it, “we have a firm hope that after the conclusion of the peace we shall present our opponents a bill for the expenses of the war forced upon us.”[19]
Thus, “with a strong hand the governments laid hold on the steering wheel of credit.”[20] In the first year of fighting, less than half of central government expenditure in Britain, France and Germany was financed by taxation. (See Table 3.1.) The proportion declined subsequently to still lower levels. Overall, the major belligerents financed less than a third of current expenditure out of taxes.

French efforts to increase tax revenues were particularly feeble. Under the terms of the wartime debt moratorium, urban tenants and tenant farmers if mobilized were exempted from paying rent, reducing the taxable incomes of landlords. Tax collectors were instructed not to prosecute the families of servicemen. The war years were described cynically as a “Golden Age. . . a fabulous time, when neither taxes, nor rents, nor debts were paid, and the end of which was much to be regretted.”[21] By the end of 1914 tax yields had fallen to 60 percent of normal. To bridge the gap, Parliament raised indirect levies, principally customs and excise taxes. But (p.76) indirect taxes were already high, limiting their capacity to raise additional revenue. The war depressed imports of consumer goods, limiting customs receipts. Despite the adoption of a War Profits Tax under the former Socialist Aristide Briand's leadership in July 1916, the share of direct tax revenues in the French total remained steady in the neighborhood of 20 percent. An income tax, voted in 1914, came into effect only in three years later and until 1918 contributed less than 5 percent of government revenues. Not until June 1917 did total tax revenues, excluding customs, recover to prewar levels.[22]

On its face, Germany's fiscal effort was more pathetic still. The Reich financed only 8 percent of its wartime expenditure from taxes.[23] This reflected the distinctively German division of

labor between the central government and states. The 1871 constitution assigned to the states the right to levy direct taxes. As the main recipients of these taxes, the states were heavily responsible for discharging the peacetime functions of government.[24] The elites who controlled decision-making at the state level hesitated, even in wartime, to delegate control over direct taxes to the Reich. Direct tax receipts doubled over the course of the conflict but still played only a minor role in war finance. The Reich was forced to rely almost exclusively on indirect taxes (customs and excise in equal proportion). Customs revenues fell off, especially after the Reich was forced to suspend duties on essential imports, including foodstuffs. The government imposed additional taxes on the Reichsbank, on coal and on railway travel. In 1918 new excises were imposed on beverages and luxury goods. The states ran deficits too, but small ones compared to the central government. When Reich and state spending are consolidated, the deficit as a share of government expenditure falls from 92 to 83 percent.[25]

With an income tax in place and the principle of direct taxation firmly entrenched, Britain was better positioned to increase tax receipts. In Germany the yield of direct taxes doubled over the course of the war; in Britain it quadrupled.[26] Income tax and supertax rates were doubled in November 1914. Between 1913–14 and 1918–19, the normal income tax rate was quintupled. Income taxation was supplemented by a Munitions Levy and an Excess Profits Duty on firms benefiting from exceptional wartime demands.[27] Indirect taxation was not neglected. Duties on beer and tea were raised despite warnings of provoking “turmoil among the labouring classes.”[28] In a departure from Britain's free trade tradition, the government imposed levies on imported vehicles, films, clocks, watches, and musical (p.77) instruments. The share of direct taxation in the British total rose nevertheless from less than 60 percent in 1913–14 to 80 percent in the second half of the war. Although subsequent observers criticized what they saw as the government's budgetary “half-heartedness,” Britain succeeded, in comparison with France and Germany, in financing an impressive share of wartime expenditures with taxation.[29]

The United States traditionally relied on the tariff for federal revenues. But on the eve of the war American industry had secured a reduction in duties on imported raw materials in return for an income tax with rates peaking at 7 percent. A 1 percent tax on corporate profits in excess of $5,000, first levied in 1909, was imposed on all businesses in 1913. With the outbreak of hostilities in Europe, customs revenues fell, and U.S. fiscal authorities, like their British counterparts, turned to direct taxation. They doubled standard rates of income taxation in 1916 and levied surtaxes on incomes over $20,000. Once diplomatic relations with Germany were severed, an excess profits tax was added to the existing tax on corporations and partnerships. The Treasury's rule of thumb was to finance one-third of war expenditures out of taxes, two-thirds out of loans. Personal income surtaxes were raised to levels that peaked at 63 percent, exceeding those in any other country. Profits from capital were taxed at rates ranging up to 60 percent. In 1917, for the first time in U.S. history, income and profit taxes raised more revenue than customs duties.[30]

Each of these national tax policies was faulted. Officials were accused of budgetary half-heartedness—of refusing to administer the bitter medicine of tax increases needed to finance wartime expenditure out of current tax revenues and protect the national finances. Some of this criticism was unjustified. Sound arguments supported the view that the costs of a temporary program of defense spending should be spread out over time and, indeed, shared with future generations.[31] It is still possible to argue that, out of selfishness or expediency, wartime politicians shifted too much of the burden to the future. But the real political fireworks arose not from intergenerational issues but from the controversy over how to distribute the burden among current taxpayers. Whatever strategy officials pursued, it represented a radical departure from the prewar status quo. The war upset understandings regarding the burden of taxes and the distribution of income. Following the armistice, the wealthy demanded that new income taxes be eliminated and that preexisting ones be rolled back to prewar levels; representatives of labor, in contrast, demanded capital levies to eliminate the windfall profits and capital gains reaped by the owners and operators of war-related industries. Any

attempt to restore the prewar fiscal system was complicated by permanent new demands on the government (p.78) finances: a land fit for heroes required the provision of war pensions, medical care, unemployment benefits, and housing subsidies. Additional revenues had to be found. The question was whether they should be raised along prewar lines or through the retention of wartime expedients. This was the single most contentious issue postwar governments would face.

Governments unable to agree on an adequate program of taxation were forced to turn to debt issue. Of the major belligerents, Britain and the United States were the most successful at financing wartime budget deficits with long-term loans. Until 1917 the British government relied mainly on the flotation of three large long-term loans, tiding itself over as the proceeds trickled in by issuing treasury bills and obtaining advances from the Bank of England. The first loan was subscribed by large financial institutions and 100,000 wealthy investors. Placement of the second loan required mobilizing the savings of more than a million subscribers, including many of modest means. Thereafter, the Exchequer made use of every device available to tap domestic savings. It issued war bonds continuously, for example, rather than offering loans for a fixed subscription period.

In the United States, extensive publicity promoted the absorption of Liberty Loans. “Millions of individuals who had never clipped a coupon or owned a share of stock,” one observer recounted, “now became ‘investment-minded’ for the first time in their lives.”[32] Treasury Secretary William G. McAdoo met his fluctuating financial needs with an elegantly orchestrated borrowing campaign. The Treasury sold Certificates of Indebtedness to the 12 federal reserve banks that acted as the Treasury's fiscal agents. The reserve banks were notified in advance of the value of the certificates they were offered and instructed to set aside the funds required for their purchase. They paid for the certificates by crediting the government's account, and resold them to member banks within their districts and to the public. The Certificates of Indebtedness were retired once Liberty Bonds were floated or government receipts rose for other reasons. This technique

operated smoothly, although it was criticized as inflationary on the grounds that no reserves were required against deposits credited to the account of the government.[33]

The French public debt grew at a slower percentage rate but reached a higher level relative to national income. The debt's slow percentage rate of growth, evident in Figure 3.4, reflected the high level from which it started. Much of France's prewar debt originated in the indemnity imposed on France by Germany as victor in the Franco-Prussian War of 1870. France had discharged the obligation by issuing bonds and transferring the principal to Germany. By 1914, the debt burden had risen by another 50 percent as a result of an ambitious public works program (including a nonremunerative system of waterways) and military expenditures to support colonial expansion. Thus, although French public debt grew quickly in absolute terms, treasury bonds and bills issued between 1914 and 1918 were a relatively small fraction of the government's prewar obligations. Still, France emerged from the war with a heavy debt burden. Computing internal debt as a ratio to (p.79)

national product in 1920 yields 1.64 for France, 1.26 for Britain, and 0.27 for the United States.[34] Along with its level, a distinctive feature of French public debt was the high share in the total of short-term liabilities such as treasury bills and national defense bills (*bons de la défense nationale*).[35] Unlike treasury bills and certificates issued in Britain and the United States, these were held mainly by the public, not the banks. France had never developed a domestic bill market on the scale of Britain's. French banks had never held comparable quantities of inland bills. To a considerable extent the credit required by French commerce had been extended by British banks, discount houses, and acceptance houses. With the declaration of war, foreign supplies of credit were interrupted. The French banks, thrust into the breach, extended short-term credit to their domestic customers. With the banks holding their liquid assets in the form of credits to the private sector rather than treasury bills, the government was forced to sell its short-term obligations to the public.

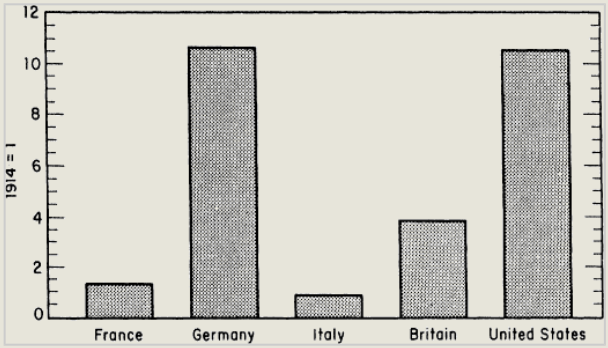


Fig. 3.4. Domestic public debt: Real 1919 debt as a share of real 1914 debt (debt deflated by wholesale price index).

Public debts grew enormously over the course of World War I, by a factor of 10 in Germany and the United States, somewhat more slowly in the other European belligerents.

Source: United Nations (1948).

Germany did not evince the same hesitation to issue long-term debt but had trouble placing it at rates that kept pace with the government's financial needs. The first funding loan, issued in

September 1914, was subscribed by banks, corporations, public insurance funds, and small investors. Additional funding loans followed at six-month intervals but did not obviate the need to issue a rapidly growing (p.80) stock of treasury bills. Even these could not be placed with the public and the banks at yields the government regarded as acceptable. As in France, the volume of transactions in commercial bills was small. But whereas French firms could obtain trade credit, albeit in limited amounts, from London and eventually from New York, German firms could not. They turned in desperation to domestic banks. Not wishing to alienate their customers, the German banking system absorbed inland bills rather than short-term treasury issues.

In principle, much of the Reich's short-term debt could have been sold to the public, as in France. But there was intense pressure to protect industry and commerce from the effects of credit stringency. Government Loan Offices were established to extend credit to small traders, merchants, and others who had been rationed out of the private capital market. To further relax credit constraints, a growing quantity of treasury bills was discounted by the Reichsbank. Until 1917 fully three-quarters of the treasury bill issue was held by the Reichsbank. The supply of currency in circulation grew more rapidly in Germany than in any of the Allied countries. Reichsbank notes in circulation increased by a factor of seven between July 1914 and July 1918. The sum of Reichsbank, Treasury, and Loan Office notes increased by a factor of nine.

Similar methods were employed in France, albeit less extensively. Nine successive statutes adopted between 1914 and 1919 authorized the Bank of France to extend additional advances to the state at an interest rate of 1 percent. Currency was injected into circulation through the purchase of government bonds and national defense bills. Between February 1914 and February 1918, the quantity of francs in circulation quadrupled.

The situation facing the British Treasury was less difficult. Perhaps two thirds of the bill circulation in Britain on the eve of the war took the form of international bills, many of which financed foreign trade that never touched British shores.[36]

With the outbreak of hostilities, these assets suddenly became risky. Banks and other financial institutions reduced their holdings of foreign bills and sought other assets that were both liquid and remunerative. Treasury bills were the obvious candidate.[37] Britain was more successful than most other countries in placing long-term (p.81) debt, but insofar as she also relied on short-term instruments the banking system provided a ready market.[38]

These financing strategies had profound implications for the international financial system. Controls and intervention had been used not only to keep the exchange rate from depreciating to the same extent that domestic prices rose, but also to prevent prices from rising to the same extent as the financial system's liquidity. Optimism that inflation and exchange rate depreciation would be reversed at the war's conclusion helped support this state of affairs. So long as they vested credibility in governments' stated objective of rolling back prices to prewar levels, consumers would remain willing to hold the additional money balances. But if the terms of the postwar settlement upset this optimism, they would attempt to divest themselves of that money, driving up commodity prices. Pent-up inflationary pressure would explode, liquidating at a stroke the authorities' costly investment in stabilizing the exchange rate.

This danger was greatest where governments had sold short-term debt to the public. If confidence was disturbed, the public might refuse to roll over its maturing bills. To repay the principal, the central bank would be forced to transfer cash to the treasury. In France, for example, the sudden refusal of investors to renew short-term public debt which in 1920 amounted to 65 percent of national income could have much more serious inflationary consequences than a budget deficit that at the time, while rightly a subject of concern, was only 13 percent of national income.

This overhang of debts greatly complicated postwar problems of monetary management. Never had governments sought to maintain convertibility while shouldering such a heavy debt burden. The traditional role for fiscal policy and debt management under the gold standard was to insure that

current expenditures did not exceed revenues so that treasury officials would not turn to the central bank for credit. Now officials had to prevent debt-servicing costs from escaping control and threatening the budgetary position. The short-term debt posed the most immediate threat. A disturbance in response to which investors let their maturing treasury bills run off might force governments to print money to repay the principal. The first casualty of the disturbance could be gold convertibility.

Foreign Finance

Neither taxes nor domestic debt and credit enabled countries to run trade deficits as a way of augmenting the resources mobilized for war. But run deficits they did. Of the major belligerents, only the United States failed to run large trade deficits following its entry into the war. (See Table 3.2.) Elsewhere, exports of manufactures and foodstuffs fell sharply as resources were diverted to military uses. Britain and France relied on Canada and the United States for imports of raw materials and manufactures and ran deficits with the British Empire and with countries like Spain (p.82)

Table 3.2. Merchandise Trade Balances During World War I (Trade Surplus as a Percentage of Imports)

	1914	1915	1916	1917	1918
Great Britain	−24.5	−43.2	−36.4	−43.9	−59.6
France	−23.9	−64.3	−69.9	−78.2	−78.8
Italy	−24.9	−46.6	−63.6	−76.6	−79.4
Russia	−12.9	−64.7	−79.1	−76.4[1]	−71.3[1]
Germany	−33.3	−57.7	−53.6	−50.7	−33.8
Austria[2]	−27.8	−64.9	−74.4	na	na
United States	25.8	65.6	129.0	110.2	106.4
Japan	0.1	24.7	40.4	45.9	13.5
Argentina	25.0	90.6	56.5	44.8	60.1
Australia	−4.9[3]	−5.9	−3.7	28.6	30.7

	1914	1915	1916	1917	1918
Brazil	34.5	78.7	40.2	42.2	15.0
Canada	1.1	53.3	39.4	64.5	37.9
Denmark	8.6	−4.8	−5.8	−5.3	−22.0
Netherlands	−13.3	−17.1	−28.5	−15.4	−37.5
Norway	−27.7	−22.0	−27.0	−52.4	−39.7
Spain	−16.2	4.2	7.6	−0.1	61.7
Sweden	6.2	15.1	36.6	77.9	9.5
Switzerland	−19.7	−0.6	2.9	−3.4	−18.2

(1) Figures cover only trade across European borders.

(2) Austro-Hungarian Empire.

(3) Half year only due to switch from calendar to fiscal year accounting.

Source: Computed from Mitchell (1975), except for figures for Germany, courtesy of correspondence with Knut Borchardt.

that provisioned their troops on the Continent. Goods they had obtained from the Central Powers and Scandinavia were drawn increasingly from North America and the Far East. Italy, which traditionally purchased a substantial proportion of her imports from Germany, reoriented her trade toward Britain, Egypt, India, the United States, and Argentina. Germany and Austria were largely cut off from Western Europe and from other markets, although they continued to import foodstuffs and raw materials from the Balkans. Like the other European belligerents, they still managed to run trade deficits for the duration of the war.

Trade deficits were made possible by liquidating foreign assets and borrowing abroad. The first step for European governments was to redeem the foreign security holdings of their residents. Next they mobilized collateral and employed their contacts with American issue houses to sell bonds to American investors. Finally, the Allies obtained credit directly from the U.S. government, which sold dollar-denominated loans to the American public on their behalf.

Initially, European governments attempted to mobilize the security holdings of the public without resorting to compulsion. The Bank of England was instructed to enter the market and purchase the American securities of British residents. Next, British investors unwilling to exchange their dollar securities for Exchequer bonds were requested to loan them to the Government for two years. Ostensibly these would be returned following the war, although the Treasury in fact was empowered (p.83) to sell them.[39] By the end of 1916, it had become clear that this scheme was not evoking the enthusiasm of investors. It was superceded by a plan under which securities were borrowed for five rather than two years and, if sold, were to be replaced with securities of the same character and value or cash in the amount of the deposit, accrued interest, and a 5 percent bonus. These new terms were no more successful in attracting securities in the quantities desired. A surtax placed on the income of securities not presented to the government finally did the trick.

Conflicting estimates exist of the value of foreign securities sold by the British Treasury. An upper bound of £1 billion was provided by the Chancellor of the Exchequer in his 1919 budget speech. The Royal Institute of International Affairs estimated that £251 million of U.S. stocks and bonds plus £34 million of Canadian securities had been sold by the government between 1914 and 1921, while up to twice that amount may have been sold privately. This estimate implies the liquidation of nearly a quarter of Britain's prewar holdings of foreign securities, or the equivalent of 70 percent of British claims on the United States.[40]

Germany used similar methods to mobilize foreign securities. Rather than soliciting securities directly, the Government initially instructed banks to encourage their clients to sell them. Eventually, however, Germany too resorted to compulsion. Liquidating the British securities of German investors was tricky; certificates mailed to Britain from Holland, if thought to be of German ownership, were seized by the British authorities. Selling U.S. securities was more practical until America's entry into the war. Although the British blockade prevented the Central Powers from using their U.S. securities to purchase goods on the American

market, they could still be exchanged in Holland and the Scandinavian countries and used to purchase commodities there.

Starting in June 1915 the French government offered 125 percent of normal dividends and interest for American railway shares deposited for sale or pledge on U.S. markets. But the share of American securities in French portfolios was small. Realizing the value of the Russian, Bulgarian, and Turkish securities that bulked large in French holdings was more difficult. While perhaps 70 percent of dollar securities held by French citizens were liquidated in the course of the war, less than 8 percent of the entire French foreign security portfolio was sold.[41]

How did mobilization of foreign assets by European governments affect foreign holdings of dollar securities overall? L. F. Loree of the Delaware and Hudson Company surveyed all railway lines in the United States at least 100 miles in length concerning the domicile of holders of their securities. He found that the value of American (p.84)

Table 3.3. Dollar Loans of the United States, 1915–19 (Millions of Dollars)

Borrower	Jan. 1, 1915–April 5, 1917	1917–19 (The Liberty Act)
Allies		
France and Britain	2,102	7,157
Russia and Italy	75	1,809
Canada and Australia	405	-[1]
Germany	8	0
European Neutrals	12	344[2]
Other	72	126
Total	2,672	9,436

(1) Included in “Other.”

(2) Greece and Belgium.

Components may not sum to totals because of rounding.

Sources: For column 1. Lewis (1938), p. 355. For column 2, *Combined Annual Reports of the World War Foreign Debt Commission, Fiscal Years 1922–26* (1927) and the *Annual Report of the Secretary of the Treasury* (1920).

railroad securities held abroad, measured at their par value, declined by 60 percent between January 1915 and January 1917.[42] Since railroad securities accounted for the vast majority of American securities held abroad, this figure cannot be too far from the overall average.

Offering these securities as collateral, France, Britain, and their allies floated loans on the American market. (See Table 3.3.) Initially the U.S. State Department discouraged loans to the belligerents as inconsistent with American neutrality. Short-term credits were permitted, however. These were quickly extended by National City Bank to Russia and France and by J. P. Morgan & Co. to France and Britain. With the flotation of a $500 million Anglo-French loan in October 1915, the distinction between short-and long-term loans was dropped. Foreigners overran the New York market. The bulk of their loans ran no more than five years to maturity and were extended to national governments, although some corporate and municipal loans were marketed as well.

Britain and France, with favored access to the American market, passed along loan proceeds to their allies. In the same period that France borrowed $1 billion from the United States and $555 million from Britain, she lent $514 million to other countries. Britain, while borrowing $1 billion from the United States and $329 from other neutrals, lent $3.8 billion to her allies. Thus, even before U.S. entry into the war, wartime lending had considerably strengthened America's international financial position and, while doing less to change Britain's, significantly weakened that of France.

Once America entered the war, advances to foreign governments were extended directly by the U.S. Treasury. Intergovernmental loans were extended at rates of interest comparable to those borne previously by commercial loans. So long as the war continued, accrued interest was added to principal.

(p.85) Britain and France continued to pass on the proceeds of dollar loans to their allies. Having borrowed $4.3 billion from the United States, Britain lent $3.2 billion to her allies. Having borrowed $2.9 billion from the United States and $300 million from other countries, France extended $1.7 billion to her allies. Thus, France emerged from the war owing the United States and the United Kingdom £1 billion but was owed considerably less than this amount by Russia, Italy, Belgium, and Yugoslavia.

Along with the repatriation of U.S. securities formerly held abroad and the accumulation of dollar liabilities by European borrowers, American investors acquired a variety of foreign government securities. In addition to the 1915 Anglo-French loan, American investors purchased $900 million of British securities, $700 million of French securities, and $200 million of other foreign bonds. These obligations were dwarfed, however, by credits extended directly by the U.S. government following America's entry into the war. These amounted to more than three times the value of foreign government securities in the hands of American investors.[43] Together, these transactions transformed the United States from a net foreign debtor to a net foreign creditor. American foreign liabilities were reduced from $7 billion in the summer of 1914 to $4 billion by the end of 1919. America's portfolio of foreign securities grew from $1 billion to $3 billion, while the federal government held foreign public obligations whose value approached $12 billion.[44]

One of the effects of the war with far-reaching consequences for the operation of the international monetary system, then, was the wholesale redistribution of long-term assets and liabilities. Every bit as important, however, was the transformation of the short-term credit position. Not just the distribution of credit and debit balances but the institutional

mechanism through which short-term credits were provided was fundamentally altered. Owing to the difficulty of settling wartime trade imbalances, a large volume of short-term credits was created. The United States, as a processing center for primary commodities, ran trade deficits with Spain, Japan, and Latin America, which thereby accumulated dollar credits in New York. The neutral nations of Europe similarly acquired dollar balances through their provision of shipping and other services. The proceeds of foreign loans were deposited with U.S. banks in anticipation of subsequent purchases of U.S. goods, creating still more credits. According to the Federal Reserve Board, by mid-1919 U.S. short-term indebtedness to foreigners exceeded $1 billion, more than double prewar levels.[45] The United States increasingly resembled prewar Britain as an international financial center, borrowing short and lending long.[46]

(p.86) It is difficult to estimate precisely the change in that position over the course of the war. In 1913 there were perhaps £500 million in bills outstanding in London, of which roughly half were foreign. These were matched by a comparable quantity of short-term deposits overseas. Over the course of the war as much as £50 million in short-term credits to Germany and other enemies had to be written off as a capital loss. These losses were only partially offset by short-term lending to France, Russia, and Japan through the sale of foreign treasury bills in London. Britain's short-term deposits abroad were run down to finance purchases of imports, perhaps by as much as £150 million. Though little confidence can be invested in the precise numbers, the evidence suggests that the gross and net short-term asset position of London declined significantly between 1914 and 1918. Thus, the same forces propelling the rise of the New York market were undermining London's position.

With the supply of foreign credits limited, countries could obtain additional imports only through settlement in gold. They hesitated to do this. A gold reserve was necessary to maintain confidence in the financial system, the authorities believed, more so where the confidence-inspiring gold standard statutes had been suspended for the duration of the war. Appealing to patriotism, governments urged citizens to

deposit any gold they possessed with the authorities. Of wartime experience, contemporaries said that more gold was mined out of the pockets of the people than out of the earth.[47] Nearly $3 billion of gold reserves were added to the vaults of central banks, amounting to 150 percent of the newly mined gold produced between 1914 and 1918.

The concentration of gold in official hands raised the ratio of gold reserves to central bank assets and liabilities, outstripping even the growth of earning assets (see Table 3.4). The only exceptions were the major continental belligerents, France, Belgium, Germany, and Italy, which employed their reserves for balance-of-payments settlements and exchange-market intervention. Much of the gold released by these countries ultimately found its way to the United States, whose vast accumulation (p.87)

Table 3.4. Central Bank Gold and Foreign Exchange Reserves as a Percentage of Assets, 1913 and 1920

	Gold		Foreign Exchange	
Country	1913	1920	1913	1920
United Kingdom	42	84	0	0
France	129	47	na	0
Belgium	26	11	17	0.4
United States	na	64	na	0.3
Italy	90	39	13	2
Germany	55	21	10	8
Netherlands	89	144	11[1]	11
Norway	37	45	34	13
Japan	53	100	36	64
Spain	25	99	10	2
Sweden	32	52	39	17
Switzerland	83	104	19	17

(1) 1914.

na = not applicable.

Numerator includes gold at home and abroad at current prices. Denominator includes all other assets except silver, notes of other banks, premises and sundry accounts.

Source: Constructed from League of Nations (1926).

of specie was one of the most striking international monetary consequences of the war.

The rise in exchange reserves was even more dramatic. Few countries failed to augment their foreign exchange holdings between 1913 and 1918, as Table 3.5 shows. Neutrals that ran trade surpluses accumulated claims denominated in the currencies of their trading partners, who discouraged attempts to convert these balances into gold. The British Empire accumulated sterling balances in London as it was again to do during World War II. Once World War I ended and attempts to run down these balances were no longer viewed as hostile, most countries reduced their exchange reserves. (See the second column of Table 3.5.) But just as the war brought about a permanent rise in the share of monetary gold held in the vaults of central banks, so too it permanently raised the value of global foreign exchange reserves.[48]

Central bank balance sheets provide little information on the domicile or currency denomination of these assets. It is likely that the value of exchange reserves held in both New York and London increased over the course of the war, while there was little if any growth in Paris and Berlin. As inflation on the Continent reached heights not matched in Britain, London balances were rendered increasingly (p.88)

Table 3.5. Change in Foreign Exchange Reserves, 1913–1919 (In Percent)

Country	1913–18	1918–19
Allies		
France	na	−44.5
Belgium	−39.5	−52.6

Country	1913–18	1918–19
Italy	411.2	−47.0
Canada	16.1	17.8
Germany	188.9	105.0
European Neutrals		
Denmark	278.9	−43.8
Netherlands	428.9	−12.7
Norway	92.9	2.9
Spain	−55.2	−31.0
Sweden	31.3	−4.2
Switzerland	88.3	34.3

na = not available.

Source: Computed from League of Nations (1926), Table V.

attractive. Banks in the Dominions naturally tended to accumulate London balances. Thus, while other countries were encouraged to hold foreign exchange reserves in London and New York alike, wartime circumstances provided extra incentive to accumulate balances in London and minimized the accumulation of balances in New York. Once again, following the conclusion of hostilities, further adjustment would be required.

Trade and Competitiveness

To focus on its financial effects is to miss many of the most important economic consequences of the war. Some of these lay in the sphere of international trade. While exceptionally large wartime trade imbalances were temporary, the reorientation of trade was permanent. (See Table 3.6.) Like a river that had jumped its banks, the pattern of trade was not easily restored to its previous bed. Wartime stimulus to industry permanently expanded the export capacity of North America. Wartime shipbuilding permitted U.S. and Canadian goods to be transported to Europe more cheaply in the 1920s. Europe's imports from North America showed little tendency to decline toward 1913 levels following the war's conclusion.

Moreover, with the disruption of European exports to other parts of the globe, the United States moved to fill the void. United States exports to South America rose by more than 75 percent in 1916. Following the war, British firms accustomed to dominating Latin American markets were exposed for the first time to serious North American competition.[49]

(p.89) In Asia the new competition was Japanese. Once European exports were curtailed, Japan constructed paper mills and factories for the manufacture of drugs, paints, and other products for sale on Asian markets. With the decline in European competition, Japan's textile industry expanded its sales to its traditional U.S. and Chinese markets and penetrated Australia for the first time. As early as 1916, small articles previously provided by Austria and Germany to Britain were increasingly supplied by Japanese producers, a trend that the war's conclusion would not easily reverse. The war encouraged Japanese industry to move upstream: as the availability of imported capital equipment declined, Japanese firms began to produce their own. Iron works were constructed. Shipbuilding capacity was expanded. For the first time Japan began exporting the products of these industries. The problems of global overcapacity that plagued the heavy industries in the interwar years can be traced directly to these wartime trends.[50]

Industrial countries like the United States and Japan were quickest to respond to new trading opportunities. This was true of small as well as large economies: Dutch apparel production, for example, expanded by 50 percent over the course of the war, the production of rubber goods by 500 percent. The European neutrals, the United States and Japan, in contrast to the developing countries, had significant amounts of industrial plant and equipment in place. This is not to say that developing countries were unresponsive: the interruption of British textile exports due to the scarcity of shipping space for American cotton stimulated hothouse growth of textile production in India and China, for instance, permanently reducing Lancashire's exports to parts of Asia. But the industrial response of the developing countries was muted. Manufacturing production in Latin America expanded only modestly in response to the wartime reduction in imports.

Some growth of manufacturing occurred in Argentina and Brazil, mainly in sectors like textiles, wool washing, and footwear that relied on indigenous materials, but relatively little elsewhere. Though higher prices meant higher profits and an incentive to expand, industries that relied on imported materials suffered from the interruption of imported supplies. Imported capital goods were even harder to obtain. Capital inflows ground to a halt, choking off industrial growth dependent on foreign funds.[51]

In many regions, the growth of primary production was more important. Exports of grain from Russia and much of Eastern Europe were disrupted, prompting producers elsewhere to take steps to increase production.[52] Canadian acreage under wheat was expanded by some 80 percent over the course of the war. Argentine acreage expanded more modestly owing to the scarcity of shipping space for grain exports. But cheap grain could be used as an input into cattle ranching; meat, with a high ratio of value to volume, was more economical to ship. Argentine meat (p.90)

Table 3.6. Percentage Distribution of Trade by Continental Groups

	U.K.[3]	U.S.A.	France	Germany	India	Canada	Japan	Netherlands	Italy	Belgium	China	Argentina	Australia
Imports from:													
Europe													
1913	44.3	48.2	53.2	54.0	80.3	28.9	30.7	65.2	65.4	66.0	26.4	78.0	70.8
1920	24.9	23.3	48.3	50.0	67.0	21.4	13.2	63.4	40.1	48.2	20.0	48.7	45.3
1924	36.1[4]	30.4	—	55.6	69.4	25.4	23.7	64.0	—	—	22.1	62.6	55.7
North America[1]													
1913	24.4	8.0	11.4	16.8	2.6	64.3	17.3	11.7	14.7	8.9	6.3	15.2	14.9
1920	36.6	11.7	23.6	28.7	10.1	69.2	38.0	16.0	34.6	19.6	20.4	33.8	26.9
1924	24.2	11.1	—	19.5	6.2	64.2	29.0	12.5	—	—	19.9	23.6	28.3
Caribbean[2]													
1913	1.2	13.8	1.7	0.9	0.0	2.1	0.1	0.2	0.4	0.3	0.0	1.0	0.3
1920	3.0	19.8	2.0	0.4	0.0	4.5	0.1	1.3	0.2	1.0	0.0	4.7	0.2
1924	2.4	16.4	—	1.0	0.0	3.6	0.1	2.2	—	—	0.1	3.8	0.2
South America													
1913	9.0	11.1	9.4	10.3	0.0	1.4	0.4	5.1	7.1	9.8	0.0	3.9	0.3
1920	10.0	14.4	10.5	7.6	0.0	1.6	1.4	8.5	13.3	10.1	0.0	8.2	0.6

	U.K.[3]	U.S.A.	France	Germany	India	Canada	Japan	Netherlands	Italy	Belgium	China	Argentina	Australia
1924	9.3	12.9	—	7.7	0.0	2.5	0.3	9.0	—	—	0.1	7.2	0.2
Africa													
1913	4.9	1.3	8.9	4.6	2.1	0.1	1.0	0.7	2.3	4.3	0.0	0.4	0.5
1920	7.2	2.9	6.4	2.2	1.6	0.1	3.8	0.8	2.4	2.5	0.0	1.4	1.3
1924	7.5	2.0	—	4.1	3.9	0.2	0.9	2.1	—	—	0.0	0.6	0.9
Asia													
1913	9.6	15.7	11.8	10.3	14.5	2.5	48.4	16.8	9.1	6.6	67.2	1.3	8.8
1920	11.1	24.3	6.6	10.6	21.0	2.6	40.8	9.9	7.5	5.8	59.5	3.2	21.4
1924	12.0	25.8	—	9.2	20.0	3.5	40.8	9.8	—	—	57.1	2.2	11.6
Oceania													
1913	6.6	1.9	3.6	3.1	0.5	0.7	2.1	0.3	1.0	4.1	0.1	0.2	4.4
1920	7.2	3.6	2.6	0.5	0.3	0.6	2.7	0.1	1.9	2.8	0.1	0.0	4.3
1924	8.5	1.4	—	2.9	0.5	0.6	5.2	0.4	—	—	0.7	0.0	3.1
Exports to:													
Europe													
1913	34.6	60.4	69.7	75.0	57.9	54.6	23.6	88.0	63.7	83.5	25.6	62.9	77.6
1920	37.0	54.3	67.5	81.9	39.8	43.3	10.0	71.8	71.8	85.6	18.3	53.8	65.1

	U.K.[3]	U.S.A.	France	Germany	India	Canada	Japan	Netherlands	Italy	Belgium	China	Argentina	Australia
1924	42.0[4]	53.2	—	72.5	50.9	47.9	9.7	78.4	—	—	18.0	60.1	66.0
North America[1]													
1913	10.3	16.5	6.6	7.7	9.5	39.0	30.1	4.5	11.1	3.4	9.2	4.7	3.6
1920	9.1	12.0	8.9	6.4	15.1	47.2	30.1	5.3	8.1	4.0	12.6	14.8	7.6
1924	11.9	13.9	—	8.1	9.5	40.5	42.1	8.7	—	—	13.4	7.2	6.2
Caribbean[2]													
1913	1.8	7.7	1.4	1.1	0.4	1.7	0.1	0.1	0.6	0.5	0.0	0.3	0.0
1920	1.8	11.4	1.2	1.2	0.9	1.9	0.3	0.8	0.5	0.4	0.0	0.2	0.0
1924	1.6	9.9	—	1.5	1.3	2.3	0.2	0.8	—	—	0.0	0.4	0.0
South America													
1913	9.5	5.9	5.9	6.6	2.0	0.9	0.2	0.5	11.6	5.1	0.0	7.3	1.1
1920	7.5	7.6	4.5	5.4	3.5	1.5	2.0	2.0	8.4	3.1	0.1	5.0	0.2
1924	6.6	6.9	—	7.4	2.2	1.9	1.0	1.3	—	—	0.1	4.8	0.1
Africa													
1913	9.8	1.1	13.3	2.1	2.8	1.0	0.3	1.1	7.1	2.5	0.0	0.0	3.7
1920	11.7	2.0	15.4	0.8	3.6	1.6	2.2	2.0	5.9	2.9	0.0	0.5	4.2
1924	8.7	1.5	—	2.2	5.8	1.1	2.3	2.2	—	—	0.0	0.3	3.8

	U.K.[3]	U.S.A.	France	Germany	India	Canada	Japan	Netherlands	Italy	Belgium	China	Argentina	Australia
							Asia						
1913	25.2	5.1	2.7	6.4	25.4	1.2	43.7	5.7	5.4	4.2	65.1	0.1	9.3
1920	26.1	9.4	2.3	4.3	34.2	1.9	51.3	17.8	4.9	3.6	68.7	0.2	15.8
1924	19.7	11.2	—	7.8	28.2	3.7	41.9	8.2	—	—	68.4	0.4	18.2
							Oceania						
1913	8.8	3.3	0.4	1.1	2.0	1.6	2.0	0.1	0.5	0.8	0.1	0.0	4.7
1920	6.8	3.3	0.2	0.0	2.9	2.6	4.1	0.3	0.4	0.4	0.3	0.0	7.1
1924	9.5	3.4	—	0.5	2.1	2.6	2.8	0.4	—	—	0.1	0.0	5.7

(1) U.S.A. northwards, inclusive.

(2) Continent from Panama to Mexico, both inclusive, plus West Indies.

(3) 1923 and 1924, General trade.

(4) Includes Irish Free State: 1923 (9 months), 3.5; 1924, 5.7.

Source: League of Nations, *Memorandum on Balance of Payments and Foreign Trade Balances 1910–1924* (Geneva, 1925), p. 113.

(p.91) (p.92) exports rose by more than 75 percent between 1913 and 1918. Producers as far flung as New Zealand similarly increased their production of meat and dairy products. But the single most important supplier of primary products to the European belligerents was the United States. The value of U.S. exports of wheat and flour more than tripled between 1913 and 1918. American meat exports rose by a factor of 10.[53]
Having invested in additional capacity, agricultural producers hesitated to retire it following the war. The persistent decline in the prices of primary commodities that bedeviled the agricultural sector throughout the 1920s reflected this wartime expansion of supply. As commodity prices fell and agricultural mortgages became increasingly difficult to service, farmers moved into the vanguard of those who criticized the gold standard as an engine of deflation.

Together, trends in agriculture and industry greatly stimulated exports from the non-European world. Between 1913 and 1928, exports from continents other than Europe doubled. To pay for this growing volume of commodity imports from the rest of the world, Europe had to expand its own exports. It could do so eventually by augmenting its productive capacity. But the devastated European economies were poorly situated to devote a substantial fraction of current income to investment in the immediate aftermath of the war. The transition would be eased if capital equipment could be imported from the United States and if U.S. loans would be made available to finance European deficits in the interim. Stability would require that the United States play an unprecedented role in the pattern of international settlements.

Domestic Political Changes

World War I transformed European politics, if not beyond recognition, then at least to a remarkable extent. When fighting erupted, there were doubts about whether the working classes would enthusiastically support a conflict pitting rival capitalist economies against one another. The Second International, it was feared, might provide an effective vehicle for opposition to conscription. Workers could hardly be expected to leap to the defense of a system in which they had little voice. Throughout Europe, therefore, the franchise was greatly extended during and immediately following the war.

Women were enfranchised in Austria, Czechoslovakia, Denmark, England, Finland, Germany, the Netherlands, Norway, Poland, and Sweden. Property and wealth tests were relaxed or eliminated. Most notably in the Austro-Hungarian successor states, but elsewhere as well, parliaments long dominated by large industrialists and estate owners were for the first time opened to the working classes on a significant scale.

A corollary of these developments was the rise of labor and socialist parties. In Britain, for example, the Labour Party increased its tally from 3 70,000 in the 1911 election to more than 2 million in 1918. The tug of war between manufacturers and rentiers that had long dominated European parliaments and elections acquired an overlay of conflict between employers and employees.

(p.93) A second political lesson drawn from the war, an event frequently attributed to the suppression of nationalities, was the need to protect minority rights. The obvious mechanism was proportional representation electoral systems, in which to win parliamentary seats it was unnecessary for a group to receive a plurality in any one constituency.[54] In the postwar ideological climate, democracy and proportional representation were frequently regarded as interchangeable. Germany, France, Belgium, Italy, Norway, Finland, Poland, Latvia, Estonia, and Czechoslovakia all adopted the device to some extent.[55]

This electoral reform profoundly impacted party politics. In single-ballot, single-member plurality-based systems (popularly known as “first-past-the-post” electoral systems), only one representative is elected from each district. A party finishing second or third in many districts may end up with no legislative voice. The most popular party tends to be rewarded with a disproportionate number of seats, the least popular with a share of legislative seats smaller than its proportion of the popular vote. This leads to a consolidation of party politics into a two-party system.

An example can help illustrate the mechanism. Imagine that initially, for whatever reason, the vote is split among three

parties. For simplicity, assume that the proportion of the vote garnered by each party is the same in each electoral district. The third party, receiving no representation, has an incentive to fuse with one of its larger rivals. Otherwise its electors, finding themselves unrepresented, will desert it for whichever of its larger rivals better represents their interests, thereby also restoring a two party system. This is the conventional explanation for the dominance of two-party systems under majority representation. It is used, for example, to account for the rapid decline of the British Liberal Party in response to the Labour Party's rise in the 1920s.[56]

(p.94) In contrast, under multi-member proportional representation, six or more members are elected per district and the allocation of seats in proportion to the vote gives legislative voice to smaller parties. Proportionality, by making it easier for smaller parties to compete, thereby encourages the proliferation of political parties.[57] As parties become more numerous, they stake out increasingly disperse positions along the political spectrum.[58] Minority and coalition governments become increasingly prevalent.

The question is what implications this has for policy. Previous authors have offered conflicting generalizations. On the one hand, it is argued, proportional representation increases the likelihood of political instability and policy deadlock by vesting a large number of interest groups with the power to bring down a coalition or minority government if it attempts to pursue a policy inconsistent with a group's interests. On the other, proportional representation is alleged to enhance political stability by encouraging compromise by parties that wish to avoid the costs of toppling the government.[59]

Neither statement is likely to apply universally. The effects of proportional representation depend on the circumstances. True, the proliferation of parties characteristic of proportional representation systems generally increases the difficulty of holding together a governing coalition. The transactions costs associated with negotiations needed to prevent a coalition partner's defection increase with the number of coalition members.[60] But the benefits of defection, from the viewpoint of the partners, must be balanced against the costs of

shattering the coalition. Those benefits depend on dispersion of political preferences. When the stakes are high, in the sense that alternative policies will have dramatic effects on the relative welfare of different interest groups, the benefits of blocking the adoption of an undesirable policy will, from the perspective of the adversely affected party, dominate the costs (p.95) of bringing down the government, of forcing a new election and of aggravating the climate of political instability. When the stakes are low, in contrast, the costs attached to bringing down the government will provide an effective inducement to compromise and stability. In the first set of circumstances proportional representation will be associated with governmental instability and policy deadlock, in the second with stable coalitions and compromise. The effects of proportional representation thus will depend on the degree of cleavage conflict.[61]

In the 1920s, the stakes were high (cleavage conflict was considerable) since governments were engaged in decisions with profound implications for the distribution of incomes. Coalition partners were willing to bring down governments, repeatedly if necessary, to prevent the adoption of policies that would work to their distributional disadvantage. Such a system was ideal for perpetuating the status quo. But when what was required was support for a significant change in policy, such as tax increases or public expenditure reductions in preparation for a return to gold, proportional representation represented a serious barrier to action.[62]

Belgium, Germany, Italy, France, and Poland, all laboring under variants of proportional representation, consequently found it difficult to form stable governments and complete the process of fiscal stabilization required to restore the gold standard.[63] Sometimes the deadlock threatened democracy itself. In Italy, economic stabilization was completed only after Mussolini assumed dictatorial powers. In Poland the period of governmental and financial instability was brought to an end in 1926 when General Pilsudski's coup d'etat imposed a regime that effectively usurped the powers of parliament. In Germany, France, and Belgium, stabilization was accomplished without toppling the political system, but only

after financial instability had reached intolerable heights and the costs of inaction reached prohibitive levels.

The Scandinavian countries, the Netherlands and Czechoslovakia, which also adopted forms of proportional representation, did not experience the same debilitating effects.[64] In none of these countries did parliamentary instability provoke an inflationary crisis. Several factors contributed to the different outcome. Most important, as neutrals in the war, the Netherlands and the Scandinavian countries had not suffered such severe fiscal dislocations. Their current and prewar fiscal systems did not differ as dramatically as those of the belligerents; hence their parliaments were not confronted with demands for dramatic changes in current fiscal (p.96) arrangements to restore the prewar situation. Since the economic stakes were lower than in France, Belgium, Italy, or Poland, the costs associated with bringing down the government provided an effective inducement to compromise.

Sweden in the 1920s illustrates the situation in these countries.[65] Sweden had adopted proportional representation in 1909, but a 1921 electoral reform had established larger electoral districts, heightening the extent of proportionality. As a result, representation in the Riksdag was divided between four major parties, which jointly polled more than 90 percent of the vote. Since the vote was split fairly evenly between them, no single party could govern without the support of another. The Liberal Party held the balance between the Socialists on the Left and the Conservatives and Agrarians on the Right. The principal concern of the Conservatives was to strengthen the national defense, that of the Socialists to strengthen social services. The Liberals steered a middle course between these extremes, insisting that both the Socialists and Conservatives restrain their desire to increase spending on defense and social programs. Needing Liberal support, none of the succession of Socialist and Conservative minorities that governed in the 1920s was able to engineer a drastic change in the composition of public spending. And significantly, neither the Socialists nor the Conservatives insisted on a radical change in property rights. There was no need for a dramatic increase in tax revenues to eliminate an

existing budget deficit or to fund greatly increased public spending. The fiscal status quo ante had not been challenged to the same extent as in the nations actively involved in the war. Retaining the existing fiscal system did not threaten to provoke a crisis. And the Swedish system of proportional representation seemed ideally designed to preserve the status quo. As one observer of Swedish politics put it, “It is, of course, clear that a parliament so divided as is the Swedish Riksdag can operate negatively more easily than positively.”[66]

In addition, where distributional issues did not dominate political debate to the exclusion of other issues, it was possible to trade off decisions with prominent distributional implications against policies in other areas. The experience of the Netherlands and Czechoslovakia illustrates the point.[67] The danger of an economic policy deadlock in these countries was diminished by the fact that religious and ethnic issues were perceived as every bit as pressing as economic questions. Hence parties were not formed purely along economic lines. In Holland, where proportional representation was adopted in 1917, three of the five major parties were religious, representing Catholics and Protestants (with the Calvinist vote split between two parties).[68] Given that cleavages did not run exclusively along economic lines, it was possible to trade off economic against religious issues. This facilitated the formation (p.97) of stable coalitions of economic and religious parties.[69] In Czechoslovakia, two of the major parties represented Czechs and Slovaks, respectively, while others represented economic interest groups.[70]

Cross-cutting economic and ethnic or religious cleavages were no guarantee of governmental stability, as the experiences of France and Germany illustrated. Due to the severity of wartime disruptions of the status quo and the superimposition of a second distributional dispute over German reparations, the conflict over distribution was exceptionally intense and continued to dominate other issues. Still, in the presence of cross-cutting cleavages, governments were more likely to be stable. Policy deadlocks were more easily broken. Inflation was more easily halted, facilitating the return to gold.

Implications for International Monetary Relations

Returning to gold would not be an easy matter, for the international economic environment in which the gold standard functioned had been fundamentally transformed by the war. The most basic change concerned the relative position of the leading national participants. As early as October 1917, the British financial journalist Hartley Withers wondered aloud, “Will the prestige of the London money market be maintained when the war is over?”[71] Withers had in mind that New York might eclipse London as the leading source of financial services. But the question also had far-reaching implications for the operation of the international monetary system as a whole. London occupied a special position in the operation of the prewar system. It had served as an attractive repository for foreign funds, encouraging foreign central banks to supplement gold reserves with foreign exchange. Britain's willingness to release gold to countries like the United States possessing less elastic currencies had moderated stresses on the gold standard system. Sterling's status as the linchpin of the network of fixed parities made it the focal point for the harmonization of monetary policies. In normal times, those policies could be coordinated simply by having other countries follow the leader, namely the Bank of England. In times of crisis, threats to sterling signalled the need for international cooperation.

The war undermined the basis for these relationships and reinforced New York's challenge to London. It transformed the United States from a debtor to a creditor nation. It concentrated a disproportionate share of global gold reserves in American hands. American banks, for the first time, became serious competitors internationally in the business of international finance. As early as 1917, Withers (p.98) and other observers recognized that America's dependence on Britain for trade credit would be reduced if not eliminated following the war, and that the growth of the New York acceptance market, in conjunction with wartime trends in international trade and finance, threatened to divert to New York financial business previously conducted in London.

American banks had begun to branch abroad in order to compete with London in underwriting long-term loans.[72] The creation of the Federal Reserve System lent new flexibility to the American financial system, damping seasonal swings between stringency and slack and providing the authorities with new levers for intervention.[73]

While acknowledging that London had suffered wartime dislocations, Withers cautioned that the disruptions suffered by France, Germany, and Russia had been greater still. Russia was to withdraw from the international financial community following the Bolshevik Revolution and Soviet repudiation of Czarist debt. The prospects of Paris and Berlin were obscured by the reparations question. Until it was established that France would receive reparations from Germany, the war debts she owed Britain and the United States in conjunction with Russia's repudiation of Czarist debts to France had transformed Paris's financial position from strength to weakness. There was little doubt that Germany's foreign investments faced liquidation. But the amount of her reparations obligation, while known to be substantial, remained uncertain. Postwar reconstruction would be costly, leading to large and persistent government budget deficits, with uncertain implications for the foreign exchanges. Not only did these uncertainties minimize the foreign resources the Continental financial powers could draw on, but they discouraged the deposit of foreign exchange reserves in Paris and Berlin.

These uncertainties heightened the importance of credibility for the operation of the reconstructed gold standard system. When domestic markets were disturbed, governments could not afford to let investors doubt that the steps required to defend convertibility would be taken with dispatch. More than ever, credibility hinged on international collaboration among governments and central banks—the harmonization of monetary policies in normal periods, the pooling of reserves in times of crisis. During the war, the British, French, and U.S. governments had engaged in extensive and regular international financial cooperation. Germany had not been party to these consultations, of course. Now the web of reparations and war debts, by souring international relations,

posed a threat to further collaboration. The change in the distribution of financial resources also implied a greatly expanded role for the United States in these arrangements. The restoration and smooth operation of the gold standard system required that policymakers acknowledge the change in circumstances and adapt accordingly.

Lamentably, European observers spoke not of adapting to changed circumstances but of restoring the prewar order. “What we have to do in order to secure London's position after the war,” wrote Withers in 1917, “is to restore as soon as (p.99) we can the system that had established it in the century before the war.”[74] Equally revealing is what American experts recommended in order for the United States to secure the ground it had gained during the war. The United States had to “learn to think internationally, not provincially.” It had to acknowledge its responsibility for the operation of the international economy and its monetary system. “Time will show,” the same American authors observed, “whether we are sufficiently developed for that.”[75]

Notes:

(1) Anderson (1919), p. 6. See also chapter 2, pp. 53–54.

(2) Between June 28th and July 28, the prices of American industrial and railway shares fell by 15 percent. Anderson (1919), p. 148.

(3) Limited trading continued in Paris until the French government decided to evacuate the city at the beginning of September. By suspending trading, it is argued, governments permitted domestic banks to value securities at pre-crisis prices and thereby maintain their solvency. Keynes (1914) offered a different interpretation, suggesting that the stock exchanges were closed not to protect the banks but that the banks were closed to protect the stock market. In his view, the suspension of trading prevented the banks from forcing customers to put up additional margins and selling shares, thereby further depressing stock prices and creating havoc on the stock market.

(4) It was also impossible to forward bills to Russia for payment, while ability to collect payments from other European countries and North America hinged on the vagaries of postal service. In addition, French banks sometimes refused to attend to the collection of bills due to staff shortages. Lawson (1915), p. 37.

(5) Argentina, Austria, Belgium, Brazil, Egypt, Greece, Norway, Peru, Portugal, Romania, Sweden, and Switzerland were other countries adopting moratoria. Brown (1940), p. 15.

(6) The 5 percent rule applied to depositors with more than 250 francs in their accounts. Withdrawals from savings banks were limited to 100 francs a month. Dulles (1929), pp. 86–87. In Britain, the Bill Moratorium actually permitted debtors to delay repayment for a month from the contractual date or until September 4, whichever came later.

(7) This represented as much as a third of the amount normally lent by the joint stock banks to the bill brokers, and somewhat less than 10 percent of the bills outstanding on the eve of the war. By November 27 the total had risen to £120 million. Kirkaldy (1921), pp. 3, 10.

(8) Bogart (1921), p. 56. The amplitude of these fluctuations and the very fact that Congress had to ferry foreign exchange to U.S. tourists who could not purchase it at any price is one indication that for some time exchange rate quotations remained largely nominal—that few transactions actually took place at those prices. See Lawson (1915), chapter 2.

(9) In contrast, the exchange rates of the neutrals remained strong. The Spanish peseta appreciated against the dollar as the Allies turned to Iberia to supply their armies on the Continent. The Swedish krone rose once the blockade of the Central Powers was tightened, reducing Swedish imports from Central Europe, and as Swedish shipping revenues soared.

(10) See chapter 2, pp. 52–53.

(11) Gold exports were prohibited by proclamation on May 10, 1918, under authority of the Customs and Inland Revenue Act. This proclamation was succeeded by Orders in Council on

April 1, 1919, and November 26, 1920, and continued through December 31, 1925, by the Gold and Silver (Export Control, Etc.) Act, 1920. Brown (1940), p. 31, regards only the 1919 and 1920 prohibitions as definite breaks with gold standard institutions.

(12) Brown (1940), pp. 33–34.

(13) Brown (1940), pp. 54–55.

(14) Grady (1927), pp. 130–131. More information is provided below on governments' efforts to mobilize foreign securities.

(15) Anderson (1919), p. 16.

(16) Harris (1931), p. 247; McVey (1918), pp. 23–24. Exporters were required to pay a premium over standard rates no greater than 5 percent but no less than 1 percent, while vessels were required to take orders from the government on routes, calls, and stoppages.

(17) For details, see Decamps (1922), pp. 309–310.

(18) Brown (1940), p. 62.

(19) Cited in Bogart (1921), p. 186.

(20) Birck (1927), p. 226.

(21) Gide (1919), p. 129.

(22) See Charbonnet (1922); Fisk (1922), pp. 29–31; Flora (1983), p. 300; Peel (1925), p. 101; Germain-Martin (1936), parts 3–4.

(23) Table 3.1 follows Balderston (1989) in eliminating from current revenue tax obligations discharged through the purchase of government debt, and in raising the estimate of expenditure for 1918/19 from the published figure to the reported increase in Reich debt outstanding over the period.

(24) For details, see Holtfrerich (1986b), pp. 109–110 and Witt (1987), *passim*.

(25) Balderston (1989), p. 225.

(26) Balderston (1989), p. 230.

(27) Under the Excess Profits Duty, first 50 percent and, starting in 1917, 80 percent of profits in excess of a prewar standard were garnished, yielding approximately a quarter of total tax revenue between 1914 and 1920. See Grady (1927) and Hicks, Hicks, and Rostas (1941).

(28) Stamp (1932), p. 29.

(29) Morgan (1952), p. 94; see also Balderston (1989).

(30) Bogart (1921), p. 295; Gilbert (1970), Chapter 5. The policy of one-third taxes, two-thirds loans is articulated in the *Annual Report* of the Secretary of the Treasury for 1918, pp. 47–49.

(31) The modern literature on “tax smoothing” provides an explicit justification for borrowing to finance temporary increases in government spending. The notion is that the deadweight loss associated with the imposition of distortionary taxes rises with the tax rate; governments seeking to maximize the welfare of their constituency hence have an incentive to maintain a relatively smooth profile of tax rates over time. They should borrow when government spending is unusually high and retire debt when spending requirements are unusually low. Barro (1979) provides references to this literature.

(32) Stoddard (1932), p. 43.

(33) This criticism is leveled by Hollander (1919). See also Fisk (1919), pp. 57–58, Van Sant (1937), pp. 14–15, and Gilbert (1970), Chapter 10.

(34) The French and British estimates are taken from Alesina (1988). That for the United States is computed from United Nations (1948) and U.S. Department of Commerce (1976). On France's prewar debt, see Dulles (1929), p. 64; Moulton and Lewis (1925), p.52.

(35) Though France floated four long-term loans over the course of the war, the first was issued only in November 1915, after a delay of more than a year. The political economy of the

first war loan and explanations for the associated delay are discussed by Babé (1925).

(36) Balderston (1989), pp. 238–239. See chapter 2, p. 42.

(37) Money finance also played an important role in Britain's war effort. The percentage increase in note circulation was larger than in any other country but Germany, where the money supply quintupled over the course of the war. At the other extreme, the rate of growth of currency circulation was slow in the United States. In part this reflected the late date of U.S. entry into the war. But even prior to April 1917, the volume of currency in circulation rose steadily. A tidal wave of gold flowed toward the United States as exports rose and flight capital sought safety in New York. Between April 1917 and the armistice, the U.S. money stock rose less than half as quickly as it had prior to American entry into the war. The United States no longer attracted gold in significant quantities once it joined the war and began to extend loans to its allies. Moreover, in contrast to World War II, federal reserve banks engaged in little direct purchase of government securities. Instead, member banks extended loans to customers who used them to purchase government obligations and replenished their reserves by rediscounting at the Fed the collateral they obtained. It is testament to the growing power and influence of the American capital market that so little money finance was required.

(38) Britain, like Germany, did face occasional difficulties in placing treasury bills, although the most severe difficulties arose after the war—in 1920—when the banks were able to shift back into trade bills and no longer represented a captive market. See chapter 4.

(39) Owners were paid ½ percent per annum in addition to regular dividends and interest, 2½ percent in the event the Treasury was forced to sell.

(40) E. V. Morgan subsequent criticized the Royal Institute's estimates as inflated, suggesting that gross public sales did not exceed £550 million, from which some £250 million of new British investments abroad should be netted. Drawing on work by Cleona Lewis, he concluded that the value of private sales

over the period was also about £250 million. Kirkaldy (1921), p. 183, estimated in contrast that only £207 million was raised by the mobilization scheme between 1915 and 1919. Royal Institute (1937), p. 130; Lewis (1938), p. 119; Morgan (1952), pp. 330–331.

(41) The 8 percent estimate is from Moulton and Lewis (1925), p. 27, the 70 percent estimate from Lewis (1938), p. 121.

(42) Cited in Bogart (1921), p. 73. This is consistent with Lewis's (1938, p. 119) estimate that 71 percent of British holdings of American railway securities were sold off over the course of the war.

(43) Estimates of foreign securities purchased by Americans are from Royal Institute (1937), p. 130. Like the Royal Institute's other estimates, these can be criticized as inflated. Alternative sources put American acquisition of foreign securities at as little as half of the amount estimated by the Royal Institute.

(44) These are the estimates of Lewis (1938). Royal Institute (1937) suggests that the U.S. position was somewhat stronger, although the basis of its estimate is not provided.

(45) Two-thirds of this total was owed to Europe. *Federal Reserve Bulletin* (December 1921), p. 1410. The prewar estimate is from Lewis (1938), p. 126.

(46) Critical to the evolution of this new position was the birth of an acceptance market in New York (Reed 1922). Prior to the Federal Reserve Act, national banks had not been authorized to accept bills. They could discount promissory notes on behalf of their customers, but these notes were not guaranteed by the debtor's bank and hence enjoyed only limited negotiability. The more reliable acceptance could be obtained only in London. American observers complained that dependence on London for trade credit hampered American exporters consequently required to pay a commission, often amounting to one-half of 1 percent, to both the American bank that issued a letter of credit and the British bank that accepted it. Schwedtman (1911), p. 245. Section 13 of the Federal Reserve Act therefore authorized American banks to transact in

commercial acceptances maturing in not more than six months. The acceptance business developed quickly. The Federal Reserve Bank of New York made the market, purchasing or discounting acceptances offered for sale until the investing public grew accustomed to transacting in the instrument. By the end of the decade, regulations had been issued authorizing acceptances for domestic as well as international transactions, fueling the expansion of the business into the hundreds of millions of dollars. As private dealings in acceptances gained popularity, the Federal Reserve Bank of New York withdrew to the sidelines. Goldenweiser (1925), pp. 55–56.

(47) In France alone, citizens deposited 800 million francs of gold in the first 13 months of the war. Anderson (1919), p. 106. In some countries, this process of concentrating gold in official hands was already underway before the war. In Germany, bank notes as small as 20 marks were issued for the first time in 1906, providing a convenient substitute for metallic coin. The Reich declared bank notes legal tender in 1909, with similar effects. See Holtfrerich (1986b), p. 114.

(48) See chapter 7 for further discussion of this point. Of the major belligerents. fluctuations in French and German foreign exchange reserves were particularly dramatic. Germany's foreign bills, after falling by more than 50 percent between 1913 and 1918, were rebuilt to more than three times prewar levels between 1918 and 1919.

(49) American exports to Latin America suffered following the nation's entry into the European war, as shipping space was requisitioned and industrial capacity was channeled into war production. But the increased prominence of U.S. producers on Latin American markets remained. Kaufman (1974), p. 182 and *passim*.

(50) Good surveys of wartime developments in Japan are Ogawa and Yamasaki (1929) and Kobayashi (1930).

(51) Introductions to Latin American trends are provided by Miller (1981), Albert and Henderson (1981) and Albert (1988).

(52) Despite steps to expand capacity, current production and exports were still subject to the vagaries of the weather. Argentine wheat exports declined in 1916 and 1917, for example, due to drought. Albert (1988), pp. 56, 64.

(53) Hardach (1977), pp. 256, 275; Albert (1988), p.63.

(54) The rise of proportional representation was also connected to the extension of the franchise. It was the risk-averse strategy for the leaders of old parties representing elites, who feared that the rise of labor and socialist parties encouraged by enfranchisement of the working class would lead to their demise. Under proportional representation, the old parties were insured of at least some legislative voice if they could retain the allegiance of their traditional constituencies.

(55) See Beard (1922), p. 161. Of these nations' electoral systems, that of France is most difficult to characterize. While the 1919 electoral law was portrayed as a shift from majority to proportional representation, it was in fact a hybrid of the two. Its operation is best illustrated by example, following Campbell (1958). Consider a constituency electing six representatives, in which electors could vote for up to six candidates. First, candidates receiving an absolute majority of votes of electors casting valid ballots were declared elected. Then parties (more precisely, party lists) receiving the votes of at least ⅙th of ballots cast would receive one seat, parties receiving the votes of at least ⅙th two seats, and so forth, as in a pure proportional system. The ⅙th threshold, the reciprocal of the number of seats, was known as the "quotient." When few parties garnered more votes than the quotient, other rules came into play. If, for example, one party received more than $\frac{2}{6}$ th of the vote but less than $\frac{3}{6}$ th, a second party received more than ⅙th but less than $\frac{2}{6}$ th, and no other party received so much as ⅙th, the first party would first be allotted two seats and the second party one seat, as in a proportional system. But then the remaining three

seats would be allotted to the party with the highest average (the first party in our example), as under plurality rule. If its list contained fewer candidates than the number of open seats, the remaining seats would be filled by candidates of the second party, and so on. Hence the characterization of the French law as a hybrid of the two systems. The 1919 law featured other complications (exceptional treatment of independent candidates, second ballots under special circumstances), as described by Campbell.

(56) The example is drawn from Duverger (1954), pp. 223–224.

(57) As Herlitz (1925, p. 586) put it, “It is well-known that the majority system has a tendency to hinder the growth of a large number of smaller parties and groups, in that it does not permit them to gain power; and, on the other hand, that the proportional system is unfavorable to the large party organizations of the English or American type.” This regularity is known as Duverger's Law, after Duverger (1954). Rae (1967), pp. 100–101, documents it along with other differences in the performance of majority- and proportional-representation electoral systems. A recent critique of Rae's results, which generally confirms his emphasis on the importance of proportional and majority representation but challenges his results concerning district magnitude and other aspects of ballot formula, is Lijphart (1990). This is not to deny the existence of other determinants of multipartism, such as the depth and dispersion of regional, religious and ethnic differences. If support for small parties is highly concentrated regionally, for example, those parties may do better under majority than proportional representation. The point is not that one will never get third parties under majority representation, only that under most circumstances the extent of multipartism will be reduced. See Duverger (1954), p. 223, and Taagepera and Grofman (1985).

(58) Cox (1989) shows that, compared to two-party majority-representation systems in which both parties converge to the neighborhood of the median voter, in proportional-representation systems with more than two parties the

positions they stake out will be more diverse. The same argument is made at a less formal level by Katz (1980).

(59) A useful review of the relevant literature, with pro-proportional representation learnings, is Rogowski (1987).

(60) This association between coalition instability and parliamentary fracti onalization is emphasized by Dodd (1976). Taylor and Herman (1971) provide statistical evidence in its support.

(61) The term “cleavage conflict” and the argument emphasizing cleavage as a crucial intermediate variable linking the electoral system to governmental stability are due to Dodd (1976).

(62) Hermens (1941), p. 77, a bitter critic of proportional representation, put the point as follows. “But no combination of parties under a system of political pluralism is ever able to act as a unit; conditions may go from bad to worse at a rapid rate; and the voter is confronted with the spectacle of inaction in the face of a crying need for action.”

(63) Unlike the other countries, Belgium already had a system of proportional representation in place prior to the war. But the *vote plural*, which gave certain electors multiple votes, had served to concentrate power in a relatively small share of the electorate and hence in a relatively few political parties.

(64) Sweden adopted proportional representation in 1909, Norway in 1919. Denmark had experimented previously with proportional representation, but it was the basis for all elections after 1915.

(65) The following account of Swedish politics in the 1920s is based heavily on Rustow (1955), chapter 3.

(66) Herlitz (1925), p. 589.

(67) Rogowski (1987), although a supporter of the view that proportional representation is generally conducive to political stability, notes that instability is more likely to occur when political cleavages are determined by a single issue.

(68) The two secular parties represented the interests of capital and labor, respectively. Carstairs (1980), p. 62; de Swaan (1973), chapter 10.

(69) Even in the Netherlands, unfettered proportionality led to a proliferation of parties with seats in Parliament and great difficulties of forming stable coalition governments. Hence the 1917 electoral law was modified in 1921 to place a lower threshold on the share of votes cast nationally a party had to garner before securing a seat. Carstairs (1980), pp. 64–65.

(70) This observation prompted the development of theories of consociational democracy, in which it is argued that proportional representation is conducive to political stability in plural societies with cross-cutting political cleavages, although it may encourage instability in societies where political cleavages run strictly along economic lines. See Lijphart (1968, 1977).

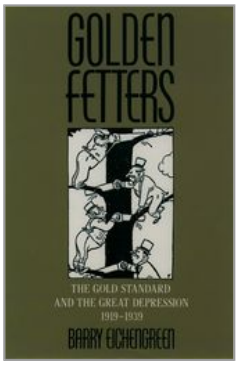
(71) “London's Financial Position,” first published in *Sterling's Journal*, reprinted in Withers (1919), pp. 15–30.

(72) The standard source is Phelps (1927). For details, see also Parrini (1969), chapter 5, and Eichengreen (1988b).

(73) Recall that this view that the Fed was responsible for the decline in the volatility of seasonal interest rate swings in the United States is not uncontroversial. See chapter 2, footnote 111.

(74) Withers (1919), p. 29.

(75) Report issued by the Mechanics and Metals National Bank of New York, quoted in Patterson (1916), p. 276.



Golden Fetters: The Gold Standard and the Great Depression, 1919-1939
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Postwar Instability

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Abstract and Keywords

The chapter covers the postwar boom and slump, which provided a first indication of how radically the environment had changed since before World War I, although contemporaries did not appreciate its lessons adequately. The different sections of the chapter look at the transition to generalized floating of exchange rates, the postwar boom and the postwar slump (1919–1921), and the aftermath of these.

Keywords: boom, economic instability, exchange rates, floating exchange rates, interwar period, postwar boom, postwar slump, slump, World War I

In March 1919 the United States terminated support operations for the British pound and the French franc. Abruptly the two currencies fell. Policymakers throughout Europe shared a belief, based more on assumption than analysis, that these trends must be reversed and their countries' customary gold parities restored at an early date. Yet this was not to be. Any truly international gold standard

would have to rest on the foundation of four currencies—the dollar, the pound, the franc, and the mark. For a roof to be raised over the gold standard facade, America, Britain, France, and Germany first had to sink the piers. Although the United States continued to peg the dollar price of gold, German stabilization did not occur until 1924, British stabilization until 1925, and French stabilization until 1926 or 1928 (depending on whether one considers de facto or de jure stabilization). In the interim, the industrial nations embarked on their first peacetime experience with a system of floating exchange rates.

That experience was punctuated by the 1919–21 boom and slump, the most dramatic business cycle fluctuation in the decade preceding the Great Depression. The postwar recession encapsulated all the destabilizing impulses that were to plague the world economy for the rest of the interwar years. It demonstrated the dependence of the global network of balance-of-payments settlements on foreign lending by the United States. It illustrated the heightened sensitivity of the world economy to central bank policy, particularly the policy of the Federal Reserve System. It showed that European central banks committed to restoring and maintaining their gold parities could not disregard the actions of the new U.S. central bank. At the same time it revealed that even central banks in the strongest position internationally like the Fed could be forced to conform to the dictates of the gold standard when formulating monetary policy.

These implications were inadequately appreciated. The lessons of 1919–21 were discarded when the recession proved short lived and gave way to a period of sustained economic growth. What was not understood was that very special circumstances had been responsible for abbreviating the recession of 1920–21. The most important one was that the international gold standard was still in suspension, enhancing the capacity of other countries to pursue policies distinct from that of the United States. Failing to appreciate this, government officials quickly set about restoring the gold standard, transforming the economic environment in ways that would have profound implications the next time recessionary tendencies appeared.

(p.101) The Transition to Generalized Floating

In the 1920s, as in other periods of floating exchange rates, the foreign exchange markets responded erratically as the expectations of currency traders were buffeted by various events. This is not to say that European currencies were simply pushed and pulled by speculative waves like ships on an open sea. At first, exchange-rate forecasts were firmly anchored by the belief that the price of gold would soon be restored to prewar levels. “There was a magic in the pre-war rates of exchange which wove a spell over the supporters of francs and other currencies,” one contemporary observed.[1] When a currency depreciated, even one with so clouded a future as the French franc or the German mark, its fall was cushioned by capital inflows. Speculators purchased the depreciated currency in anticipation of the capital gains they would reap when prewar parities were restored.[2] The official commitment to prewar parities was still regarded as credible since governments had not yet displayed their inability to balance budgets and reduce money supplies to prewar levels.

Thus, this central element of the gold standard system survived the war intact and conditioned the behavior of markets even following the armistice when gold standard arrangements were all but completely suspended. But as price levels and asset stocks diverged more and more markedly from prewar levels and prospects for the early restoration of prewar financial relationships dimmed, the ship began to drag anchor. Expectations became increasingly diffuse, and foreign exchange markets grew increasingly turbulent. Ironically, the credibility of the commitment to gold survived the war but not its aftermath.

Though relative prices had clearly diverged from sustainable levels, the debate centered on just how far. Elegant conceptual frameworks, notably the purchasing power parity doctrine, were developed to answer this question. Unfortunately, these frameworks were easier to formulate than to implement.[3] The problem could be circumvented by delegating it to the market, which was the British solution once American support for the sterling–dollar exchange rate

was withdrawn. Britain simply allowed the sterling exchange to be governed by market forces.[4]

(p.102) Unlike other European nations that had suspended the right of gold export during the war, and unlike the United States which had placed gold export under government license, Britain retained the statutes permitting gold to be sold abroad. At the wartime peg, exporting gold was profitable, since arbitragers could purchase it in London for the sterling equivalent of $4.76 and resell it in New York for $4.86. Following the armistice, would-be exporters no longer were deterred by appeals to patriotism, the shortage of shipping, or the unavailability of insurance. To prevent all demands for gold from falling on London and to protect the Bank of England's reserve while the adjustment of sterling was still underway, Britain suspended free gold exports. An Order in Council prohibiting the export of gold coin and bullion was issued on March 29, 1919, and succeeded by an act of Parliament in 1920. Britain joined the list of countries with inconvertible currencies.

Once unpegged, sterling fell in response to Britain's sizeable merchandise trade deficit and the extension of trade credits by London to the Continent. By the end of 1919 the pound had declined from $4.76 to $3.81. Other European currencies depreciated even more rapidly. Not only had the Continent experienced more inflation, but economies there were in greater disarray and their demand for imports was immense.

Sterling and the dollar served as dual focal points for the floating rate system. The dollar's importance derived from the fact that the United States continued to set the price of gold. Sterling's derived from its history. The pound was a customary reference point in international financial markets, and policymakers worldwide proceeded on the assumption that its traditional position would be restored. Exchange rates might be quoted in dollars, but their progress was monitored with reference to sterling. Anticipating Britain's early return to gold, other countries informally linked their currencies to the pound. Those of Belgium, Denmark, Norway, Italy, France, Sweden, and Switzerland all tended to rise and fall with sterling throughout 1919 and into 1920. (Figure 4.1 displays a

few of these rates.) Starting in 1920, the German mark also tended to move with these currencies. Still other countries such as Brazil, Canada, and Spain, whose currencies depreciated sharply against the dollar initially, managed to attach themselves to this informal sterling bloc in the summer of 1920.

By the second half of 1920 the restoration of stable exchange rates seemed well underway. Exchange-rate fluctuations diminished, and European currencies strengthened against the dollar. Then a series of setbacks occurred. Sterling's growing instability vis-à-vis the dollar made it a less desirable currency to which to peg. The nascent sterling bloc began to disintegrate. Policies and price levels diverged, and exchange rates against sterling moved off in different directions. By 1921 efforts to peg to sterling had given way to generalized floating. **(p.103)**

The postwar float was an economic necessity, but it also was consonant with the desire to let market forces reassert themselves. What better way to signal the restoration of normalcy than to remove the

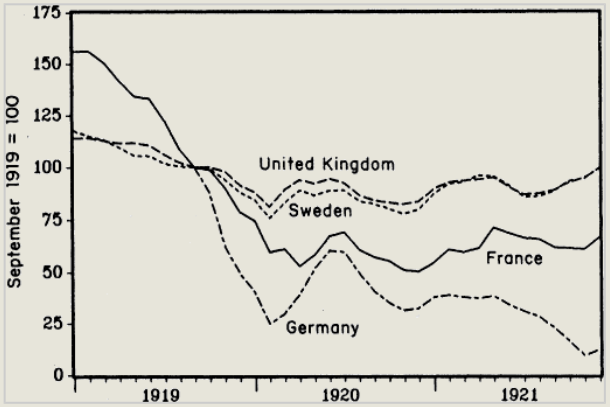


Fig. 4.1. Exchange rates against the U.S. dollar, 1919–21.

European currencies renewed their depreciation against the dollar in the winter of 1919. Depreciation of the British pound and the Swedish krona remained moderate; in contrast, the French franc and German mark declined dramatically.

Source: Banking and Monetary Statistics (1943), pp. 670–681.

comprehensive controls on domestic prices and foreign exchange transactions adopted during the war? Paradoxically, a freely floating exchange rate was the closest substitute for the gold standard to which the authorities aspired. The two extremes—a free float and a fixed rate—offered the least scope for discretionary intervention. Although licensing or prohibiting gold exports was inconsistent with laissez faire principles, the war had taught officials to view such matters in a more pragmatic light.

All this would have mattered little if it had proved possible to reestablish prewar parities early on. Britain's Cunliffe Committee urged an early return to gold, and the Governor of the Bank of England aimed at restoring sterling to its prewar level by the time the Treaty of Versailles was signed.[5] And the

British were not alone. In 1919 the French franc was still within striking distance of its traditional parity. As of February the currencies of Switzerland, Spain, Argentina, Sweden, the Netherlands, and Japan were all above their prewar levels.

Why then was the better part of a decade required to complete the return to gold? The popular explanations—misalignment of price levels and the extent of structural maladjustment—are inadequate. To understand the need for flexible exchange rates, one must appreciate the fiscal difficulties faced by the authorities.

(p.104) The misalignment of price levels was the point of departure for virtually all postwar discussions of exchange rate problems. As emphasized by exponents of the purchasing power parity doctrine, prices had risen less quickly in the United States than in Britain, and less quickly in Britain than in many parts of Europe. This divergence of price levels had to be reversed to allow the restoration of prewar parities. Yet contracts and conventions, it is argued, stood in the way of rapid downward adjustment of wages and prices. Firms hesitated to reduce their selling prices, unions to lower their wage demands, until they saw others doing likewise. This coordination problem impeded the adjustment of prices and costs toward prewar levels. Hence the conclusion that a period of floating was required to set the stage for restoring prewar parities.

Yet it is hard to accept that the adjustment of prices required half a decade or more. Implicit contracts had fallen by the wayside in the course of wartime inflation, control, and reorganization. Many explicit contracts had for the first time incorporated escalator provisions for changes in the cost of living, eliminating a leading source of inertia in the price system. Corporations had begun to compensate workers on a profit-sharing basis, facilitating the response of labor costs to the downward movement of prices. The commodity boom and bust of 1919–21 demonstrated the unprecedented flexibility of wages and prices characteristic of the immediate postwar years. Between 1920 and 1921, wages and prices fell by roughly a third in most industrial countries. There was no

obvious reason why they could not fall by another third to ensure an early return to gold.[6]

Problems of adjustment were not limited to price levels, however. There was also the need to reabsorb millions of demobilized servicemen into employment. Europe had suffered extensive wartime destruction of productive capacity. In ten northern *départements* of France, half of all roads had been torn up and six hundred bridges destroyed. More than a year after the armistice, over a large part of Europe fewer than half of all locomotives were in working order. Inadequate transport impeded the supply of inputs to industry and of output to home and foreign markets. Machinery had been destroyed by retreating armies. In France's ten northern departments, for example, 9,000 factories employing 10 or more persons had been crippled or razed, and half the textile industry's capacity had been destroyed.[7] Manpower, plant, and equipment had shifted out of consumer goods industries into production of capital equipment and war matériel. General engineering, machine tool production, and shipbuilding all expanded dramatically while industries engaged in producing consumer goods were forced to contract. Once private-sector demands were permitted to reassert themselves, the maldistribution of productive capacity was manifested in simultaneous gluts and shortages. Eliminating these imbalances might require an extended period of adjustment.

(p.105) Reinforcing these domestic dislocations were impediments to international trade. Wartime restrictions on imports and exports were only gradually relaxed. Lacking established tax systems, the new nations of Central and Eastern Europe used tariffs to raise revenues. The United States, rather than lowering its trade barriers, cemented them with the adoption of the Fordney-McCumber Tariff.[8] For all these reasons, the nations of Europe found it difficult to procure the capital goods and materials from abroad needed for reconstruction and adjustment.

This explanation suffers from the same limitation as that emphasizing the level of prices. Resolving the problems these distortions created for the balance of payments required only

a change in the real exchange rate—that is, an additional competitiveness-enhancing decline in domestic prices and costs. Exports would be stimulated, imports would be reduced, and the external constraint would be relaxed. If deflation proceeded for another year at its 1920–21 rate, there was no obvious reason why it could not be followed by an immediate return to gold at the old parity. Indeed, policymakers and the public viewed an early return to gold as the best way of promoting the recovery of international trade, which was seen as essential for expediting structural adjustment. If anything, contemporaries believed that the existence of structural imbalances and the trade problems they gave rise to strengthened the case for immediate restoration of the gold standard system. As the Cunliffe Committee declared, early restoration of the gold standard was “the only effective remedy for an adverse balance of trade.”[9]

Understanding Europe's protracted transition back to gold therefore requires the introduction of other factors. The central problems stemmed from the overhang of debts. With short-term government obligations maturing weekly, the preeminent concern of government officials was debt management, not exchange rate stabilization. So long as a substantial share of the public debt remained unfunded, it was questionable whether any stabilization would hold. If the banks or the public, for whatever reason, allowed their maturing treasury bills to run off, a funding crisis would result. The treasury would have inadequate resources to use for financing its ongoing spending. The central bank would be compelled to purchase the bills issued in replacement by the fiscal authorities, and the consequent increase in the money supply would drive down the exchange rate. Thus, a crisis of confidence in the treasury bill market could wipe out the entire investment in policies aimed at restoring the gold parity. It seemed only prudent to wait until the floating debt had been funded, via the replacement of treasury bills with long-term bonds, before attempting to return to gold.

So long as problems of debt management remained unresolved, moreover, governments were hesitant to restore to central banks the independence they traditionally enjoyed. Central banks were pressured to keep discount rates low to

minimize debt service costs and facilitate the placement of treasury issues. The French experience with *bons de la défense nationale* (to be described in Chapter 6) was merely the most notorious instance of the problem. The newly created Federal Reserve (p.106) System was pressured by successive Treasury Secretaries to pursue a low interest rate policy to encourage placement of public debt.[10] Even an institution with so untarnished a reputation for independence as the Bank of England was forced to extend Ways and Means Advances to the government well into the postwar period.[11]

Several justifications existed for the low interest rate policy. In Europe, the Bolshevik Revolution to the East and labor unrest in the West posed dangers that could be vanquished only by rapid reconstruction and the restoration of prosperity. High interest rates that discouraged investment threatened to disrupt the reconstruction process. Moreover, a rise in interest rates would inflict losses on the patriots who had willingly absorbed government bonds during the war. Such shabby treatment might hinder future placement of long-term securities.[12]

Where debts were funded, they still had to be serviced, requiring tax increases or public spending reductions. A balanced budget was a necessary precondition for avoiding the resurgence of inflationary pressures that would undermine any attempt to stabilize the currency. A group of delegates to the 1922 Genoa Conference on economic and financial questions summarized the problem neatly.

> [T]he reduction of prices and restoration of prosperity is dependent on the increase of production, and . . . the continual excess of government expenditure over revenue represented by budget deficits is one of the most serious obstacles to such increase of production as it must sooner or later involve the following consequences: (a) Further inflation of credit and currency; (b) A further depreciation in the purchasing power of the currency, and a still greater instability of the foreign exchanges; (c) A further rise in prices and in the cost of living.[13]

Reducing government expenditure was problematic in the postwar political climate. Not only was reconstruction costly, but pensions, health care, and housing had been promised to veterans as a reward for their patriotic sacrifices. Anticipations of widespread joblessness once military spending was curtailed reinforced fears of labor unrest. Consequently, many countries adopted costly programs of unemployment insurance and relief.[14] Reducing government expenditure to prewar levels was inconsistent with these goals.

Raising taxes was no less difficult. The wealthy insisted that the progressive supertaxes of the war be rolled back as part of the restoration of normalcy. Representatives of the working class responded by invoking labor's vision of the egalitarian society that should follow the war and argued that maintenance of progressive taxation was justified by wartime profiteering. To reduce the burden of the debt, labor spokesmen recommended a capital levy on real and financial wealth. Their (p.107) recommendations carried new weight: the war, by compelling governments to broaden the franchise, strengthened the political influence of the working class.[15]

In the end, labor still lacked the political clout to speedily implement the wealth tax. But it took the better part of a decade to establish this fact. The capital levy hung over investors like a fiscal sword of Damocles, discouraging saving, provoking capital flight, and heightening the fiscal crisis.

Neither the beneficiaries of government programs nor the prospective victims of the taxes required to finance them were willing to give an inch. The deadlock left government budgets in deficit and central bank printing presses operating at full speed. Only when inflation reached intolerable levels would the compromises needed to the resolve the crisis finally be reached.

The Postwar Boom

The 1919–21 boom and slump dramatically illustrated the potential for instability under floating exchange rates and underscored the pivotal role of debt management in postwar

economic fluctuations. There was nothing like a 50 percent rise and fall of prices in 24 months to impress upon contemporaries the scope for instability under floating rates. The experience heightened the importance officials attached to restoration of the international gold standard. At the same time it signaled the need for caution until problems of debt management and fiscal stabilization were resolved.

In 1918, many government officials believed that the armistice would be followed by a serious recession as military expenditure was curtailed and servicemen were demobilized. Once it became apparent that demobilization and fiscal retrenchment would be phased in gradually, the consensus evaporated.[16] In the end, there was no more than a mild recession, dubbed by Pigou as “the breathing space.”[17] In Britain prices declined by 8 percent between November 1918 and March 1919, in the United States by about 5 percent.[18] Contributing to the global deflation was the increase in commodities from the Americas and the Far East once security returned to the shipping lanes.[19]

By summer, deflation and stagnation save way to inflation and boom, followed in the spring of 1920 by the collapse of prices and production. The same pattern (p.108) was evident in virtually every industrial country. Only in Germany did inflation and activity follow a significantly different path.[20]

Considerable confusion attended the question of what caused this boom and slump. Most observers rejected the monetary interpretation of price fluctuations. Not only were quantity-theoretic explanations for price-level changes in only limited vogue outside Anglo-American circles, but an abundance of other potential culprits existed.[21] Even without monetary accommodation, relaxation of wartime controls would have put upward pressure on prices. In many countries, the prices of commodities deemed essential to the war effort had been pegged below marketclearing levels.[22] Rationing compelled consumers to accumulate bank balances, while appeals to patriotism encouraged them to purchase bonds. These were now cashed in to finance pent-up consumption. In the United States the major provisions of the system of wartime controls were eliminated without delay. In Britain controls on raw

materials were removed within six months of the armistice. Most controls on consumer staples were withdrawn in 1920.[23] Although the return to the free market proceeded more slowly in other countries, the “bonfire of controls” in the United States and United Kingdom permitted demand to be unleashed and cause skyrocketing prices.[24]

Demand was stimulated further by the desire of firms to replenish inventories. Manufacturers worldwide attempted to eliminate shortages of raw materials and retailers sought to rebuild stocks of consumer goods. Enterprises used their retained earnings and cash reserves to finance raw material purchases and inventory accumulation.[25]The restocking boom was concentrated in small firms; their larger counterparts were more advantageously placed to maintain their inventories during the war. Postwar restocking was not completed until 1921 and in some countries and sectors not until even later. It was promoted by optimism in business circles once owners and managers realized that a postwar recession had been avoided. With a major share of Europe's industrial capacity still out of service, however, the (p.109) demand for stocks ran up against bottlenecks that intensified the inflationary pressure.

Restocking was necessary for the resumption of business as usual. But as commodity prices spiralled upward, traders began to lose all sense of the level at which they might stabilize. Purchasers of raw materials, fearing continued inflation, were undeterred by higher commodity prices. Traders bid up prices of contracts for future delivery in the expectation of being able to resell them at a profit. Markets were driven by the same mania that would engulf Wall Street in 1929, but without the price-level anchor provided by the gold standard.

Other sectors were quickly infected. In what the *Economist* labeled “a craze for speculation,” money poured into financial markets.[26] Leading firms in the British cotton, shipbuilding, shipping, engineering, and banking industries were bought out and amalgamated. No sooner was the United Steel Company formed out of an amalgam of smaller steel producers, for example, than it was expanded and reincarnated as the United

Steel Corporation Group. Wall Street boomed. As early as June 1919, the Federal Reserve Board commented on the unusual succession of million-share days on Wall Street and wondered aloud whether the armistice had inaugurated a new speculative era.[27] A nationwide real estate boom developed in the United States, with both urban and rural property changing hands at unprecedented rates and prices.

Initially, fiscal policy remained expansionary. In the major industrial countries, less than half of current expenditure was financed out of taxes in the first postwar fiscal year. The specter of the Bolshevik Revolution and the westward march of labor unrest encouraged governments, concerned with appeasing the working class, to maintain spending at high levels.[28] In 1920, having convinced themselves that the immediate threat had receded, governments in the United Kingdom and United States shifted their budgets in a contractionary direction. The British budget, whose deficit amounted to nearly two-thirds of net expenditure in 1918–19, swung into surplus in 1919–20, as demobilization and the termination of war contracts cut government spending by 50 percent and the sale of surplus stores augmented revenues.[29] The American budget moved from a sizeable deficit in 1919 to substantial surplus in 1920. Even France raised taxes in mid-1920, although, compared to the United States and United Kingdom, the change in fiscal position was small. Just as fiscal policies were more than tangentially related to the 1919–20 boom, fiscal retrenchment was a factor in the timing and magnitude of the 1920–21 slump.

Clearly, there is no shortage of alternatives to the simple monetary explanation for the inflation and the recession. Still, Cassel, Pedersen, Palyi, and Friedman and Schwartz, among others, argue that prices could not have risen had monetary policies not been excessively expansionary and could not have fallen subsequently had (p.110)

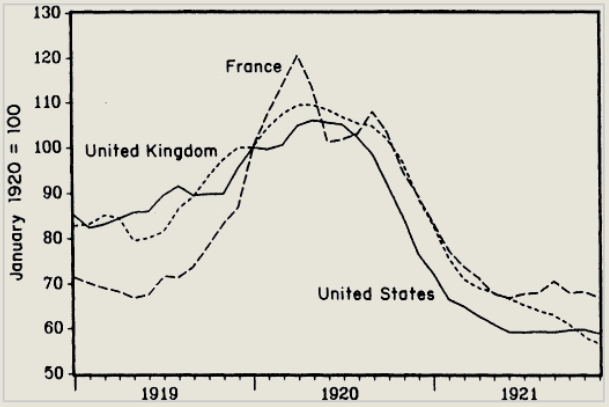


Fig. 4.2. Wholesale prices in three countries, 1919–21.

U.S. and European prices rose and fell together during the 1919–21 boom and slump, reflecting pressure on European governments to follow the dictates of U.S. policy in order to restore their prewar exchange rates against the dollar.

Source: Federal Reserve Bulletin (various issues).

they not been overly contractionary. Kindleberger, in contrast, dismisses monetary factors. “Prices rose worldwide,” he concludes, “because of limited output and an upswing of demand; they fell when it was clear that liquidity had been strained and that production had responded quickly, even in excessive measure.”[30] Although the velocity of monetary circulation rose along with the interest rate in the course of the inflationary boom, no one disputes that a considerable expansion of the money supply was required to support a rise in wholesale prices of 40 percent in five quarters, or that a considerable contraction was required to validate the 44 percent fall in prices over the subsequent 13 months. The question is whether the monetary cycle was an endogenous response of the financial system to fluctuations in the demand for commodities and credit, as American monetary policymakers asserted at the time, or a destabilizing impulse imparted by central banks, as argued subsequently.

In most countries the fluctuation in money supplies had an important endogenous component. Though note circulation

rose strongly in both the United States and United Kingdom between mid-1919 and mid-1920, deposits increased even more quickly as spending was unleashed, activity recovered, and the demand for financial assets expanded. Higher interest rates provoked by the demand for circulating capital induced commercial banks to draw down their excess reserves, raising (p.111) the deposit multiplier.[31] Banks that belonged to the Federal Reserve System expanded their loans by 18 percent in the second half of 1919 and by 8 percent in the first half of 1920. With market rates of interest exceeding Federal Reserve discount rates, member banks had an incentive to utilize the discount window.

Taken to an extreme, this suggests that the monetary expansion in 1919–20 was a response to the surge in demand rather than an underlying cause. The argument parallels the balance-of-payments interpretation of the German hyperinflation, which claims the source of the inflation lay beyond the purview of the Reichsbank and fiscal policymakers, who had no choice but to accommodate the rise in prices.[32]

But even if the impetus for inflation lay elsewhere, it is not obvious what inhibited monetary policymakers in 1919–20 from taking decisive action to contain it. Surely it was within their capacity to raise the discount rate or initiate open market sales to neutralize the actions of banks and depositors. Yet central bankers, though they possessed this capacity, hesitated to utilize it. They were well aware that market interest rates exceeded official discount rates, providing banks an incentive to discount paper, to rediscount at the central bank, and to expand the supply of credit. The Fed cautioned member banks felt to be overdoing their rediscounting and warned against excessive speculation. It adopted a policy of “direct pressure,” threatening to deny access to the rediscount window to banks extending loans for speculative purposes.[33]

Yet the Fed and its foreign counterparts failed to back their words with deeds. The Bank of England's discount rate was fixed at 5 percent for the final year of the war. Only in November 1919, after prices had risen by more than 15 percent since the first of the year, did it raise Bank rate by a percentage point. It waited until April 1920 to raise it again.

The Federal Reserve Board kept its discount rate at the artificially low level of 4 percent as late as the autumn of 1919. The Bank of France remained at 5 percent until April 8, 1920, when it raised its rate by a point.

Why this failure to act? In the case of the United States, inexperience may be a partial answer. The newly established Federal Reserve System had had little practice at managing monetary conditions. If the Governors had looked to the hearings of the National Monetary Commission held prior to the establishment of the new U.S. central bank, they would have discovered wide disagreement on the channels through which discount policy affected the economy, and no guidance on the appropriate response to an unprecedented inflationary boom. The Fed's discount rate was untested, and its proprietor harbored doubts that it would even “normally be expected to be ‘effective’ in the sense in which that term is used in Continental Europe.”[34]

Ignorance and inexperience cannot explain the failure of the long-established European central banks to act, however. In part their inaction reflected the belief that, in the special circumstances of the postwar period, the standard instruments of monetary control were incapable of stabilizing financial conditions. With the (p.112) restocking boom creating a proliferation of lending opportunities, they were skeptical that changes in interest rates would significantly alter commercial bank behavior. The London clearing banks were liquid, with an almost unprecedented ratio of cash and Bank of England balances to earning assets. Hence Bank rate could exert little influence. In the United States this view was officially endorsed in the *Federal Reserve Bulletin* of October 1919. “[I]t seems fairly clear that little desirable influence could have been exercised by Federal Reserve Bank rates in recent months.”[35] Higher interest rates might deter legitimate borrowers, in this view, but not the speculators dominating the market.

The option of open market operations remained, but the Federal Reserve Board had no experience in their use. In its early years, the Fed lacked a portfolio of assets suitable for open market sales. Curiously, U.S. officials continued to

invoke this constraint in 1919–20 even though the Fed had by this time accumulated a portfolio of suitable assets. In any case, the same constraints did not bind other central banks, which possessed ample stocks of government bills and bonds.

Insofar as these considerations were invoked, they served as cover for other priorities. Those priorities revolved around problems of debt management. In Europe, where governments continued to run large budget deficits, the cost of financing them depended on the level of interest rates. In the United States and the United Kingdom, where deficits were more rapidly eliminated, there was the problem of funding floating debts (replacing short-term treasury bills with long-term bonds). The goal of the U.S. Treasury was to complete the task of funding by July 1920. Low interest rates facilitated the process. The Federal Reserve Board acknowledged in mid-1919 that the normal tendency to counter inflation by raising the discount rate "for the moment encounters some difficulty so long as the policy of promoting the absorption of Government securities by favoring rates is maintained." Benjamin Strong, Governor of the Federal Reserve Bank of New York, characterized the Fed as in "government borrowing bondage."[36] Under normal circumstances, debt management policy focused on long-term interest rates. This should have left central banks some room for maneuver at the short end of the maturity spectrum. But in the immediate postwar period much debt remained unfunded. A rise in short-term interest rates consequently had an immediate impact on debt service costs.

Nowhere were these problems more evident than in Britain and France. In 1920 public debt service amounted to 31 and 23 percent of central government expenditure in the two countries, as shown in Table 4.1. The British Treasury issued bills "on tap," offering a perfectly elastic supply at the prevailing rate of 3½ percent. Had the Bank of England attempted to raise market rates by advancing its discount rate, bills would not be renewed. The Treasury would be forced to turn to the Bank of England for Ways and Means Advances, defeating the effort to restrict credit. So long as a large volume of floating debt continued to be issued in this

manner, the central bank possessed no power of independent action.[37] Only between April and (p.113)

Table 4.1. Fiscal Policies in Four Countries 1905 and 1913–20

	(a) Net Revenues	(b) Net Expenditures	(c) Public Debt Charges	Public Debt Charges as a Percent of Expenditures	(d) Expenditures for National Defense	Defense Outlays as a Percent of Expenditures
GREAT BRITAIN (in thousands of pounds sterling)						
1904–5	137,590	136,176	27,000	19.8	66,055	48.5
1912–13	165,778	165,598	24,500	14.8	72,436	43.7
1916–17	546,974	2,171,659	127,250	5.9	1,302,603	60.0
1918–19	862,625	2,552,905	269,965	10.6	1,701,545	66.7
1920–21	1,376,485	1,145,928	349,599	30.5	292,228	25.5
FRANCE (in thousands of francs)						
1905	3,502,034	3,453,634	1,205,124	34.9	1,143,820	33.1
1913	4,558,044	4,718,462	1,284,079	27.2	2,070,530	43.9
1917	5,575,845	41,679,600[1]	4,863,686	11.7	34,065,809	81.7
1919	10,161,214	49,026,587[1]	7,986,823	16.3	35,811,390	73.0
1920	17,760,789	52,183,217[1]	11,833,174	22.7	26,432,545	50.7

	(a) Net Revenues	(b) Net Expenditures	(c) Public Debt Charges	Public Debt Charges as a Percent of Expenditures	(d) Expenditures for National Defense	Defense Outlays as a Percent of Expenditures
ITALY (in thousands of lira)						
1905	1,764,220	1,701,430	680,050	37.6	419,200	24.6
1913	2,385,130	3,289,010	598,220	18.2	1,666,660	50.7
1917	5,170,430	16,971,000	1,227,310	7.2	14,310,680	84.3
1919	9,372,360	32,150,100	2,705,200	8.4	26,974,420	83.9
GERMANY (in thousands of marks)						
1905	1,110,151	1,310,200	112,017	8.6	1,052,288	80.3
1913	1,957,380	2,024,523	231,176	11.4	1,582,290	78.2
1917	2,122,304	27,821,047	2,616,793	9.4	24,920,907	89.6
1919	6,348,460	46,966,460	5,914,294	12.6	40,179,143	85.5
1920	14,379,439	61,470,870	8,922,692	14.5	37,033,558	60.2

(1) Total expenditures.

Source: Federal Reserve Bulletin (December 1921), p. 1382.

July 1921 did the Treasury shift from tap to tender issues, restoring a modicum of monetary independence to the Bank of England.[38] In France, *bons de la défense nationale* continued to be issued at fixed interest rates that did not vary between December 1918 and March 1922.[39] When those rates were unattractive, the Treasury was forced to turn to the Bank of France for advances. The volume of advances to the French Treasury by the Bank rose steadily (p.114) from late 1918 until May 1920, paralleling market rates.[40] Had the Bank of France attempted to raise its discount rate, this would have caused *bons* to run off, advances to the Treasury to rise, and the attempt at credit restriction to be frustrated.

Although Treasury influence over the discount policies of the reserve banks declined in early 1920, the Fed remained concerned to facilitate Treasury funding of the floating debt and to prevent a decline in the prices of government securities, since these served as backing for commercial bank loans.[41] Assistant Treasury Secretary Russell Leffingwell defended the failure to raise interest rates on the grounds that "the effort to make money really dear before January, 1920 when the government was first able to reduce its floating debt to manageable amounts and maturities, would have risked more than it would have hoped to gain."[42]

In retrospect, policymakers should have foreseen the consequences of interestrate pegging. Any event such as a surge in the demand for credit which raised market interest rates relative to treasury bill yields rendered these bills unattractive to investors. The central bank would be forced to purchase the excess supply of short-term public debt, injecting money into circulation. Inflation was inevitable. The more rapid the inflation, the larger the rise in market interest rates, and the greater the gap between market rates and treasury bill yields. The demand for treasury issues would decline, requiring additional monetization. Even a modest rise in market rates thereby threatened to set off an inflationary spiral.

This reckless policy would seem indefensible. Yet so long as government budgets remained in deficit, little choice existed. If the debt was growing faster than national income, the debt-

servicing burden would rise explosively. Higher interest rates raised debt service costs and widened the deficit, increasing the rate of growth of the debt; they also depressed investment and interrupted economic growth. Efforts to clear the way for a return to gold would be frustrated.

Funding the floating debt would help alleviate the problem. Costs of debt service on outstanding long-term bonds would not rise with current interest rates. The cost of issuing and servicing additional bonds would increase only modestly if higher interest rates were perceived as temporary. Until the underlying fiscal imbalance was eliminated, however, investors had no reason to trade liquid treasury bills for bonds that locked them in to a nominal interest rate. Funding the floating debt was only feasible after the fiscal crisis was resolved; it could not resolve the crisis on its own.

It was far from clear that a rise in interest rates would ease the task of funding. Higher rates made new bond purchases more attractive but inflicted losses on investors (p.115) in existing loans. Insofar as they suggested that the government might raise rates again, they discouraged purchases of the funding loan.[43] Owners of war loans lobbied strenuously against interest rate changes that would depress bond prices. As Benjamin Strong noted subsequently. “There was a strong outcry in Congress for the protection of the interests of holders of the previous loans.”[44] Throughout 1919, Treasury officials warned the Federal Reserve Board that the 20 million Americans who had purchased war loans “would not stand” for a 10 percent fall in bond prices.[45]

The only solution was to raise taxes or reduce public spending. If the budget, inclusive of debt service, could be moved into surplus, debt could be retired, reducing the danger that the central bank might be forced to monetize treasury bills that investors permitted to run off. The risks of interest rate increases were only tolerable, therefore, following retrenchment on the fiscal front. It is no coincidence that the Fed and the Bank of England advanced interest rates only after the budget deficits of the two countries had been redressed. Nor is it coincidental that stabilization measures in the summer of 1920 proved less successful in countries like

France, Belgium, and Germany where political fragmentation delayed progress on the fiscal front.

The Slump

In October 1919, the British Treasury finally raised its bill tap rate to 4½ percent. Rates were increased again the next month, when the Federal Reserve Bank of New York and other reserve banks advanced their discount rates from 4 to 4¾ percent. This move almost immediately followed the deadline for payment of the last installment of the Victory Loan. Just as debt management accounts for the Fed's hesitation to act, it also explains the timing of the interest rate increase.

The boom lost some of its steam. Several reserve banks nonetheless raised their rates to 6 and 7 percent starting in January 1920. In April the British Treasury raised its tap rate to 6½ percent. France and Italy followed.

With the industrial economies already poised on the brink of recession, these ill-timed interest-rate increases surely contributed to the severity of the slump. Central banks were not unaware that economies were weakening. The collapse of Japanese silk prices at the beginning of the year sent shudders through commodity markets. Coffee, rubber, and sugar markets had begun to soften. Speaking on May 18 to the conference of the Federal Reserve Board and Directors of the reserve banks, Governor William P. Harding warned that the peak had already been reached.[46] Yet none of these developments weakened the newfound resolve to raise rates. **(p.116)**

For the United States, the key to

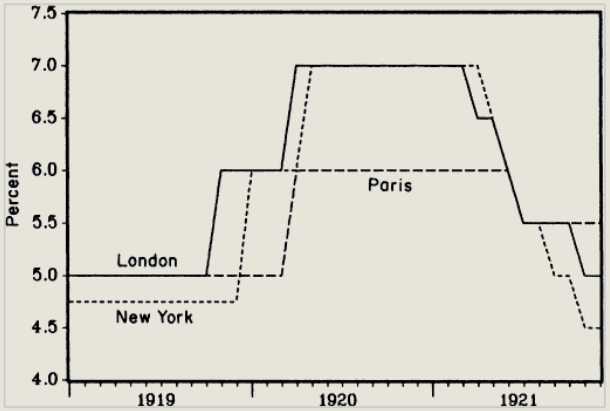


Fig. 4.3. Central bank discount rates, 1919–21.

Interest rates, like prices, tended to move together in New York and the major European financial centers over the course of the 1919–21 boom and slump.

Source: League of Nations, Monthly Bulletin of Statistics, and Federal Reserve Bulletin (various issues).

understanding Federal Reserve System policy is its low level of gold reserves. The United States was the only major industrial country to have restored convertibility and from which gold could be freely obtained. By the end of 1919, U.S. gold reserves had fallen from their mid-year level of 50 percent of eligible liabilities to less than 44 percent, perilously close to the 40 percent statutory minimum.[47] The Treasury, having previously resisted calls for higher interest rates, now pushed the Fed to raise discount rates to defend the gold standard.[48] Even though the United States possessed the largest gold reserve of any nation, gold standard constraints still bound. This was the first of a series of critical junctures when the dictates of the gold standard shaped U.S. monetary policy. The next one would be in 1931.

To admit a role for the external constraint, it is not necessary to argue that the gold reserve was the sole determinant of U.S. policy. At the end of 1919, with the gold cover ratio still above 43 percent, U.S. monetary authorities retained some room for maneuver. Concern over persistent inflation and over what the Fed (p.117) regarded as speculative excesses reinforced the resolve to raise rates. Adolph Miller of the Federal Reserve Board subsequently defended the decision on the grounds that restricting the rate of growth of domestic credit was essential for controlling inflation and placing the economy on a firmer footing. But the Fed and the Treasury had been aware of the inflationary threat for some time. What was different at the beginning of 1920 and served to push them over the threshold toward higher interest rates was the decline in the gold cover ratio.[49]

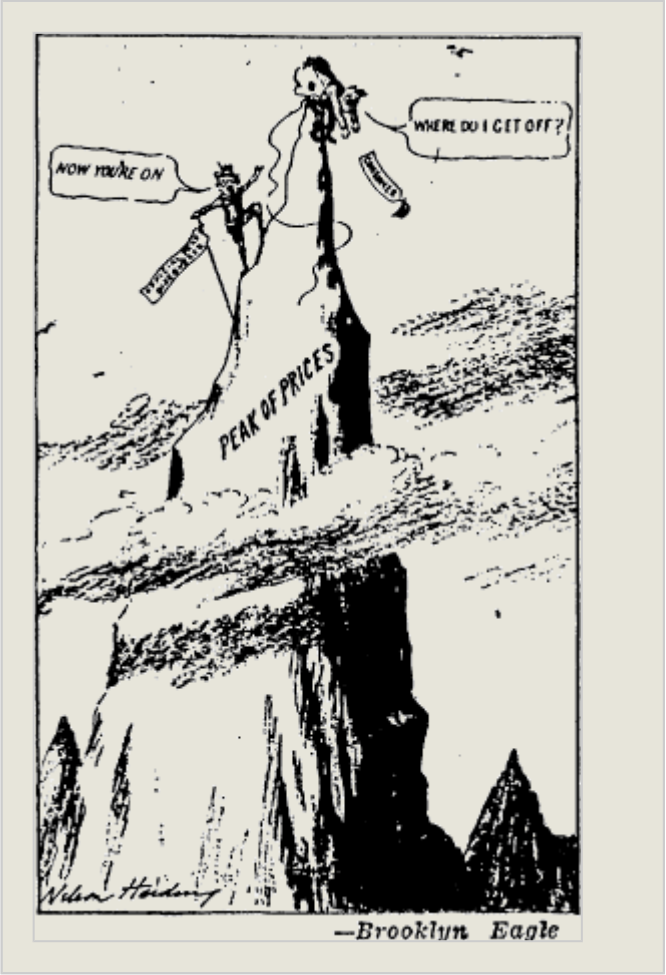
Because higher U.S. interest rates were offset initially by higher interest rates abroad, the Fed's ratio of reserves to liabilities continued to decline. By May 1920 the cover ratio had fallen to a truly alarming 40.9 percent. On May 14, free gold fell to a bare minimum of $201 million—hence the additional discount rate increases of the spring, undertaken when the economy's downward spiral was already evident.[50] Again, this would not be the last occasion on which, to defend gold convertibility, the Fed would take steps sure to reinforce the deterioration of domestic economic conditions.

Gold cover ratios applied by district. Preventing their violation therefore required complicated swaps of paper and reserves between reserve banks. Late in 1919, the Board empowered Governor Harding to suspend reserve requirements for the Federal Reserve Bank of New York, which he did in 1920 to permit the New York Bank to rediscount on behalf of other districts in weaker positions.[51] But even this modest compromise of U.S. gold standard statutes threatened to undermine public confidence in the Federal Reserve System's commitment to the gold parity. It created a free-rider problem among district reserve banks; rather than curtailing loans to their favored clients, as normally required in response to declining reserves, district banks lacking gold could simply borrow it from the New York Fed or other reserve banks possessing it in excess. The incentive to adjust was

diminished. Those reserve banks forced to extend accommodation to others had reason to resent the burden placed upon them.

Hence the next time, in March 1933, when reserve requirements bound at the district level, the Board of Governors refused to suspend reserve requirements for individual federal reserve banks. Those with excess reserves proved unwilling to provide them to others in need. These events would contribute directly to the 1933 devaluation of the dollar.[52] (p.118)

Why did the free gold constraint bind in 1920 but rarely again for the rest of the decade? The answer is that the U.S. money supply had been allowed to reach



unprecedented levels, more than $23 billion, in 1920.[53] Even the massive amounts of gold that the United States had accumulated during World War I scarcely sufficed to ensure 40 percent backing. The restrictive policies pursued from the summer of 1920 reduced the U.S. money supply and price

level significantly. Not only did the decline in currency held by the public, unaccompanied by a change in gold reserves, raise the backing ratio directly, but the Fed's restrictive measures created an excess demand for money that could be satisfied only by importing gold. In consequence, the U.S. gold stock rose steadily over subsequent years, further augmenting the supply of free gold.

For the United States, already on the gold standard, external pressures in 1920 manifested themselves in a fall in gold reserves. For other countries that had not yet restored gold convertibility, they led also to a decline in the exchange rate. European central banks responded accordingly. The Bank of England's discount rate changes were directly related to weakness in the sterling exchange.[54] The rise in U.S. (p.119)

rates in January 1920 led to a collapse of the Paris exchange, which declined from 11 francs per dollar to 15 francs. The Bank of France followed in April with its first discount rate increase in nearly six years.

In these years of learning and

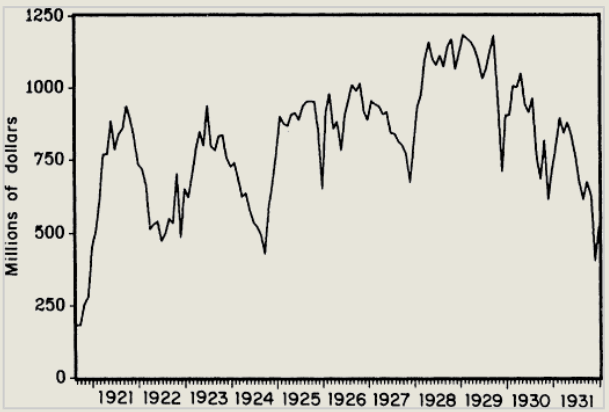


Fig. 4.4. Free gold of the Federal Reserve System.

By the end of 1920, after a delay of several months, the rise in American interest rates and the fall in U.S. merchandise imports induced a flow of gold toward the United States and a rise in the free gold reserves of the Federal Reserve System.

Source: Federal Reserve Bulletin (various issues).

experimentation for the nascent Federal Reserve System, U.S. monetary policy was formulated almost exclusively with U.S. considerations in mind. At the peak of the 1918–20 expansion, the U.S. consideration by which monetary policy was guided was the gold reserve. Given the priority attached to returning to gold, other central banks had no choice but to pay close attention to the actions of the Fed.

While problems of debt management help explain central bank reticence to advance interest rates during the inflation, they cannot account for the hesitation to reduce rates in the slump. The Fed waited until the end of the year to give serious consideration to discount rate reductions. Its inaction in the face of a 46 percent fall in wholesale prices, a significant decrease in production, and such a rapid decline in the American money supply is extraordinary.[55] Complaints from the farm belt and even the introduction of bills in Congress threatening to legislate reductions in reserve bank discount rates did not prod the Fed into faster action.[56]

(p.120) The explanation lies in American monetary policymakers' belief in the need for purging speculative excesses. The 1918–20 boom was regarded as prima-facie evidence of the instabilities excess liquidity could cause. Observers found evidence of the overabundance of liquidity in the fact that most of the additional assets held by the banks had been created as a result of the government's wartime policy of deficit finance, not in response to legitimate needs of trade.[57]

The Fed was determined to eliminate redundant money and credit so that speculative excesses would not recur. The policy came to be known as “liquidation.” In December 1920, the Federal Reserve Board rejected the option of discount rate reductions on the grounds that they threatened to provoke renewed speculative excesses. The following February officials of the New York Fed warned that lower interest rates would provoke an orgy of “wild speculation.” In March the newly appointed Treasury Secretary Andrew Mellon began to lobby for lower rates, but members of the Federal Reserve Board and governors of the New York Fed again warned of the danger of provoking unhealthy stock market speculation. In

April the Board rejected similar proposals for similar reasons. The feeling grew in Washington that the New York Fed lay behind the resistance to reduce interest rates. Mellon and other political appointees intensified their pressure on Benjamin Strong, President of the New York Fed. By May Strong withdrew his resistance in the face of this pressure, and rates were finally reduced.[58]

A more immediate concern motivating the maintenance of high discount rates was continued preoccupation with the level of the gold reserve.[59] Although the Fed's gold cover ratio stopped falling in May, it recovered little through the end of the year. It is hardly surprising that the reserve banks failed to reduce their discount rates significantly until the cover ratio had risen more than marginally above the statutory minimum. If the public attempted to redeem the more than $3 billion of Federal Reserve notes in gold, convertibility would have had to be suspended.[60] Besides magnifying this risk, a low cover ratio could have other adverse consequences. Aspirations to elevate the dollar to key currency status would have been dealt a blow. Unless the stability of the dollar price of gold remained beyond question, foreign central banks would refuse to hold their exchange reserves in New York. Maintaining high discount rates was viewed as necessary to cement America's role in the gold standard system.[61]

Subsequent observers, with benefit of hindsight, criticized as exaggerated these fears of a short-run threat to convertibility and a long-run challenge to the dollar's key currency status.[62] But even officials who remained skeptical of the immediacy (p.121) of the threat saw other reasons to support the policies designed to reduce prices and wages. For example, other countries had already announced their intention to restore the status quo ante. If they reduced wages and prices to 1913 levels while the United States did not, the competitive position of American industry would be eroded.

In retrospect, this seems a curious preoccupation. American producers were in an exceptionally strong position relative to their European competitors. A higher level of prices in the United States might have produced gold losses in the short run, but it would have permitted the Europeans to pursue less

deflationary policies, which itself would have minimized the Fed's loss of reserves. The more expansionary posture internationally would benefit all countries. The insular approach of American monetary policymakers reflected their incomplete appreciation of the influence they now exercised over the stance of policy abroad.

Viewed from a longer-run perspective, however, the American preoccupation with reducing prices was not entirely without logic. Officials within the Federal Reserve System justified it by referring to the danger of a global gold shortage. Little gold had been mined in the course of the war or in the immediate postwar years, and gold production had fallen steadily since 1915. Wartime disruptions to international markets could account for the initial decline in supply but not for the failure of gold production to recover subsequently. Disorganized conditions in Russia played a role, but the principal factor blamed for depressing mining activity was the rise in wage rates and other production costs relative to the fixed dollar price of gold. Admittedly, gold no longer traded in London at the official price but at higher prices that reflected sterling's depreciation against the dollar. But the London gold premium incorporated only depreciation of the British currency, not the American inflation. Heightening the danger created by the decline in the supply of newly mined gold was the prospect that the demand would expand rapidly as the world economy recovered. Once countries returned to the gold standard, the demand for yellow metal would rise further. The point was underscored by American and European gold losses in 1919–20 to other parts of the world. Various expedients were proposed, including subsidies for gold production, taxes on gold used for nonmonetary purposes, and reliance on foreign exchange to supplement the gold reserves of central banks. But the only lasting solution was to engineer a decline in price levels, which would increase the real value of existing gold reserves and, by raising real gold prices, enhance the incentive to augment them.

The American recession exerted a powerful influence over the rest of the world. During the boom, the United States had exported capital, fueling money and credit expansion in Europe. American capital exports in 1919–20 (principally trade

credits channeled through London) exceeded the amount of lending the United States engaged in during any other two years of the interwar period. Despite the European clamor for U.S. goods, American import demands had been sufficiently strong that the United States had been a net exporter of gold. From the end of 1920, the process operated in reverse. American lending fell off, as shown in Figure 4.5. The United States began to attract gold from the rest of the world on a massive scale.[63] Except (p.122) insofar as they were willing to permit their currencies to depreciate, other countries were forced to initiate restrictive measures to offset this balance-of-payments shock.

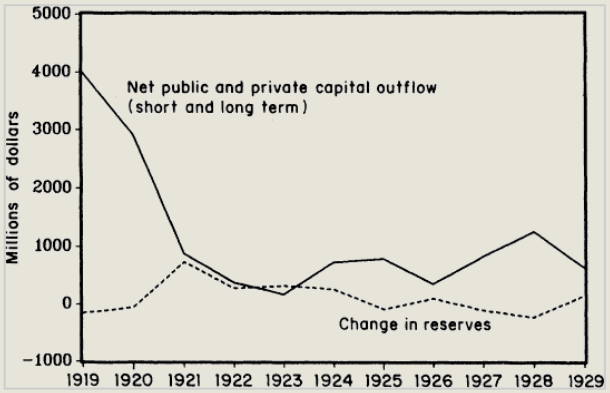


Fig. 4.5. U.S. foreign lending and change in international reserves, 1919–29.

U.S. foreign lending and the gold and foreign exchange reserves of the Federal Reserve System fluctuated inversely throughout the 1920s, reserves rising when foreign lending fell and vice versa.

Source: U.S. Department of Commerce (1976).

Aftermath

Economic activity in the industrial countries spiralled downward from the early months of 1920 through the summer of 1921. In July the U.S. economy bottomed out, and by autumn expansion was again underway. No extended recession occurred to impress upon observers the dangers of the policies pursued. Consequently, leading lights within the Federal Reserve System embraced the policy of liquidation. They inadequately

recognized the capacity of a policy driven by the imperatives of the gold standard to destabilize the economy. They did not understand the extent to which the pattern of international settlements had come to hinge on foreign lending by the United States. Although the 1920–21 slump revealed that the policy of liquidation could have powerful macroeconomic effects, the economy rebounded quickly and expanded strongly thereafter. Some observers drew the conclusion that the purging of excesses had been quite salutary and urged its repetition on the next occasion, 1928–29, when speculation was again viewed as excessive.

What they failed to appreciate was that a set of very special circumstances was responsible for the U.S. economy's rapid recovery from the 1920–21 recession. An unusually good harvest in 1921 cushioned the economy's decline, reducing the (p.123)

prices of the raw materials that served as inputs into a variety of U.S. industries.[64] Even more basically, the policy environment differed fundamentally from that of 1929. With their exchange rates floating against the dollar in 1920–21, European countries were not compelled to follow the Fed in lockstep. Germany, entangled in the international dispute over reparations and unable to put its fiscal house in order, did not mimic the restrictive policies of the United States. The German economy continued to operate under intense demand pressure, causing the mark to depreciate but at the same time moderating deflationary tendencies worldwide. In 1929,

having restored the gold standard, Germany would not enjoy the same independence.[65]

What was true for Germany was true as well for other countries with depreciating currencies, notably Poland and Austria, both of which managed to largely avoid the effects 1920–21 slump.[66] Other industrial countries, more successful in avoiding high inflation and more committed to restoring their prewar gold standard parities, felt more pressure to follow the United States. Still, with their exchange (p.124) rates floating, they could do so at a distance. The United Kingdom was the principal country to capitalize on her freedom to maneuver, allowing sterling prices to fall more slowly than dollar prices through the first half of 1921. As a result, sterling depreciated against the dollar, before making up the lost ground after production had stabilized in the second half of 1921. Sweden similarly pursued less deflationary policies than the United States through the middle of 1921, allowing the krona to weaken against the dollar before reversing the trend once recovery had begun.[67]

The European response had important implications for the United States. From the beginning of 1921 the Fed was on the receiving end of a massive gold inflow. Its reserve ratio rose rapidly, relaxing the constraint on discount policy. German, Austrian, and Polish inflation and the volatility of sterling propelled gold toward the United States. So did the relatively high pressure of demand under which the British and Swedish economies continued to operate. Thus, the refusal of Germany, Austria, Poland, Britain, and Sweden to fully match the restrictive policies implemented in the United States not only moderated the contraction of their own economies but allowed the Fed to reverse course earlier than it could have otherwise. The U.S. recession bottomed out quickly; economic growth resumed.

The policy of liquidation, Federal Reserve officials concluded, had only salutary effects. What they failed to realize was that the success of the policy had been contingent on the foreign reaction, a reaction that was possible only because the gold standard had not yet been restored. The situation would be entirely different when recessionary tendencies once again became evident in 1929.

Notes:

(1) Shepherd (1936), p. 56.

(2) “In 1919 there was a good deal of this speculative acquisition of marks, crowns and other European currencies. . . . Both the dealers in commodities and the dealers in exchange seemed to think that the depreciation, great as it was even then, was a temporary aberration from the old gold parity. When marks were worth, say, 5 cents or 3d, it seemed attractive to buy them and ruinous to sell them, even if several years had to pass before they returned to their pre-war value of 23.8 cents or 11 3/4d.” Hawtrey (1926), p. 70.

(3) The basic premise of the purchasing power parity doctrine was that the percentage change in exchange rates should equal the inflation differential between countries. The leading exponent of this view was Cassel (1922). His memo setting out this theory of equilibrium exchange rates, written for the Brussels International Financial Conference, was excerpted in the *Federal Reserve Bulletin* (December 1920, pp. 1277–1281). The problem, even for proponents of this approach, was to settle on the price indices appropriate for use in these calculations. Conclusions could be very sensitive to choice of index, as demonstrated by the controversy surrounding the computations of Keynes (1925). See also Moggridge (1969).

(4) American support was withdrawn March 21, 1919. Certain exchange controls remained in force until August, including restrictions on the purchase of foreign currency to acquire foreign securities or speculate in foreign exchange. In a sense, the government had little choice about whether or not to unpeg sterling; neither the Bank of England nor the Treasury had much foreign currency available for intervention (Sayers, 1976, vol. 1, p. 116). Still, Britain might have chosen to quickly restore free gold movements and to instruct the Bank of England to employ its gold reserve in international settlements, as some observers advocated, in the hope that restoring convertibility might inspire confidence and attract capital inflows, sustaining the reestablished sterling parity. Ultimately, the strategy was rejected as too risky.

(5) Sayers (1976), vol. 1, p. 115.

(6) The downward adjustment of money wages in 1920–21 was also facilitated by the operation of “sliding scale” clauses in labor constracts. These provisions, which indexed wages to product prices or the cost of living, were widely adopted during the war, notably in Britain. They fell out of favor gradually thereafter, but not at a rate that would have dramatically reduced the scope for wage reductions in 1922–23. For details on profit sharing and indexation, see Pigou (1947) and *Federal Reserve Bulletin* (March 1919), p. 195.

(7) Ogburn and Jaffee (1929), p. 158.

(8) Average ad valorem rates on dutiable imports rose from 30 to 35 percent with the adoption of the Fordney-McCumber Tariff. See Eichengreen (1989b).

(9) Committee on Currency and Foreign Exchanges After the War (1919), p. 3.

(10) This is the theme of Wicker (1966), chapter 2.

(11) For details, see Morgan (1952) or Howson (1975).

(12) This last consideration figured prominently in the calculations of U.S. Treasury officials, as documented by Wicker (1966).

(13) Resolution proposed by the Committee on Public Finance, International Financial Conference, reprinted in *Federal Reserve Bulletin* (December 1922), p. 1283.

(14) The United States was a notable exception. Programs in different countries are reviewed in Eichengreen and Hatton (1988), Chapter 1.

(15) On the capital levy, see Eichengreen (1990b) and Chapter 6 in this book.

(16) Of 247 American firms responding to a Federal Reserve Board survey published in March 1919, more than half characterized business prospects as uncertain rather than excellent, good, fair, or poor. *Federal Reserve Bulletin* (March 1919), p. 207.

(17) Pigou (1947), p. 5. Friedman and Schwartz dub this the period of “price hesitation,” although there was nothing hesitant about the tendency of prices to fall. Friedman and Schwartz (1963), p. 222. Lewis (1949), p. 18, and Palyi (1972), p. 37, also provide useful surveys.

(18) The Federal Reserve Board noted “striking reductions” in prices in January, especially in the metals and textile industries. In the latter they constituted “the greatest ever made at any time since the close of the Civil War.” *Federal Reserve Bulletin* (February 1919), p. 103.

(19) U.S. exports of merchandise to Europe rose by roughly 25 percent between 1918 and 1919. Cassel (1922), p. 188.

(20) The course of events in Germany is the subject of more detailed discussion in the next chapter.

(21) See Nogaro (1927) for a representative French analysis and Costigliola (1984) for a review of the debate.

(22) Extraordinary subsidies had been extended. In Britain, for instance, the prices of iron and steel were about £10 per ton below cost due to subsidies on iron ore, pig iron, and limestone. Pigou (1947), p. 123.

(23) Among the final commodities to be decontrolled were hides (March 1920), coal (June 1928), bread and flour (October 1920), lard and sugar (February 1921), and butter (March 1921).

(24) The phrase “bonfire of controls” is from Mowat (1955), p. 29. It is likely that pent-up consumer demand played a larger role in the United Kingdom than in the United States given differences in the stringency of price controls and rationing in the two countries. While there is evidence of buoyant demands for clothing, house furnishings, and residential construction in the United States, it is hard to argue that the American boom was driven by consumer spending, especially given the high level of saving in 1919. See Samuelson and Hagen (1943), pp. 17–19. Insofar as these factors affected the U.S. economy, they did so primarily through the release of consumer

spending in Europe and the consequent rise in American exports.

(25) The value of U.S. business inventories increased by $6 billion in 1919, almost double the largest annual increase experienced in any year between 1920 and 1929. Kuznets (1938), vol. 1, Table VII-6.

(26) *Economist* (December 6, 1919), cited in Mowat (1955), p. 26.

(27) *Federal Reserve Bulletin* (June 1919), p. 523. Treasury Secretary Glass similarly criticized the “wave of stock market gambling.” Smith and Beasley (1939), pp. 159–160.

(28) See Boyce (1987, pp. 32–33) for a discussion of how these pressures shaped British fiscal policy.

(29) Morgan (1952), pp. 104–105.

(30) Kindleberger (1986), p. 331. See also Cassel (1922), Pedersen (1961), Friedman and Schwartz (1963), and Palyi (1972).

(31) Brown (1940), p. 198; Friedman and Schwartz (1963), p. 223.

(32) A parallel discussion of the German hyperinflation appears in chapter 5.

(33) White (1983), p. 122 and *passim*.

(34) Morgan (1952), p. 203.

(35) *Federal Reserve Bulletin* (October 1919), p. 911.

(36) *Federal Reserve Bulletin* (June 1919), p. 524; Chandler (1958), p. 148.

(37) “It would have been impossible in any circumstances for the Bank to have maintained more than a modest differential between market rate for commercial bills and the Treasury bill rate. If market rate were forced up, there would be a tendency to switch from Treasury bills to commercial bills as they fell due. The government would fail to renew all its Treasury bills

as they fell due and would have to borrow on ways and means from the Bank. This, of course, would place additional funds in the hands of the market and so undo the contraction of credit by which the initial rise in commercial bill rate had been brought about." Morgan (1952), p. 203. Note that the Treasury bill tap was turned off temporarily in mid-1919 to facilitate placement of the Victory Loan and the Funding Loan.

(38) After July there were in fact some additional issues at tap rates, although those rates were adjusted to reflect the results of the previous tender. Morgan (1952), p. 146. Until mid-1922 Germany also issued bills at a tap rate of 5 percent.

(39) See chapter 6, and especially Table 6.3.

(40) Haig (1929), p. 206.

(41) Friedman and Schwartz (1963), pp. 223–224.

(42) Leffingwell and associates offered a tortured theory whereby a rise in interest rates actually intensified inflationary pressure. The argument was that a large floating debt in the hands of the banks was a source—or at the least a symptom—of inflationary pressure. If the government issued more debt than the public was willing to hold, in the first instance it would end up in the hands of the banks, which were in a favorable position to replenish their liquidity at the Fed. This rediscounting was an obvious source of inflation. Thus, high interest rates threatened to slow the process of funding this debt and placing it with the public, thus allowing the inflation to persist. Wicker (1966), p. 27. Leffingwell (1921), p. 35.

(43) This is an example of the "time consistency problem" to which economists have devoted much attention in recent years. See, for example, Kydland and Prescott (1977).

(44) Hearing before the Joint Commission of Agricultural Inquiry, 67th Congress, 1st Session, Vol. 2, 1922, pp. 503–504.

(45) Wicker (1966), p. 36.

(46) U.S. Senate (1923), p. 5.

(47) The precise legal provisions governing required reserves were actually more complicated. The Fed was required to maintain reserves in gold or lawful money (e.g., silver dollars, silver certificates, and greenbacks) of at least 35 percent against deposits and reserves in gold of at least 40 percent against Federal Reserve notes in circulation. In any case, there was no dissent from the view that the amount of free gold possessed by the Fed fell to alarmingly low levels in the early months of 1920. The 40 percent ratio was viewed as a critical threshold below which public confidence in convertibility would be threatened. See Goldenweiser (1925), p.90. A further discussion of the free gold problem is in chapter 10.

(48) Wicker (1966), p. 45.

(49) As Wicker (1966), p.45, concludes, “So that while action by the Treasury was inspired by gold reserve considerations it would be a mistake to infer that the Board acted solely because the reserve ratio had fallen.”

(50) Anderson (1930), p. 5.

(51) Chandler (1958), p. 184. The Federal Reserve Act empowered the Board to suspend the backing requirement for notes for up to 30 days, and to renew the suspension for periods not exceeding 15 days, so long as the reserve bank in question paid a tax on its notes, where the tax rate rose with the reserve deficiency. The New York Fed's gold backing for its notes fell below 40 percent in the fourth week of April, as its rediscounts on behalf of other reserve banks rose. By late May, the gold backing of New York Fed notes declined to little more than 37 percent. Federal Reserve Bank of New York (FRBNY) Archives, “Statement of Condition” (various numbers). Interdistrict accommodation extended by the New York Fed continued to rise through the second quarter of 1920. Total interdistrict accommodation peaked somewhat later, in August, September and October. Goldenweiser (1925), p. 37.

(52) See chapter 11, pp. 326–327.

(53) Twenty-three million dollars is Friedman and Schwartz's estimate of M1. Friedman and Schwartz (1963), p. 710.

(54) Sayers (1976), p. 117. But the Bank of England still had to modify its use of rediscount policy to accommodate Treasury needs. Sayers (1976), p. 119 and *passim*. See also Morgan (1952), p. 204 and *passim*.

(55) Only the post-1929 contraction of monetary aggregates would subsequently outstrip the contraction that took place in the year and a half following September 1920. Friedman and Schwartz (1963), p. 232.

(56) FRBNY, Letter from Strong to Norman, 26 February 1921, describes Congressional pressure on the Fed to reduce its discount rates.

(57) Chandler (1958), pp. 186–187.

(58) Wicker (1966), pp. 54–55; Chandler (1958), pp. 174–176.

(59) Friedman and Schwartz (1963), pp. 237–238, 249; Chandler (1958), pp. 183–185.

(60) So it was argued by Governor Harding in Harding (1925).

(61) Strong wrote Leffingwell as early as February 6, 1919, “WE MUST DEFLATE. Notwithstanding the hardships and losses resulting, I believe you will agree that it is inevitably necessary that our banking position must be gradually deflated. If this is not done, we must face the necessity of either continuing the gold embargo . . . or else lose a large amount of gold at a time when it would be inconvenient for us to do so.” Cited in Chandler (1958), p. 139. Presumably the urgency attached to these considerations was only heightened by the subsequent year of inflation.

(62) See, for example, Wicker (1966).

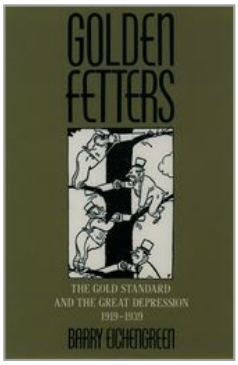
(63) Holtfrerich (1986a), pp. 15, 27.

(64) This “positive supply shock” is emphasized by Romer (1988), who invokes it to help account for the unusually rapid fall of prices relative to output in the United States in 1920–21.

(65) This point has been made previously by Graham (1930) and Holtfrerich (1986b).

(66) Walre de Bordes (1924), pp. 11, 218; Lester (1937), p. 434.

(67) Cassel (1922), pp. 236–237.



Golden Fetters: The Gold Standard and the Great Depression, 1919-1939
Barry Eichengreen

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The Legacy of Hyperinflation

Barry Eichengreen (Contributor Webpage)

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Abstract and Keywords

This chapter and the next describe the fiscal war of attrition that fueled inflation in the 1920s. That war proved most intractable in Germany, where it was fought internationally as well as on the domestic front. The German hyperinflation that resulted from this deadlock is the subject of Ch. 5. The different sections of the chapter look at the background (the post World War I reparations tangle), the transition to hyperinflation, the impact of inflation on the German economy, the stabilization that followed the revaluation of government reserves and pegging of the exchange rate in November 1923, and the implications for international monetary relations.

Keywords: economic stabilization, exchange rate, German economy, Germany, hyperinflation, inflation, international monetary relations, interwar period, reparations, revaluation

The German mark stood as one of the traditional pillars of the prewar gold standard system. In the decade preceding the

war, Germany emerged as a leading industrial power, a status she was poised to regain despite wartime devastation of her economy and France's efforts to shackle her industrial might. Along with London and Paris, Berlin had been one of the central participants in the cooperative ventures sustaining the prewar gold standard. Now as before the war, any truly international gold standard would have to encompass Germany and the countries in her orbit. A prerequisite for the construction of such a system was the mark's stabilization.

The process would prove long and arduous. Before stabilizing her currency in 1924, Germany endured one of the most extreme hyperinflations in recorded history. By the summer of 1922, prices were rising at rates of more than 50 percent a month. In the summer of 1923, inflation accelerated to more than 100 percent a month. For a brief period in the autumn, the inflation rate exceeded 1000 percent a month, with prices doubling or tripling in a week (see Figure 5.1).[1]

The exchange rate's role in the inflation was a matter for impassioned debate. German officials, such as Karl Helfferich, Reich Minister of Finance during the war and subsequently Nationalist deputy in the Reichstag, and Rudolf Havenstein, President of the Reichsbank, as well as outside observers such as John H. Williams, Professor of Economics at Harvard University, believed that the inflation had been ignited by disturbances to the foreign exchange market that set off a vicious spiral of currency depreciation, rising import prices and money creation. Others argued that the root causes lay elsewhere, namely in budget deficits financed by printing money, and that the exchange rate was no more than a leading indicator of inflationary pressures. They regarded the exchange rate as one of many prices to be brought under control by changes in monetary and fiscal policies.

The debate over the German hyperinflation is typically framed as a contest between these two schools: the balance-of-payments and fiscal views. Participants in the debate strongly support one viewpoint and reject the other outright. In fact, both views contain a kernel of truth. Shocks to confidence that prompted flight from the mark, igniting the vicious spiral of currency depreciation and inflation, significantly widened the

budgetary gap by raising the cost of the goods and services (p.126)

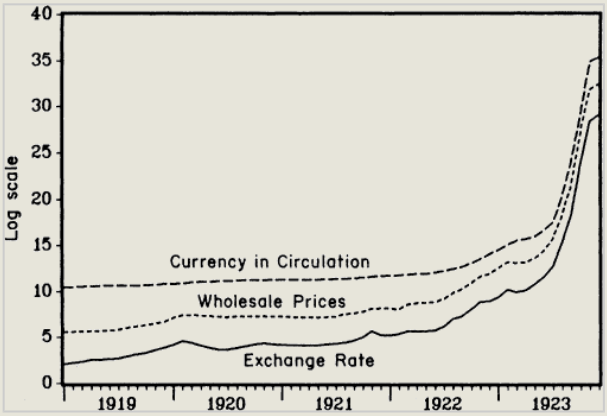


Fig. 5.1. Mark/dollar exchange rate, prices, and note circulation, 1918–23.

Germany's exchange rate, prices and money supply rose so rapidly that they can only be conveniently depicted on a graph with a logarithmic scale.

Source: Rogers (1929), *pp. 142–143*.

purchased by the public sector more quickly than its revenues. Yet even if there had been no inflation or currency depreciation, the Reich's budget still would have been in substantial deficit, requiring bond and ultimately money finance. The fiscal view is correct insofar as the budget would have been in deficit, eventually necessitating money creation, even without inflation and currency depreciation. The balance-of-payments view is correct in that inflation and currency depreciation, once underway, added to the fiscal crisis. More fundamentally, analyzing the episode at this level conceals more than it reveals. Whether currency depreciation, budget deficits, or for that matter a combination were the proximate source of the inflationary pressure, both were themselves products of more basic political, social, and economic tensions. The root cause of the inflation was the same one that prevented other European countries from stabilizing their currencies in the early 1920s: an absence of consensus regarding tax incidence and income distribution. In Germany the domestic distributional conflict was aggravated by the international dispute over reparations and consequently

manifested itself in a particularly virulent form. Because of its extremity, the mark's bout with inflation laid bare the social and political conflicts that fueled inflation not just in Germany but also in France, Belgium, and Italy. Thus, the episode highlights the obstacles to currency stabilization that prevailed throughout Europe in the aftermath of the war.

Even after a decade passed, policy in these countries was still driven by the fear that old wounds would be reopened if the compromise that the gold standard symbolized (p.127) was allowed to disintegrate. Where inflation had reached catastrophic heights, governments stood ready to defend their gold parities at any cost. That commitment would severely constrain their options, with disastrous consequences, when the Great Depression struck.

The Background: Reparations

The reparations tangle was one of the principal obstacles to an early German stabilization. Establishing and maintaining a fixed gold parity required the capacity to fend off speculative attacks. Just as before the war, this capacity derived from two ingredients: credibility and cooperation. Containing adverse speculation turned on Germany's credible pursuit of fiscal and monetary policies consistent with stabilization of the domestic-currency price of gold. This required a budget balanced inclusive of transfers, so that there would be no pressure to print money for financing fiscal deficits. The preconditions for credible and consistent fiscal and monetary policies were domestic economic stability and consensus regarding the distribution of the fiscal burden, which hinged on a reparations bill that was not just economically feasible but politically tolerable.

To be fully credible, the commitment to the gold standard had to be international. Germany's own commitment had to be buttressed by international cooperation. Just as before the war, foreign assistance was essential to the stability of the international monetary system. It could take the form of an open loan, as in 1924, or accommodating changes in interest rates abroad, as in 1927. But until the dispute over reparations subsided, neither form of collaboration could be

regularized. Thus, none of the prerequisites for monetary stability was present until 1924, and inflationary chaos was the result.

The destabilizing influence of reparations was heightened by the pervasive aura of uncertainty in which they were shrouded.[2] Discussions of Germany's obligation at the Versailles Peace Conference were marred by disagreement among the Allies, with the British delegation insisting initially on a significantly larger sum than the French or Italians.[3] In 1920 British opinion turned against the Treaty as a betrayal of the Wilsonian vision of peace with reconciliation. Meanwhile, the French position hardened following the victory of the right-wing *Bloc National* in the November 1919 general election.[4] It was Germany's bad luck that the 1921 London Conference at which the magnitude of the bill was determined coincided with the fiftieth anniversary of the Franco-Prussian War and the agreement under which France had been forced to pay reparations to Germany. Ironically, the same 1871 indemnity (p.128) that had facilitated Germany's adoption of the gold standard now helped delay its restoration.[5]

More recent events reinforced French insistence that “the Boche will pay.” Rehabilitating France's ten northeastern *départements*, which had served as one of the main theaters of the war, required an expensive infusion of capital. France had incurred substantial war debts to her Allies, whereas Britain's debt to the United States was offset in part by France's debt to Britain. American refusal to provide concessional reconstruction loans or to forgive these debts did much to harden the French position, rendering it inevitable that German reparations and Allied war debts would be bound up together.[6]

A reparations bill as large as $200 billion was contemplated at Versailles. Ultimately, the assembled delegates were only able to establish a deadline for the conclusion of discussions: May 1921.[7] Negotiations seemed to stretch on interminably. The Reparation Commission charged with settling the matter could agree only on a principle: that while France and her allies were authorized to press their claims for full damages, actual transfers would be linked to Germany's capacity to pay as

gauged by the rate of growth of her exports and her success in obtaining foreign loans.

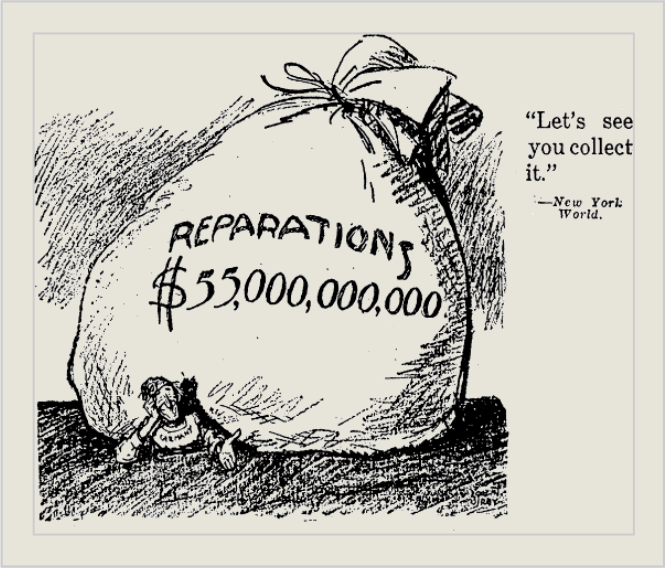
By linking reparations payments to the condition of the German economy, the Allies diminished the incentive for German policymakers to put their domestic house in order. Hyperinflation was only the most dramatic illustration. Politicians were not encouraged to implement painful programs designed to promote growth by the knowledge that the fruits of their labor would be transfered abroad. The form of the reparations bill hardened German resistance. Including pensions, as insisted on by Britain and the Commonwealth to inflate their share of the total, cast doubt on the French justification for reparations based on the cost of reconstructing devastated regions and reinforced the German belief that the dominant Allied motives were avarice and spite.[8]

An unstable German economy had far-reaching economic and political ramifications. Anything that depressed trade in Germany depressed trade throughout Central Europe. Economic instability in Central Europe intensified fears of a Bolshevik threat from the east, reviving familiar Anglo-French conflicts over spheres of influence in Eastern Europe and undermining the spirit of cooperation developed during the war. Prospects for compromise among the Allies grew increasingly remote.

In the interim, Germany was instructed to begin transfers in kind, mainly coal but also stocks of Reichsbank gold, war matériel, public property in ceded territories (p.129) and colonies, railway rolling stock, and ships.[9] The coal was essential to a French steel industry handicapped by the destruction of French mines by retreating German armies.[10] These “interim payments,” justified as a way of defraying occupation costs, were formally distinct from other transfers, although they eventually came to be regarded as the first installment of reparations. Transfers completed prior to May 1921 amounted to 8 billion gold marks (marks of prewar value). This amounted to some 20 percent of German national income in 1921, although it represented only 40 percent of the interim payment specified at Versailles.[11]

It seemed noteworthy that these sizeable interim transfers did not destabilize the German price level or the government budget. They were effected despite continued uncertainty about the size of the reparations bill and despite capital flight from territories scheduled for cession. Since a large part of the interim transfer took the form of public property such as railway rolling stock rather than private-sector production that the government had to pay for by borrowing or taxing, it was relatively easy to mobilize. But insofar as it would be necessary eventually to replace that public property, Germany was mortgaging her future, a fact that could not have reassured outside observers. The presence of Allied troops along the Rhine and the Baltic and the return of domestic political stability following the Kapp Putsch of 1920 have also been invoked to explain the ease of transfer.[12] But troops were no guarantee of compliance, as the Allies would learn in 1923. Only with benefit of hindsight could the failure of the Kapp Putsch be seen as strengthening moderate tendencies within the military.[13] At the time, each of these developments, rather than reassuring domestic and foreign observers, heightened concern over both economic stability and Germany's fragile political equilibrium. (p.130)

More than the presence of occupation forces or the political climate, the key factor in the interim transfer was Germany's hope that a



demonstration of good will would elicit Allied concessions and permit the early extinction of reparations. The Allies had not yet irrevocably committed to their excessive demands. By

evincing a willingness to pay on the scale of France's reparations after 1871, Germany might encourage the victors to adopt a more conciliatory stance.[14]

The fiscal implications of the transfer were accommodated by tax reforms guided through the Reichstag by the finance minister, Matthias Erzberger, over the strident opposition of a right wing led by Helfferich. Erzberger's tax package featured an emergency levy and transferred the income tax from the states to the Reich in return for a commitment by the central government to redistribute some of the revenues back to local authorities. The tax increase was essential for maintaining fiscal balance in the face of the interim transfer. German politicians and their constituencies tolerated higher taxes because they anticipated that the revenue would be transferred abroad for only a limited period of time. Rather than provoking capital flight and other forms of evasion, the tax increase was followed by short-term capital inflows in anticipation of possible stabilization of the mark. Since the interim transfer provoked neither capital flight nor currency depreciation, the revenue base of the new income tax was not eroded by inflation.

(p.131) Following a series of preparatory conferences, the Allies assembled in London in 1921 to set Germany's payment schedule. The U.S. Congress had already indicated its unwillingness to ratify the Versailles Treaty. The American representative to the Reparation Commission was reduced to observer status, limiting his ability to support the British delegation in its opposition to the more extreme demands of France and Italy.[15] Congress's refusal to ratify signalled the resurgence of isolationist tendencies within the United States, which bode ill for those who hoped for war debt cancellation. Given American inflexibility regarding war debts, the prospects for French, Italian, and British compromise on reparations appeared increasingly bleak.

The negotiators at London delivered a reparations bill of 132 billion gold marks, or 31 billion U.S. dollars. This staggering sum was a concession relative to the Reparation Commission's initial recommendation of 225 billion gold marks.[16] Denominating the debt in gold insured that inflation and

exchange rate depreciation could not be used to erode its value. Germany was to begin service immediately on 50 billion of the 132 billion total, on which 5 percent interest and 1 percent amortization amounted to 3 billion gold marks (roughly 7½ percent of national income).[17] In addition, she was charged 1 billion marks annually for occupation costs and in settlement of prewar debts (bringing the total to perhaps 10 percent of national income). Payment of the second tranche of 82 billion gold marks was deferred pending an adequate increase in Germany's capacity to pay. These contingencies heightened the uncertainty surrounding the date at which the reparations burden would finally be extinguished. All that was certain was that Germany would be obligated to make substantial transfers over a period of decades.

No issue in twentieth-century economic and political history has been more hotly contested than the realism of this bill.[18] Contemporaries gauged the burden by comparing it to the reparations paid Germany by France following the Franco-Prussian war. France had paid a total of 5 billion francs, roughly one-quarter of French national income in 1872.[19] In comparison, Germany's immediate burden (p.132) of 50 billion gold marks represented 125 percent of national income in 1921. Including the deferred payments (known as C Bonds) raised the ratio to the 330 percent. At 10 percent of national income, the first year's payments under the London Schedule were very large by prewar standards.[20]

Defenders of the London Schedule observed that Britain had transferred abroad fully 8 percent of national income through foreign lending in 1911–13. This proved, they argued, that the balance-of-payments adjustment mechanism was capable of absorbing a transfer on the requisite scale. But at least some British investment abroad had returned to London as foreign deposits and some in the form of export demands. Together these mechanisms minimized the impact on British industry and on the balance of payments. It was unlikely that either mechanism would operate as powerfully to recycle German reparations.[21]

The politics of the two transfers were even less comparable. Britain had not sacrificed domestic wealth in the amount of

the transfer. The British had invested abroad voluntarily with the option of devoting those resources to future consumption. No necessary impact on British living standards resulted. The problem for Germany was how to mobilize for transfer 10 percent of national income and to reduce both present and future consumption without provoking domestic political unrest.

Transforming 10 percent of national income into foreign currency required an external surplus equivalent to 80 percent of 1921–22 exports. One can imagine that strict controls modelled on wartime practice might have succeeded in reducing German imports by 80 percent. But radically curtailing imports was inconsistent with the maintenance of exports given the economy's reliance on inputs from abroad such as copper, cotton, and wool, a dependence that had been heightened by wartime losses of territory and stockpiles. Expanding exports by 80 percent required a further increase in imported inputs, multiplying the gross increase in exports necessary to effect the transfer. And even these calculations left aside the implications of massive import compression for domestic living standards.

Even had Germany somehow been able to provide this astonishing increase in exports, the Allies would have been unwilling to accept it. The problem was not that the incremental exports were so large relative to the British, French, and U.S. (p.133) economies. The projected transfer amounted, on an annual basis, to perhaps 1 percent of their combined national incomes. But German exports would be heavily concentrated in the products of industries already characterized by intense international competition, notably iron, steel, textiles, and coal. The same difficulties would be posed for Allied industries if Germany instead flooded third markets with exports. Representatives of these industries were unlikely to accede graciously to a sudden expansion of German exports. Even while complaining that Germany's effort to meet its reparations obligation was inadequate, the Allies raised their import barriers. Keynes, in *The Economic Consequences of the Peace*, insisted that proponents of reparations specify “in what specific commodities they intend this payment to be made, and in what markets the goods are

to be sold."[22] Thomas Lamont of the U.S. delegation to Versailles brought this same point to the attention of the negotiators. The American economist Frank Taussig echoed the warning.

That 1920–21 was a period of recession aggravated both problems: those of Germany's ability to export and the Allies' willingness to import. The Allies would have been happy to accept additional in-kind transfers had they taken the form of raw materials (British reservations about coal notwithstanding). But the German economy could provide these only to a limited extent. Transfers of raw materials disrupted Germany's capacity to export manufactures. Proposals to import German labor for the work of reconstruction were rejected as immoral and politically unpalatable in light of unemployment among demobilized Frenchmen, Belgians, and Italians.

Hence the theoretical question of what change in prices would be needed to clear international markets in the presence of reparations (known as the "transfer problem") was ultimately beside the point. Keynes's conclusion was that to generate a trade surplus on the order of 80 percent of initial exports, a very considerable decline in the relative price of German goods would be needed to switch foreign demands toward German exports and German demands away from imports. He raised the possibility that, if demands were sufficiently inelastic, a decline in German export prices might reduce the value of German exports at the same time it raised their volume, rendering the transfer impossible at any price.[23] Bertil Ohlin's rejoinder was that a rise in the relative price of German exports was equally plausible a priori, especially if foreign governments stimulated expenditure to promote the absorption of imports at the same time that the German government curtailed domestic demand.[24] In one sense, both economists seized an essential issue, Keynes that a transfer on the projected scale might prove impossible, Ohlin that the expenditure-changing policies governing absorption might ultimately determine whether or not this was the case. In another sense, both missed the point by focusing on the determination of relative prices at the neglect of the determining political considerations.

(p.134) Just as political constraints limited the Allies' willingness to absorb reparations, they limited Germany's capacity to mobilize them. Living standards had fallen significantly since 1913, raising the specter of unrest if the government attempted to divert 10 percent of the national income that remained toward the payment of reparations. The London Plan was presented as an ultimatum, to be accepted within six days if Germany was to avoid occupation. Such terms did not cultivate domestic support for the transfer.

Despite these obstacles, Germany delivered some 75 percent of scheduled reparations in the year from May 1921, an impressive performance in which continued Allied occupation of customs posts in the west and of the area around Dusseldorf played some part. Immediate prospects seemed bright. In the absence of inflation and reparations, the Reich's budget would not have been far from balance in 1921.[25] Acquiring the capacity to finance reparations seemed to require only another tax increase along the lines of that passed in 1920, which the Reichstag considered in the summer of 1921. But politicians were unable to agree on the form of the tax; the Socialists advocated a levy on wealth, others favored additional sales taxation. Backing for tax increases was diluted by the knowledge that the fruits of all sacrifices would be transferred abroad. The Reichstag finally passed a tax compromise in January 1922 after the deadlock was broken by the Reparation Commission, which, alarmed by the mark's depreciation and the budgetary impasse, agreed to Germany's request that payments be reduced to 75 percent of those scheduled (validating ex post her 1921 performance). But this relatively modest tax initiative was wholly inadequate to eliminate the budget deficit.

Opposition to tax increases did not enhance the Reich's ability to market bonds. Increasingly, the government was forced to finance its deficits with money creation. Fortunately, capital continued to flow in, limiting the amount of monetization required, stemming the exchange rate's decline, and moderating inflation. Though there was growing reason to question the credibility of the authorities' commitment to restoring the prewar parity, the fact that the mark had depreciated more quickly than domestic prices had risen

offered scope for currency appreciation prior to stabilization. Investors still believed that currency depreciation would be reversed, conferring capital gains on investors in marks.[26] Of course, a reduced reparations bill, which might itself contribute to a consensus for higher taxes, would be needed to strengthen and stabilize the mark. As it became clear that no reduction would be forthcoming, capital flows reversed direction, setting the stage for hyperinflation.

The Transition to Hyperinflation

The German hyperinflation is one of those “tales of wonder and adventure which owe their interest to the extravagance of the facts recounted.”[27] Few variables behaved more extravagantly than the exchange rate. As a result of wartime controls, (p.135) the rate of currency depreciation lagged behind the rate of price inflation between 1914 and 1918. But even as price increases accelerated, the exchange rate made up lost ground. Domestic goods continued to be traded in markets where long-term customer relations mattered, at prices governed by contract and convention. Foreign exchange, in contrast, was traded between anonymous buyers and sellers at prices that adjusted instantaneously to not just contemporaneous events but also expected future developments. Once the inflationary trend became evident, exchange rate depreciation therefore began to outstrip the rise in domestic prices.

The lag of domestic prices also reflected regulation and control. Farmers were required to sell a portion of their grain crop at regulated prices. Rather than raise prices with the exchange rate, the Reich resold at a loss the grain it imported from abroad. Housing remained under rent control, with rents falling in 1922 to as little as 3 percent of prewar levels. Railway rates were not fully adjusted for changes in the price level and declined to as little as 10 percent of 1913 levels. But the most important factor was the tendency of domestic prices and costs governed by contract and convention to adjust to changes in the exchange rate only with a lag. The effect was to halve the price of domestic goods relative to the price of imports of U.S. goods over the course of calendar year 1919.

The negative side of this coin was resource misallocation; the positive side was enhanced international competitiveness.[28]

The relationship between depreciation and competitiveness then grew increasingly complex. Whenever the foreign exchanges stabilized, as in the first half of 1921, price setters used the breathing space to recover lost ground. This pushed the real exchange rate back down toward prior levels. (The real exchange rate, shown in Figure 5.2, is the price of foreign goods, in this case U.S. goods, expressed in marks through conversion by the dollar exchange rate, relative to the price of German goods.) Following the London Ultimatum in May 1921, with its bad news about reparations, the mark weakened dramatically, and the real exchange rate doubled again. As soon as the rate of nominal depreciation slowed, prices made up lost ground, and the real exchange rate fell back.

These sawtooth real-exchange-rate movements, clearly evident in Figure 5.2, increased in frequency and declined in amplitude as market participants adapted to inflation and depreciation by increasing the speed of wage and price adjustments. The dollar quotation “replaced the weather as a topic for small talk” and became “the decisive factor in setting German prices.”[29]

> German industry, starting with large firms, calculated prices with reference to the exchange rate and converted mark receipts into foreign currency as quickly as possible. Shopkeepers took to closing at lunchtime, acquiring the current dollar quotation, and reopening in the afternoon with new prices. From computing prices with reference to foreign exchange it was a short step to transacting in foreign currency; by the summer retailers refused to accept marks, first in the occupied territories, later in South Germany, and subsequently throughout the entire country.[30]

(p.136)

By the final months of the inflation, prices were adjusted daily or even hourly in response to changes in the exchange rate, all but eliminating the lag between depreciation and inflation. Wage indexation was the final step.[31] Wage- and price-setting conventions were short-circuited. Domestic prices and costs responded as quickly as the exchange rate. The German real exchange rate recovered over the summer of 1923 as price setters not only passed through additional depreciation but made up lost ground. August 1923, three months prior to the stabilization, was the last month in which the real exchange rate remained below its 1913 level.

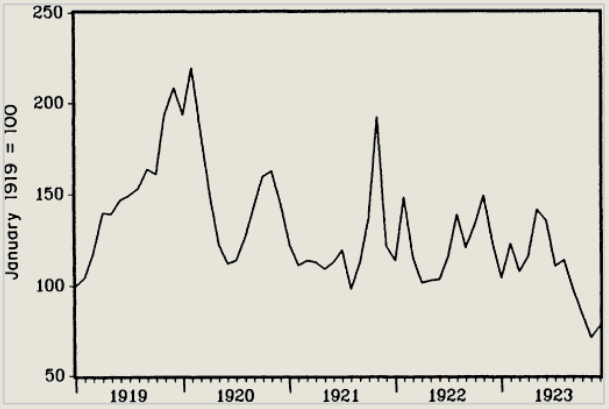


Fig. 5.2. German real exchange rate, 1919–23.

Adjusted for the exchange rate, the price of German merchandise fell relative to the price of U.S. goods each time the mark depreciated. This ratio of domestic to foreign prices, known as the real exchange rate, is depicted here. Each time the mark's depreciation slowed, domestic prices caught up with the nominal exchange rate, and the real exchange rate reversed course. This sequence of events produced a sawtooth pattern of real exchange rate movements between 1919 and 1923.

Source: Exchange rate and German wholesale price index are from Rogers (1929), p. 142; U.S. wholesale price index is from Tinbergen (1934), pp. 210–211.

The exchange rate and the inflation rate reacted to each revelation about reparations, domestic politics, and economic policies. Between May 1920 and May 1921, neither the outcome of reparations negotiations nor the success of Erzberger's financial reforms was yet evident. The exchange rate oscillated without trend at 60 to 70 marks per dollar. Only then did the “whirl of the devisen” begin.[32] The mark (p.137)

declined abruptly following the London Ultimatum in May and the partition of Upper Silesia. The January 1922 rescheduling strengthened the currency temporarily, but the mark declined again following the failure to achieve a more comprehensive reparations settlement and the resumption of large cash transfers. Depreciation accelerated with the growth of domestic political discord and the assassination of Walter Rathenau, the foreign minister viewed as spokesman for moderate elements. It accelerated again once it became clear toward the end of 1922 that Raymond Poincaré, the new French Prime Minister, rather than being willing to compromise on reparations was prepared to extract them by force. The Ruhr invasion in January 1923 led to further drastic depreciation of the mark. Reichsbank support operations in early February provided a respite. But the inability of the French occupation and German resistance to break the reparations deadlock led to a worsening of the German budgetary situation; after the middle of April this led to a renewed decline of the mark. Rates of depreciation and inflation after May were so

rapid that they can be depicted only on figures using logarithmic scales, as in Figure 5.1.

These events destabilized the exchange rate by producing expectations of inflation fueled by money creation. But what caused the money creation? The popular culprit in the English-language literature is the budget deficit that the Reich financed by printing money.[33] The magnitude of budget deficits is beyond dispute. Tax and nontax revenues covered only half of government spending in 1920–21. (See Table 5.1.) Following passage of Erzberger's tax reforms, the situation showed (p.138)

Table 5.1. German Government Spending and Taxes, 1920–23 (In Billions of Gold Marks)

Year	Expenditures	Revenues	Deficit
1919	8,643	2,496	6,147
1920	7,098	3,171	3,927
1921	10,395	6,237	4,158
1922	6,240	4,029	2,211
1923	6,543	2,589	3,954

Note: 1919 figures are for April-December.

Source: Webb (1989), pp. 33, 39.

some improvement, with revenues rising faster than expenditure from April 1921 to March 1922. But then tax receipts fell off sharply, and the real value of government expenditure rose, nearly doubling in the third quarter of 1923 when spending in support of the passive resistance was at its height. The government could hardly issue bonds, since the collapse of its revenues implied the collapse of its debt-servicing capacity. Its only recourse was for the Reichsbank to purchase government paper and monetize the deficit. The directors of the Reichsbank, appointed by the Chancellor, enjoyed little independence from the government and were forced to accommodate its fiscal needs. This is the essence of the fiscal view: mounting budget deficits leading to money creation and an explosive spiral of inflation and depreciation.

But what was the source of the budget deficits? In November 1922 a commission of experts, comprised of Keynes, Cassel, R. H. Brand, and Jeremiah Jenks, reported to the German

government on the budgetary situation. They concluded that the budget would balance, leaving aside reparations, so long as price stability was maintained.[34] The implication was clear. If a reparations moratorium was declared and confidence restored, the budget would swing into balance. There would be no pressure for monetization, and inflation could be brought under control. If not, deficits would result, given the Reich's limited capacity to raise additional revenues and reduce expenditures. Deficits would lead to the acceleration of inflation, shattering Germany's fragile budgetary equilibrium and igniting an explosive spiral.

This argument was embraced with understandable enthusiasm by German politicians. Not only could they shift the blame for their difficulties onto the avaricious Allies, but they could invoke inflation as incontrovertible evidence of the unrealism of Allied demands. By posing a threat to German political and economic stability, hyperinflation might weaken the resolve of those members of the Reparation Commission desiring a stable and prosperous Germany to serve as a locomotive for European recovery and a bulwark against Bolshevism.

The argument hinged on German assertions that the Reich had exhausted its capacity to raise taxes and cut spending. Foreign observers, including the dominant faction within the French government once Poincaré replaced Briand as Prime Minister, rejected the claim. That measures were in fact taken at the end of 1923 to (p.139) raise additional revenues and cut spending has convinced many historians that this skepticism was justified.[35]

German politicians, in contrast, attributed the deficit to disturbances to the foreign exchange market. “Contrary to the widely held conception,” asserted Karl Helfferich, “not inflation but the depreciation of the mark was the beginning of this chain of cause and effect.”[36] Allied intransigence led Germans to anticipate confiscatory taxation. Capital flight was the inevitable result. Germans sold marks, driving down the currency on the foreign exchange market. The interim payment in 1920–21 and partial reparations transfers in 1922 aggravated the balance of payments problem and further weakened the exchange rate. Depreciation drove up import

and export prices and spilled over into domestic inflation. To avoid strangling the economy, the Reichsbank had no choice but to accommodate the increase in the demand for money and credit that resulted from higher prices.

> The depreciation of the German mark in terms of foreign currencies was caused by the excessive burdens thrust on to Germany and by the policy of violence adopted by France; the increase of the price of all imported goods was caused by the depreciation of the exchanges; then followed the general increase of internal prices and of wages, the increased need for means of circulation on the part of the public and of the State, greater demands on the Reichsbank by private business and the State and the increase of the paper mark issues.[37]

So far this was merely a one-time increase in the price level or, at most, in the rate of inflation.[38] An explosive spiral required feedback from the inflation to the budget. That feedback worked as follows. Since nominal revenues were less responsive than nominal expenditures to changes in the rate of inflation, an inflationary shock magnified the size of the budget deficit, requiring additional Reichsbank monetization to finance the shortfall. Monetization fueled the inflation, aggravated the revenue shortfall, widened the deficit, and reinitiated the process. Only measures to restore stability to the foreign exchange market, such as a dramatic reduction of reparations, could halt the explosive spiral.

Inflation eroded the real value of tax revenues because of the lag between tax assessment and collection. The most important of Erzberger's new taxes had been imposed on personal and corporate incomes. Their base was vulnerable to erosion by inflation. When the price level was rising by 50 percent a month, taxpayers could reduce the real value of their obligations by a third merely by delaying payment for 30 days. Despite the progressivity built into the tax schedule and increasingly aggressive use of interest penalties, the authorities were incapable of stemming the inflation-induced erosion of income tax receipts.[39]

(p.140) The same was true of other taxes. The emergency wealth tax imposed in 1919 had permitted property owners to discharge their obligation in as many as 47 annual installments.[40] By 1921 inflation had effectively liquidated these liabilities. In 1922 installment payments were superseded by a regular property tax, but it too was vulnerable to evasion by delay. The Reich was forced to rely for revenues on indirect taxes and a 10 percent withholding tax on wages.[41] Until late in the process, employers were not required to immediately pass along withholding taxes to the authorities, so even these revenues were far from inflation proof.

Assertions that the budget deficit resulted entirely from the reparations-administered shock to the foreign exchange market were dismissed abroad as self-serving German propaganda. Some foreign observers detected merit in the argument, however. John Williams was convinced that inflationary pressure started with depreciation and ran from there to budget deficits and monetization. James Angell similarly concluded that the balance-of-payments mechanism was at work.[42]

Resolving this dispute requires an estimate of the response of the budget deficit to inflation so that the deficit that would have prevailed with stable prices can be calculated. This is easier said than done, since at the same time that autonomous increases in inflation were widening the deficit, increases in the deficit could have been fanning the inflationary fires. It may be inappropriate to interpret a correlation between the two variables as the response of the deficit to inflation, since it could equally well reflect the response of inflation to the deficit.[43] The problem will be most severe when autonomous changes in public spending and revenues were important, such as in 1920–21, the period of the Erzberger tax reforms, and 1923, a year marked by dramatic changes in fiscal policy in support of the passive resistance.[44] In contrast, in 1922, when autonomous changes in revenues and expenditures were relatively small, the correlation will reflect mainly changes in the deficit due to inflation induced by other factors.

Table 5.2 summarizes the fiscal situation in 1922. The action is mainly on the revenue side, where dramatic erosion of direct and indirect tax receipts occurred. If one attributes variations in the deficit between 1922-I and 1922-IV to variations in the rate of inflation on the grounds that autonomous changes in fiscal policy were relatively unimportant, then each additional point of inflation appears to have widened the deficit by one million gold marks.[45] This implies deficits of 441, 266, 264, and 389 million gold marks in the absence of inflation. (p.141)

Table 5.2. The Fiscal Situation in 1922 (Millions of Gold Marks Except Where Noted Otherwise)

	Revenue	Expenditure	Deficit	Inflation (Percent)
1922-I	1,205	1,703	499	55.8
1922-II	1,293	1,590	297	29.4
1922-III	888	1,473	585	308.3
1922-IV	646	1,472	826	419.9

Note: Inflation is measured as the percentage change in the wholesale price index between the last month in the quarter and three months previously.

Source: Webb (1989), Table 3.2; Rogers (1929), p. 142.

The conclusion that the budget would have remained in deficit in the absence of inflation leads to rejection of the argument that the sole cause of the inflation was depreciation of the mark. But it is still possible for reparations to have been at the root of the problem. Versailles expenses in the four quarters of 1922 ran 843, 696, 353, and 334 million gold marks. In each quarter but the last, they more than accounted for the deficits that would have prevailed with price stability.[46] Just as Keynes, Cassel, and the rest of the Committee of Experts concluded, leaving aside the effects of reparations and inflation, the budget would have balanced in 1922. And insofar as removing reparations would have removed the need for monetization, inflation would have been eliminated as well. Reparations, in this sense, were ultimately responsible for the German hyperinflation.

Of course, a further implication of this finding is that reparations would not have destroyed price stability had the Reich simply raised taxes in the amount of its Versailles expenses. We are drawn back to the question of why it failed to do so.

(p.142) The answer is that the fiscal authorities found themselves fighting a war of attrition on two fronts. Domestically, labor and capital both insisted that the other bear the taxes needed to finance reparations transfers. Both refused to compromise. The Socialists, drawing support from the democratic parties, insisted that property taxes be levied to finance reparations. With allegations of war profiteering still fresh, they pressed for a capital levy. The parties of the Right opposed such measures and formed an alliance with the Nationalists who vehemently opposed all reparations payments.[47] Citing industry's wartime sacrifices, the Right proposed that workers toil for two additional hours daily to produce the goods needed to effect the transfer.[48] They advocated increased sales taxation and reduced public spending on social programs to enable the government to mobilize those goods and transfer them abroad.[49]

Like schoolchildren competing to see who can hold their breath the longest, both groups held out despite the pain they inflicted upon themselves. Their dilemma was heightened by the simultaneous war of attrition waged internationally. The Allies, led by France and Belgium, demanded full payment of reparations, despite the damage inflicted on their own economies by the crisis in Germany. The Germans argued that the hyperinflation was proof of their inability to pay. The international war of attrition broke into the open once France and Belgium invaded the Ruhr. The Allies threatened to maintain their occupation, forcibly extracting reparations in kind, for however long it took Germany to give in. Germany vowed to continue financing the passive resistance with the government budget and the central bank's printing presses until the Allies acknowledged that occupation was futile. Neither side was inclined to compromise—both believed the other would concede first.

Impact on the German Economy

The distributional conflict could continue only so long as its pursuit did not have a disastrous impact on the size of the pie to be distributed. Initially the inflation did little damage to the German economy and even may have provided modest benefits. Each time the real exchange rate depreciated (in 1919, in the second half of 1920, and again in the second half of 1921), exports were stimulated. Each time domestic prices caught up to the nominal exchange rate, exports receded. But insofar as the inflation led to real exchange rate depreciation on balance, it stimulated exports, employment, and production. With the transition to hyperinflation in the (p.143) summer of 1922, the relationship collapsed. Export volumes fell by a third even though prices denominated in domestic currency again failed to keep pace with the exchange rate.[50] The Ruhr invasion cannot be held responsible, since the decline in exports preceded it by two quarters. Rather, exports were depressed by disruptions to production and commerce caused by exchange-rate and price-level uncertainty. “The uncertainty and the wide fluctuations in exchange rates,” as the American economist John Parke Young observed, were “a serious burden to exporters and importers.”[51]

The effects of uncertainty were evident in financial markets as well. Experts argued that inflation should raise the real value of industrial securities. Investors had an incentive to protect their savings by drawing down their bank accounts. They should have purchased claims on firms in a position to pass along the rise in prices to their customers and hence to pay dividends that kept pace with inflation. By raising real share prices even faster than other prices, this “flight to real values” should stimulate investment in plant and equipment.[52]

Real share prices rose until the end of 1921.[53] They declined steadily thereafter, however. The market peak was too long after the London Ultimatum but too soon before the Ruhr invasion for either to have been responsible. Responsibility lies rather with disruptions to trade and commerce caused by exchange-rate and price uncertainty, and the damage this inflicted on firms' earning power.[54] By 1922, the rate of

growth of production of many industrial goods, such as pig iron, had begun to slow. By the end of the year, production in some industries already moved into decline.[55] The stock market seems to have anticipated these trends even before they became clearly evident in the statistics.

Wartime destruction and postwar upheavals had depressed German real wages below prewar levels. Each acceleration in inflation temporarily reduced them further. Just as the depreciation of the real exchange rate stimulated the demand for German exports, the fall in real wages enhanced the incentive for German exporters to increase supply. Unemployment in German manufacturing fell each time inflation accelerated, reflecting these trends.[56] With the transition to hyperinflation, the lag of wages behind prices was shortened and, ultimately, eliminated. The pay period for white collar employees in coal mining, for example, declined from a month to a fortnight in the autumn of 1922, to 10 days the following February, to 5 days in August, and to twice weekly in September.[57] This enabled real wages to recover lost ground in the inflation's final stages. (p.144)

Through these channels inflation first stimulated economic activity and then, as it accelerated and became increasingly disruptive, depressed it. Frank Graham concluded that the

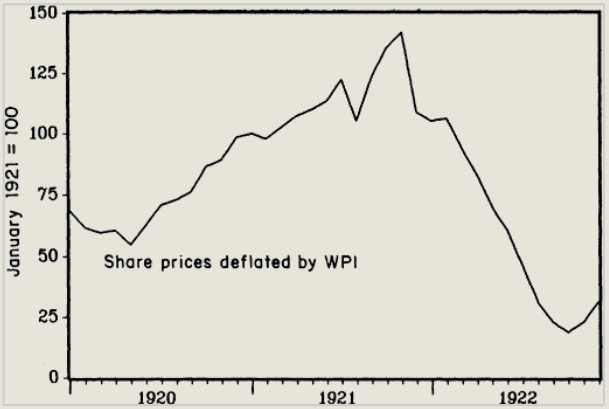


Fig. 5.3. Tobin's q, Germany, 1920–22. Tobin's *q*, or the market valuation of productive capital relative to its replacement cost, rose at first as inflation induced investors to shift out of money and into equities. But as inflation accelerated and became increasingly disruptive, corporate profits and hence stock prices fell.

Source: Graham (1930), *Table xvi*.

macroeconomic effects remained positive as late as the end of 1922 or even into 1923. Only therafter did the “dislocations” associated with the inflation, to use Graham's word, swamp the stimulative effects. Other disturbances, notably the Ruhr invasion and the passive resistance, make it difficult to isolate the direct contribution of the hyperinflation to the decline in output in 1923. Graham's guess was that inflation, narrowly defined, was responsible for a quarter to a third of the fall.[58]

Inflation redistributed income in still other ways. Debtors benefited at the expense of creditors. Unskilled workers benefited at the expense of the skilled. Producers of capital goods benefited relative to producers of consumer goods because of the flight to real values. Large enterprises benefited relative to small firms due to superior access to credit. The beneficiaries had every incentive to continue the

war of attrition. But the size of the pie to be distributed shrank as financial chaos disrupted productive activity. Individuals devoted more and more time and energy to minimizing their holdings of rapidly depreciating money balances, visiting the bank and the store several times daily, constantly monitoring and adjusting prices.[59] (p.145) Once the pie began to shrink dramatically, there were no longer any obvious beneficiaries of inflation. The war of attrition became increasingly costly. Something had to give.

Accommodation and Stabilization

In November 1923 it did. The government revalued its reserves and intervened to peg the exchange rate at 4.2 billion marks to the dollar. Government borrowing at the central bank ended. The budget deficit fell. The inflation came to a halt. The central factor in the stabilization was domestic political accommodation that rendered fiscal reform both feasible and credible.

One can categorize interpretations of the stabilization according to the variable to which priority is attached: the money supply, the budget, domestic debt, real money balances, the exchange rate, domestic politics, and international relations. Most economists focus on money supply control as necessary and sufficient for stabilization. To douse the fires of inflation, the argument runs, one need only remove the fuel. That the mechanism was actually more complicated is evident in the fact that money supply continued to grow rapidly in the wake of stabilization. The money stock rose by nearly 150 percent between November 20th and the end of the year, and by a further 38 percent in the first half of 1924.

This anomaly directs attention to the budget (shown in Table 5.3). The point

(p.146)

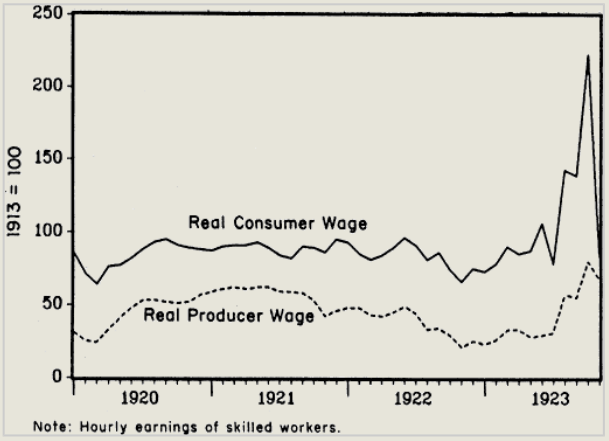


Fig. 5.4. Real consumer and producer wages, Germany, 1920–23.

Inflation initially reduced German producers' real labor costs because of the lag of money wages behind prices. But toward the end of the inflation, wages were indexed to prices and pay periods were shortened, eliminating and even reversing this effect.

Source: Webb (1989), *Table 5.2*.

Table 5.3. Ordinary Revenues and Expenditures of the German Government, November 1923–June 1924 (In Millions of Gold Marks)

	Ordinary Revenue			
Month	Total	Tax Only	Ordinary Expenditure	Balance
November 1923	68.1	63.2	—	—
December 1923	333.9	312.3	668.7	−334.8

Month	Ordinary Revenue Total	Tax Only	Ordinary Expenditure	Balance
January 1924	520.6	503.5	495.6	24.1
February 1924	445.0	418.0	462.8	−17.8
March 1924	632.4	595.3	498.6	133.8
April 1924	579.5	523.8	523.5	56.0
May 1924	566.7	518.7	459.1	107.6
June 1924	529.7	472.3	504.5	25.2

Source: Young (1925b), p. 422.

of departure for this interpretation is the observation that inflation depends not just on the supply of money but on the public's willingness to hold it. This willingness turns on expected future inflation and hence on expected future money supplies. Expectations of future money supplies hinge on the budget deficit that is the source of pressure for monetization. The necessary and sufficient condition for stabilization, therefore, is the credible and convincing adoption of measures for balancing the public sector acounts.

The attraction of this argument is the ease by which it reconciles money supply growth with stabilization. If fiscal reform was credible, it would prompt a rise in the demand for money and permit money supply growth without inflation. A further merit of the interpretation is the attention it directs to the issue of credibility.[60] Surely we can argue that policy reforms that the authorities were prepared to disregard at the first sign of difficulty would have failed to halt inflation.

A limitation of the argument is the difficulty of isolating sources of credibility. One might cite the steps taken at the end of October to balance the budget. Subsidies to the Ruhr and Rhineland were discontinued. The number of government employees was cut by 25 percent. The salaries of remaining public servants were cut by about 30 percent. Observers could

verify that progress was being made once the budget swung into surplus after the first of the year.[61]

This was not the first time the government had announced ambitious budgetary reforms. And its previous reforms had been wholly inadequate to close the fiscal gap. The proceeds of the 1920 tax increase had been inflated away. The "Ruhrlevy" of August 1923 brought only the briefest respite. It was not obvious why the reforms of October and November should be any more successful than those of 1920 or August 1923. The importance of perception is underscored by the fact that a substantial portion of the budget's improvement was caused by the response of taxes to disinflation. The real value of the Reich's revenues quintupled between November (p.147) and December and rose by the same absolute amount between December and January. The argument that inflation was halted by deficit reduction smacks of circularity when it is acknowledged that much of the deficit reduction resulted from price stabilization.

In response to this objection, the institutional reforms of October and November are invoked.[62] A key element allegedly was the insulation from pressure to accommodate budget deficits given to the monetary authorities. The Rentenbank Decree of October 15 placed strict limits on the new institution responsible for extending loans to the Reich. Its total credits were not to exceed 2400 million gold marks (now Rentenmarks). Credits to the government were strictly limited to half the total.[63]

Yet the mere adoption of ceilings did not guarantee credibility. One of the Rentenbank's first acts was to accede to government requests for a 1200 million Rentenmark loan, immediately bumping up against the credit ceiling. In December 1923 the Finance Ministry requested an addition 400 million Rentenmarks; news of this provoked a decline in the exchange rate. The government was turned away only after tense negotiations.[64]

Clearly, other more fundamental changes in circumstance must have rendered credible the reforms of November 1923.[65] The central factor was domestic political accommodation. It

helped render fiscal reform both feasible and credible. The critical development was the accommodation reached among industry, government, and the Allies. German industry had traditionally opposed all reparations. Heavy industry in general and the great coal and steel combines in particular occupied a pivotal position in negotiations. The French steel industry, with inadequate coal of its own, remained dependent on imports from the Saar and the Ruhr. The French government, in its reparations negotiations, continued to place emphasis on coal. The German steel industry had integrated backward, purchasing domestic coal producers whose output it resisted placing at the disposal of its French competitors. German industry's resistance to compromise was reinforced by the fact that large enterprises enjoyed favorable access to Reichsbank credit at essentially fixed interest rates. The more rapid the inflation, the larger the subsidy they enjoyed. Once France and Belgium invaded the Ruhr, heavy industry also received wage subsidies to pay unproductive labor and prevent layoffs.

As the owners and operators of the coal firms that were the main source of transfers in kind, these individuals were strategically placed to neutralize the efforts of other groups that sought to fulfill Germany's reparations obligations. Both the (p.148) Cuno and Stresemann Governments required their support. Foreign governments had long recognized their pivotal position; Alexandre Millerand, the former French Prime Minister, is said to have negotiated with Hugo Stinnes, the leading German coal magnate, almost as if he were a foreign head of state.[66]

By November 1923, with the disintegration of the German economy, the Ruhr industrialists, long the staunchest German opponents of reparations, had come to conclude that the costs of intransigence exceeded the benefits. Even those who had benefited most directly from the inflation, such as Stinnes, who used preferential access to Reichsbank credit to extend his industrial empire, now attached priority to the restoration of economic normalcy.[67] Moreover, at the same time that the costs of intransigence had risen, the benefits had declined. Following its initial successes, the effectiveness of the passive resistance decreased. Deliveries of coal, coke, and lignite as

percentages of the Reparation Commission schedule rose steadily from negligible levels in February to nearly 40 percent in July. Support for the resistance was undermined by the collapse of the mark and the deterioration of working-class living standards that provoked strikes and riots starting in July.[68] These disturbances contributed to the fall of the Cuno Government in August. Its successor, a coalition headed by Gustav Stresemann, called off the passive resistance on September 26. No loans to finance it were raised after mid-October.

The Ruhr industrialists arranged directly with the occupation forces, represented by MICUM, or the Inter-Allied Commission Controlling Factories and Mines, to resume transfers in kind.[69] As a battalion of engineers, MICUM was the logical body for negotiations insofar as restarting coal transfers first required solving some technical mining problems. The industrialists' agreement stipulated that MICUM was to receive 27 percent of German coal output and control distribution of the Ruhr's coal production to assure this result.[70] Thus, the very group that had been the source of the most uncompromising opposition to reparations offered the critical concessions that helped to end the stalemate. Not being altruists, the industrialists demanded financial transfers from the Reich as compensation for the coal ceded to MICUM. Stresemann accepted the principle that the government assume an obligation to compensate but insisted that no funds would be forthcoming until the economy stabilized. In the event, the industrialists had to wait almost a year for compensation.[71] Despite Stresemann's reservations, the industrialists, so that they could begin doing business again, joined the ranks of those willing to agree to concessions for ending the war of attrition.

Deliveries of coal rose to nearly 50 percent of those scheduled in December and to 80 percent the following February, which the Allies interpreted as a reassuring (p.149) display of German cooperation. But coal deliveries were only a fraction of Germany's total reparations burden. Thus a critical element of the accommodation was the Allies' decision to suspend Germany's remaining obligations pending the outcome of

Dawes Plan negotiations. These arrangements remained in place until the Dawes Plan was finalized in August 1924. Industry's willingness to compromise and shoulder a portion of the reparations burden helped to break the budgetary deadlock that had been the ultimate source of the inflation. “The prerequisite for success in the struggle against inflation —a united front—was thus established.”[72]

Domestic concessions were palatable because the Allies joined in the unprecedented display of flexibility. Despite their growing success in extracting in-kind transfers, the costs of occupation—political as well as economic—continued to exceed the benefits. By consenting to the MICUM agreements, the Allies for the first time evinced a willingness to accept less than full payments. On November 30 the Reparation Commission announced the formation of two committees to review the entire situation, and deferred Germany's other obligations pending their report. Though the Dawes Plan rescheduling remained months away, Germany had new reason to hope for concessions.

It still had to be demonstrated that these initiatives would resolve the fiscal problem. Here, once again, the exchange rate was critical. The deficit had two components: one produced by inflation, another that would have existed even with price stability. Their magnitudes were uncertain. Observers could verify that domestic spending economies and suspension of budgetary transfers abroad were sufficient to eliminate the second component only once an interlude of price stability eliminated the first. Not until then could the budgetary reforms be regarded as both adequate and credible.

The immediate way to restore price stability was to peg the exchange rate. With transactions indexed to foreign exchange quotations, a sudden halt to depreciation meant a sudden halt to inflation. The decline in real money balances made pegging the exchange rate possible at least temporarily. As inflation accelerated, individuals attempted to minimize their money holdings. Prices had risen even faster than the money supply. Once the authorities revalued the Reichsbank's gold reserve to reflect the rise in the domestic-currency price of gold, the value of that reserve approached 95 percent of the

outstanding money balances. The authorities could peg the currency, momentarily at least, even if they had to purchase virtually every bank note in circulation. Had the fiscal reforms been inadequate, pressure to monetize budget deficits would have resurfaced, undermining the public's newfound willingness to hold domestic currency. The gold reserves would have been depleted. Fortunately, the dramatic rise in revenues in December signaled significant improvement. Once the budget moved into surplus in January, uncertainty diminished. Stabilization took hold.

Thus, the role of the exchange rate in the stabilization was analogous to its previous part in the inflation. Though exchange-rate depreciation was not solely responsible for the inflationary crisis, it contributed to the fiscal dilemma. And even though exchange-rate stability was not sufficient to halt inflation permanently, it (p.150) provided necessary breathing space before stabilization. For both reasons, exchange-rate instability and runaway inflation were increasingly regarded as inter-changeable. This experience consequently heightened the urgency with which observers in Germany and abroad viewed the disarray in the international monetary system.

Implications for International Monetary Relations

In 1924 Germany's reparations obligation was rescheduled in conjunction with the Dawes Plan. The plan deferred part of Germany's obligation, scaling back immediate debt service payments to a fraction of 1921–22 levels.[73] Debt service in 1924–25 was paid out of revenues generated by a small transport tax and by interest earnings on certain railroad and industrial bonds. It was limited to some 1 percent of GNP. Transfers rose thereafter, peaking in 1929 at about RM 3 billion, by which time Germany's rising GNP would presumably be sufficient to support the transfer.[74] Reparations posed a less serious threat to budget balance and price stability than they had previously.

Central to the success of the Dawes Plan was a foreign loan, publicly endorsed and privately marketed in New York and other financial centers. Negotiated over the spring and

summer of 1924 and issued in October, the Dawes Loan made available to Germany 800 million gold marks of foreign currency. The United States floated half the loan, Britain 25 percent, France, Belgium, the Netherlands, Italy, Sweden, and Switzerland the remainder.

Despite its modest size, the Dawes Loan played a critical role in cementing the German stabilization. As late as the spring of 1924, considerable uncertainty remained about whether the stabilization would hold. Thirty-day loans continued to command high interest rates; annualized interest rates averaged 44 percent in April and May.[75] Still fearing that that the settlement might collapse, allowing inflation to resume, savers demanded this premium for committing their money for even a month. The danger was that their fears would prove self-fulfilling. High interest rates discouraged investment and aggravated the accompanying recession. If industrial profits collapsed and unemployment rose to intolerable levels, the 1923 accommodation might break down.

Here the Dawes Loan offered critical relief—it gave the government and the economy breathing space. The transfer endowed the government with resources for supporting the mark in the event of a speculative attack. The infusion of foreign funds placed downward pressure on interest rates and loosened the balance-of-payments constraint. Within three months of the Dawes Loan, interest rates for monthly money had declined to 11 percent, still high by international standards but a great improvement over the situation a year before. As interest rates declined, (p.151)

Table 5.4. U.S. and British Lending in the 1920S

	U.S. Lending Abroad by Region (millions of dollars)			
	Europe	Canada	Latin America	Far East
1924	526.6	151.6	187.0	96.1
1925	629.5	137.1	158.8	141.7
1926	484.0	226.3	368.2	31.7
1927	557.3	236.4	339.7	151.2

U.S. Lending Abroad by Region (millions of dollars)

	Europe	Canada	Latin America	Far East
1928	597.9	184.9	330.1	130.8
1929	142.0	289.7	175.0	51.5

New Capital Issues for Overseas Borrowers in London (millions of pounds)

	For Governments	For Other Borrowers
1925	30.5	57.3
1926	46.7	65.7
1927	63.6	75.1
1928	57.7	85.7
1929	30.4	63.9

Sources: For the United States, Department of Commerce (1930); for Britain, Royal Institute of International Affairs (1937).

investment recovered. The deterioration of economic conditions was halted, and the 1923 compromise held.[76]

The success of the Dawes Loan unleashed a wave of foreign lending by the United States that inundated international financial markets for the next four years. (See Table 5.4.) After these loans went bad, their American purchasers were criticized for succumbing to reckless enthusiasm for these high-risk, high-yield bonds. Foreign investors were accused of having perversely relieved Germany of the obligation to make financial amends for the war.[77] Yet it is hard to imagine another outcome consistent with international monetary stability. Wartime changes had strengthened the international competitive position of American exporters and weakened that of their European counterparts. The resulting trade imbalances conveyed gold toward the United States and applied balance-of-payments pressure to countries like Britain and Germany. Reparations transfers from Germany to the Allies were passed along to the United States in the form of service on the war debts, augmenting U.S. surpluses and aggravating European deficits. The Reichsbank and other

European central banks committed to newly restored gold parities had no choice but to tighten credit conditions and raise interest rates. High interest rates attracted portfolio investment from the United States. Foreign lending by the (p.152) United States thereby recycled other financial flows. This was the fragile footing for balance-of-payments settlements in the 1920s.[78]

But as prewar experience had demonstrated, the volume of foreign lending depended on confidence as well as interest rates. Since the risk of default rose with the debt-servicing burden and hence with the level of interest rates, a time might come when no interest rate sufficed to attract additional foreign investment. Lending might collapse if confidence was disturbed by the excessive accumulation of debt in Central Europe, by lack of progress in international negotiations when the Dawes Plan expired, or by a severe business cycle downturn. An international monetary system whose stability hinged on the maintenance of lending was never far from crisis.

Before the war, crises had been contained by credibility and cooperation. Wartime changes had worked to undermine monetary policymakers' single-minded preoccupation with external balance, diminishing the credibility of the official commitment to gold. That commitment remained most credible in precisely those countries suffering high inflation in the 1920s. Policymakers there were willing to go to extraordinary lengths in defense of their gold parities to avoid a replay of the traumatic inflations they associated with inconvertibility. Such commitment proved counterproductive once the failure of cooperation rendered the gold standard the principal obstacle to prosperity.

Notes:

(1) The summary statistics are from Webb (1989). For reasons of space, I concentrate here on the most famous Central European hyperinflation. Comparative analyses of the Austrian, Hungarian, and Polish inflations are provided by League of Nations (1946).

(2) Keynes (1920), pp. 157–158; Bailey (1944), p. 243.

(3) The British and French positions shifted subsequently. Burnett (1940), vol. 1, pp. 718–719, reports proposals submitted in March 1919, in which the British suggested 200 billion marks, the French figures ranging from 124 billion (were France the sole recipient of payments) to 188 billion marks, and the Americans a sum ranging from 100 billion to 140 billion marks. See Kent (1989), chapters 2–3.

(4) British opinion was also moderated by belated recognition that the massive increase in German exports required to satisfy extreme reparations demands would be disruptive to the international commodity markets the British economy relied on. Rupieper (1979), p. 7.

(5) See chapter 2.

(6) For details, see Schrecker (1978), Trachtenberg (1980), and Eichengreen (1989c).

(7) Mantoux (1952), p. 65.

(8) Keynes (1920), pp. 154–157; Marks (1978), p. 232. Pensions and other costs of prosecuting the war supposedly had been excluded by previous agreement. But with France now supporting the British position, effective U.S. opposition was difficult. Burnett (1940, vol. 1, p. 829) and others following him argue that Britain's motives were purely distributional—that it was attempting to maximize its share rather than increase the overall bill—although revisionists such as Trachtenberg (1980, pp. 69–70) suggest that Britain was in fact motivated by both objectives.

(9) Included were 5000 locomotives, 150,000 railway cars, the entire railway system of Alsace-Lorraine, all merchant ships exceeding 1600 tons, half of smaller merchants ships over 1000 tons, a quarter of the schussing fleet, and a fifth of the river and lake fleet.

(10) McDougall (1978), p. 104. Indeed, it is said that in 1920 “the French need for coal was more pressing than their need for reparation in general.” Trachtenberg (1980), p. 147.

(11) Burnett (1940), vol. 1, p. 60. The share-of-national-income calculation adopts 40 billion gold marks as a compromise estimate of German national income in 1921. Webb (1989), p. 106, reports recent estimates in the range of 35–40 billion gold marks. Keynes estimated German national income at 35 billion gold marks in 1922, implying a lower figure for 1921. Felix (1971b), pp. 25–26. I employ a number at the high end of the spectrum so as not to exaggerate the reparations burden. Schuker adopts an even higher estimate of German national income (55.5 billion gold marks) and hence arrives at a lower figure for the reparations burden as a share of GNP. The difference is due to his practice of inflating German national income in gold marks by the rise in the U.S. (dollar) price level of 39.8 percent between 1913 and 1921. This procedure cannot be correct. Reparations were defined in terms of gold or, equivalently, dollars, since the dollar price of gold had not changed. To compute the gold mark value of German national income, it is necessary to adjust only for the change in the German price of gold between 1913 and 1921, not the change in dollar prices as well (again, since the dollar price of gold had not changed). Schuker's procedure would be relevant only if we wished to calculate German reparations as a share of U.S. national income. This discussion illustrates that all estimates of German national income in the aftermath of the war are subject to wide margins of error and must be treated with caution.

(12) See Carsten (1972), Maier (1975), and Bertrand (1977).

(13) Led by the radical nationalist Wolfgang Kapp, the Putsch was an attempt to seize power by the Right. It failed following a strike mounted in resistance by the working class, which served to demonstrate the extent of support for the new Republic. Maier (1975), pp. 167–170.

(14) Kent (1989), pp. 80–99. Details on the French indemnity are provided by Say (1898) and O'Farrell (1913).

(15) Leith-Ross (1968), pp. 60–61; Costigliola (1984), chapter 1.

(16) Epstein (1959), pp. 380–381. Keynes, famous as a critic of the Versailles and London settlements, favored one-third this

amount as the maximum Germany could realistically pay. Keynes (1920), p. 147.

(17) The actual arrangement was for Germany to pay 2 billion gold marks plus 26 percent of exports, in the expectation that this would amount to 3 billion gold marks in total. In wartime discussions of reparations, 50 billion gold marks was repeatedly mentioned as the amount that a victorious Germany might extract from the defeated Allies. Schuker (1976), p. 182. There is some dispute in the literature over whether the 82 billion gold marks of deferred payments (the C Bonds) were simply a sop to inflamed public opinion in France and Italy and were not expected to be paid. See Marks (1978). Alternatively, the C Bonds were viewed in some circles as a bargaining chip that could be set against Inter-Allied War Debts in negotiations with the United States. McDougall (1978), chapter 5.

(18) McNeil (1986), chapter 4, provides a review of the debate. Bergman (1927), Felix (1971a), and Schuker (1985) offer three very different perspectives.

(19) Twenty-three percent of national income to be precise. France floated two domestic bond issues in 1871 and 1872, and succeeded in transferring the 5 billion francs of principal before the end of 1873. The national income estimate for 1872 of 22.2 billion francs is that used by Machlup (1964), p. 379.

(20) Interest was to be charged on the 50 billion gold marks of A and B Bonds but not on the C Bonds. Since service of the latter was deferred, the present value of the obligation was somewhat less than the 330 percent of 1921 national income mentioned in the text. The reparations bill fell relative to GNP following the Dawes Plan rescheduling in 1924 and the recovery of the German economy. This was not something contemporaries could rely on in their discussions at London and Versailles, however. Machlup (1964) contrasts other reparations bills, while Fraga (1986) and Webb (1988) compare German reparations with LDC debt in the 1980s.

(21) The tendency for foreign deposits and export demands to offset the immediate impact of British lending should not be exaggerated. See chapter 2. The basis for conjecturing that

neither mechanism would operate as powerfully in the case of German reparations is that Germany was in no position to further expand her exports, in response to any increase in foreign demands, beyond the expansion required to effect the initial transfer. And since Berlin was only one of several financial centers, and an undesirable one in which to concentrate one's assets given the political implications of the reparations tangle, only a minor share of German transfers was likely to return as deposits there.

(22) Burnett (1940), vol. 1, p. 625; Keynes (1920), pp. 187–188.

(23) The clearest statement of this view is in Keynes (1929b).

(24) Ohlin (1929). The irony of the fact that Ohlin rather than Keynes advanced the “Keynesian” interpretation of the controversy has not been overlooked. By 1931 Keynes had come around to Ohlin's position. See Trachtenberg (1980), pp. 337–342, and chapter 2 in this book.

(25) Webb (1989), p. 54.

(26) Cassel (1922), pp. 150–154.

(27) Quoted in Guttman and Meehan (1975), p. ix.

(28) The same positive association between depreciation and international competitiveness would also emerge in European countries experiencing more moderate inflations, such as France, Belgium, and Italy. See chapter 6.

(29) Stolper (1940), p. 162.

(30) Schacht (1927), p. 76. See also Feldman (1977), pp. 294–294, and Holtfrerich (1986b), p. 304.

(31) Holtfrerich (1986b), p. 313.

(32) Stolper (1940), p. 149.

(33) Two forceful statements of this view are Bresciani-Turroni (1937) and Sargent (1986a).

(34) The report of the experts is excerpted in Dornbusch (1987).

(35) See, for example, Schuker (1976).

(36) Quoted in Bresciani-Turroni (1937), p. 45.

(37) Again, Helfferich quoted in Bresciani-Turroni (1937), p. 45.

(38) Crude versions of the balance-of-payments theory that cite disturbances to foreign-exchange markets as sufficient to set off an inflationary spiral, as opposed to simply administering a one-shot shock to the price level or the inflation rate, have been rightly criticized on these grounds.

(39) In addition to interest penalties, a new 1922 law required some prepayment of estimated tax liabilities. But this too proved inadequate to protect real tax revenues from erosion by inflation. Only at the very end of the hyperinflation did the Reich succeed in implementing policies fully valorizing tax obligations.

(40) The 47 annual installments applied to agricultural property. On other property, installment payments ran for 25 years.

(41) Graham (1930), pp. 43–45; Webb (1986), p. 51. See also Witt (1983).

(42) See Williams (1922) and Angell (1926). That Williams had written his dissertation on depreciation and inflation in prewar Argentina, where analogous mechanisms operated, may have inclined him toward the hypothesis. See Malamud (1983), and chapter 2 in this book.

(43) In econometric parlance, this is an identification problem.

(44) The Reich increased spending dramatically to sustain passive resistance to the Ruhr occupation starting in the first quarter of 1923. The Streseman Government terminated public spending in support of the resistance in September.

(45) 1.04 million gold marks to be precise. This estimate is obtained by regressing the deficit on a constant and the rate of inflation, using the four quarterly observations for 1922.

A different approach is to compute real budget deficit corrected for inflation as the sum of the primary deficit (non-debt-service expenditure minus revenue) and real debt service (the real interest rate times government debt). This method yields an almost identical estimate of the real deficit for 1922-IV (351 million gold marks instead of 389 million), but shows inflated-adjusted surpluses for the preceding quarters. It leaves no question that the Reich budget moved into substantial deficit in 1923, even correcting for the effects of inflation:

Inflation-Corrected Budget Balance, 1922-I to 1923-Iii (Millions of Gold Marks)

Method	1922-I	1922-II	1922-III	1922-IV	1923-I	1923-II	1923-III
A	1448.0	610.7	968.4	−351.2	−717.6	−758.8	−2093.9
B	1436.2	592.6	947.3	−363.7	−738.5	−777.8	−2370.1

Computed as: $(G_t-T_t)/P_t+\{[(i_t-\pi_t)/(1+\pi_t)](B_t-_1/P_t-_1)\}$ where $G - T$ is the primary deficit, P is the price level, π is inflation, and i is the nominal interest rate. Method A uses the ratio of nominal debt service to nominal debt as the interest rate; method B uses the interest rate on overnight loans.

(46) Webb (1989), p. 37.

(47) Bresciani-Turroni (1937), pp. 57–58; Angell (1929), pp. 30–33.

(48) Assume that two hours is 20 percent of the (lengthened) workday, and that labor receives two-thirds of national income. Then the extra work required to pay reparations would represent 13 percent of national income. This is higher than the figure of 10 percent of national income reported above, suggesting, plausibly, that those who prescribed two extra hours of labor were exaggerating the burden. Feldman (1977) p. 338 and *passim*, describes the importance businessmen in the steel industry attached to reversing the reduction in the workday from 12 hours (with a two-hour break) to 8 hours achieved by labor in the aftermath of the war. They were happy, it seems, to use reparations as a rationale for legislating a longer workday.

(49) Feldman (1977), p. 232.

(50) Bresciani-Turroni (1937), p. 228.

(51) Young (1925b), p. 49.

(52) See, for example, Keynes (1923). The ratio of share prices to other prices (precisely, to the prices of new capital goods) is Tobin's q (Tobin, 1969). When the market attaches a greater value to capital in place than to the cost of additions to that capital stock, there should be an incentive to invest.

(53) Although he fails to specify, this presumably is the period Hardach (1980, p. 21) has in mind when he argues that inflation “increased expenditures in (sic) plant and equipment in all branches of the economy.”

(54) See also Bresciani-Turonni (1937), chapter IV, who expresses much the same view.

(55) Data are from Tinbergen (1934).

(56) Webb (1989), p. 78.

(57) Webb (1989), pp. 80–81.

(58) Graham (1930), pp. 317–318.

(59) For evidence on the strength of the effect, see Cagan (1956) and Frenkel (1977). For further references to this now copious literature, see Sommariva and Tullio (1986).

(60) This is the aspect of stabilization emphasized by Sargent (1986a).

(61) Young (1925b), p. 422; Kent (1989), p. 236.

(62) The clearest statement of this view is provided by Sargent (1986a), who refers to it as a change in regime.

(63) Twenty-five percent of Rentenbank credit was earmarked for retirement of government debt held by the Reichsbank. The latter remained the bank of issue, but its notes now had to be backed with gold. The Reichsbank still was entitled to discount commercial bills, but subject to strict limitations.

(64) Schacht (1927), p. 120.

(65) For example, the destruction of the real value of public debt by inflation is cited for easing the task of fiscal stabilization. Interest payments fell from one-seventh of public spending in the first quarter of 1920 to negligible levels by the second half of 1922. That inflation continued for another year indicates, however, that this factor, while helpful, was far from sufficient.

(66) Felix (1971b), p. 63.

(67) Trachtenberg (1980), pp. 316–317.

(68) Maier (1975), pp. 366–371; Trachtenberg (1980), p. 304.

(69) The first MICUM agreement, concluded with the Wolff group, was actually initialled in October. But the important

agreements with Krupp and Stinnes were concluded in early November. Trachtenberg (1980), pp. 325–326.

(70) The complex discussions between MICUM and the industrialists, and related negotiations among German firms and between the firms and the Stresemann Government, are summarized by Feldman (1977), pp. 406–444 and McDougall (1978), pp. 337–338.

(71) Feldman (1977), p. 425.

(72) Guttmann and Meehan (1975), p. 205.

(73) Webb (1988), p. 749.

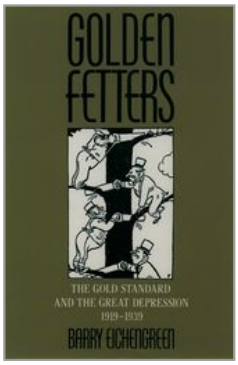
(74) See Table 8.4.

(75) Dornbusch (1987), Table 11.8.

(76) Interest rates for 1925 are from Board of Governors of the Federal Reserve System (1943).

(77) The most forceful recent statement of this view is Schuker (1988).

(78) As John H. Williams characterized this process in 1930 (Williams, 1930, p. 76), “Both the borrowings and the recovery seem to me an integral, organic part of the whole process of reparation payments.”



Golden Fetters: The Gold Standard and the Great Depression, 1919-1939
Barry Eichengreen

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Reconstructing the Facade

Barry Eichengreen (Contributor Webpage)

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Abstract and Keywords

This chapter (like the previous one) looks at the fiscal war of attrition that fueled inflation in the 1920s; here, inflationary chaos elsewhere in Europe is contrasted with the experience of countries that repelled the inflationary threat. The different sections of the chapter discuss the first (failed) attempts to restore the gold standard after World War I and the failure to provide a framework for international cooperation, deflationary paths (in Britain, Sweden and the Netherlands), inflation (in Belgium), the inflationary crisis in France, and the enduring effects of these. Recovery was more rapid in countries that experienced inflation and depreciation (notably France, Belgium, and Italy) than in those that had pursued deflation in order to stabilize their currencies and restore the prewar gold price. In countries where the fiscal war of attrition had been most destructive, political leaders and their constituencies insisted on going to exceptional lengths to prevent the ceasefire from breaking down. The gold standard was the white flag emblematic of the truce, and policy makers

continued to wave it even after political economic circumstances had changed fundamentally and an entirely different policy response was required.

Keywords: Belgium, Britain, currency stabilization, deflation, economic policy, economic stabilization, Europe, France, gold standard, inflation, interwar period, Netherlands, Sweden

First efforts to restore the international gold standard took place at conferences in Brussels in 1920 and Genoa in 1922.[1] Britain and other countries saw these parleys as an opportunity to erect a formal framework for international monetary cooperation. The financial difficulties of the first decade of the twentieth century had taught them that their fortunes were linked. Wartime experience provided a further illustration of the advantages of international financial collaboration. Rather than trusting that collective management of international monetary affairs could be organized on an ad hoc basis, European leaders sought to negotiate an agreement that would regularize cooperative responses to international monetary problems.

Their efforts came to naught. The same obstacles that were to frustrate attempts to engineer a cooperative response to the Great Depression a decade later led to the failure of the Brussels and Genoa conferences. War debts and reparations roiled the waters, preventing governments from reaching agreement on the international monetary issues to which those debt obligations were linked. Policymakers in different countries subscribed to different conceptual models of how the gold standard worked, leading them to prescribe incompatible remedies for their international monetary ills. Insofar as the difficulties that arose once the gold standard was reconstructed required collective management, governments had to hope that the requisite cooperation could be arranged on the spot.

With this failure to provide a framework for systematic international cooperation, the credibility of each government's commitment to the gold standard was subjected to growing scrutiny. This posed a dilemma for countries that suffered inflation during and after the war. To signal the depth of their

commitment to gold, it might help to restore prices, and hence the gold parity, to 1913 levels, even if the painful process of doing so was at odds with domestic prosperity. If reassured that the authorities were committed to restoring the traditional parity even in the wake of an extraordinary disturbance like World War I, financial market participants (p.154) would be more likely to shift financial capital in stabilizing directions in the event of another shock.

The alternative, less likely to raise unemployment but quite possibly inconsistent with a credible commitment to gold, was to accept the prevailing price level and stabilize at a new, lower parity. “The choice,” as Ralph Hawtrey characterized it, “is between a long and painful deflation and an arbitrary manipulation of the currency, which is hardly consistent with the preservation of public good faith.”[2]

Hawtrey was half right. He correctly forecast that choice of parity would significantly magnify or diminish World War I's lingering effects. Countries that endured deflation in order to restore their prewar parities recovered less quickly than those that ultimately stabilized their currencies at lower levels. And as Hawtrey predicted, the process was “long and painful.” But the credibility of the authorities' commitment to gold proved more elusive than Hawtrey supposed. Britain, for example, was unable to resist a speculative crisis in 1931 despite restoring sterling's prewar parity. France, in contrast, remained securely on gold even though it stabilized the franc at a depreciated level. Restoring the prewar parity was neither necessary nor sufficient for “the preservation of public good faith.”

The credibility the public vested in the official commitment to gold depended rather on political priorities and the political institutions adopted to facilitate their pursuit. Of the determinants of those priorities, the very experience with inflation and stabilization in the 1920s was surely the most important. Where stabilization was successfully achieved only at the conclusion of a contentious and politically exhausting fiscal war of attrition, political leaders and electors were willing to go to extraordinary lengths to prevent a replay of the conflict. They sought to retain the gold standard, the

symbol of fiscal compromise, at any cost. Ironically, it was precisely those countries that returned to gold at a devalued parity following a long, politically disruptive inflation that displayed the firmest resolve to defend the gold standard when it again came under attack.

The Failure to Provide a Framework for Cooperation

The sense of urgency attending postwar deliberations is conveyed by the terms in which the Council of the League of Nations announced its intention to convene the conference at Brussels. It referred not to financial problems or difficulties but to the "financial crisis."[3] In preparation for the meeting, questionnaires were dispatched to national governments, inquiring into the government budget, public debt, foreign trade, monetary reserves, and note circulation.[4] Opinions were solicited from five leading economists: Cassel of Sweden, Pigou of Britain, Gide of France, Bruins of Holland, and Pantaleoni of Italy. The economists prepared a joint statement setting the agenda for the conference.[5] In it they identified three critical international (p.155) economic problems. First was the threat of inflation, which could be vanquished only by balancing government budgets, allowing interest rates to rise to realistic levels, and funding floating debts. Second was the problem of exchange rate instability, whose elimination required price stabilization and the removal of obstacles to trade. Third was the problem of capital shortages, which could be resolved only through the provision of international credits.

The joint statement of the experts underscored the mutually reinforcing nature of the three problems. Exchange rates could be stabilized only if inflation was subdued. Inflation could be subdued only if budget deficits were eliminated. Budget deficits could be eliminated only if economic growth resumed. Capital shortages posed the principal barrier to the resumption of growth, but the international loans needed to relieve those shortages were inconceivable so long as exchange rates remained in disarray. Comprehensive intervention was required to break out of this vicious cycle.

Regrettably, bureaucratic imperatives dominated. The delegates to Brussels chose to address each problem in isolation, establishing separate committees. The Committee on Public Finance offered a ringing endorsement of budgetary orthodoxy. To balance budgets, it recommended reductions in military and social spending. Food subsidies, artificially low public utility charges, and excessive unemployment benefits were condemned as wasteful public spending.

The deliberations of the Committee on Currency and Exchange were more disputatious. Its options ranged from proposals to delegate the problem of exchange rate stabilization to the market, to, at the other extreme, utopian schemes for a world currency and an international central bank advanced by the Guatemalan delegate Jean van de Putte and the British financial journalist Paul Einzig.[6] The committee agreed only on the need to eliminate exchange control, restore central bank independence, and establish a common standard of value on which to base the exchange rate system.

Curiously little mention of gold was made. Some delegates were concerned that a ringing endorsement of the gold standard might intensify the pressure for countries with greatly depreciated currencies to restore their prewar parities. This could provoke a costly deflation and delay the resumption of economic growth. Other participants, notably the British, were preoccupied by the danger of a global gold shortage. Though gold production had fallen continuously since 1915, the demand for gold continued to rise with the expansion of the world economy. The British toyed with a scheme to alleviate the problem by granting foreign exchange reserves parity with gold, but their ideas remained insufficiently formed.

Most controversial of all were the conclusions of the Committee on International Credits. Stressing the need to quickly restore Europe's productive capacity, it recommended establishing an international financial commission of the League of Nations responsible for the extension of reconstruction loans and international credits. Sir George Paish, former editor of the *Statist* and wartime adviser to H.M. Treasury, circulated a pamphlet to the delegates in which he

recommended flotation (p.156) of a £4 billion reconstruction loan sponsored by the League. A formal proposal to establish an “International Bank of Issue” to underwrite this and subsequent loans was submitted by Léon Delacroix, the Belgian Prime Minister.

The United States resisted all proposals to vest an international organization with such authority. Prominent American officials such as Treasury Secretary Carter Glass adamantly opposed government sponsorship of international loans.[7] The Treasury's priority was the restoration of free markets, at least superficially a goal inconsistent with government sponsorship. The United States was most strongly opposed to the establishment of yet another free-standing international institution. The Committee on International Credits therefore recast Delacroix's international bank as a commission of the League of Nations. Its proposal was based on a plan submitted by the Dutch banker K. E. Ter Meulen. The Ter Meulen Plan envisaged a commission for providing loans to countries otherwise unable to obtain them. The commission would specify the assets put up as collateral by the borrowing country, and the borrower would then be authorized to issue bonds for which the international commission would be the ultimate guarantor.[8]

American officials worried that the extension of new loans would dim the prospects for repayment of those already outstanding, notably war debts.[9] Europeans, in contrast, worried that the United States might insist on granting war debts seniority over reconstruction loans, rendering investors hesitant to purchase newly issued government bonds. Paish concluded that the successful flotation of reconstruction loans was contingent on U.S. willingness to forgive the war debts.

American officials demanded instead that the European nations agree to a schedule for repayment of the war debts before credits were funneled through the League. To surmount the immediate crisis, they urged European officials to seek commercial bank loans and export credits. To encourage the extension of private credits and minimize the danger that the Brussels delegates might embrace resolutions demanding that war debts be forgiven or downgraded, the

U.S. Treasury insisted that delegations be composed not of government officials but representatives of national chambers of commerce.[10]

It then became apparent that the Congress was not prepared to allow the United States to join the League of Nations. Since the United States was the only country capable of financing loans on the requisite scale, its refusal to join doomed the idea of an international credit bank under League of Nations auspices.

The Wilson Administration's failure to sponsor a program of intergovernmental loans (or grants like those made available by the United States after World War II) had only minor consequences so long as the New York market continued to advance short-term credits to European borrowers. Until 1920 such credits were (p.157)

extended freely. But when the Fed, increasingly concerned with inflation, pushed up domestic interest rates in the first half of 1920, U.S. lending was curtailed.[11] As capital inflows declined, the imported capital equipment required for reconstruction became increasingly difficult to finance. European countries were forced to choose between economic reconstruction and monetary stabilization. Both processes proved costly and protracted.
Other Brussels proposals were stillborn as well. The central factors responsible for the conference's failure—U.S. ambivalence toward international entanglements, the struggle over war debts and reparations, and disagreements among policymakers over whether financial problems could simply be delegated to the market—returned to haunt attempts at international cooperation throughout the 1920s.

Their next appearance was at Genoa in 1922. A new sense of realism had overtaken the participants; the Genoa proposals tended to be less ambitious than those emanating from Brussels. The delegates devoted little attention to international recovery schemes, rejecting Belgium's renewed call for an international credit bank. They shunned proposals like those adopted at Brussels to extend technical assistance to devastated regions. Instead they focused on the restoration of exchange rate stability as necessary and sufficient to lay the basis for economic recovery.

(p.158) Like their predecessors at Brussels, the delegates at Genoa betrayed some ambivalence toward prewar parities. They sympathized with the notion that the traditional parities were the ideal basis for stabilization. A return to gold at any other level would remind investors that the authorities retained the option of again changing the domestic price of gold. A policy of devaluing before stabilizing would raise disturbing questions about the depth of the commitment to the new gold standard. At the same time, countries that had undergone sustained inflation would experience dislocations if they attempted to reduce prices abruptly to 1913 levels. Unemployment would rise if wages did not keep pace with falling prices, and the burden of servicing internal debts would increase. Policymakers were urged, therefore, to consider stabilization at exchange rates in the neighborhood of those prevailing currently.

Ironically, this argument was most enthusiastically embraced by countries in the strongest position to restore their prewar parities. Britain was its leading advocate. France, Belgium, and Italy, whose currencies had depreciated more rapidly than sterling, refused to accept that circumstances existed in which it was advisable to increase the domestic-currency price of gold. Concerned with the impact on confidence in their currencies of such an admission, they prescribed devaluation exclusively for cases where it was demonstrably impossible to restore the prewar parity.[12] A further irony, of course, was that the same countries that refused to accept the case for stabilizing at a depreciated rate ultimately opted for this alternative.

Only on matters of central bank cooperation and foreign exchange reserves did the Genoa resolutions transcend earlier discussions at Brussels. The worldwide rise in prices and America's wartime absorption of specie created a pressing need for gold on the part of all major central banks except the Fed. If these banks now attempted to obtain it by raising interest rates and restricting credit, economic recovery would be disrupted. If they simultaneously adopted restrictive policies, none would succeed in attracting gold from the others, but prices and production would be depressed. In an early expression of this fear, Hawtrey warned that “if the countries which are striving to recover the gold standard compete with one another for the existing supply of gold, they will drive up the world-value of gold, and will find themselves burdened with a much more severe task of deflation than they ever anticipated.”[13]

The proposals of the Financial Commission, drafted by Hawtrey (by this time Director of Financial Enquiries at H. M. Treasury), Keynes, and Sir Robert Horne, the British Chancellor of the Exchequer, were designed to head off this noncooperative struggle. Central banks were instructed to harmonize their actions to avoid destabilizing economic conditions. They were to formulate monetary policies “not only with a view to maintaining currencies at par with one another, but also with a view to preventing undue fluctuations in the purchasing power of gold.”[14] These goals could be attained simultaneously only through central bank cooperation. (p.159) “Measures of currency reform will be facilitated if the practice of continuous cooperation among central banks . . . can be developed,” the Genoa Resolutions read.[15]

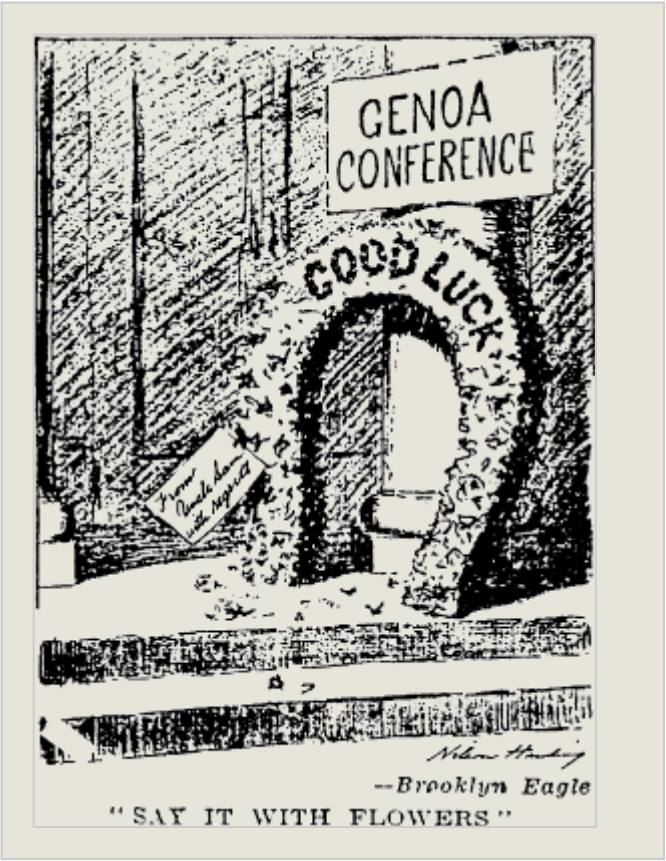
Equally significant were British proposals, ultimately endorsed by the delegates, to augment gold reserves with foreign exchange. The British argued that the danger of a global gold shortage could be alleviated by concentrating the available gold in a few central banks and encouraging other countries to accumulate claims on those gold centers. The practice of holding foreign exchange reserves had been common-place before the war; the significance of Britain's Genoa proposals lay in the effort to institutionalize it. If all countries agreed simultaneously to hold some portion of their reserves in the

form of foreign exchange, speculators would have no reason to attack the currency of the first country to take the step. Governments that substituted gold for foreign exchange to relieve the deflationary pressure on the world economy would not be penalized.[16]

The Financial Commission therefore recommended that countries negotiate an international convention formally authorizing them “in addition to any gold reserve held at home, [to] maintain in any other participating country reserves of approved assets in the form of bank balances, bills, short-term securities, or other suitable liquid assets.”[17] Signatories would be required to fix their exchange rates and restore gold convertibility, with any failing to do so losing the right to hold reserve balances of the others. The principal creditor countries were encouraged to move immediately to “establish a free market in gold and thus become gold centres.” The Commission recommended convening a meeting of central banks to hammer out the details of such a convention as soon as possible following the Genoa Conference's close.

Notwithstanding sincere concern over the adequacy of global liquidity, Britain's proposals betrayed a strong strand of national self-interest. The weight its representatives attached to these measures reflected their belief that, unless the deflationary pressure operating on the world economy was eliminated, a costly reduction in prices would be required to restore the prewar sterling parity before the Act of Parliament suspending the gold standard expired in 1925. Britain's dependence on foreign trade reinforced this concern. Prospects for the recovery of international trade were dim so long as the monetary stringency caused by the global gold shortage persisted. London's status as a financial center rendered her an obvious repository for the foreign exchange reserves of other countries, especially for Commonwealth members and other British trading partners. By encouraging the accumulation of exchange reserves, a convention like that proposed at Genoa would help replace some of the financial business lost to New York over the course of the war.

National monetary authorities were urged to harmonize their demands for gold to avoid the disastrous decline in international prices that would otherwise result (p.160)



from the "simultaneous and competitive efforts of a number of countries to secure metallic reserves."[18] To facilitate monetary policy coordination, the Genoa Resolutions recommended that central banks be established where they did not exist and that they be insulated from political pressures.

To the delegates' frustration, efforts to nurture cooperation and to negotiate a convention on exchange reserves encountered the same obstacles faced at Brussels. Prospects for significant international monetary cooperation were poor while war debts and reparations remained in dispute. So long as governments were at logger-heads, it was unlikely that national central banks could successfully collaborate. Moreover, rapprochement among governments was necessary but not sufficient for effective central bank cooperation. The central bankers also had to be convinced of its merits. In fact, many were inclined to resist. As F. H. Nixon, Director of the Economic and Financial Section of the League of Nations, described the problem,

> In point of fact, some cooperation between heads of certain central banks takes place at present in a purely informal way, and it is to be doubted whether a formal conference is going to carry things much further forward, since the banks which are not independent are closely tied to their governments, and those which are independent tend to be very independent, even of each other. And it is to be questioned whether the banks will assume responsibilities where the governments have refused to do so.[19]

(p.161) The problem was most acute in the case of the United States. Anticipating that European negotiators would argue that stabilization required war debt liquidation, the United States refused to participate in the Genoa Conference, just as it had at Brussels. Only Commerce Secretary Herbert Hoover pressed for active involvement.[20] Hoover urged the Harding Administration to offer a five-year holiday on war debt interest payments to all countries but Britain, if the recipients of German reparations offered a five-year moratorium of their own.[21] As he put it, “unless our commercial community is willing in some way to interest itself in the countries struggling with fiscal and financial problems we must expect to pay many thousand fold in the loss of export markets and in the employment of our people.”[22]
But the French had already ruled out discussion of reparations. The U.S. Senate opposed war debt concessions and in January 1922 established the World War Foreign Debt Commission to limit the Administration's room for maneuver.

Compared to European politicians, the vast majority of officials within the Harding Administration viewed the case for international consultations and international monetary reform as less pressing. With the United States already on the gold standard and the Fed's stock of free gold up impressively from its 1920 low, American policymakers in 1922 did not foresee the need for deflation. Compared to Europe, the United States was less dependent on international trade. Compared to Britain, it relied less on income from the provision of financial services, although U.S. officials naturally opposed initiatives designed to shift financial business to London from New York. That the United States possessed upwards of 40 percent of the global gold stock did not heighten American enthusiasm for schemes that promised to downgrade gold's monetary role.

Federal Reserve officials were unenthusiastic about British proposals to vest the Bank of England with responsibility for organizing the process of central bank cooperation. They were affronted by the decision at Genoa to charge its Governor, Montagu Norman, with responsibility for calling the subsequent meeting of central banks.

Furthermore, leading U.S. officials, such as Benjamin Strong, Governor of the Federal Reserve Bank of New York, objected to extension of the gold-exchange standard.[23] With little experience in central banking under the gold standard, Strong and his fellow countrymen both in and out of the Fed clung to an exaggerated view of the institution's automaticity. They ascribed financial instability to (p.162) intervention and feared that extending official reserve status to foreign deposits increased the scope for government interference with the international monetary system's operation. Loosening the link between gold reserves and domestic financial conditions opened the door, they warned, to unrestrained credit creation and speculative excesses. They also felt that international support operations that loosened the gold standard constraints on individual countries would encourage the pursuit of lax financial policies.

French officials, for analogous reasons, opposed formalizing the gold-exchange standard. The disorganized state of French finances was regarded as evidence of the dangers that would arise if central banks acquired additional discretion. Moreover, France naturally opposed changes in the international monetary system that promised to reinforce the international financial preeminence of London and New York.[24]

In light of this opposition, it seems unlikely that the Genoa Resolutions on Currency would have borne fruit even if other obstacles had not intervened. And intervene they did. The meeting of central banks, initially scheduled for June 1922, was delayed by Britain's dispatch of a delegation to Washington to discuss a payments schedule for the British war debt.[25] France and Belgium's invasion of the Ruhr then made it impossible for these countries to dispassionately discuss

monetary reform with Germany, Britain, and the United States.

Thus, the ongoing dispute over war debts and reparations prevented central bankers, even when nominally independent of their governments, from designing a mechanism for regularizing international monetary cooperation. But even if other disputes had been resolved, disagreements about the nature of the gold standard system and the role for collective management would have continued to frustrate efforts to construct such a mechanism. The most that can be said of the Genoa Conference is that it lent prominence to the debate over the gold-exchange standard and heightened awareness of the advantages of central bank cooperation. At the same time it highlighted the obstacles that would plague efforts at systematic international monetary collaboration for the remainder of the interwar years.

Deflation

With the defeat of proposals for an international credit bank and for systematic monetary cooperation, each country was forced to solve the problem of currency stabilization on its own. Officials privately acknowledged that output and employment had to be sacrificed to reduce prices to prewar levels. This unpleasant admission had different implications for different countries. For those whose currencies had lost less than half of their prewar value in terms of dollars, the costs of adjustment, (p.163) though formidable, still did not preclude a return to par.[26] Britain, Holland, Sweden, Denmark, and Norway fell into this category. For countries whose currencies had lost 60 to 90 percent of their dollar value, returning to par entailed reducing prices by as much as two-thirds to nine-tenths. In a compromise between debtor and creditor interests, the currencies of most such countries were permitted to recover a portion of their lost value prior to stabilization, which then took place at a higher domestic-currency price of gold and the dollar than what prevailed in 1913. Czechoslovakia, Belgium, France, Italy, and Portugal fell into this category. Finally, there were countries where inflation reached such heights that prewar parities and price levels were rendered irrelevant. In Austria, Hungary, and

Germany, stabilization was accompanied by currency reform at currently prevailing prices.

Nowhere was more weight attached to credibility than in Britain. Aside from Keynes, the only public figures to voice reservations about the restoration of sterling's prewar parity were Reginald McKenna (chairman of the Midland Bank), Hubert Henderson (Keynes's associate and editor of the *Nation and Athenaeum*), and the press magnate Beaverbrook.[27] Winston Churchill, the Chancellor of the Exchequer ultimately responsible for the decision to restore the prewar parity, found their arguments unconvincing. Churchill and others condemned exchange rate instability for discouraging international trade and foreign investment. The presumption that the recovery of international trade and investment was a necessary prerequisite for the restoration of domestic prosperity hence provided a compelling rationale for stabilization.

The justification for a particular gold price, namely what had prevailed until 1914, was less transparent. Blind faith, the popular association of the prewar parity with Britain's status as a global power, the special benefits accruing to the City—all played a role.[28] The decision is impossible to understand, however, without considering also the issue of credibility. For the commitment to convertibility to be credible, it had to be immutable, so the argument ran. The motives of a government that tampered once with the parity would be suspect evermore. Credibility and $4.86 were not just linked. They were regarded as synonymous.

Sterling gained ground on the dollar in fits and starts as shown in Figure 6.1. From less than three-quarters of its prewar level in 1920, it rose to 97 percent of parity in February 1923. It then dropped to less than 90 percent of par over the (p.164)

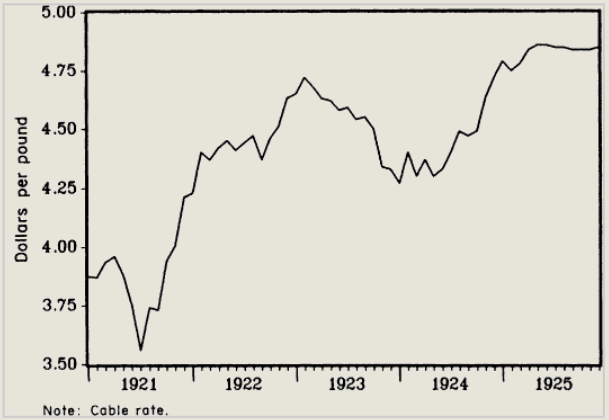


Fig. 6.1. Sterling/dollar exchange rate, 1921–25.

The British pound appreciated against the U.S. dollar from mid-1921 through mid-1923, coming within striking distance of the prewar exchange rate of $4.86. Sterling then gave back ground, until in the summer of 1924 it began its final approach to the prewar parity.

Source: Morgan (*1952*), *pp. 351–355*.

subsequent year, before rising gradually until the return to gold was effected in April 1925. Sterling's appreciation from mid-1921 through early 1923 reflected hopes that the successful conclusion of negotiations at Genoa might permit a generalized return to gold. After it became apparent that the Genoa Resolutions would not produce a multilateral agreement, Britain looked to the United States. If the United States could be convinced to adopt more inflationary policies, Britain's transition back to gold would be eased. Starting in the second half of 1921 the United States had accumulated ample free gold for backing monetary expansion and the Fed had no immediate reason to worry about gold losses. Hence, the British argued, the Americans might initiate inflationist policies in the interest of international cooperation.

United States monetary policymakers, preoccupied by the domestic situation, refused to consider such arguments. Benjamin Strong was still unconvinced that such action was appropriate for a central bank under a gold standard regime.

Other officials within the Federal Reserve System were even less sympathetic to the Bank of England's plight. Already the consequences of Britain's failure at Genoa to successfully construct a framework for international monetary cooperation were clear.

In light of American unwillingness to initiate inflationary measures, the British considered prodding them by shipping gold in payment of war debts. Otto Niemeyer, financial counselor to the British Treasury, suggested that gold shipments (p.165) might push the Americans “over the edge into . . . increased prices.”[29] Unfortunately for Niemeyer's proposal, there was little but their capacity for embarrassment to prevent American policymakers from sterilizing gold inflows.[30] If the Americans were to inflate, they would have to be convinced that the policy was in their interest. For a time, the weakness of the U.S. economy in 1924 seemed to be pushing them in this direction. Ultimately, however, recessionary tendencies proved insufficient to warrant much loosening of domestic credit. Although industrial production slowed, consumer demand remained steady. Farm incomes rose as a result of higher world wheat prices. Hence the Fed was not compelled to act. The volume of reserve bank credit outstanding was no larger at the end of 1924 than it had been at the end of the previous year, despite significant gold inflows.[31] American wholesale prices fell by 2 percent between January 1923 and January 1924 and continued their descent over the subsequent year. The burden of adjustment landed squarely on the British economy.

Britain was forced to deflate. Yet sterling appreciated even more quickly than Britain closed the gap against American prices. The markets knew that the Act of Parliament suspending the gold standard would expire in 1925; extending its provisions would significantly embarrass the government. Aware of the incentive this provided the authorities to get their financial house in order, speculators bid up the currency in anticipation of the measures to follow.

These speculators were convinced of Britain's ability to complete the transition by the extent of consensus on the fiscal front. The years from 1920 through 1925 saw a

succession of Chancellors of the Exchequer, and shifts from a Conservative government to the first Labour Government and then back to the Conservatives. But given Britain's majority representation electoral system, the parties staked out similar positions near the center of the political spectrum. The budget Philip Snowden submitted on behalf of the Labour Government in 1924 had strong elements of continuity with those of his predecessors. Having inherited a balanced budget, Labour also left one behind, making only minor modifications in the tax structure.[32]

Speculators were also encouraged by progress on the financial front. The short maturity of the public debt remained a threat to sterling's stability. If for any reason (p.166)

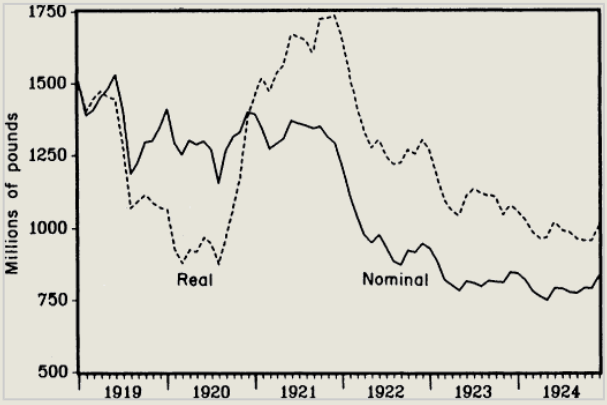


Fig. 6.2. Nominal and real value of British floating debt, 1919–24.

The rise in the real value of the floating (or short-term) debt of the British government in 1920–21 reflected the fall in the price level. The floating debt was reduced subsequently as the government's short-term bills were converted into long-term bonds.

Source: Morgan (1952), pp. 73, 147.

the investing public hesitated to renew its maturing treasury bills, significantly higher interest rates would have to be offered. Unless taxes were raised quickly, the increased cost of debt service would undermine budget balance, create fears of inflation, and lead investors to demand still higher interest rates. The government would have no choice but to turn to Ways and Means

Advances from the Bank of England, leading to currency depreciation. It seemed inadvisable to pursue costly policies designed to induce exchange rate appreciation so long as a funding crisis could wipe out the entire investment at any time.
The deflation required for the return to gold intensified these pressures by raising the real value of outstanding treasury bills. Funding the floating debt became more important so as to insulate the Bank of England. Converting treasury bills into bonds would not reduce the total value of the debt or necessarily cut debt-service costs, but it would decrease the value of the debt maturing in immediately succeeding years. The danger of a debt run, in which investors refused to renew their maturing treasury bills, forcing the government to obtain funds from the central bank to repay the principal, would be diminished.[33] From the second half of 1920, considerable progress was made in lengthening the debt's maturity structure. Though the collapse of prices after mid-1920 had dramatically raised the real value of the outstanding floating debt, by 1924 a series of conversion operations, which reduced the (p.167) current value of treasury bills and Ways and Means Advances to the Government by some 30 percent, succeeded in restoring its real value to early 1920 levels. Steady recovery of the British economy meant that this floating debt accounted for a declining share of GNP. Thus, the danger that convertibility would be threatened by investors' panic sales of treasury bills was considerably reduced.

Sweden and the Netherlands followed Britain down the deflationary path. Compared to the belligerents, neither country had suffered severe fiscal dislocations during or after the war. Hence distributional cleavages were not so pronounced, and proportional representation did not have debilitating effects.[34] By the end of 1922 the Swedish krona and Dutch guilder, like sterling, were within percentage points of their dollar parities. Even when sterling fell back in 1923, the krona and guilder remained relatively stable, with the krona losing less than 2 percent of its dollar value over the year, the guilder less than 7 percent. Wholesale prices in Sweden and Holland were reduced by an additional 7 percent between 1922 and 1923.[35] Purchasing power parity calculations provided little evidence of overvaluation when

Sweden restored the prewar parity in 1924 and the Netherlands followed Britain back onto gold in 1925.[36]

Inflation

Elsewhere in Europe the situation was entirely different. In Belgium, for example, persistent inflation frustrated efforts to stabilize the currency at current levels, much less restore the prewar gold standard parity. A lack of consensus concerning the fiscal burden prevented the government from closing the budgetary gap. (See Table 6.1.) The proportionality of the electoral system was increased in 1919, and the Catholic Party lost its prewar electoral majority. The wartime coalition was maintained with difficulty until 1921, but then a period of political instability ensued. None of the Catholic-Liberal coalitions that held power subsequently had the breadth of support required to break the fiscal deadlock.[37]

The authorities were forced to print money to finance the deficit; inflation and depreciation were the result. As in Germany, the reparations dispute complicated the problem. Belgium had suffered extensive wartime devastation and proceeded on the assumption that reparations would be made available to finance reconstruction costs. To balance the budget was to admit that prospects for reparations were dim. Politicians had an incentive to use budget deficits as a lever to extract transfers from Germany. Nationalists insisting on reparations were firm in their opposition to fiscal retrenchment.

Belgium had the advantage of not having inherited a burdensome public debt. Because of German occupation, the government had been deprived of its ability to borrow domestically. Expenditures financed on behalf of Belgium by the Allies (p.168)

Table 6.1. The Belgian Budget, 1919–26 (Millions of Francs)

	1919	1920	1921	1922	1923	1924	1925	1926
Receipts[1]								
Ordinary	1,492	1,565	2,369	3,227	4,173	4,147	5,086	6,971
Extraordinary	71	10	117	1	4	17	155	2,051
Receipts from Germany	10	215	463	1,476	1,518	1,964	1,051	544
Government railroads and other enterprises	462	979	1,130	1,316	1,474	2,015	2,185	1,932
Food administration	618	1,843	1,346	45	5	9	–	–
Total	2,653	4,612	5,425	6,065	7,174	8,152	8,477	11,498
Expenditures[2]								
Ordinary	3,416	2,082	2,445	2,917	3,446	3,898	5,579	5,897
Extraordinary	719	843	1,177	1,562	1,019	451	1,519	6,572
Recoverable under the Peace Treaty	1,682	3,016	2,214	2,484	2,516	2,853	3,820	639
Railroads and other public enterprises	1,030	1,317	1,502	1,442	1,715	2,459	2,751	2,278
Food administration	647	2,910	972	24	5	5	–	–
Total	7,494	10,268	8,310	8,429	8,701	9,666	13,669	15,386
Deficit	4,841	5,656	2,885	2,364	1,527	1,514	5,192	3,888

(1) Exclusive of proceeds of loans.

(2) Inclusive of public debt retirement.

Sources: Situation du Trésor Public. Chambre des Représentants, 1930 to 1934; *Moniteur Belge*, February 4–5, 1935.

were assigned to Germany as part of the reparations settlement. Thus, Belgium was relieved of the obligation to repay war debts. This advantage was rapidly frittered away. The tax system was in disarray, and the budget deficit was large. So long as the prospects for German reparations remained hopeful, the government could finance its deficits by borrowing domestically and promising to repay the principal once reparations came on stream. But when reparations proved slow to arrive, inflation accelerated and investors willingly purchased only short-term debt instruments. Starting in 1922 the government was left with no alternative to central bank finance. From 30 Belgian francs to the pound in May 1919, the currency fell like a stone to 52 francs in May 1922, 81 francs in May 1923, 90 francs in May 1924, and 96 francs in May 1925. The longer inflation persisted, the less realistic were the hopes for a return to the prewar parity. By early 1925 prominent Belgian officials, such as Albert Janssen, director of the National Bank, were openly predicting that the franc would be stabilized at a rate considerably below the prewar parity.[38]

The failed Ruhr invasion of 1923 and the Dawes Plan rescheduling of 1924 finally made clear that reparations transfers would be inadequate to finance the Belgian (p.169) government's “recoverable expenditures.” The choices were higher taxes and lower public spending on the one hand, continued inflation on the other. Albert Theunis, finance minister since 1920, had made slow but steady progress toward closing the budget deficit, mainly by curbing expenditure. In 1925, he submitted the first postwar balanced budget and prepared to retire. But Parliament refused to vote the 120 million francs of new taxes that Theunis proposed. The resurgence of inflation raised expenditures relative to taxes, threatening to ignite a financial explosion similar to that experienced in Germany.[39] Theunis retired in disappointment.

The April 1925 elections brought to power a coalition under Prosper Poullet dominated by Socialists and Christian Democrats. Albert Janssen, having accepted the portfolio of finance minister, once again attempted to close the fiscal gap. He extended concessions to both left and right in an effort to enlist their support. The cornerstone of his program, like

Theunis's, was new taxes. The tax increase was voted toward the end of 1925 over the opposition of the Liberals and the conservative wing of the Catholic Party. But to defuse right-wing opposition, the increase was limited to 600 million francs. This compromise had disturbing implications. A careful reading of Janssen's budget suggested that, rhetoric aside, a tax increase of twice this amount was required for fiscal balance.[40]

Acknowledging the reality of devaluation, Parliament passed a law revaluing the gold reserve of the central bank by 450 percent, thus providing the monetary authorities with the resources needed for exchange market intervention. The National Bank entered the market, pegging the franc at 107 to the pound, up only slightly from its September low of 111. Even after revaluation, however, the reserves of the central bank still amounted to little more than 20 percent of the outstanding note circulation. In contrast to Germany, where reserves approached 95 percent of note circulation following their revaluation, inflation had not eroded the willingness to hold money or reduced the real value of money balances to the same extent.[41]

The National Bank consequently had slim margin for error. If investors in the floating debt lost confidence, the government's only option would be for the central bank to purchase the treasury bills that investors sold. Injecting currency into circulation would drive down the franc. Possessing only limited reserves, the central bank could do little to contain these pressures. Raising interest rates on the debt was no solution without tax increases. In 1926 interest on the debt amounted to fully half of government expenditure.[42] Hence a rise in the return on government debt from, say, 4 to 5 percent would increase government spending by 10 percent. Budget projections were notoriously imprecise; as late as 1925 observers complained of uncertainty about the fiscal position.[43] Until the floating debt was funded and it became clear that the 1925 tax increases sufficed, any minor disturbance (p.170) could provoke just such a confidence crisis. Hence a foreign loan was essential to provide the central bank room for maneuver.

Turmoil in neighboring France did not help. As the French franc depreciated, Belgian manufacturers found it increasingly difficult to match the prices of their French competitors. Still more important to the collapse of the Belgian stabilization was the failure to secure a loan. The Federal Reserve Bank of New York and the Bank of England expressed a willingness to extend short-term credits to the National Bank of Belgium while the loan was under negotiation. But long-term finance could not be provided through official channels. The government therefore turned to a syndicate headed by J. P. Morgan & Co. The Morgan bankers were understandably skeptical that Belgium's fiscal house was in order and were suspicious of a Socialist-led government's commitment to financial stability.[44] That they had recently encountered difficulty in placing bonds issued on behalf of Italy only reinforced their hesitation. The bankers demanded immediate consolidation of the floating debt.[45] To obtain the resources needed to retire or convert outstanding treasury bills, they advised the government to merge the balance sheet of the Treasury with that of the state railways.[46]

The bankers believed that investors would willingly exchange their treasury bills for long-term bonds or shares secured by the railway system's assets.[47] The feasibility of this plan hinged on reorganization of the railways along lines that would insure their profitability. The railways had been run previously on a break-even basis or at a loss; to generate the profits needed to fund the floating debt, it would be necessary to raise railway rates by 25 percent and eliminate featherbedding. Neither the public nor railway management was willing to accept this.

Montagu Norman of the Bank of England attempted to intervene with the bankers on Janssen's behalf, arguing that Belgium had already undertaken budgetary reforms sufficient to warrant a loan. But the Bank of England had its own problems, and Norman was unable to back his words with cash. Benjamin Strong lobbied (p.171) his friend Russell Leffingwell to assist the Belgians, but to no avail.[48] The loan negotiations collapsed.

With a $100 million loan, the gold backing of the note circulation would have exceeded the customary 40 percent minimum. The government could experience a breathing spell in which to consolidate its fiscal reforms. Without the loan, the cover ratio was barely 20 percent. As soon as loan negotiations collapsed, in March 1926, the National Bank withdrew from the foreign exchange market. In the last four days of intervention, it had lost $20 million of reserves, a fifth of the loan for which it been negotiating and more than a quarter of the metallic reserve it possessed the previous autumn when it had begun to peg the franc.[49]

The Belgian franc lost an eighth of its value in the first hours following the withdrawal of support. Overall, it lost half of its remaining value against sterling between March and July 1926. In March and April alone, investors presented 600 million francs worth of treasury bonds for repayment, and the government was forced to request legislation authorizing the National Bank to discount up to 1500 million francs of bonds. Inflation threatened to spiral out of control.

The government was replaced by a ministry of national union, a three-party coalition significantly broader in composition than the ones preceding it. It was led by Henri Jaspar, a member of the Catholic Party. The highly respected and financially orthodox Emile Francqui, vice governor of the *Societé Générale*, refused to accept a portfolio but became financial spokesman for the coalition. Francqui was strong willed, indefatigable, and famous for his financial conservatism; his very participation in the government is credited with helping to restore confidence. Francqui demanded 1500 million francs of new taxes, a larger sum than requested by Janssen in 1925 even after adjusting for inflation. The proceeds were to be allocated to the newly created *Fons d'Amortissement de la Dette Publique*, charged with retiring public debt.

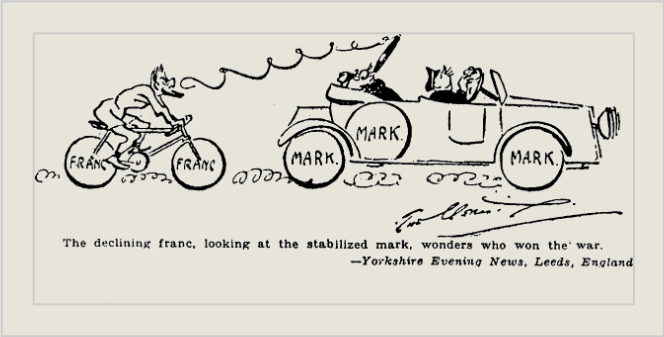
Once the new taxes were imposed, a foreign loan was quickly secured. The central bank first obtained $41 million in stand-by credits from a consortium of foreign central banks; next the government secured a $100 million long-term loan from a syndicate headed by J. P. Morgan & Co. As soon as the loan

was arranged, the National Bank stepped in to stabilize the franc. By that time the currency had appreciated to 175 to the pound, up about 12 percent since the change of government but still only a fraction of the prewar parity. On October 25, 1926, a Royal decree restored the convertibility of the franc into gold.

The truly momentous change between 1925 and 1926 was not Francqui's participation in the government, however, but the collapse of resistance to stabilization. As in Germany two years before, the left and right called off their war of attrition. The costs of financial instability had come to exceed the benefits even for those best positioned to take advantage of inflation. All parties agreed to sacrifices in order to end the period of instability. In Belgium the ceasefire took the most dramatic possible form: the government, in the name of the king, was granted powers (p.172) to unilaterally take whatever steps were necessary for stabilization. Public spending was cut. New public works projects were halted. Francqui's 1500 million francs worth of additional taxation was imposed unilaterally. The turnover tax was doubled. The land tax was increased by 50 percent. Indirect taxes on luxury items were increased by at least 25 percent. Assets of the railway system were reorganized along the lines that had been recommended by the foreign bankers in 1925. The net worth of the railway was at least 10 billion francs, equal to the total value of the floating debt outstanding at the end of 1925. That floating debt was quickly reduced to 2.2 billion francs through conversion into claims on the new railway enterprise.[50] Once the war of attrition had finally exhausted the combatants, peace broke out on the fiscal front.[51]

The Crisis of the Franc

Of those countries managing to escape currency collapse, the financial crisis was most acute in France. Annualized rates of wholesale price inflation peaked at nearly 350 percent in June—July 1926, months when France “pulled back from the brink of hyperinflation.”[52] (p.173)



The same elements that combined to produce inflationary crises elsewhere operated with exceptional force in France. The left and right engaged in a protracted struggle over who would bear the burden of taxation. The fragmentation of the polity, attributable in part to the modified system of proportional representation under which members of the Chamber of Deputies were elected, heightened the difficulty of resolving the dispute. Unwillingness to compromise was reinforced by the reparations tangle, for, as in Belgium, to raise taxes was to admit the unrealism of the nation's reparations demands and reduce the pressure on Germany. The longer the stalemate persisted, the more perilous the financial situation became.

In contrast to the situation in Belgium, however, France's crisis passed through two distinct phases. The first paralleled the crisis in Belgium and other countries. The war of attrition over taxes and public spending produced a succession of budget deficits that could be financed only with money creation. Inflation and currency depreciation were direct outgrowths of this budgetary deadlock. By 1924 the situation had deteriorated so alarmingly that the politicians, to avert disaster, finally compromised. The *Bloc National*, the governing coalition of center-right parties led from January 1922 by Raymond Poincaré, an authoritative, calculating lawyer from Lorraine, succeeded in increasing existing taxes—mainly turnover and excise duties—by 20 percent. The budget moved into balance, inaugurating an interlude of financial stability. The first phase of the crisis was over.

But workers, small farmers, and the lower middle classes resented the fiscal burden thrust upon them. The conservative *Bloc National* was thrown out of office as a result of the 1924 general election, in which leftist parties won 328 out of 554

Parliamentary seats. The leftist *Cartel des Gauches* that replaced it was initially headed by Edouard Herriot, long-time Radical Mayor of Lyon. A succession of finance ministers then sought to replace existing sales and excise taxes with levies on income and wealth. Though the budget was still broadly balanced, the dispute over taxation raised doubts about whether it would remain so. The specter of a levy on capital led wealth holders to liquidate financial assets and transfer money out of the country. (p.174)

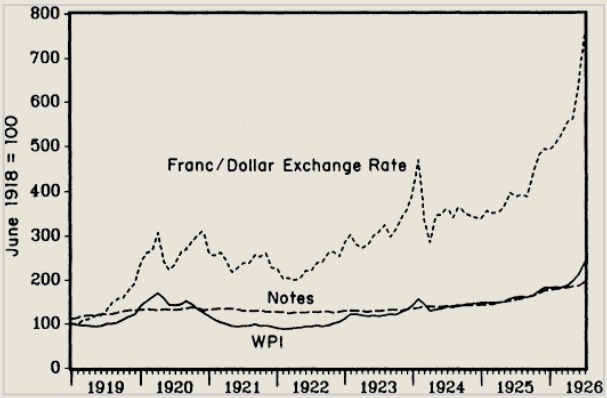


Fig. 6.3. Franc/dollar rate and note circulation in France, 1918–26.

The franc/dollar exchange rate depreciated even faster than French money supply and prices rose between 1922 and 1926.

Source: Rogers (*1929*).

Thus, in the second phase of the crisis, from mid-1924 through mid-1926, the dispute over taxation provoked a series of speculative attacks on the bond market, even though the budget was broadly balanced. Each time it appeared that the tax burden might be shifted from workers to rentiers, the rentiers refused to renew their maturing treasury bills, forcing the authorities to print money to refund the principal. Monetization produced inflation, depreciation, and a deepening crisis. When financial chaos reached intolerable heights, the left-wing Chamber finally accepted the leadership of a right-wing politician, Poincaré, whose opposition to economic radicalism was beyond question. Poincaré's accession to power is popularly credited with the

same reassuring effects that Francqui exercised in Belgium. In fact, as revealed by the earlier episode of financial instability Poincaré himself had overseen, it was not his personal reputation that mattered but that his return to office at a time of left-wing control of the Chamber indicated a significant political compromise.

The dispute over French taxes had a long and contentious history. Prior to the war, three-quarters of government revenues had been raised from indirect taxes, only a quarter from taxes on income and wealth. In 1907, to enhance the revenue-raising capacity of the state, Joseph Caillaux, the young financial expert who was Finance Minister in the Cabinet of Georges Clemenceau, submitted a proposal to broaden the direct tax base and increase its progressivity. Radicals and Socialists welcomed the idea as a first step toward comprehensive income redistribution. Members of the parties representing the propertied classes of course protested vehemently. But by 1914, with the approach of war, the need to augment the state's fiscal (p.175) capacity was impossible to deny. Modest reforms, notably taxes on unimproved land and on income from foreign securities, were finally adopted. In the minds of many, this was only a temporary expedient. The final settlement would have to wait until after the war.

The war superimposed serious complications, notably the reparations tangle. In Germany budget deficits reflected the failure to raise taxes sufficiently to meet the nation's Versailles expenses. In France they reflected the failure to raise taxes sufficiently to finance reconstruction costs. France's entire reconstruction program, like Belgium's, was based on the presumption that a defeated Germany would pay. The government accounts were divided into a general or ordinary budget that was broadly balanced each year, and an extraordinary or special budget of military and reconstruction expenses to be financed by reparations. The special budget remained in substantial deficit in every fiscal year through 1924.[53]

The association of the budget deficit with the inflationary spiral was widely acknowledged. But the more severe France's

inflationary crisis, the higher the stakes and the greater the pressure on Germany. Only after the failure of the Ruhr invasion did French politicians begin to face the facts. The failure of France's German adventure made it clear that reparations transfers on the schedule established in 1921 would not be forthcoming. To restore financial stability, France had to put its own house in order.

Until budget balance was restored, the Treasury sought to finance its deficits by issuing bonds. For this purpose the government established a new institution, the *Credit National*, that emitted eight long-term issues between the end of 1919 and the beginning of 1924. But uncertainty over reparations and the future of the franc rendered investors hesitant to purchase long-term debt. Between the ends of 1919 and 1923, a period in which domestic debt increased by 90 billion francs, public holdings of long-term and perpetual bonds rose by less than half that amount.[54] The Treasury bridged the gap by issuing short-term debt, mostly *bons de la défense nationale* with maturities of 1, 3, 6, 12, or 24 months.

The short maturity of the debt left the government vulnerable to funding crises. Disturbing news about public finances could lead investors to liquidate their *bons* at any time. In principle, by offering higher interest rates, the Treasury could entice investors to roll over their maturing *bons*. But higher interest rates implied higher debt-servicing costs and a further deterioration of fiscal position. If the rise in interest rates provoked a recession or merely slowed the economy's rate of growth, tax revenues would lag behind debt service costs and require the issue of additional debt. The public's unwillingness to purchase bills in adequate amounts would force the government into obtaining advances from the Bank of France. The consequent rise in monetary circulation would fuel inflation, erode the real value of government (p.176) revenues, and exacerbate the fiscal crisis—for all three reasons reinforcing investors' desire to liquidate their holdings of floating debt.[55]

Budget deficits made the task of debt management more onerous still. Confusion aggravated the difficulty; the state of the public finances was far from clear. The various public

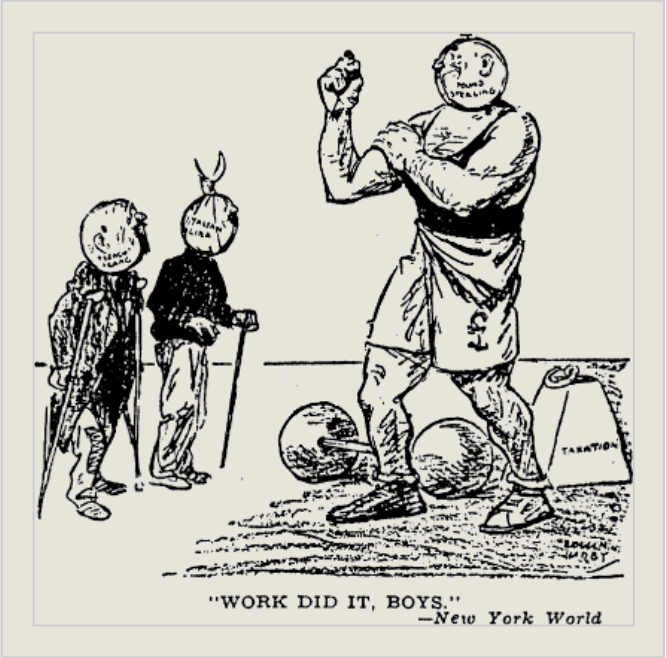
accounts published at the time varied in their treatment of off-budget items. Ex ante projections differed significantly from subsequent closed accounts. Observers were forced to rely on tax assessments and expenditure authorizations rather than receipts and outlays, obscuring the fiscal position. Uncertainty may have been the single most pervasive feature of the fiscal debate.[56]

Notwithstanding this uncertainty, significant differences were apparent before and after 1924. Before 1924, there was no denying the existence of a budgetary problem. After 1924, there was no denying that the deficit was falling as a share of government expenditure and national income.

The years prior to 1924, culminating in the first crisis of the franc, exhibited all the features of a classic inflationary spiral. Large budget deficits were monetized continuously. The parties of the left and right deadlocked over the desirability and composition of a tax increase. Budget bills were rarely adopted before much of the fiscal year had passed. The franc fell alarmingly starting in June 1922, when the Bankers Committee submitted to the Reparation Commission a pessimistic report on the prospects for German payments. Illusions that reparations would be forthcoming in quantities sufficient to retire the debt and balance the budget were then shattered by the failure of the Ruhr invasion. The question became whether the politicians had the will to acknowledge this reality and take the requisite fiscal steps.

The 1923 budget was the acid test. A substantial deficit was projected. The Finance Minister, Charles de Lasteyrie, opposed both new taxes and loans on the grounds that reparations were about to arrive. Eventually he was forced to propose a 20 percent increase in existing taxes. Unable to agree on the form the tax increase should take, the Senate simply revised upward the official revenue projections, miraculously extinguishing the deficit.[57] The inadequacy of this step became apparent when it was revealed that a 1920 agreement between the Ministry of Finance and the central bank had been violated. That agreement required the state to retire its debt to the central bank at a rate of 2 billion francs a

year starting in 1921. In November 1923 it became known that, owing to inadequate receipts, for the second (p.177)



time in a row the government would be unable to make the payment due at the end of the calendar year. Unable to raise taxes, Parliament passed an "exceptional" law allowing the agreement to be disregarded. This failure to meet the repayment schedule startled investors who had taken at face value the government's stated commitment to restore the currency's prewar value. "[P]atient investors began to show distinct signs of disquietude," one observer recalled.[58] The franc fell against the dollar from 16 in September 1923 to 19 in December and to more than 25 in February. Neither increases in the Bank of France's discount rate nor capital controls helped to stem the tide.

All the signs of an inflationary crisis became apparent. The exchange rate quotation became a favorite topic of cafe conversation. The iron and steel industry began invoicing its export sales in foreign currency. Exporters delayed repatriating foreign earnings to minimize exchange rate risk. Still, it was easier to blame foreign currency speculators than to agree on a tax increase. Foreign tourists were attacked in the streets by angry Parisians and demonstrations against the government grew commonplace. Wealthy Frenchmen began sending their families abroad. Right-wing elements suggested that a dictatorship might be needed to restore order.[59]

With financial and political chaos threatening to reach intolerable heights, Deputies at last agreed to compromise. In March 1924 Parliament finally passed the 20 percent tax increase, or *double decime*, that had been proposed by de Lasteyrie the year before. Having displayed fiscal backbone, the government was able to borrow (p.178)

Table 6.2. The French Budget Deficit as a Share of Public Expenditure, 1920–26 (In Percentage Points)

	Estimates of		
	Dulles	Haig	Ministry of Economy and Finances
1920	65.4	82.0	43.2
1921	54.8	58.3	28.2
1922	50.5	45.5	21.6
1923	39.5	43.1	30.8
1924	22.6	21.1	16.8
1925	13.7	12.9	4.2
1926	−0.1	3.8	−2.4

Note: A minus sign preceding the deficit share for 1926 denotes a surplus.

Source: Dulles (1929), p. 494 (data on revenues and expenditures); Haig (1929), pp. 44–46 (data on revenues and net borrowing); Ministère de l'Economie et des Finances (1966), p. 485 (data on revenues and expenditures).

£4 million from Lazards in London and $100 million from J. P. Morgan & Co. in New York. These funds were used to intervene in the exchange market. This “bear squeeze,” by bankrupting speculators who had sold francs forward, was intended to drive them permanently from the market. The franc reversed direction, appreciating by 40 percent. At that point the authorities intervened to prevent further appreciation and undue damage to the competitiveness of French exports.

Both the new taxes and the recovery of revenues as inflation slowed worked to close the fiscal gap. The deficit as a share of

public spending was halved between 1923 and 1924 and fell by a further 75 percent between 1924 and 1925.[60] Net borrowing by the state fell from 3.8 billion prewar francs in 1923 to 1.4 billion in 1924 and 0.8 billion in 1925. In 1925, for the first time, most expenditures were consolidated into a unified budget. A second tax increase was enacted in July 1925, further boosting revenues. The 1926 deficit was negligible. In January 1926, for the first time since 1921, the Treasury lived up to its obligation to retire 2 billion francs of its debt to the Bank of France.

It would seem that the fiscal crisis had come to an end. Yet the exchange rate crisis reappeared, in even more virulent form, in 1925–26. Though there was no obvious fiscal problem, the franc fell, from 19 to the dollar at the beginning of 1925 to 27 at year's end and to more than 41 at the height of the crisis in July 1926. The public refused to roll over maturing *bons de la défense nationale*; the value of *bons* outstanding fell from 55 billion francs in January 1925 to 44 billion francs in the summer of 1926. The Bank of France was required to discount treasury bills, in effect printing currency for the government to use in meeting its day-to-day obligations. The financial demands of the Treasury exceeded those the central bank was (p.179) permitted to accommodate, forcing it at the beginning of 1925 to violate the legal limit on its government advances. The Bank and the government disguised the violation by falsifying the Bank's balance sheets, leading to the fall of the Herriot Ministry when this was revealed the following April.[61]

How can we understand this crisis? Some writers suggest financial markets were demoralized by the realization that restoration of the *franc germinal* was no longer feasible.[62] Even at its peak in the spring of 1924, the franc was worth less than one-third of its prewar value against the dollar. Not just budget balance but a series of substantial budget surpluses would be needed to restore prices to 1913 levels. The Dawes Plan signalled that the reparations transfers necessary to retire public debt and withdraw currency from circulation would not be forthcoming. But while they can explain why the market was no longer dominated by expectations of appreciation, these factors cannot explain why

such expectations gave way to fears of run-away inflation. If the external accounts and the budget were in balance, there was no obvious impediment to stabilization at prevailing levels.

Another possibility is that the exchange rate was destabilized by the Treasury's policy of pegging interest rates at artificially low levels.[63] Starting in February 1923, interest rates on 30-day bills were pegged at 3 percent, those on 90 day bills at 4 percent. (See Table 6.3.) By refusing to allow rates to match market levels, policy-makers could have made a funding crisis inevitable. If rates of return rose on alternative assets, investors would switch out of *bons*, which would have to be absorbed by the Bank of France to permit the Treasury to meet expenses. Monetization would push market rates up another notch, leading to additional liquidation of *bons* and igniting an explosive inflationary spiral.

Unfortunately for this explanation, there is little sign of a rise in market interest rates after the first half of 1925. Three-month commercial paper rates in Paris fell from 5.7 percent in the first half of 1925 to 4.65 percent in the second half and to 4.45 percent in the first half of 1926. Rates on three month treasury bills and bankers acceptances in London fell between the first and second halves of 1925.[64] **(p.180)**

Table 6.3. Rates of Interest on Treasury Paper (Bons De La Défense Nationale) in Percent

Date of Decree, Arrêté or Decision	Effective Date	1 Month[1]	3 Months	6 Months	1 Year	2 Years
September 13, 1914	Same	—	5	5	5	—
December 10, 1914	December 21, 1914	—	4	5	5	—
April 16, 1918	Same	3.6	4	5	5	—
December 28, 1918	January 1, 1919	3.6	4	4.5	5	—
February 25, 1922	March 12, 1922	3	3.5	4	4.5	—
February 14, 1923	February 19, 1923	3	4	4.5	5	—
July 31, 1926	August 1, 1926	3.6	5	5.5	6	—
December 1, 1926	December 2, 1926	3	5	5.5	6	—
December 16, 1926	December 17, 1926	—	4	4.5	5.5	6[2]
February 3, 1927	February 4, 1927	—	—	—	5	6
April 11, 1927	April 12, 1927	—	—	—	4	5
May 6, 1927	May 7, 1927	—	—	—	3	5
June 22, 1927	June 23, 1927	—	—	—	—	4.5

(1) The one-month *Bons de la Défense Nationale*, if not presented for payment at the end of one month, bore interest during two succeeding months at slightly increased rates.

(2) Effective date January 1, 1927.

Source: Haig (1929), p. 240.

At the root of the crisis lay not minor changes in interest rates or disappointment about the failure to restore the *franc germinal* but the fact that, appearances notwithstanding, the fiscal dispute was still unresolved. The Dawes Plan rescheduling had put an end to the fiscal war of attrition between France and Germany but not to the battle between the French left and right.

The tax increases adopted to meet the 1924 crisis had increased the fiscal obligations of the left. When the parties of the center and left were able to form a government headed by Herriot after the *Bloc National's* losses in the 1924 general election, they sought to shift the burden elsewhere. But Herriot was unable to provide effective economic leadership. A man of wide culture as well as wide girth, Herriot unfortunately had little interest in or understanding of economics. His finance ministers sought to shift the fiscal burden elsewhere but uniformly failed to secure sufficiently broad political support for their proposals. Uncertainty became the order of the day. Etienne Clementel, Herriot's first finance minister, based his financial proposals on the observation that, despite income tax reform, the *Bloc National* had succeeded in surreptitiously elevating the share of indirect taxes in total revenues relative to 1913. Several of the parties supporting the *Cartel* insisted that food and other essential items be exempted from the turnover tax. Clementel's budget bill for 1925 therefore proposed to raise direct taxes and reduce levies on consumption.[65] Despite the finance minister's personal skepticism, the capital levy became the official policy of the new government.

The Cabinet's preferred version of the capital levy was a 10 percent tax on all wealth, payable over ten years. This provided an obvious incentive for investors to get their money out of the country. The April 1925 financial project which elevated (p.181) the levy to the status of an official government policy coincided with the renewal of financial instability. *Bons* were easier to dispose of than, say, real estate.[66] Once some investors transferred their assets out of the country, others had an incentive to follow suit. Capital flight eroded the base of the capital levy, implying that higher

rates would be applied to wealth that remained behind. Like a run on deposits induced by a line forming outside a bank, the run on the market for *bons* was induced by news of capital flight.[67]

Ultimately, the *Cartel des Gauches* lacked the Parliamentary majority necessary to impose the levy.[68] The parties that composed the coalition were themselves divided over the measure. “Such political difficulties as have been discussed especially, and the uncertain majority, made it impossible for the government to carry to completion any of its plans for new loans, consolidation, or taxes,” as the leading American historian of the episode subsequently wrote.[69]

The uncertainty over fiscal policy reached new heights. A succession of finance ministers failed to resolve the dispute in 1925. Clementel resigned as finance minister in April when the Cabinet rejected his proposal to rely on income taxes, preferring the capital levy insisted on by the Socialist partners in the *Cartel*. His successor de Monzie, in an effort to subdue opposition, recast the levy as a forced loan but failed to secure its adoption. Herriot was overthrown by the Senate, and Paul Painleve formed a new government. Caillaux, returned to the Finance Ministry, opposed the levy but was unable to break the deadlock.[70] Painleve suggested a compromise involving the adoption of both the income taxes favored by the center and the capital levy favored by the left. Opposition from business and parties on the right blocked its adoption. Again the government fell. Louis Loucheur proposed increased reliance on special inheritance, gift, and real estate transaction taxes. The program was rejected by the Finance Commission of the Chamber after five days' discussion. Paul Doumer proposed heavier usage of the turnover tax, which he attempted to make palatable to the left by linking it to taxes on securities transactions. By this time the “waltz of the portfolios” was in full swing.

The first half of 1926 saw no improvement. The uncertainty devastated financial markets. Each economic group, fearful that it would ultimately be the target of increased taxation, sought to shelter its assets. Rentiers allowed their *bons* to run off, forcing additional monetization. Savers transferred their

funds out of the country, depressing the exchange rate. To counter the spread of financial chaos, the *Cartel* suppressed specific proposals for a capital levy, but as late as July 1926 the levy (p.182) was still widely thought to be the centerpiece of its fiscal program.[71] The specter of hyperinflation loomed. “All France to-day is seething with anxiety,” reported the *New York Sun* on July 21.[72]

In the end, the crisis itself broke the logjam. As Russell Leffingwell wrote his Morgan Bank colleague Thomas Lamont on July 18, 1925, “I haven't the slightest doubt that the French people as a whole are now so weary of an unstable currency that they would welcome and cordially support the adoption of sound principles of public finance.”[73] Leffingwell's optimism may have been premature, but by the summer of 1926 the change in attitude he predicted had come to pass. The costs of financial instability had finally overwhelmed the case for social reform through capital taxation in the calculations of an increasing number of moderate-left deputies. Their attempt to push through higher pensions and teachers' salaries had been defeated by inflation.

Bertrand Nogaro, Radical-Socialist deputy and economist, was the leading figure in the revolt on the left. Nogaro argued that the restoration of monetary stability was a necessary precondition for social reform. Together with Jacques Duboin, a prominent ex-banker, he assembled a group of about ten moderate-left deputies who now pushed for financial stabilization. By mid-1926 they had won over a considerable number of other moderate-left deputies, who voted against their own party leadership. By July, their number had grown to more than 70; they provided the swing votes that brought down the Herriot Government formed at the height of the crisis. Their growing influence facilitated the formation of a second government of national union and the return to power of Poincaré, a staunch opponent of the capital levy. Many of these deputies had opposed Poincaré's financial policies in the 1924 electoral campaign. Two additional years of financial turmoil had convinced them to reverse their position in order to bring the fiscal war of attrition to a close.

The consequences could not have been more dramatic. Parliament granted Poincaré full powers of decree to take unilateral financial action. In effect, financial decision making was temporarily removed from the political arena. To buttress the budgetary position, Poincaré imposed increased indirect taxes and spending reductions. The magnitude of these measures has been the subject of some exaggeration, perhaps because a dramatic return to financial stability accompanied their adoption.[74] In fact, the budget was already close to balance, and the revenue-raising capacity of the new taxes was minimal. What their imposition through Parliament's granting full powers of decree did was to signal the emergence of a consensus supporting (p.183) indirect duties and modest income taxation and vanquish fears of a capital levy. Flight capital was repatriated, stabilizing the market for *bons*. Price stability was restored.[75]

With this dramatic shift in the political balance serving to convince investors that the return of price stability was more than temporary, Frenchmen and foreigners moved back into francs. By attempting to acquire additional currency, they drove up the price of the franc. The exchange rate recovered quickly. From its low of 240 to the pound and 49 to the dollar on 21 July 1926, it rose to 124 francs to the pound and 25.51 to the dollar in December; at this point the exchange rate was pegged by the Bank of France. This de facto stabilization was made official in June 1928, when the French gold standard was officially restored. The prewar parity had implied 25 francs to the pound and 5 to the dollar; as a result of France's protracted war of attrition, the franc had thus lost 80 percent of its value.

Enduring Effects

There was little conscious manipulation of exchange rates in the 1920s with the goal of promoting economic growth. Inflation and currency depreciation were unintended consequences of the fiscal war of attrition engaged in by rival interest groups. Yet the length of time depreciation persisted and the extent to which it was ultimately reversed exerted a profound impact on the pace of economic recovery from the war. As shown in Figure 6.4, growth and recovery proceeded

more rapidly in countries experiencing inflation and depreciation, notably France, Belgium, and Italy, than in those that resolutely pursued policies of deflation in order to stabilize their currencies and restore the prewar gold price.[76] (p.184)

Through what channels did inflation and depreciation exercise these effects? Exchange-rate changes affected the

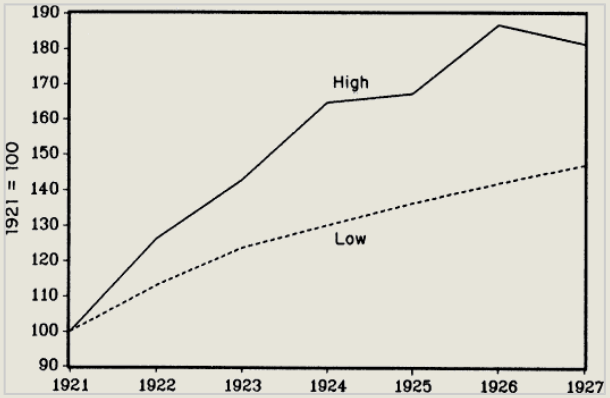


Fig. 6.4. Industrial production in high and low inflation countries.

Note: High: France, Belgium, Italy. Low: Sweden, United Kingdom, Norway, Spain, Denmark, Netherlands, United States, Canada, Japan, Australia. Growth and economic recovery proceeded more rapidly between 1921 and 1927 in countries running expansionary policies and experiencing high inflation than in countries experiencing low inflation or pursuing policies of deflation designed to effect restoration of the prewar gold standard parity.

Source: Eichengreen (*1986a*).

competitiveness of national industries through their differential impact on wages and prices. “It has been a commonplace of economic text-books,” wrote Keynes in 1923,

"that wages tend to lag behind prices, with the result that the real earnings of the wage earner are diminished during a period of rising prices."[77] This was certainly true in the 1920s. Except where price (p.185)

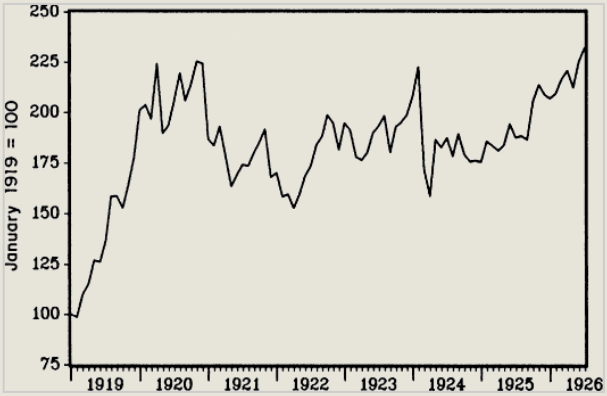


Fig. 6.5. French real exchange rate, 1919–26.

This figure for France displays the familiar sawtooth pattern of real exchange rate movements, reflecting the tendency for the relative price of French imports to rise each time the depreciation of the franc accelerated and for it to fall when the franc's depreciation slowed.

Source: Rogers (*1929*), *pp. 57, 59*; *Tinbergen* (*1934*), *pp. 210–212*.

increases exploded into hyperinflation, wages failed to keep pace with rising prices. In the industrial countries, wages rose or fell on average only three-quarters as fast as wholesale prices between 1921 and 1927.[78] Thus, even where wholesale prices adjusted quickly to neutralize the effect on product prices of exchange-rate appreciation or depreciation, labor costs did not. In countries where the real cost of labor declined with the depreciation of the currency, producers had an incentive to boost output and employment and finance additional investment from their increased earnings. In countries enduring deflation and exchange-rate appreciation, rising real labor costs had an opposite effect.[79]

Where currency depreciation stimulated supply, encouraging additional employment, it was still necessary to find a source of demand so that the additional goods could be marketed.

This demand was provided by switching consumer expenditure from foreign goods to domestic ones. Where inflation persisted, the exchange rate depreciated even faster than commodity prices rose. Thus, countries undergoing currency depreciation enjoyed an improvement in their international competitiveness (as shown for France in Figure 6.5), which enabled them to boost their export sales. The definitive study of the relationship was published in 1925 by (p.186) John Parke Young under the auspices of the Commission of Gold and Silver Inquiry of the U.S. Senate. Young's analysis confirmed that exchange rates had adjusted more quickly than domestic prices, which themselves moved more rapidly than labor costs.[80]

Currency depreciation had such powerful effects precisely because exchange rates were not consciously manipulated. So long as retailers continued to anticipate the eventual restoration of prewar parities, they expected price increases not only to end but be rolled back. So long as wage-earners anticipated that price increases would be reversed, the case for higher wages to keep pace with consumer price inflation was placed in a less urgent light. But once price increases had proceeded to the point where currencies had lost more than 90 percent of their prewar purchasing power, it became increasingly unrealistic to hope for a return to prewar parities. Wages and prices began to adjust with increasing speed. As in Germany in 1923, these adaptations eliminated the stimulus to recovery lent previously by inflation, and the depressing effects of price and exchange rate uncertainly became dominant. No rationale existed for further delaying the date of stabilization.

The legacy of inflation did not end with stabilization and the restoration of gold convertibility, however. In countries where the fiscal war of attrition had been most destructive, political leaders and their constituencies now insisted on going to exceptional lengths to prevent the ceasefire from breaking down. The gold standard was the white flag emblematic of the truce. Policymakers continued to wave it even after political economic circumstances had changed fundamentally and an entirely different policy response was required.

Notes:

(1) No comparable international monetary conferences had been convoked prior to World War I. Some smaller conferences assembling subsets of potential gold standard countries had taken place, including the meeting convened by Louis Napoleon in conjunction with the 1868 International Exposition in Paris, the meeting of 12 bimetallic countries convened by U.S. President Hayes in Paris in 1878, a third meeting in Paris in 1881, and a conference of 19 nations in Brussels in 1898. None of these conferences had a major impact on the structure or composition of the prewar gold standard system, however.

(2) “The Gold Standard,” paper read before Section F of the British Association, September 12, 1919. Reprinted in Hawtrey (1923), p. 56.

(3) League of Nations (1920a), p. 13.

(4) League of Nations Archives, Geneva (hereafter LN) Series 10, Box R491.

(5) League of Nations (1920b), pp. 3–5.

(6) LN Series 10, Box R499, Memorandum by Mr. Jean van de Putte; Series 10, Box R500, Memorandum by Mr. Paul Einzig.

(7) United States Treasury, *Annual Report of the Secretary of the Treasury on the State of the Finances for the Fiscal Year Ended June 30, 1920* (1920), pp. 81–86.

(8) LN Series 10, Box R502, Dossier 407, Committee on International Credits, Resolutions.

(9) United States Treasury, *Annual Report of the Secretary of the Treasury on the State of the Finances for the Fiscal Year Ended June 30, 1920* (1920), p. 81.

(10) LN Series 10, Box R496, Telegram from Attolicoto Giannini, 4 April 1920. Meeting European resistance, Treasury Secretary Glass sent only an unofficial observer to the conference, Roland W. Boyden, also unofficial U.S. representative to the Reparation Commission.

(11) On the extent of U.S. lending in 1919–20 and the effect of rising domestic interest rates, see chapter 4.

(12) Eichengreen (1985), p. 173.

(13) “The Gold Standard,” paper read before Section F of the British Association, September 12, 1919. Reprinted in Hawtrey (1923), p. 56.

(14) *Federal Reserve Bulletin* (June 1922), pp. 678–680.

(15) Resolution 3 of the Report of the Financial Commission, in Economic and Financial Conference (1922), p. 449.

(16) Additional measures were also proposed to alleviate the gold shortage, such as removing all gold coin from circulation. But in the view of British experts, only formalization of the gold-exchange standard would definitively resolve the liquidity problem.

(17) See United Kingdom (1924).

(18) Mills (1923), p. 369.

(19) LN Series 10, R40a/20901/20311, “Financial Commission of Genoa: Memorandum by Mr. F. H. Nixon,” May 1922.

(20) Ultimately, Secretary of State Charles Evans Hughes was able to send only Richard Washburn Child, the American Ambassador to Rome and himself an early opponent of the conference, as unofficial observer to Genoa.

(21) Fink (1984), p. 48. This was an interesting precursor to the debt moratorium sponsored by Hoover, by then U.S. president, at the height of the financial crisis in 1931. See chapter 9. Hoover's idea attracted scattered support in 1922. It was embraced, for example, by Paul M. Warburg, former member of the Federal Reserve Board, at a speech at Williams College in July 1922. *Commercial and Financial Chronicle* (August 5, 1922), pp. 596–597.

(22) Speech before the American Manufacturers' Export Association, reported in *Commercial and Financial Chronicle* (October 29, 1921), pp. 1823–24.

(23) Clarke (1973), p. 15 and *passim*. There is also the suggestion that the central bankers of other nations, including Montagu Norman himself, opposed tampering with the gold standard in this way. Boyce (1987), p. 41.

(24) Kooker (1976), pp. 86–90.

(25) A copy of a form letter of invitation to governors and presidents of central banks, with the date left blank but the month included, is in the Strong Papers at the New York Fed. FRBNY (Strong Papers), “Private and Confidential: Letter of Invitation to Governor or President” (undated).

(26) The taxonomy here roughly follows Palyi (1972), pp. 73–74. Jack (1927, pp. 40–41) writes, “In July 1926 the French franc averaged 198 to the pound, or almost eight times its pre-war parity. Wholesale prices for the same month stood at an index of 836. To restore the pre-war parity by the method of deflation would involve reducing the internal paper price level to the neighborhood of 150, which may be taken as representing the level of world gold prices, and if deflation took the form—as had been suggested—of annual repayments of 2 milliard francs by the State to the Bank of France, a period of some eighteen years would elapse before the repayment of the Bank's advances to the State would be completed.”

(27) The definitive analysis of Britain's return to gold is Moggridge (1969). Other perspectives on the deliberations include Sayers (1960), Pressnell (1978), Wright (1981), and Cairncross and Eichengreen (1983).

(28) Another factor sometimes cited was that devaluing against the U.S. dollar before returning to gold would have raised the cost in terms of sterling of servicing Britain's dollar-denominated war debt. See DeLong (1987).

(29) Cited in Costigliola (1977), p. 921.

(30) Niemeyer's proposal appears more sensible when viewed against the background of Federal Reserve operating procedures in earlier years. Prior to mid-1922, the Fed had not engaged in systemwide open-market operations.

Consequently, there might have been real constraints on its ability to conduct effective sterilization operations. In 1923, however, the Fed finally adopted the technique. See chapter 7. There were other grounds for rejecting the Niemeyer proposal as well, notably the danger that the United States might use the gold inflow to finance a massive program of government-sponsored lending to Germany, which would further undercut Britain's influence on the Continent. Boyce (1987), p. 60.

(31) Thus, the Fed had effectively sterilized the impact of gold inflows on the U.S. monetary base. *Annual Report of the Federal Reserve Board for the Year 1924* (1925), p. 3.

(32) Hicks (1938), p.6. Taxes on sugar, tea, cocoa, coffee, and chicory were reduced by the First Labour Government, and the McKenna Duties, taxes imposed during the war on imported luxury goods such as automobiles, were abolished. These measures were certain to appeal to the Labour Party's constituency. But, significantly, the corporation profits tax was abolished as well. In all, indirect taxes were cut by £29 million, direct taxes by half that amount. Lyman (1957), p. 146.

(33) The danger of a debt run had been on the minds of officials for some time, in Britain and in other countries. See chapter 4.

(34) See chapter 3.

(35) In Britain they remained steady, while in the United States they rose by 4 percent. These are annual averages, from Mitchell (1975).

(36) Jack (1927), pp. 70, 82.

(37) Hermens (1941), p. 306.

(38) Janssen made the statement in a lecture at the London School of Economics in March. Shepherd (1936), p. 106.

(39) Shepherd (1936), p. 31.

(40) FRBNY (Strong Papers), “Belgium: Summary of Position” (undated). See also Shepherd (1936), pp. 118–119.

(41) Jack (1927), p. 138. See chapter 5.

(42) Franck (1927), pp. 22–23.

(43) Contemporary commentary to this effect is cited by Shepherd (1936), p. 30.

(44) Thus, on 6 May 1925 the New York office of J. P. Morgan & Co. cabled Thomas Lamont in London suggesting that a credit for Belgium would not be hard to arrange but that it would be squandered were it used only to back an additional note issue to finance government deficits. Lamont Papers 84–4, Cable to Lamont 6 May 1925, Cable # 25/2122. The Morgan bankers' resistance stiffened with time. See the letter from Alan G. Anderson, Deputy Governor of the Bank of England to Benjamin Strong, FRBNY (Strong Papers), “Confidential Anderson to Strong,” 27 November 1925.

(45) Lamont Papers, “Belgium,” 84–5, 15 January 1926.

(46) Thomas Lamont denied that the bankers had demanded that railway shares be put up as security for the prospective loan as alleged in the press, only that they be reorganized in a way that minimized the drain resulting from their losses on the government finances. Lamont Papers 84–5, Lamont letter to Maurice Bokanowski, 15 July 1926.

(47) The value of the plan lay more in the symbolism—in the indication that the government was willing to take the steps required to put its financial house in order—than its reality. The net revenues of the reorganized railway system were likely to amount to no more than 10 percent of the 1925 budget deficit, and much of that would be required for capital improvements. FRBNY (Strong Papers), “Note on the Net Revenue Which the Belgian State Railways Worked Commercially Might be Expected to Produce Towards Financing the Paying Off of the Belgian Government Floating Debt,” 15 March 1926.

(48) Boyce (1987), p. 140; FRBNY (Strong Papers), “Strong to Alan G. Anderson,” 7 December 1925; Chandler (1958), pp. 345–346.

(49) Franck (1927), p. 158.

(50) Jack (1927), p. 140. Subsequently, the National Bank obtained additional foreign credits from the Federal Reserve Bank of New York and other foreign correspondents, as described above. *Commercial and Financial Chronicle* (October 30, 1926), p. 2204; *The Economist* (October 30, 1926), p. 713.

(51) Besides Belgium, another example of a country that suffered persistent inflation and ultimately stabilized its currency at a depreciated level was Italy. Both the cause of the inflation and the solution were very different, however. Prices were relatively stable between 1921 and 1924, while economic recovery appeared to be proceeding smoothly (Cohen, 1972, p. 643; Schneider, 1936, p. 104). But in the final quarter of 1924, price stability gave way to inflation and currency depreciation.

In contrast to the situation elsewhere, Italy's financial difficulties were largely unrelated to deficit spending. They resulted rather from negative supply shocks, namely a run of bad harvests. The consequent deterioration in the balance of payments led to depreciation and inflation.

The crisis was resolved once the bad harvests passed and the government obtained a foreign loan to back its intervention on foreign exchange markets. War debt settlements concluded with the United States in November 1925 and Britain in January 1926 restored Italy's access to the capital markets, an event celebrated by a $100 million loan from J.P. Morgan & Co. The loan permitted the Institute of Exchange to purchase lira throughout 1927. Between August 1926 and May 1927, the currency appreciated by 40 percent. By the end of 1927, Mussolini and his advisors concluded that the process had gone far enough. In December a second foreign loan was obtained, and the lira was pegged at about a third of its prewar rate.

The fact that Mussolini's political survival did not depend on the support of domestic creditors facilitated stabilization at this level. Similarly, in contrast to other governments, the Fascist regime could simply mandate conversion of the floating debt without enlisting the support of investors. In

November 1926 it announced the forcible conversion of all treasury bills into 5 percent consols. As in other countries, eliminating the overhang of short-term debt reduced the danger of a spontaneous loss of confidence leading to liquidation of treasury bills, to monetization, and to an exchange rate crisis, thereby buttressing confidence in the exchange rate. For details, see Alberti (1931).

(52) Yeager (1981), pp. 85–96.

(53) Different sources provide very different estimates of the French budgetary situation. Here I refer to efforts to reconstruct the budgetary picture after World War II by *Ministere de l'Economie et des Finances* (1966) and reprinted in Sauvy (1984), vol. 3, p. 379.

(54) Compared to the data on government revenues and expenditures, those on the public debt are relatively reliable. Here I refer to series provided by Rogers (1929), p. 4.

(55) For periods when the budget was roughly balanced, a rise in the interest rate would not lead to explosive growth of the debt/income ratio and an unwillingness of the public to hold bonds at any price only if the real rate of economic growth continued to exceed the real interest rate. In 1925 GNP growth was less than 1 percent, while in 1926 it was roughly 4 percent. Nominal interest rates in excess of 4 percent, in conjunction with price stability or even expectations of falling prices associated with the return to gold, therefore spelled trouble. Growth rates were faster before 1925, but in that period substantial budget deficits also added to the growth of the debt.

(56) Subsequent authors (e.g., Makinen and Woodward, 1989) have relied on the “definitive” budget accounts published by the Ministry of Finance in the 1960s and also reported in Table 6.2. These too have been criticized, however, for simply carrying over the errors and omissions of contemporary accounts. Sauvy (1984), p. 364.

(57) Previously, revenues had been estimated by mechanically extrapolating their level in the previous year. Now it was

forecast that 1923 would be a year of more rapid economic growth, implying a faster rise in revenues.

(58) Haig (1929), p. 89.

(59) Debeir (1978), p. 36. A useful account of the changing political and economic situation in 1926 is Philippe (1931).

(60) I refer to the estimates of the actual deficit in the final column of Table 6.2. Data on tax receipts are subject to a wide margin of error. The conventional statistics suggest that their real value rose by 4 percent between 1923 and 1924, and by another 4 percent between 1924 and 1925. Haig (1929), p. 44.

(61) Direct advances to the State by the Bank of France rose from 23 billion francs to 35 billion francs over the course of 1925. Total advances increased even more rapidly. The Minister of Finance used moral suasion to encourage the banks to extend loans to the government in return for Treasury paper. The Bank of France agreed to rediscount for the banks in quantities sufficient to pay for the Treasury paper purchased. What were in effect advances from the central bank to the Treasury thereby appeared in the Bank of France's statement under “portfolio” rather than “advances to the State.” The Senate concluded that the Bank of France had violated the spirit of the law in early 1925. It has been suggested that it was violated on a number of other occasions as well.

(62) *Germinal* was the revolutionary name for the month in which March 28, 1803 fell, the date when France officially returned to the bimetallic standard.

(63) This is the argument advanced by Makinen and Woodward (1989).

(64) Rogers (1929), p. 227. One might argue that although there was no rise in nominal interest rates abroad relative to those prevailing at home, there was a rise in real interest rates abroad relative to real interest rates at home once inflation accelerated in France. But this begs the question of what set off the inflationary crisis in the first place. A related argument, closer to the one I advance below, is offered by Penati (1991).

He argues that the period of crisis preceding the Poincaré stabilization was a self-fulfilling debt run, whose dynamics are essentially the same as those described above, but he does not go on to isolate the event or events that initiated the crisis.

(65) Haig (1929), p. 103.

(66) Not only did investors in *bons* refuse to roll over maturing issues, but they attempted to borrow money on *bons* due one to six months later. *Commercial and Financial Chronicle* (July 24, 1926), p. 404. Estimates of the extent of capital flight are provided by Meynial (1927).

(67) This process is formally modeled by Eaton (1987) and Alesina, Penati, and Tabellini (1990).

(68) As Eleanor Dulles (1929, p. 179) put it, “the socialist groups did not have a clear and permanent majority in Parliament, so that it was impossible for them to pursue a strong and consistent policy.” See also Peel (1937), p. 128, and Hermens (1941), p. 128.

(69) Dulles (1929), p. 192. See also Schmid (1974) for a parallel analysis.

(70) Joseph Caillaux, the Finance Minister, before the Chamber of Deputies on July 8, 1926, “rejected absolutely the idea of a capital levy, and contended that it would bring about more disastrous inflation than would be risked by any other scheme.” *Commercial and Financial Chronicle* (July 10, 1926), p. 151.

(71) Dulles (1929), p. 195. Similarly, in a mid-May letter to George Harrison reporting on his European trip, Benjamin Strong noted French fears of the government being kicked out “in favor of a Herriot-government, which of course would have the backing of the Blum element, who stand so strongly for a capital levy. If they should have such a government, the situation would no doubt become much worse. The French people would be frightened and I fear the flight from the franc would get much worse than it is now.” FRBNY (Strong Papers), Strong to Harrison, 15 May 1926.

(72) Reprinted in *Commercial and Financial Chronicle* (July 24, 1926), p. 404.

(73) Lamont Papers 103–111, Leffingwell to Lamont, 18 July 1926, p. 3.

(74) The importance of significant tax increases in closing the budget deficit is emphasized by Dulles (1929), Yeager (1981), and Sargent (1986b), for example. Their argument is criticized as exaggerated by Makinen and Woodward (1989).

(75) “With the return of confidence in the position of the franc after the formation of the Poincaré National Union Cabinet, funds from abroad in the form both of capital being repatriated and of foreigners' holdings seeking investment began to come into the country in large quantities.” Rogers (1929), p. 71. This explanation for the crisis is not complete without a supporting role for the budget deficit. Years later the closed accounts might show budget balance. But this was not known at the time. As late as 1929, Eleanor Dulles could write that “The amount of the 1925 deficit is even more uncertain in some respects than that of 1924,” (1929, p. 380). Contemporary estimates forecast sizeable deficits. Painleve, after all, had resigned in November 1925 because he projected significant deficits and despaired over Parliament's refusal to agree to either income tax increases or a capital levy. Investors anticipating monetization of budget deficits were reacting to contemporaneous budget forecasts, not to closed accounts that would be unavailable for years. The financial crisis was so severe because the available information on the budget suggested that the situation was unravelling even more quickly that it actually was.

(76) The two lines in Figure 6.7 are unweighted averages of growth rates for France, Belgium, and Italy (countries with depreciating exchange rates) and for the United Kingdom, Norway, Sweden, Spain, Denmark, Holland, Finland, Switzerland, Canada, the United States, Australia, and Japan (countries with relatively stable exchange rates and low inflation). The underlying data are described in Eichengreen (1986a). Other factors also influenced postwar growth rates, of course. Of these, the extent of wartime disruption of

economic activity was particularly important. Countries that had suffered the most serious wartime disruptions had the greatest scope for raising industrial production simply by repairing existing infrastructure. If the ratio of industrial production in 1921 to its level in 1913 is taken as a proxy for the extent of wartime disruption, then there appears to be a strong relationship between growth over the period 1921–27 and the extent of wartime disruption. But a strong relationship also remains between exchange rate depreciation cum inflation and the pace of postwar recovery. Regressions for Britain, France, Norway, Sweden, Belgium, Italy, Spain, Denmark, Holland, Canada, the United States, Australia, and Japan yield the following:

$$\underset{}{1921\text{–}27DIP} = \underset{(0.31)}{2.12} + \underset{(0.10)}{0.20}\ DXRATE - \underset{(0.27)}{0.92}\ START \quad R^2 = .76$$

$$\underset{}{1921\text{–}26DIP} = \underset{(0.23)}{1.53} + \underset{(0.10)}{0.35}\ DXRATE - \underset{(0.18)}{0.45}\ START \quad R^2 = .75$$

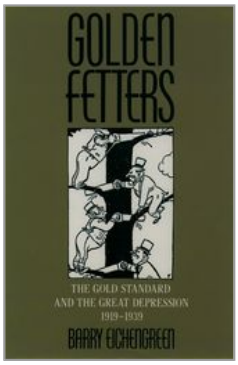
where DIP is the ratio of industrial production at the end and beginning of the sample period, DXRATE is the ratio of exchange rates at the end and start of the period (relative to the dollar), and START is the above-mentioned proxy for wartime disruption. Standard errors are in parentheses.

(77) Keynes (1923), p. 27. However commonplace, Sir Josiah Stamp could still complain in 1928 that “it is insufficiently realized that slowly falling prices are a deadening influence on business itself . . . they provide good times for the people who are in work because they steadily increase the value of money wages, but they gradually reduce the number that are in work, for they continually restrict the area of business.” Reprinted in Stamp (1931), p. 4.

(78) This regularity is documented in Eichengreen (1986a). See especially Table 1, equation 1.

(79) Although wages adjusted to price and exchange rate changes with a lag, adjust they did. See Eichengreen (1986a), Table 2.

(80) Young (1925b), chapter 2, section 2.



Golden Fetters: The Gold Standard and the Great Depression, 1919-1939
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The Interwar Gold Standard in Operation

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Abstract and Keywords

This is the first of three chapters that consider the operation of the reconstructed gold standard system following World War I; it documents the decline in its credibility and in international cooperation over it, in comparison with the prewar era. Britain joined the USA on the gold standard in April 1925, and by the end of that year, nearly three dozen countries had effectively restored convertibility; the French franc was stabilized de facto in 1926, the Italian lira in 1927, and by the beginning of 1928, the reconstruction of the gold standard system was essentially complete. However, from the outset, it was apparent that the new gold standard was not having the beneficial effects so widely envisaged; the most glaring problem was its failure to maintain price stability, and the adjustment mechanism did not succeed in swiftly eliminating balance-of-payments surpluses and deficits. The obvious solution was international cooperation, but the

requisite level was not forthcoming. The different sections of the chapter look at the form of the reconstructed system, problems of its operation – liquidity and adjustment, the role of international cooperation, monetary policy in 1927, 1928–1929, and impediments to cooperation.

Keywords: adjustment, balance-of-payments deficits, balance-of-payments surpluses, credibility, gold standard, international cooperation, interwar period, price stability, reconstructed gold standard

Great Britain joined the United States on the gold standard in April 1925. By the end of that year, nearly three dozen countries had effectively restored convertibility. The French franc was stabilized de facto in 1926, the Italian lira in 1927. By the beginning of 1928, the gold standard system's reconstruction was essentially complete.

From the outset it was apparent that the new gold standard was not having the beneficial effects so widely envisaged. The most glaring problem was its failure to maintain price stability. Prices declined slowly for several years before plunging to sharply lower levels starting in 1929. The implication, in the eyes of contemporaries, was that the volume of global gold reserves was inadequate for supporting the prevailing price level. Central banks starved of gold restricted credit availability and raised domestic interest rates in a futile effort to obtain scarce reserves from one another. To the extent that all countries engaged in the practice, they frustrated one another's efforts and only intensified the deflationary pressure operating on the world economy.

Nor did the gold standard adjustment mechanism succeed in swiftly eliminating balance-of-payments surpluses and deficits. The French balance of payments was in surplus every year between 1927 and 1931. The United States ran balance-of-payments surpluses throughout the 1920s. Aside from a small surplus in 1928, Great Britain was in deficit every year between 1927 and 1931. The implication was clear: deficit countries like Britain would be driven from the gold standard unless adjustments took place.

The obvious solution to the problems of inadequate liquidity and adjustment was international cooperation. If surplus

countries expanded credit and reduced domestic interest rates, the adjustment burden would not fall entirely on deficit countries. They would not be forced to contract—to restore external balance by restricting the provision of money and credit and thereby intensifying the deflationary pressure the world economy suffered from. If the major central banks simultaneously relaxed domestic credit conditions, no one country would necessarily lose gold to the others, and the deflationary pressure on the world economy would be further attenuated.

Only the insufficiency of global gold reserves would remain. Unless prices fell, central banks would still possess inadequate gold stocks for financing temporary balance-of-payments deficits. But insofar as the real problem was less an insufficiency (p.188) (p.189)

Table 7.1. The Years Fifty-Four Nations Were on the Gold Standard, 1919–37

Nation	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	Type
1 Argentina									X	X	X									C
2 Australia							X	X	X	X	X									C
3 Austria					X	X	X	X	X	X	X	X	X							Ex
4 Belgium							X	X	X	X	X	X	X	X	X	X	X			B
5 Bolivia										X	X	X	X							Ex
6 Brazil									X	X	X	X								Ex
7 Bulgaria									X	X	X	X	X							Ex
8 Canada								X	X	X	X	X	X							Ex
9 Chile								X	X	X	X	X	X	X						Ex
10 China																				S
11 Columbia					X	X	X	X	X	X	X	X	X							C
12 Costa Rica				X	X	X	X	X	X	X	X	X	X	X						Ex
13 Cuba	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					C
14 Czechoslovakia								X	X	X	X	X	X							Ex
15 Denmark									X	X	X	X	X							B

The Interwar Gold Standard in Operation

Nation	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	Type
16 Equador									X	X	X	X	X	X						Ex
17 Egypt							X	X	X	X	X	X	X							Ex
18 Estonia										X	X	X	X							Ex
19 Finland								X	X	X	X	X	X							Ex
20 France										X	X	X	X	X	X	X	X	X		B
21 Germany						X	X	X	X	X	X	X	X							Ex
22 Greece										X	X	X	X							Ex
23 Guatemala						X	X	X	X	X	X	X	X	X	X					Ex
24 Honduras[1]													X	X	X	X				Ex
25 Hungary							X	X	X	X	X	X	X							Ex
26 India									X	X	X	X	X							B
27 Italy									X	X	X	X	X	X	X	X	X	X		Ex
28 Japan												X	X							C
29 Lithuania				X	X	X	X	X	X	X	X	X	X	X	X	X	X			Ex
30 Mexico							X	X	X	X	X	X	X							C
31 Netherlands							X	X	X	X	X	X	X	X	X	X	X	X		C

The Interwar Gold Standard in Operation

Nation	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	Type
32 Netherlands East Indies							X	X	X	X	X	X	X	X	X	X	X	X		C
33 New Zealand							X	X	X	X	X									Ex
34 Nicaragua	X	X	X	X	X	X	X	X	X	X	X	X	X							Ex
35 Norway										X	X	X	X							B
36 Panama	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Q	Q	Q	Q	Ex
37 Peru													X	X						Ex
38 Philippines	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Q	Q	Q	Q	Ex
39 Poland									X	X	X	X	X	X	X	X	X	X		Ex
40 Portugal													X							Ex
41 Romania											X	X	X	X						Ex
42 Salvador		X	X	X	X	X	X	X	X	X	X	X	X							Ex
43 Siam										X	X	X	X	X						Ex
44 Spain																				
45 Sweden						X	X	X	X	X	X	X	X							C
46 Switzerland							X	X	X	X	X	X	X	X	X	X	X	X		Ex

The Interwar Gold Standard in Operation

Nation	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	Type
47 Turkey																				
48 Union of South Africa							X	X	X	X	X	X	X	X						C
49 United Kingdom							X	X	X	X	X	X	X							B
50 United States	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Q	Q	Q	Q	C
51 Uruguay										X	X	X	X	X						Ex
52 U.S.S.R.																				
53 Venezuela									X	X	X	X								C
54 Yugoslavia													X							Ex

X = Gold standard.

Blank = Paper standard.

S = Silver standard.

Q = Qualified gold standard.

B = Gold-bullion standard.

C = Gold-coin standard.

Ex = Gold-exchange standard.

(1) Honduras was on a silver standard up to 1931.

Source: Prepared by Dr. Donald K. Kemmerer, and submitted during hearings on *Gold Reserve Act Amendments*, before a Subcommittee of the Senate Banking and Currency Committee, March 29, 30, 31, and April 4, 1954, pp. 301–302 (83rd Cong., 2d sess., on Bills S. 13.2332, 2364, and 2514. U.S. GPO, 1954), as amended by author.

(p.190) of gold than its maldistribution internationally, redistributing gold from countries that held disproportionate quantities, namely, France and the United States, to countries with unsatisfied demands could ameliorate the gold famine in the rest of the world. To the extent that a problem remained, international cooperation in the form of collective support for weak currencies and international loans of reserves became all the more vital. Unfortunately, the requisite level of cooperation was not forthcoming. The United States did expand domestic credit in 1925 and 1927, supporting the pound sterling on two critical occasions. But U.S. policymakers had reservations about these ventures into international cooperation and undertook them only because domestic and international considerations were inclining them in the same direction. French policymakers, who associated discretionary monetary policy, whether unilateral or collaborative, with financial instability, were unwilling to go even that far. When the need for international cooperation became critical after 1929, its provision proved singularly inadequate.

The Form of the Reconstructed System

However much Montagu Norman temporized in his correspondence with foreign central bankers, Britain's return to gold in 1925 was preordained by the expiration of the gold embargo at the end of the year.[1] Having to renew the act suspending gold (p.191) convertibility would seriously embarrass Stanley Baldwin's Conservative Government. It threatened to torpedo Britain's efforts to become a gold center for the deposit of foreign exchange reserves by other nations. Nations preceding Britain onto gold would hold their exchange reserves in New York, dealing a potentially fatal blow to London's financial aspirations.

British officials therefore pressured countries contemplating stabilization to wait on Britain's return. Some like Sweden exhausted their patience in 1924. Germany and Hungary stabilized in 1924 as well; the imperative of buttressing confidence through restoration of the gold standard left no alternative. In the winter of 1924–25, Australia and South Africa made known their intention to restore gold convertibility. In the spring of 1925 Switzerland and the

Netherlands followed suit. These developments left British officials little choice but to initiate the stabilization process.[2]

The logical time to move was spring, when sterling traditionally strengthened because of the seasonal increase in foreign borrowing in London. Norman took a covert trip to America to discuss the transition with Benjamin Strong, Governor of the Federal Reserve Bank of New York. News of their meeting leaked to the press, and the market bid up sterling in anticipation.

The anticipated measures followed quickly. The Bank of England obtained a line of credit from the Federal Reserve, the Treasury and J.P. Morgan & Co. Monetary policies were adapted to the exchange rate target. Bank rate in London was kept at least a point above the discount rate of the Federal Reserve Bank of New York. Between July 1924 and July 1925, American officials allowed the U.S. money supply to rise by more than 8 percent, due to the exceptionally rapid growth of bank lending and deposits.[3] Largely as a result of this rapid rate of expansion of bank credit, gold flowed from New York to London, buttressing the Bank of England's position.

A singular feature of the episode was the willingness of American policymakers to allow the expansion of bank credit to persist despite the gold outflows it caused. Although the Fed tightened slightly at the end of 1924 in response to inflationary pressure, the change in U.S. monetary policy was inadequate to stem the gold outflow that continued from December through May. This was one of the few occasions on which Fed officials were so tolerant of gold losses. The weakness of the U.S. (p.192)

economy was an important factor contributing to their hesitation to raise domestic interest rates. But on several subsequent occasions when the economy was weak, notably at the end of 1931, the Fed was much less tolerant. The unusually wide margin of excess reserves that the U.S. central bank enjoyed in 1924, in conjunction with its desire to encourage Britain's restoration of gold convertibility, made an important difference.[4]

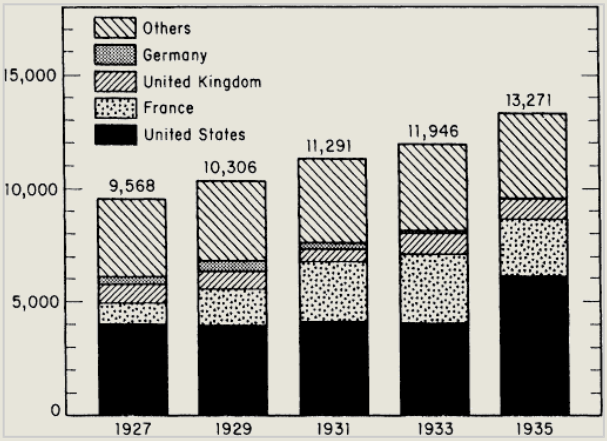


Fig. 7.1. International distribution of gold reserves, 1927–35, in millions of U.S. dollars of constant 1929 gold content.

The United States and France accumulated massive amounts of gold between 1927 and 1935. Intense balance of payments pressure was placed on other countries; Germany and Britain were squeezed.

Source: Hardy (*1936*), *pp. 92–93.*

Britain's return to gold in April 1925 removed the last remaining obstacle to stabilization for several other countries. Australia, New Zealand, Danzig, Hungary, and South Africa restored gold convertibility immediately. By the end of 1925, 35 currencies were officially convertible into gold or had been stabilized de facto for at least a year. Already the span of the reconstructed gold standard was considerable.

By the end of 1925, two groups of countries remained outside the system. In Denmark, Norway, Yugoslavia, Brazil, Bolivia, and Uruguay, the transition back to gold, though not yet complete, was already well underway. By early 1926, four of the six had succeeded in stabilizing their currencies. In

France, Belgium, Italy, Greece, and Poland, in contrast, serious problems of currency instability remained. With their currencies continuing to depreciate, doubts lingered about the ability of these countries to return to gold. France and Belgium succeeded in stabilizing de (p.193)

Fig. 7.2. Annualized rates of growth of U.S. money supply, 1923–30.
The growth of both principal indicators of the U.S. money supply slowed after 1926, reflecting the Fed's shift toward a more restrictive policy stance.

Source: Hamilton (*1987*).

facto by the end of 1926, Greece, Italy, and Poland in 1927. A gold standard of truly international dimensions had finally been restored.[5] The reconstructed system differed in important respects from the gold standard of prewar years. Most apparent were statutory changes affecting domestic currency and international reserves. Before World War I, gold coin had circulated internally in a substantial number of countries. Most of this coin was withdrawn from circulation after the outbreak of hostilities. Thus the gold bullion standard, first proposed by Ricardo nearly a century earlier, was finally adopted by Britain and other countries following her lead. The Gold Standard Act of 1925, a “milestone in the world's monetary history” in Cassel's somewhat overblown prose, established a minimum amount, 400 ounces, below which the Bank of England was not required to sell gold to the public.[6] Removing gold coin from

circulation and concentrating it in the vaults of central banks was designed to alleviate the incipient reserve shortage that had so preoccupied the delegates at Genoa.

A still more significant change concerned the use of foreign exchange reserves. Before 1914, Belgium, Bulgaria, Finland, Italy, and Russia had been the only European countries to allow substitution of foreign exchange for metallic reserves without limit. Elsewhere in Europe—in Austria, Denmark, Greece, Norway, Portugal, (p.194) Romania, Spain, and Sweden—it had been possible to hold a limited share of reserves in foreign exchange. Still, on the eve of the war nearly two-thirds of global foreign exchange reserves had been held by only three countries: Russia, India, and Japan.

In the second half of the 1920s, reliance on exchange reserves became increasingly prevalent. In countries that stabilized with League of Nations assistance and, as a condition of obtaining League loans, established or reformed central banks, the monetary authorities typically were empowered to hold their entire reserve in foreign exchange. In other countries where it had been permissible before the war to hold only excess reserves in that form, central banks were now authorized to maintain some fixed fraction of their required reserves in foreign exchange.

A notable exception to this rule was the United States. The Federal Reserve Act of 1913 limited the legal cash reserves of the new U.S. central bank to gold and lawful money. It required that reserve banks hold gold equal to 40 percent of the value of Federal Reserve notes issued to them, not merely Federal Reserve notes in public circulation. The difference, Federal Reserve notes held in reserve by the issuing reserve bank, known as counter cash or cash held for counter requirements, often amounted to as much as one-quarter of the actual note circulation. Thus, this requirement effectively raised the gold backing requirement for the note circulation by a quarter, or from 40 to 50 percent. The remaining backing could take the form of “eligible securities,” which were limited to commercial, agricultural, and industrial paper discounted by the reserve banks plus their purchases of bankers' acceptances. Government bonds did not qualify.[7] This practice

was designed to assure the public that Federal Reserve notes were “fully backed” with gold and real bills. If eligible securities fell short of 40 percent of notes issued to reserve banks, the shortfall had to be covered with additional gold. Additional gold equal to 35 percent of deposits placed with the reserve banks also had to be maintained.

All these restrictions applied by Federal Reserve district. The excess reserves of one reserve bank could not be used automatically to offset the potential deficiency of another. Contemporaries estimated that the federal structure of the U.S. central bank inflated its gold requirements by $400 million, or about 4 percent of the world total.[8]

In the 1920s the United States thus became a gigantic sink for the gold reserves of the rest of the world. Despite accumulating by the end of the decade nearly 40 percent of global gold reserves, the Fed's free gold—the amount left over after statutory requirements were subtracted—was extremely small. The U.S. central bank retained only limited scope for engaging in expansionary open market operations.[9]

Moreover, there was reason to fear that these restrictions would bind precisely when the need for expansionary open market operations was greatest. In a recession, as lending opportunities evaporated, member banks would use their available (p.195) liquidity to pay back their borrowings from the Fed. As the Fed's rediscounts of member bank paper declined in consequence, so would its eligible securities, increasing the required gold cover and further reducing the scope for expansionary open market operations.

A third important change in the gold standard, in addition to innovations affecting the supply and demand for international reserves, concerned the instruments of monetary control. Prior to 1914, the central bank discount rate had been the key instrument of policy. By altering the terms on which it rediscounted bills for other financial institutions, the central bank could affect the volume and terms on which the banking system as a whole extended credit to the economy. The terms and availability of credit exercised a powerful influence over international gold flows.

But where discount policy had been utilized extensively, open market operations had not. The Bank of England and the German Reichsbank were the only central banks to have used open market operations on a significant scale between 1880 and 1914. Even those two central banks limited their use of the instrument mainly to those occasions when changes in the discount rate failed to stem gold losses.[10]

In the 1920s new questions arose about the effectiveness of discount policy. Government securities inundated financial markets as a result of World War I. The commercial paper and advances the discount rate operated on now comprised a much smaller share of domestic liquidity. A change in the discount rate might leave a substantial portion of the market unaffected.

But these same stocks of public debt offered a convenient lever for intervention. The Bank of England, for example, could operate through the purchase and sale of 90-day treasury bills.[11] It held a substantial portfolio of these bills and was active in the market almost continuously. When it wished to tighten credit, the Bank, in addition to raising the discount rate, now sold treasury bills to render the higher Bank rate effective. Similarly, a Bank rate reduction had to be accompanied by purchases of treasury bills to insure that market rates moved with it.[12]

The U.S. Federal Reserve Act gave reserve banks the authority to purchase and sell not only banker's acceptances and bills of exchange but also government securities. The Federal Reserve Board first employed the technique in 1922. Until that time, decisions regarding security transactions had been delegated to individual reserve banks. At first, purchases and sales of municipal warrants and acceptances by reserve banks were more common than transactions in treasury securities. Starting in November 1921, the reserve banks had purchased extensive quantities of government securities to replenish their earning assets, disrupting Treasury operations.[13] (p.196) The experience prompted the formation of an open market committee to centralize the Federal Reserve System's security transactions and oversee reserve bank discount policies. The Committee was headed by the Governor of the Federal

Reserve Bank of New York, initially Benjamin Strong, and comprised of four other reserve bank governors. Only in 1928, following a dispute between the Federal Reserve Board and the Federal Reserve Bank of Chicago, was it firmly established that final say over discount policy rested with the Open Market Investment Committee, not the individual reserve banks.[14] But already in 1923 it was acknowledged that the Committee would play a leading role in coordinating the security transactions of the entire System.

Open market operations, conducted mainly in New York, soon became one of the principal instruments of monetary control. They provided a discreet means of sterilizing the domestic impact of international gold flows. Like the Bank of England, the Federal Reserve System utilized them on several occasions in the 1920s. Unfortunately, the highly restrictive gold cover regulations imposed on the System by the Federal Reserve Act severely limited the volume of open market purchases in which it could engage.

The Bank of France and the Reichsbank possessed still less freedom of action. The constraints under which both central banks functioned were a legacy of postwar inflation. Correctly or not, French politicians blamed the 1922–26 inflation on deficit spending financed by money creation.[15] The 1928 stabilization law was designed to insulate the Bank of France from pressure to again monetize government budget deficits. Authorization to use open market operations was limited to three circumstances. First, the Bank of France was permitted to repurchase 90-day bonds of the Treasury's newly created debt management agency (the *Caisse d'Amortissement*) which it had previously assisted in placing on the market. Second, the Bank was empowered to purchase bills and short-term securities on behalf of foreign banks of issue that maintained current accounts with it. Third, it was permitted certain dealings in foreign exchange.[16]

These restrictions limited the Bank's capacity to stem the massive gold inflows that France experienced starting in 1927. In the period up through 1926. Frenchmen had sought to minimize the value of the currency they held to avoid capital losses caused by persistent inflation. Once the franc was

repegged, they began to rebuild their money balances. As they shifted out of foreign assets and attempted to acquire domestic currency, the franc rose toward the gold import point. Gold (p.197) flowed in and was converted into domestic currency by the Bank of France. The dramatic increase in the demand for money that occurred in France starting in 1927 was a normal concomitant of a credible stabilization. That it could be achieved only through massive gold inflows was a result of the peculiar structure of the French gold standard.

None of the loopholes in the regulations restricting the actions of the Bank of France provided it with much room for maneuver. In 1928 the Bank was issued nearly 6 billion francs worth of bonds of the *Caisse* in settlement of advances extended previously by the central bank to the government. Had these bonds been sold to the public, they could have been repurchased subsequently to increase the liquidity of the market, reduce interest rates, and limit the “gold avalanche.” But these 6 billion francs of *Bons de Caisse* represented less than 5 percent of the French money supply.[17] Moreover, in a period when the problem for the Bank of France was gold inflows, the first step in the process, open market sales, would only augment the French accumulation of gold so vociferously complained about by foreigners. It is no surprise that the Bank of France failed to develop a market in these securities.

January 1930 was the one occasion on which Emile Moreau, Governor of the Bank of France, proposed that the central bank buy or sell *Bons de Caisse*. Not only were the 2.5 billion francs of open market sales he proposed a mere 1.7 percent of the money supply, but they worked in the wrong direction. Moreau proposed to sell securities from the Bank's portfolio at a juncture when France was experiencing persistent gold inflows. His proposal was vetoed by the Regents of the Bank on the grounds that open market operations were dangerously inconsistent with the gold standard adjustment mechanism.[18]

Transactions on behalf of foreign central banks, if utilized extensively, might have influenced conditions on the Paris money market. But the initiative for such operations came from abroad. The Bank of France might have attempted to expand domestic credit by purchasing for francs bills

denominated in foreign currency, or by buying the foreign currencies themselves. This would have put downward pressure on the exchange rate, however. Thus, any attempt to intervene in this manner ran up against the exchange rate constraint.[19]

(p.198) The constraints on the Reichsbank were similar. German politicians, to minimize the risk of another inflation, restricted the central bank's freedom of action. Any tendency to do so was reinforced by the Allies, who were determined to prevent the German government from again using inflationary finance to frustrate the effort to exact reparations. Under the provisions of the 1924 bank law, the Reichsbank was prohibited from engaging in most expansionary open market operations. As part of the Dawes Plan, a 400-million mark ceiling was placed on Reichsbank discounts of public debt. An obligatory 40 percent cover ratio was incorporated not only into the Bank Law of 1924 but into the 1930 Hague Treaty. At critical junctures, notably in the summer of 1931, the 40 percent ratio was binding. Breaching the cover ratio threatened to rekindle fears of inflation and violate Germany's treaty obligations. This limited the Reichsbank's ability to inject additional liquidity into financial markets even if the price of inaction was the collapse of the banking system.

Problems of Operation: Liquidity

Limits on intervention were not the entire problem. Experts worried also that inadequate liquidity threatened to disrupt the operation of the system. In this they were misguided. Not only was the fear unfounded but it diverted attention from more immediate threats to the stability of the gold standard.

The liquidity problem arose out of the alleged global shortage of gold. The gold famine that had been the subject of so much discussion at Genoa continued to preoccupy financial specialists for the remainder of the decade. In 1925 monetary experts warned the British Royal Commission on Indian Currency and Finance of the danger that gold production would fall short of the levels required to satisfy global demand, which they projected as growing by 3 percent a year.[20] In 1928 the Financial Committee of the League of

Nations established a Gold Delegation to study the problem. In 1929 the Royal Institute of International Affairs authorized the formation of a study group on the international functions of gold.[21] The premise common to these exercises was that inadequate gold supplies were a source of deflationary pressure on the world economy and balance-of-payments problems for the deficit countries.

It is not difficult to understand why contemporaries were drawn to the hypothesis. The second half of the 1920s was marked by steady deflation. In Britain wholesale prices fell by 15 percent from the return to gold in April 1925 through January 1929.[22] Moreover, global gold output had fallen steadily over the course of World War I. Despite recovering after 1921, as shown in Figure 7.3, gold production still fell short of prewar levels. The value of central bank gold reserves had risen by only (p.199)

Fig. 7.3. Global gold output, 1913–29. The failure of global gold output to recover to previous levels in the aftermath of World War I heightened contemporary concern over the danger of a worldwide liquidity shortage.

Source: United States, Director of the Mint (1944), p. 102.

13 percent between 1913 and 1928. The dollar value of the notes and demand deposits of central banks had, in contrast, more than doubled between 1913 and 1925 and continued to expand at a rate of 4 percent per annum between 1925 and 1928.[23] The implication was that slow growth of monetary gold stocks was preventing central banks from satisfying expanding demands for money and credit. The consequences were deflation and increasingly intense balance-of-payments pressures. As an explanation for current difficulties, however, this argument was factually incorrect. In 1930 the League of Nations Gold Delegation reported that the ratio of gold reserves to the sum of notes and central bank sight deposits had fallen only from 48 percent in 1913 to 41 percent in 1925. Forty-one percent was still considerably in excess of the gold cover required by statute, which ranged from 29 to 34 percent depending on how much foreign exchange was also held by central banks. Cover ratios had fallen by less than implied by the slump in gold production because of the withdrawal of gold coin from circulation and its concentration in the vaults of central banks. The $3 billion of coin withdrawn from circulation provided nearly the entire increase in gold cover required by statute between 1913 and 1928, permitting the

new gold production of the period to serve as a cushion for satisfying additional central bank demands.[24] (See Table 7.2.) (p.200)

Table 7.2. Legal Reserve Requirements in Gold and Surplus or Deficiency of Actual Gold Reserves and Total Gold Stock (Millions of Dollars)

(1)		(2) Amount of Gold Legally Required to Cover According to Hypothesis			(3) Surplus or Deficiency (−) Compared with Actual Reserves			(4) Surplus or Deficiency (−) Compared with Total Gold Monetary Stocks Actually Held		
Continents	Years	(I)	(II)	(III)	(I)	(II)	(III)	(I)	(II)	(III)
Europe,	1913	1,294	1,245	1,157	756	805	893	3,204	325	3,341
excluding	1927	3,334	2,965	2,543	170	539	961	503	872	1,294
Russia	1928	3,602	3,314	2,900	643	934	1,345	719	1,002	1,421
Russia	1913	721	721	721	66	66	66	302	320	320
	1927	134	97	—	−37	—	97	−37	—	97
	1928	145	92	—	−53	—	92	−53	—	92
Europe,	1913	2,015	1,966	1,878	822	871	959	3,524	3,573	3,661
including	1927	3,468	3,062	2,543	133	539	1,058	466	872	1,391
Russia	1928	3,747	3,406	2,900	590	931	1,437	666	1,007	1,513
North America	1913	1,252	1,252	1,252	199	199	199	834	834	834
	1927	2,947	2,947	2,947	1,259	1,259	1,259	1,661	1,661	1,661
	1928	2,850	2,850	2,850	1,087	1,087	1,087	1,482	1,482	1,482

(1)		(2) Amount of Gold Legally Required to Cover According to Hypothesis			(3) Surplus or Deficiency (−) Compared with Actual Reserves			(4) Surplus or Deficiency (−) Compared with Total Gold Monetary Stocks Actually Held		
Continents	Years	(I)	(II)	(III)	(I)	(II)	(III)	(I)	(II)	(III)
South America	1913	339	339	339	3	3	3	79	79	79
	1927	702	680	658	5	27	49	91	113	135
	1928	731	706	684	47	72	94	200	225	247
Asia	1913	252	201	67	−51	—	134	−32	19	153
	1927	899	684	565	−166	49	168	−166	49	168
	1928	938	717	593	−205	16	140	−205	16	140
Africa and Oceania	1913	27	27	27	64	64	64	270	270	270
	1927	175	120	90	33	88	118	164	219	249
	1928	177	117	87	30	90	120	161	221	251
TOTAL	1913	3,885	3,785	3,563	1,137	1,137	1,359	4,675	4,775	4,997
	1927	8,191	7,493	6,803	1,264	1,962	2,652	2,216	2,914	3,604
	1928	8,443	7,796	7,114	1,549	2,196	2,878	2,304	2,951	3,633

Notes: Case (I) assumes only gold is held.

Case (II) assumes that current gold ratios are maintained.

Case (III) assumes that only foreign assets are held.

Source: League of Nations (1930), p. 98.

Why then were contemporaries so preoccupied by the specter of a gold shortage? Not only were more than two years of study by League of Nations experts required to establish the prevailing gold cover ratio and its relationship to the statutory minimum, but once it was established that the available supply of gold sufficed in principle, there was still the possibility that supply might fall short of demand in practice. The Federal Reserve System and the Bank of France were absorbing gold at an alarming rate. In 1929, the net gold imports of the United States and France amounted to nearly twice the value of the year's gold production. Unless their insatiable appetites were curbed, even the recovery of output to prewar levels might prove inadequate.

(p.201) If existing stocks could somehow be redistributed internationally in quantities sufficient to alleviate the immediate problem, the question remained of whether prospective gold production would be adequate for future demands. When the League of Nations combined independent estimates of future production with its own projections of the quantity of gold needed to provide one-third cover for central bank liabilities, it forecast that a binding reserve constraint would emerge in the near future if liabilities grew by more than 2 percent per annum. (See Table 7.3.) Over the second half of the 1920s, the stock of notes and sight liabilities had grown at twice this rate.[25] Even those experts, such as Irving Fisher, who dismissed the gold shortage as an explanation for current difficulties entertained the possibility that a serious shortfall might arise in the future.[26]

Critics subsequently attacked the League's forecasts for undue pessimism and dubious assumptions. Its forecasts of gold output were impugned for having unjustifiably assumed “further rising costs of mining, exhaustion of ore bodies, etc.”[27] Actual production in the 1930s far outstripped the League's gloomy projections. But this was due largely to the fall in the real cost of gold production attributable to the collapse of the price level after 1929, the very disaster the Financial Committee of the League sought to avoid.[28] That actual production exceeded the League's projections cannot

be taken as evidence, then, that fears of an incipient gold shortage were unfounded.

Whether and when the reserve constraint bound would hinge on the propensity of central banks to supplement gold reserves with foreign exchange. Statute, while permitting them to hold a considerable volume of exchange reserves, did not compel them to do so. If central banks held foreign exchange to the full extent permitted, the gold cover required to back their notes and sight liabilities could be reduced from 34 to 29 percent.[29] The saving of $1.4 billion represented nearly 15 percent of the 1928 gold stock.

Moreover, encouraging central banks to supplement gold with foreign exchange introduced further problems. Other countries could obtain claims on the reserve currency countries, the United States and Britain, only if the latter ran balance-of-payments deficits. Unless the Fed allowed the U.S. balance of payments to weaken, for every additional dollar deposit acquired by foreign central banks the United States would acquire an additional dollar's worth of gold. Unless the United States was willing to run payments deficits, other countries would be unable to obtain dollar reserves except in return for gold.[30] Insofar as the viability of the system required (p.202)

Table 7.3. Surplus or Deficiency (−) of Monetary Gold Projected by the League of Nations in 1930 (Millions of Dollars)

Year	Estimated Gold Production	Nonmonetary Demand	Available for Monetary Purposes	Increment Required to Provide 1/3 Cover for Average Increases in Notes and Sight Liabilities of		Excess or Deficit of Amount Available for Money Compared with Increment Required if Notes and Sight Liabilities Increase By	
				3% p.a.	2% p.a.	3% p.a.	2% p.a.
1930	404	180	224	253	167	−29	57
1931	402	182	220	260	170	−40	50
1932	410	184	226	269	174	−43	52
1933	407	186	221	276	178	−55	43
1934	403	188	215	285	180	−70	35
1935	398	190	208	294	184	−86	24
1936	397	192	205	302	188	−97	17
1937	392	194	198	311	192	−113	−6
1938	384	196	188	321	196	−133	−8
1939	370	198	172	330	200	−158	−28

Year	Estimated Gold Production	Nonmonetary Demand	Available for Monetary Purposes	Increment Required to Provide 1/3 Cover for Average Increases in Notes and Sight Liabilities of		Excess or Deficit of Amount Available for Money Compared with Increment Required if Notes and Sight Liabilities Increase By	
1940	370	200	170	340	204	−170	−34

Note: p.a. = per annum.

Source: League of Nations (1930), p. 100.

the accumulation of dollar reserves by other gold standard countries, it reinforced the argument that the international monetary system of the 1920s required foreign lending, accommodating monetary policy and an end to sterilization of gold inflows by the United States.

It still might be possible to accumulate official claims on the other reserve-currency country, Great Britain, which ran payments deficits throughout the period. But as the volume of London deposits grew large relative to the gold held by the Bank of England, doubts would ultimately surface about the Bank's ability to convert sterling into gold. The Federal Reserve Board could relieve the immediate pressure on the Bank of England by adopting more expansionary policies that reduced the U.S. payments surplus. Other countries could accumulate claims on New York in lieu of claims on London. But as the volume of deposits in New York grew large relative to American gold reserves, sooner or later the same doubts would surface about the convertibility of the dollar. In the long run the system was dependent for incremental liquidity on foreign deposits in the gold centers. But as the volume of foreign deposits expanded relative to the stock of monetary gold, inevitably the convertibility of the reserve currencies into gold would be called into question. Foreign creditors would rush to withdraw their London and New York balances to avoid the capital losses they would suffer if convertibility was suspended and the reserve currencies devalued. Liquidation of the foreign-exchange component of the gold-exchange standard would subject the world economy to intense deflationary pressure.

(p.203) This flaw in the structure of the gold-exchange standard attracted considerable attention after World War II. As early as 1947 Robert Triffin warned that it posed a threat to the fledgling Bretton Woods System.[31] But a virtually identical warning had been sounded nearly two decades earlier by Feliks Mlynarski in his 1929 book. “The steadily increasing accumulation of foreign exchange reserves,” Mlynarski wrote, “is the most essential feature of the gold exchange standard.”[32] But as the volume of foreign deposits grew large relative to the gold stocks of the reserve countries, confidence in the convertibility of the reserve currencies inevitably would ebb.

> The banks which have adopted the gold exchange standard will become more and more dependent on foreign gold reserves, and the banks which play the part of gold centres will grow more and more dependent on deposits belonging to foreign banks. Should this system last for a considerable time the gold centres may fall into the danger of an excessive dependence on the banks which accumulate foreign exchange reserves and vice versa the banks which apply the gold exchange standard may fall into an excessive dependence on the gold centres. The latter may be threatened with difficulties in exercising their rights to receive gold, whilst the former may incur the risk of great disturbances in their credit structure in case of a sudden outflow of reserve deposits.[33]

A small disturbance provoking this “sudden outflow of reserve deposits” could lead to liquidation of the gold-exchange standard. In 1931, as we will see below, the shock took the form of banking panics in Austria and Germany, which spilled over to London and then spread to New York following the devaluation of sterling.

Problems of Operation: Adjustment

Stabilization of currencies on a gold basis did not bring the need for adjustment to an end. For countries whose newly convertible currencies were overvalued, adaptation required an additional decline in wages and prices and a further fall in spending to eliminate balance-of-payments deficits. Otherwise, reserve losses would cumulate, ultimately provoking a convertibility crisis. In countries with undervalued exchange rates, prices or spending had to rise to eliminate payments surpluses and help relieve the pressure on deficit nations.

Observers debated the magnitude of the adjustment that was required. Many assumed that equilibrium prices and costs would have borne the same relationship to exchange rates as in 1913. Though different price indices might point to slightly different conclusions, the consensus view was that, following stabilization, British prices were some 10 percent too high and French prices 10 percent too low.[34]

But if the prices of British and French goods were initially 10 percent out of line, why after five years had prices, costs, and spending failed to adjust to eliminate the (p.204) imbalance? Keynes and his followers emphasized impediments to the adjustment of wages. The incomplete flexibility of labor costs had long been a fact of British economic life.[35] This is not to say that wages were downwardly rigid in the 1920s. But they declined only gradually, by a total of 1.5 percent between April 1925 and January 1929.[36] The sluggishness of wages and costs thus was blamed for Britain's inability to restore external balance.

However pervasive the downward inflexibility of wages and prices, no one argued that rigidities prevented wages and prices from rising where the balance of payments was in surplus. Rise they did. Between the final quarter of 1926 and the first quarter of 1929, money wages in France increased by fully 7 percent, real wages by more than 10 percent.[37] American wages rose in both real and nominal terms. Yet adjustment remained inadequate. The rise in wages and prices did not suffice to stem gold inflows. France and the United States remained in balance-of-payments surplus throughout the interwar gold standard years.

Thus, the problem extended beyond the inflexibility of labor markets. Its crux was the inelasticity of domestic expenditure. And this inelasticity was attributable in turn to central banks' policies of sterilizing the domestic effects of international reserve flows.

Balance-of-payments deficits that reduced domestic money supplies were supposed to reduce domestic expenditure. If wages and prices were flexible, this would reduce prices and costs in money terms without affecting domestic employment. If they were not, the reduction in domestic money supplies and domestic expenditure would depress output and employment instead. But regardless of whether the response took the form of changes in wages and prices on the one hand or changes in output and employment on the other, in either case nominal spending should have fallen, strengthening the deficit country's balance of payments.

The persistence of external deficits indicated that the predicted adjustment of nominal spending was not taking place. Something was preventing balance-of-payments deficits from reducing domestic money supplies and thereby compressing domestic expenditure. One possible explanation raised by contemporary observers focused on asymmetries specific to the operation of a gold-exchange standard.[38] When a gold-standard country ran a payments deficit, there should have been pressure for its currency circulation to contract. But if the country was a reserve center, the claims accumulated by its trading partners tended to return in the form of foreign deposits. If the United States ran a payments deficit against the rest of the (p.205)

world, other countries, starved for exchange reserves, deposited the dollars they accumulated in New York. The U.S. deficit was neutralized by the rise in foreign deposits, with no loss of gold reserves. There was no tendency for the U.S. money supply to contract, no fall in prices or spending to eliminate the payments deficit. Thus, the external constraint did not bind for the reserve-

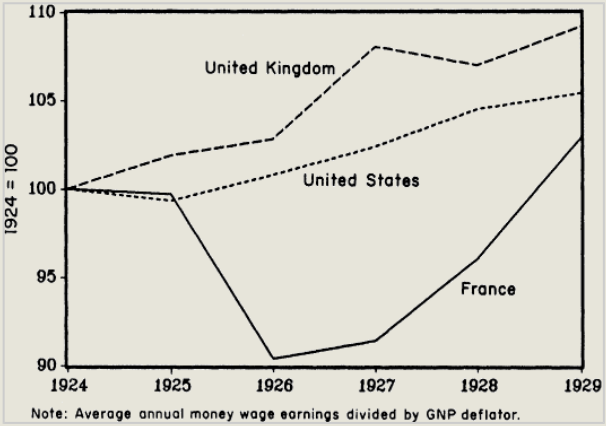


Fig. 7.4. Average annual real wage earnings, 1925–29.

Costs of production were reduced by French inflation, reflecting the tendency of money wages to lag behind rising prices. This had persistent effects: three years after the 1926 stabilization, the gap between domestic and foreign labor costs still had not been closed.

Source: Phelps, Brown, and Browne (1968), Appendix 3.

currency country. The Bank of France complained as early as 1928 that this asymmetry permitted the Federal Reserve to pursue excessively expansionary monetary policies. Following the onset of the Great Depression, French critics blamed it for the Wall Street boom, the October crash, and, ultimately, the cyclical crisis.[39] Of course, analogous asymmetries had existed before the war without preventing adjustment from occurring. And in contrast to the French, other foreign observers argued that the problem with American policy was not that it was overly expansionary but that it was too restrictive. For most of the 1920s the Fed persisted in sterilizing gold inflows rather than permitting them to produce a more rapid rise in (p.206) the American money supply as required by the rules of the gold standard game. This steady flow of gold toward the United States undermined the balance-of-payments position of other countries. It was the main source of stress on the international monetary system.[40] The practice had nothing to do with asymmetries peculiar to the operation of a gold-exchange standard; surplus countries had the capacity to sterilize reserve inflows under a pure gold standard as well. The idea that a gold-exchange standard lacked discipline was based on the notion that the balance-of-payments constraint did not bind for the reserve-currency country, permitting it to run persistent deficits, not persistent surpluses as in the U.S. case. Clearly the root of the problem was elsewhere.

It lay rather in the policy of sterilization.[41] For a country in payments surplus, sterilization involved sales of securities from the central bank's portfolio to mop up any addition to the domestic money supply brought about by the conversion into local currency of the gold accumulated by domestic exporters. For a country in deficit, conversely, it involved open market purchases to offset any incipient decline in money supply due to gold losses. Using annual data for 1922 through 1938, Ragnar Nurkse showed that only a minority of central banks obeyed the rules of the gold standard game, permitting reserve inflows to increase domestic supplies of money and credit, reserve outflows to reduce them. More frequently, central banks sterilized reserve gains and losses, neutralizing their impact on domestic supplies of financial assets. On average, central banks failed to sterilize reserve flows only a third of the time. The comparable figure was even smaller

during the heyday of the interwar gold standard: 21 percent in 1928, 20 percent in 1929, 35 percent in 1930, 19 percent in 1931.[42] Sterilization was every bit as common in other nations as in the reserve currency countries. It was as prevalent in deficit countries as in those enjoying surpluses.[43]

Of course, deficit countries could not allow reserve outflows to persist indefinitely without risking a convertibility crisis. Eventually these countries would be forced to allow reserve losses to translate into tighter domestic credit conditions. The question was when. In the 1920s, a variety of pressures led them to put off the (p.207) day of reckoning.[44] So long as the policy of sterilization persisted, so did the external imbalances that produced the international reserve flows. If deficit countries miscalculated and maintained the policy for too long, capital flows could accelerate and drive them from the gold standard before they had the chance to take corrective action.

The Role of International Cooperation

The decline in the credibility of the commitment to gold heightened these dangers. No longer did private capital automatically flow in stabilizing directions in anticipation of corrective action by policymakers. Doubts grew about when and even whether that action would take place. Central bankers had to occupy the space vacated by private investors. But no one central bank possessed sufficient reserves to release them in quantities adequate to contain a crisis singlehandedly. International assistance had to be provided collectively. By collaborating in the supply of lender-of-last-resort facilities, central bankers could aid their foreign counterparts confronting the most serious adjustment problems and prevent the gold standard system from being brought down by the collapse of its weak links.

Central bank cooperation was the obvious solution to the liquidity and adjustment problems as well. By simultaneously raising or lowering their reserve ratios rather than succumbing to the competitive struggle for gold, central banks could finesse the problem of liquidity and stabilize the price level. “Central banks must refrain,” wrote C. H. Kisch and W. A. Elkin in the chapter on cooperation that concluded their

manual on central banking, “from engaging in, and so encouraging on the part of others, a scramble for gold which would have the effect of raising the commodity price of gold and would lead to a period of economic distress, while the conditions of production were being adjusted to this enhanced value.”[45]

Prior to the war, the Bank of England's discount rate had provided a focal point for policy internationally. The Bank was sufficiently prominent in international markets that, if it raised or lowered its discount rate, other central banks often followed suit. The Bank was aware of the likelihood that its foreign counterparts would respond and frequently took this into account when formulating its discount (p.208) policy.[46] Some de facto coordination of policies was thereby achieved. This had not eliminated the need for explicit cooperation in times of crisis. But it had minimized the need for consultation in normal periods. In the international economy of the 1920s, in contrast, an obvious leader for other central banks to follow no longer existed. Heading off the noncooperative struggle for gold therefore required systematic, regularized cooperation.

The spread of exchange reserves and private foreign deposits heightened the premium attached to cooperation. The interlocking network of foreign deposits rendered the stability of gold parities increasingly interdependent. A balance-of-payments crisis that forced one country to freeze foreign deposits immobilized liquid assets of other countries, leaving them unable to defend themselves and allowing the payments crisis to leapfrog national borders. The extent of the danger became evident in the summer of 1931, when the crisis spread contagiously from Vienna to Berlin, Budapest, and finally London. But experts were aware even earlier that “the holding by a Central Bank of assets abroad involves a degree of dependence on the stability and permanence of financial policy in a country whose Government is beyond the Central Bank's sphere of influence.”[47]

Starting in 1924, efforts to coordinate monetary and financial policies internationally had grown increasingly prevalent. The British, German, French, and American central banks had stayed in constant touch during the 1924 loan negotiations

that sealed the stabilization of the mark. Austria, Hungary, Danzig, Estonia, Greece, and Bulgaria all received international loans under League of Nations auspices. International cooperation figured in the extension of stabilization loans to other European countries. Britain obtained credits from the United States in 1925. France and Italy both secured stabilization loans around the middle of the decade. The Bank of England, the Bank of France, the Reichsbank, the National Bank of Switzerland, the Federal Reserve Bank of New York, and the Bank of Japan cooperated in extending credits to Belgium. Fourteen central banks responded to the Bank of Poland's request for credits in 1927. The same kind of international collaboration made possible Romania's monetary reform in 1929. Although long-term loans were ultimately provided by private sources, central bankers could encourage or veto their extension. “In many cases the great international banking houses, such as Morgan's, Rothschild's, and Baring's, refused to float stabilization loans if the borrowing nation's central bank did not at the same time receive a credit from foreign central banks.”[48] International cooperation in aid of stabilization became the rule rather than the exception.

A sudden decline in the extent of central bank cooperation could have been responsible for the problems encountered by the interwar gold standard starting in 1928. According to Stephen V. O. Clarke, the leading historian of interwar monetary cooperation, until June 1928 the record had “considerable merit”; thereafter (p.209) it “must be judged a failure.”[49] Clarke attributed the decline of cooperation among the leading gold standard countries to the death of Benjamin Strong in 1928.

Strong and Montagu Norman had met in 1916. Correspondence between them spanning the last decade of Strong's life reveals growing warmth and mutual respect.[50] Norman and Strong's friendship and easy working relationship provided a natural basis for cooperation. Norman was a strong believer in “solidarity” or cooperation among central banks, whose importance he repeatedly sought to impress upon Strong, overcoming the latter's initial skepticism that

cooperation had a role to play under the gold standard.[51] But as the health of both men, especially Strong, deteriorated in 1928, so did the regularity of the correspondence and the extent of the collaboration.

When George L. Harrison replaced Strong as Governor of the Federal Reserve Bank of New York, “the intimacy of the transatlantic relationship evaporated.”[52] Attempts to cultivate Anglo-French financial cooperation were marred by personal misunderstanding and suspicion. Norman was on cool terms with the French troika of Moreau, Rist, and Quesnay, whose meetings he repeatedly missed and whose language he refused to speak. For their part, the French suspected Norman, who was on good terms with Hjalmar Schacht, the flamboyant President of the Reichsbank, of pro-German leanings.[53] After 1927, effective collaboration required the full participation of the Bank of France. Neither the British nor the Americans were positioned to obtain it.

Yet there is reason to think that cooperation was already in decline as early as the autumn of 1927, a year before Strong's death. So long as collaboration was limited to the provision of stabilization loans, the leading central banks were willing to participate. These were exceptional loans for exceptional times. The amounts were small relative to the assets of the Bank of England or the Federal Reserve System. But once stabilization loans had helped to reconstruct the international monetary system, central bankers reverted to their preferred model of a decentralized gold standard in which each country was exclusively responsible for its own affairs.

There was a sense, moreover, in which the commitment to cooperation was never really tested before 1928. In those instances when the Fed had accommodated foreign requests for a change in American policy, domestic economic conditions had already inclined it in that direction. In none of the widely cited instances of international cooperation had the Fed clearly altered domestic policy in return for comparable adjustments abroad. In 1924 and 1927, two well known instances of (p.210) collaboration, the United States had been required to release gold to countries stabilizing their currencies and seeking to rebuild their reserves. Cooperation

dictated a reduction in reserve bank discount rates to repel short-term capital flowing from London to New York. In both instances these measures were consonant with the Fed's desire to loosen domestic credit in order to counter recessionary tendencies at home. In 1928–29, for the first time, the Fed's domestic and international objectives were at odds. Aiding foreign central banks with weak balances of payments required lowering the discount rate and otherwise loosening domestic credit conditions. But at home the Fed's concern was that excessive liquidity was fueling the Wall Street boom and feeding speculation. When international cooperation conflicted with domestic objectives, the latter took precedence.

Monetary Policy in 1927

The dominance of domestic objectives is evident in the contrasting responses to the sterling crises of 1927 and 1929. On the first occasion, the British balance of trade was weakened by the slump in merchandise exports associated with the 1926 coal strike. The capital account deteriorated as industrial unrest rendered London a less attractive repository for short-term funds. Even before the difficult spring of 1927, forward sterling had moved to a 2 percent discount against the franc.

Events abroad aggravated Britain's difficulties. Currency stabilization in other countries expanded the range of attractive alternatives to sterling deposits. Countries seeking to acquire gold turned to the London gold market. To rebuild the Reichsbank's reserves, Germany alone drew from London more than £6 million of gold in the second half of 1926.[54]

In the spring of 1927, in addition, German monetary policy began to shift in a more restrictive direction. Germany had been the recipient of an exceptionally large volume of short- and long-term foreign capital inflows in 1926. Schacht and his Reichsbank colleagues questioned the capacity of the nation to service this mounting debt while at the same time meeting its reparations obligations. In January 1927 the Reichsbank therefore reduced its discount rate to 5 percent in the hope that lower interest rates would discourage capital inflows.[55]

But the impact on the German balance of payments was even more potent than Schacht and other Reichsbank officials anticipated. The central bank's gold cover ratio fell from 52 percent at the beginning of January to less than 44 percent in early May, disturbingly close to the 40 percent minimum.[56] In response, the Reichsbank reversed course, tightening credit. A rise in its discount rate was widely anticipated.[57] When it took place, capital would begin to flow back to Germany to take advantage of higher interest rates, intensifying the pressure on the British balance of payments.

If this was not enough, the Bank of England simultaneously came under pressure (p.211) from France. The Poincaré stabilization in the summer of 1926 brought to a close half a decade of capital export. French investors began to repatriate their funds. The reflux of capital continued into 1927 and was augmented by inflows of funds from foreigners betting that the franc would be revalued before it was officially stabilized. A return to *franc germinal* might have seemed like a low probability event. The French public's preoccupation with revaluation was likened to that of “an awakened patient fearing to be operated upon when the operation is already over.”[58] But Rothschild and other financial leaders were actively lobbying for revaluation. Poincaré was known to be sympathetic. Revaluation to the prewar parity, were it to occur, would confer substantial capital gains on investors in franc-denominated assets. One consequence was to subject the Bank of England to a persistent drain of speculative capital across the Channel.

For the moment, the Bank of France continued to limit the currency's appreciation by selling francs for foreign currency, mainly sterling. In the six months following the end of November 1926, it accumulated nearly £150 million worth.[59] But French officials never felt comfortable about holding foreign exchange. They were not enthusiastic proponents of the gold-exchange standard. Since Genoa they had viewed it as a British scheme to foist a sterling standard on them and buttress London's position as an international financial center, presumably at Paris's expense. The adoption of a sterling-based gold exchange standard by the countries of Eastern

Europe might bring that region into Britain's orbit, frustrating France's efforts to encircle Germany diplomatically. Moreover, if the habit of holding exchange reserves spread, the discipline of the gold standard would no longer apply to the reserve currency countries. They would be permitted to indulge in excessive credit creation like that French politicians had succumbed to when freed from gold standard discipline. For all these reasons, in the spring of 1927 the Bank of France initiated efforts to convert its exchange reserves into gold.

In May Emile Moreau, the newly appointed Governor of the Bank of France, asked the Bank of England to make available £30 million of gold in return for a comparable amount of sterling exchange. This was more than twice the gold that Germany absorbed from Britain in the six months ending in February 1927. Not only would the transaction reduce the Bank of France's holdings of sterling, but it would force the Bank of England to raise its discount rate, thereby stemming the flow of capital to France that was strengthening sentiment for revaluation of the franc. Moreau was not among those convinced of the desirability of restoring the *franc germinal*. He was aware of the economic difficulties that Britain had experienced following the revaluation of sterling. To intensify the pressure for the Bank of England to take corrective action, Moreau simultaneously exchanged sterling for dollars in the market.[60]

From the perspective of the Bank of England, Moreau's operations were “secret . . . upsetting . . . [and] capricious; quite independent of the rates of exchange and (p.212) at present as difficult to explain as to justify in our sensitive market.”[61] The British reacted critically because they feared the implications, namely a higher Bank rate in London. A higher discount rate was the last thing the Bank of England desired. The British economy was already in a weakened state. A Bank rate increase, Norman warned, could provoke renewed labor unrest. Failure to restrict domestic credit, on the other hand, might well lead to a sterling crisis—and French officials were unwilling to risk this. If Britain was forced to abandon the gold standard, other countries that had not yet returned might hesitate to do so. Growing uncertainty about the stability of gold parities might undermine confidence in even

so strong a currency as the franc. Poincaré therefore pressed Moreau to moderate the pressure he was applying to the Bank of England.[62] The Bank of France responded by postponing its gold purchases in London pending Norman's trip to Paris at the end of May.

During his visit to the Bank of France, Norman argued that France was better positioned than Britain to correct the payments imbalance between the two countries, presumably through an immediate de jure stabilization of the franc that would halt speculative capital movements. Though French officials remained unconvinced by his arguments, they were impressed by Norman's description of the precariousness of the British position. Pierre Quesnay, General Manager of the Bank of France, paid a quick return visit to London. Reassured by evidence that the Bank of England was taking steps to tighten domestic credit and chastened by warnings that the British Treasury possessed £60 million of unconsolidated war debt claims on the French government, Bank of France officials relented. They allowed that the £30 million of gold might be transferred over a period of six months rather than within 60 days as demanded previously. They suspended other actions, like sales of sterling in the open market, that were undermining the Bank of England's position.

The critical cooperative initiatives came not from France or Britain, however, but from the United States. Norman and Strong had been in constant touch over the preceding months. Moreau had sent Strong a record of Norman's visit to the Bank of France.[63] Thus, Strong was aware of the extent of British difficulties. To complement the Anglo-French settlement, Strong agreed to exchange for sterling the £12 million of London gold in his possession. Britain could then sell this gold to France. In effect, the Fed agreed to absorb a substantial fraction of the sterling that the Bank of France insisted on liquidating.

Strong, Norman, Schacht, and Charles Rist, a leading French economist attending in his capacity as assistant to Moreau, then assembled on Long Island for a private meeting at the beginning of July. In its aftermath, the Fed reduced its discount rates and conducted $80 million of open market

purchases. Lower interest rates in New York encouraged gold to flow out of the United States, strengthening the position of the Bank of England. Neither Britain nor France lost face. Germany, for its (p.213) part, agreed to refrain from engaging in arbitrage at the Bank of England's expense.[64]

Thus, the 1927 episode was an admirable instance of international cooperation. The United States, Britain, France, and Germany took steps simultaneously to reduce both Britain's deficits and the other countries' surpluses. Britain tightened domestic credit slightly; the United States loosened significantly. France deferred its conversion of foreign exchange into gold, while Germany agreed to forgo profitable arbitrage opportunities.

But the terms of the policy trade were decidedly uneven. The French, German, and British adjustments were marginal. The United States, on the other hand, contributed a major shift in monetary policy. The question is why. The weakness of the U.S. economy surely contributed to the Federal Reserve System's willingness to undertake a significant change of direction. Industrial production in the United States had begun to weaken in May, though it would be some time before the downturn's full dimensions would be apparent. (American industrial production in fact fell by 11 percent between May and November.) Participants in the discussions of the Open Market Committee and the Federal Reserve Board commented on the decline in the shoe, textile, and oil industries, in several instances suggesting that a recession was imminent.[65] Strong's influence within the Federal Reserve System may have been at its peak, but he still had to convince his fellow Governors of the need for lower discount rates. Even if Britain's difficulties had not been a factor, the Fed might well have still reduced discount rates in 1927.

The additional impetus for monetary expansion contributed by international considerations could only have been helpful. In 1927 U.S. monetary policy was starting to shift in a more contractionary direction. The rate of growth of American money supply was declining. Yields on long-term government bonds had stopped falling, while those on short-term governments were trending upward (see Figure 7.5). Wary of

excessive speculation on Wall Street, the Fed had already begun to tighten. Monetary stringency raised the probability that the economy would fall prey to recession. Insofar as international factors pushed the Fed in a more expansionary direction, their influence was desirable from both domestic and foreign points of view.

This, of course, is the opposite of the way U.S. monetary policy in 1927 is conventionally portrayed. Echoing contemporaries who blamed excessively expansionary U.S. policy for the stock market boom, and who blamed the Wall Street crash in which that boom culminated for the depression that followed, historians have indicted the Fed for failing to tighten further in 1927 and impugned international cooperation for its role in that failure.[66] It is most likely correct that, by tightening

(p.214)

further in 1927, the Fed could have prevented the stock market from scaling the heights it ultimately did. But not one iota of evidence exists that this policy would have moderated the recession when it ultimately came.[67] The 1927 episode cooled U.S. enthusiasm for both international cooperation and the gold-exchange standard. It highlighted the susceptibility to

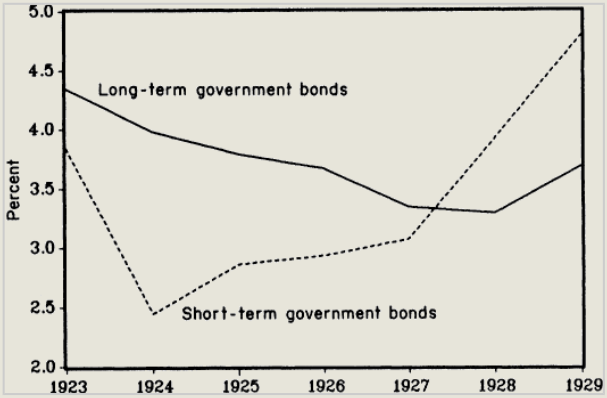


Fig. 7.5. U.S. interest rates, 1923–29. Short-term interest rates in the United States rose noticeably after 1927. Long-term interest rates followed, although their response was muted.

Source: Hamilton (*1987*), *Table 2*.

contagious confidence crises of a system that relied for reserves on an interlocking network of foreign deposits. It underscored the need for systematic and regular central bank cooperation to stabilize the hybrid system. Indeed, the 1927 sterling crisis convinced Strong and his colleagues that the risks of such a system outweighed the benefits. The Bank of France, Strong acknowledged, had been within its rights to demand that the Bank of England convert its sterling into gold. Yet these modest demands had threatened to topple not just the sterling parity but the entire gold standard system, consequences that were headed off only by the timely conclusion of difficult negotiations. The next time crisis management required cooperation, the ongoing reparations tangle, transatlantic disputes over war debts, Anglo-French conflict in (p.215) the Middle East, or domestic political resistance might prevent or delay it. As Strong wrote Norman in the aftermath of the 1927 crisis,

> Banks of issue now hold bills and balances in the United States alone exceeding $1,000,000,000, not to mention a sum at least approaching this now held in London, and considerable amounts in other gold standard countries. In fact, as I have written you, I am inclined to the belief that this development has reached a point where instead of serving to fortify the maintenance of a gold standard it may, in fact, be undermining the gold standard because of the duplication of the credit structures in different parts of the world sustained by a few accumulations of gold in the hands of a few countries whose currencies are well established upon gold, such as England and the United States.[68]

The solution to this problem, Strong concluded, was to retreat from the gold-exchange standard to a more traditional gold-based system.[69] By liquidating their foreign exchange reserves, central banks could eliminate the danger that a minor disturbance would lead to a run on foreign deposits and to convertibility crises in the reserve currency countries. Though reversion to a traditional gold standard reintroduced the danger of a global gold shortage, this could be avoided by an agreement among central banks to reduce their statutory cover ratios. Having restored a traditional gold standard,

systematic international cooperation would no longer be essential for stability.

Starting in mid-1927, Strong therefore urged foreign central bankers to move away from the gold-exchange standard and adopted a less sympathetic attitude toward international cooperation. Possessing ample reserves, the United States was inclined to overlook the potential drawbacks of a purely gold-based system. Increasingly its position attracted international support. France, the other country with extensive gold reserves, had always resisted British attempts to promulgate the gold-exchange standard. Once the franc was stabilized and the Bank of France accumulated a considerable volume of exchange reserves, French views gained international influence. While continuing to hold working balances of foreign exchange, France and Germany both attempted to shift the composition of their reserve port-folios toward gold. Rather than purchasing foreign currency to contain upward pressure on the mark, the Reichsbank now permitted the currency to appreciate to the gold import point and purchased bullion. Similarly, by the end of the year the United States had liquidated the sterling exchange it had inherited from France via Britain.[70]

But in attempting to limit the need for international cooperation by reducing the role of foreign exchange reserves, central bankers put the cart before the horse. They immediately adopted a cooler attitude toward cooperation, even though the importance of foreign exchange reserves had not yet begun to decline. Notwithstanding French and German steps to reduce their foreign balances, reliance on exchange reserves continued to rise. The exchange reserves of 24 European countries grew from slightly more than $5 billion at the end of 1927 to just over $6 billion (p.216) at the end of 1928.[71] The share of foreign exchange in total reserves remained almost unchanged. Officials thus turned away from cooperation before achieving the change in international monetary relations they hoped would render it superfluous.

Monetary Policy in 1928–29

The consequences quickly became apparent. International considerations no longer restrained the Fed from tightening domestic credit in response to what it saw as the principal threat to domestic prosperity: a stock market boom it believed to be diverting financial resources from legitimate uses into speculation. In 1928 increasingly restrictive U.S. monetary policy put an end to American foreign lending. New York became the destination for short-term capital rather than the source. Meanwhile, France continued to import massive amounts of gold. With statute preventing the Bank of France from accommodating growing demands for money through the use of open market operations, those demands could be satisfied only through continued gold imports. France was far and away the largest gold importer of the period: her gold reserves rose from $954 million to $1253 million over the course of 1928. The $300 million increment acquired by this one country was fully 3 percent of global gold reserves.

As a result of this combination of American and French policies, growing balance-of-payments pressure was placed on other parts of the world. In 1929 the pressure intensified. France acquired another $200 million of gold in the first half of the year, draining another 2 percent of global gold reserves from other countries. The United States did the same. The Federal Reserve banks reduced their holdings of bills and government securities by $480 million between January and July, tending to reduce the U.S. monetary base, other things equal, by the same amount. The American public replenished a portion of its money balances by importing $215 million of gold over the same period. Another portion of the incipient reduction in American money balances was replenished by U.S. commercial banks, which used the discount window to borrow an additional $237 million from the Federal Reserve System.[72]

Britain was disproportionately affected. Declining agricultural commodity prices forced much of the outer sterling area into deficit. According to Bank for International Settlements estimates, these payments deficits reached £81 million in 1928 and £99 million in 1929.[73] Finding themselves unable to

borrow in the United States, the sterling area countries financed their deficits by running down their London balances, thereby weakening the British balance of payments.

By raising interest rates in London or reducing them in New York, the Bank of England and the Fed might have slowed the flow of capital across the Altantic to the United States and relieved the pressure on sterling. But, as in 1927, the Bank of England again wished to avoid increasing its discount rate. Though indices of British (p.217) industrial production were stable or rising, unemployment remained high. With the approach of a general election, any increase in interest rates could have serious political repercussions.

A reduction in interest rates in New York seemed more timely. But the Fed feared that such a move would only fuel the Wall Street boom, which in the eyes of many had already reached dangerous levels. Instead of reducing them, the Fed raised reserve bank discount rates in the first half of 1928. Open market sales were used to drain liquidity from the financial system. The Fed's pursuit of contractionary initiatives was all the more remarkable in light of the state of the U.S. economy. Factory employment was lower in mid-1928 than any time since 1924. Industrial production remained unchanged between February and June. Commodity prices displayed little tendency to rise. The Fed's insistence on credit restriction in the face of the economy's weakness revealed the depth of its concern with the stock market's behavior.

The steps taken between early 1928 and early 1929 failed to slow the stock market's rise. Harrison and his colleagues at the New York Fed, most immediately exposed to Wall Street's insatiable appetite for credit, pushed for additional interest rate increases and further credit restriction. Others within the Federal Reserve System were more concerned about the impact on the already tenuous industrial situation. Led by Adolph Miller of the Federal Reserve Board, they proposed as an alternative to general credit restriction a policy of “direct pressure.” They recommended that moral suasion be used to discourage member banks from borrowing at the Fed in order to extend loans to brokers and stock market speculators.

Credit to Wall Street could be curtailed without denying it to legitimate industrial and agricultural borrowers.

There was already good reason to be concerned about the impact on the American economy of increasingly high interest rates. As early as July 1928, the Federal Open Market Investment Committee had been warned that “If the present high interest rates are continued for several months it seems probable that business activity may be affected six months or a year from now.” A report circulated to the members of the Open Market Investment Committee on April 1, 1929, enumerated three reasons why higher money rates were already having a detrimental effect on business. First, they discouraged housing starts and other construction activity. Second, they led to the postponement of many state, municipal, and railway projects. Third, by discouraging foreign borrowing in the United States and imposing stringent money market conditions in England, Holland, Germany, and Italy, they diminished the purchasing power of these foreign countries and their demand for U.S. exports. And, in fact, those open-market sales the Fed had already undertaken in 1928 and early 1929 led to little decline in bank reserves in the New York district and hence, presumably, little decline in loans to Wall Street. Their main effect was to drain reserves from other reserve districts.[74]

(p.218) The policy of direct pressure appealed to the members of the Board because it seemed to have been successful when last utilized in 1919–20. The imperatives of postwar debt management prevented the Fed from raising interest rates in 1919 to counter what it regarded as an increasingly disturbing stock market boom, so the Fed had used moral suasion and veiled threats to discourage member banks from making speculative investments.[75] The stock market boom had been broken in 1920 at the cost of only a brief recession.[76]

Direct pressure again became the System's official policy once the Federal Reserve Board established its dominance over individual reserve banks that preferred a different course. On February 14, 1929, the directors of the New York Fed voted unanimously to increase the New York bank's discount rate. The Reserve Board in Washington, D.C., vetoed their decision,

preferring to rely on direct pressure.[77] The same sequence of events—a vote by the New York Fed to increase the discount rate and a veto by the Board—repeated itself ten times over the succeeding four months. The Federal Reserve System continued to place its faith in direct pressure, discouraging member banks from rediscounting on behalf of speculators. The problem was that speculators were difficult to identify; hence the policy of direct pressure had the effect of denying credit to some industrial and agricultural borrowers. In mid-June the Federal Reserve Board decided that this was no longer tolerable. In anticipation of the increased credit demand that would arise in late summer and early autumn, the traditional harvest and crop-moving seasons, the Board decided to make rediscounts more freely available to member banks. Hoping that higher interest rates would now succeed where they had failed previously, namely in discouraging borrowing for speculative purposes, the New York Fed was finally permitted to advance its discount rate in August.

The Board has been harshly criticized for relying on direct pressure rather than interest rates. The policy of direct pressure is said to have been rendered ineffectual by the fungibility of funds.[78] Insofar as the Fed succeeded in discouraging member banks from rediscounting in order to extend loans to brokers, the very act induced other banks without a need to borrow to shift their loan portfolios toward brokers' loans. It would have been wiser, the critics have argued, to raise reserve bank discount rates and break the stock market boom before it reached the stratospheric levels of mid-1929.

Though banks surely were able to make some adjustments in their loan portfolios, the question is to what extent. The evidence is far from clear. Common stock prices in fact rose by less than 3 percent between January and June 1929.[79] The most dramatic increase in stock prices took place in July and August, immediately after moral suasion was relaxed. While it is not certain that the policy of direct pressure was responsible for the stability of share prices between January and June, neither is it obvious that the policy was ineffectual.

(p.219) International considerations played almost no role in these maneuvers. In principle, whether the Fed restricted the availability of credit throughout the economy by raising interest rates or used moral suasion to divert funds from Wall Street to Main Street should have been a matter of indifference to foreign central banks. If the Fed raised interest rates economywide, the balance of payments pressure felt by relatively weak foreign central banks, most notably the Bank of England, would have been intensified. Additional funds would have been drawn from London by the lure of higher dollar returns. If the Fed instead diverted credit from the stock market to domestic industry and trade, British funds still could have flowed into New York banks, to be relent to brokers at increasingly attractive rates. Russell Leffingwell, the former U.S. Treasury official now employed by the Morgan bankers, preferred high interest rates over direct action on domestic grounds but doubted that one policy rather than the other would place less pressure on European central banks.[80]

Insofar as the supply of domestic credit to the American economy was greater overall under the policy of direct pressure, the draw on London funds might have been somewhat less. Moreover, in the event that New York banks and other intermediaries failed to adjust their deposit rates to reflect rising rates on brokers' loans, the pull on London funds might have been attenuated further still. For countries losing reserves to the United States, the policy of direct pressure favored by the Board might have had modest advantages over the higher interest rates favored by the New York Fed, the traditional ally of foreign central banks.

Curiously, the Bank of England favored the New York Fed's policy of higher interest rates over the Board's policy of direct pressure. The Bank viewed matters through the lens provided by the City of London, still the most highly articulated financial market in the world. The experience of the London market suggested that attempts to channel credit through the use of moral suasion could have limited effects at best. Norman concluded that the Fed would have to raise interest rates temporarily to prick the stock market bubble, after which they could be reduced to stem the capital inflow. The

Bank of England would suffer short-run inconvenience but enjoy long-term benefits.

In February 1929 Norman sailed to New York to coordinate this maneuver. The new Governor of the New York Fed, George Harrison, agreed that interest rates could be reduced only through a “sharp, incisive action” to first raise them and thereby break the speculative demand for credit.[81] Harrison put the case to the Board of Governors on Tuesday, February 5. The Fed's ultimate goal, Harrison argued, should be “to get back to a lower rate position . . . as speedily as possible in order to provide business, commerce and industry with lower rates.” But this was impossible to accomplish through purchases of government securities and reductions in the Fed's discount rate while the present “exorbitant use of credit” continued. So long as the present high rates persisted, they “would not only have a directly detrimental effect on our domestic business and commerce, but would force penalty (p.220) rates of discount abroad and a possible consequent depression which would indirectly but seriously affect our export markets.”

The Board refused to go along, responding to Harrison that “a rate increase was a most serious step for the Reserve System to take and that they thought we should not do so except as a last resort.” Norman returned to London empty handed. The Bank of England's reserve losses mounted, forcing his colleagues to raise Bank rate to 5.5 percent before his ship docked. The rise in interest rates in London and throughout Europe intensified credit stringency worldwide, helping to set the stage for the Great Depression.

But the problem was not that the Federal Reserve Board chose to rely on credit rationing through moral suasion instead of higher interest rates. Rather, it was the priority the Fed attached to ending the Wall Street boom, a priority that mandated credit restriction and undermined the British balance of payments. But the Fed was not solely to blame. Foreign central bankers, led by Norman himself, endorsed the U.S. policy even though they had the most to lose. Not only were their economies subject to the effects of credit stringency, just like that of the United States, but they were

the ones to whose gold standard parities the U.S. policy posed the most immediate threat.

Impediments to Cooperation

Even before Benjamin Strong's death in 1928, the record of central bank cooperation was spotty. Exceptional stabilization loans had been extended to countries experiencing exceptional crises but only after extended periods of financial distress and on a scale that was small relative to the assets of the creditors. Only intermittently thereafter was domestic policy adapted to ease the pressure on foreign countries or grease the wheels of international finance. At most, circumstances abroad provided a pretext for changes in policy desired for domestic reasons.

Anglo-American cooperation grew increasingly difficult over time because Harrison and Norman did not share the trust and familiarity cultivated by Strong and Norman over a decade. Personal relations mattered because efforts to coordinate policies remained ad hoc in the absence of measures to systematize and institutionalize them. As authority for the formulation of American monetary policy shifted from New York to Washington, London—New York contacts built up over a decade were rendered increasingly redundant. Members of the Federal Reserve Board, less familiar with international financial affairs than officials of the Federal Reserve Bank of New York, failed to share even the limited appreciation of the merits of international cooperation possessed by Harrison.

Yet even American officials who appreciated the link between domestic monetary policy and international monetary affairs remained strangely hesitant to address it. One of Benjamin Strong's legacies was a deep-seated fear of the instability of the gold exchange standard. The growth of official foreign deposits in New York increased the vulnerability of the American financial system to disturbances emanating from distant parts of the world. For the moment, those disturbances (p.221) might be contained through international cooperation. In the long run, in the American view, the solution was to transform the international monetary system in a direction that reduced the need for management, collective or

unilateral. Policymakers unfortunately turned away from cooperation before this transformation was complete.

Notes:

(1) Clarke (1967), pp. 78–79. At one point, Norman considered extending the deadline to 1930, but Germany's stabilization and the growing international financial prominence of the United States magnified the perceived urgency of restoring sterling's prewar parity. Clay (1957), p. 146.

(2) Young (1925b), p. 25; Great Britain, Committee on the Currency and Bank of England Note Issues (1925), p. 6.

(3) The figure cited in the text is M1, from Friedman and Schwartz (1963), p. 711.

(4) See chapter 10.

(5) The only unfinished business at the end of the year was de facto stabilization in Spain, Portugal, Romania, and Japan and de jure stabilization in Czechoslovakia, Brazil, Uruguay, and Peru. Brown (1940), vol. 1, p. 402.

(6) Technically, the lower limit was 400 hundred fine ounces. Cassel (1936), p. 41.

(7) Some government securities qualified indirectly, insofar as eligible paper included paper secured by U.S. government obligations rediscounted by member banks with reserve banks and member bank collateral notes secured by government obligations. Nineteenth Annual Report of the Federal Reserve Board for 1932 (1933), p. 16.

(8) Anderson (1930), p.5.

(9) There is considerable controversy over this point, to which I return in chapter 10.

(10) In the case of the Bank of England, this took the form of borrowing from commercial banks through the medium of a broker in order to tighten financial market conditions. Sayers (1957), p. 49, knew of no instances in which the Bank of England actively pumped funds into the market to loosen credit conditions. The U.S. Treasury occasionally bought

securities to neutralize the impact on the markets of other government financial operations. There were also instances in which the Bank of France and other Continental central banks purchased foreign securities. Bloomfield (1959), pp. 45–46.

(11) Committee on Finance and Industry (1931), *Minutes of Evidence*, Question 401.

(12) Sayers (1957), p. 51.

(13) Treasury officials complained that uncoordinated reserve bank purchases exacerbated interest-rate volatility and put securities prices on a “false footing,” which threatened to demoralize the market. Chandler (1958), pp. 212–214. The volume of U.S. securities held by reserve banks rose from $236 million in January to $604 million in May. Hardy (1932), p. 38.

(14) The directors of the Chicago Fed objected to the reduction in its discount rate recommended by the Federal Reserve Board in July. Although the possibility that the Chicago Fed would test the powers of the Board in the courts and that Congress would be asked to enhance the autonomy of individual reserve banks was much discussed, the Board prevailed. FRBNY Archives (Strong Papers), Strong to Norman, 21 September 1927.

(15) Chapter 6 above argues that this is an accurate characterization of the inflationary crisis through 1924 but not of the difficulties of 1925–26.

(16) Eichengreen (1986b), pp. 63–64. A translation of the 1928 monetary law appears as an appendix to Myers (1936).

(17) The money supply figure cited is M1 as calculated by Saint-Etienne (1983).

(18) On the January 1930 episode, see Bouvier (1984), pp. 71–72 and Mouré (1990), pp. 461–462.

(19) Clarke (1967), pp. 137–138, notes correctly that previous authors have exaggerated the restrictions on the Bank of France's dealings in foreign exchange. The issue was not whether or not purchases of foreign exchange were feasible

but whether they had undesirable side effects. As Madden and Nadler (1935), pp. 311–312, put it, “The purchase or sale of foreign bills in France has the same effect on the money market as dealings in securities. The purchase of foreign bills from French owners places funds at the disposal of the money market, while the sale of bills withdraws funds. However, such operations affect not only the money market but also exchange rates. Active bidding by the Bank of France for, let us say, sterling bills would tend to raise the exchange rate on London and might possibly lead to gold exports. Conversely, the sale of sterling bills in large volume would depress the sterling rate and might cause a movement of gold from London to Paris. For this reason the power of the Bank of France to use open market operations in foreign exchange as a method of credit control is rather limited, and there is little evidence that it has ever been used primarily for this purpose.”

(20) See, for example, memorandum by Mr. H. Denning, in Royal Commission on Indian Currency and Finance (1926), Vol. II, Appendix 5, Minutes of Evidence, pp. 43–51.

(21) League of Nations, Gold Delegation (1930), p. 5; see also Royal Institute of International Affairs (1931).

(22) The figure cited is the change in the Board of Trade index, from Capie and Collins (1983), p. 32.

(23) League of Nations, Gold Delegation (1930), Annex XIII, Table IV.

(24) Gold coin in circulation had fallen from nearly $4 billion in 1913 to less than $1 billion in 1928. League of Nations, Gold Delegation (1930), Annex XIII, Table III.

(25) It was telling, moreover, that this rapid growth of central bank liabilities had still been inadequate to prevent the price level from falling. Kitchin (1929), pp. 64–67; League of Nations, Gold Delegation (1930), p. 100 and *passim*.

(26) Nelson (1989), p. 9.

(27) Palyi (1972), p. 125.

(28) The decline in price levels after 1929 translated into a fall in the real costs of gold mining (a rise in the real price of gold) because, although other prices were collapsing, central banks continued to peg the domestic currency price of gold.

(29) These are the League's estimates for 1928. League of Nations, Gold Delegation (1930), p. 97.

(30) There is an analogy with the dollar problem of the post-World War II era, touched on in chapter 13.

(31) See Triffin (1947, 1960).

(32) Mlynarski (1929), p. 79.

(33) Mlynarski (1929), p. 89.

(34) Moggridge (1969) discusses Keynes's purchasing power parity calculations and demonstrates the sensitivity of his conclusions to choice of price indices. It was also widely argued that the lira was undervalued at its new gold parity. Gantenbein (1939), p. 17.

(35) The rapid fall in wages and prices in the 1920–21 recession was regarded as an anomaly. During World War I, wages in many industries had been indexed as a way of buying labor peace in the face of inflation. In 1920, these sliding-scale provisions continued to feature in many labor contracts, as described in chapter 6. Over the course of the 1920s, perhaps in response to the fall in money wages they had produced in 1920–21, indexing provisions were eliminated in many sectors where they had previously prevailed.

(36) Figures on average weekly wages are from Capie and Webber (1985), p. 62.

(37) Sauvy (1984), vol. 3, p. 378.

(38) Two presentations of this argument are Mlynarski (1929), pp. 75–76, and Nurkse (1944), p. 44. See also Gayer (1937), pp. 24–25, Westerfield (1938), pp. 555–561, and Gantenbein (1939), p. 18.

(39) Bank of France (1929), p. 5. Mouré (1989), pp. 6–7. Charles Rist, economic advisor to French governments in the 1920s and 1930s, was a prominent exponent of the view that the Fed's overly accommodating monetary policy had prolonged the boom, encouraged excessive consumption, and fueled stock market speculation, for all three reasons aggravating the depression that started in 1929. See Rist (1933), pp. 329–333 and chapter 8.

(40) See, for example, Kisch and Elkin (1930), p. 157. It is straightforward to explain why the French were critical of U.S. policy for being excessively expansionary, while other countries criticized the United States instead for sterilizing gold inflows. For central banks like the Bank of England, a major problem in the 1920s was the persistence of balance of payments deficits, to which U.S. policies of sterilization contributed. France was one of the few countries to enjoy persistent surpluses and gold inflows throughout the late 1920s. Any sterilization in which the United States engaged therefore caused the Bank of France little inconvenience. But the French were painfully aware of their recent experience with inflation and financial turmoil. That inflation was ascribed to excessive credit creation prior to the return to gold. Thus, French policymakers were critical of any monetary policy that could be portrayed as excessively accommodating, and opposed to any modification in the form of the gold standard that might lend itself to such abuses.

(41) For contemporary statements of this view, see, for example, Puxley (1933) or Gregory (1935).

(42) Nurkse (1944), p. 69.

(43) Eichengreen (1990a) analyzes the extent of sterilization by reserve centers and other countries in the interwar gold-exchange standard period, detecting no differences between the two groups.

(44) This is how Nurkse's emphasis on sterilization as a factor destabilizing the interwar gold standard can be reconciled with Bloomfield's (1959) evidence that, by Nurkse's own criterion, sterilization seems to have been equally prevalent before the war. Using annual data comparable to that

employed by Nurkse for the interwar years, Bloomfield found that in the period 1880–1914 central banks played by the rules of the game only 34 percent of the time, nearly the same figure arrived at by Nurkse for the period 1922–38 (32 percent). But it still is possible that, in the critical years of intense balance-of-payments pressure prior to 1913, policymakers were quicker to take the actions mandated by the “rules” in order to defend their gold standard parities. Annual data shed no light on this issue. In addition, when attention is limited to the years when the interwar gold standard prevailed globally (1928–31), Nurkse's average falls to 24 percent, well below Bloomfield's 34 percent.

(45) Kisch and Elkin (1930), p. 155.

(46) At the same time the Bank of England was sensitive to discount rate changes abroad, and responded to them in much the way foreign central banks responded to changes in its Bank rate. Evidence to this effect is provided in Eichengreen (1987). See also the discussion in chapter 2.

(47) Kisch and Elkin (1930), p. 128.

(48) Chandler (1958), pp. 285–286.

(49) Clarke (1967), p. 220.

(50) Strong and Norman “seem to have liked each other immediately.” From 1921 “they were together almost every year, sometimes for long periods. They spent long vacations together, sometimes at Bar Harbor but more often in Southern France. They traveled together to the important capitals of western Europe and often conferred at length with other central bankers.” Chandler (1958), pp. 258–259.

(51) Moreau (1954), p. 136. Central bank solidarity was consistent with Norman's desire for central bank independence from political pressure, since effective cooperation among central banks required that their affairs be insulated from contaminating political influences.

(52) Palyi (1972), p. 143.

(53) Sayers (1976), vol. 1, pp. 183–186.

(54) Clarke (1967), p. 114.

(55) In addition, the exemption of foreign issues from Germany's 10 percent withholding tax was removed to further discourage foreigners from lending to Germany. See Balderston (1983).

(56) *Economist* (June 11, 1927), p. 1222.

(57) Clarke (1967), pp. 109, 114.

(58) Grand (1928), p. 39.

(59) Clarke (1967), p. 111.

(60) At the same time, Moreau requested $100 million of gold from the Federal Reserve. Moreau (1954), entries for 13, 16 and 18 May 1927.

(61) FRBNY (Strong Papers), Norman to Strong, 22 May 1927.

(62) Poincaré may have been influenced by warnings that if the Bank of France made unreasonable demands on the Bank of England, the British Treasury would harden its position on the war debts owed it by the French Treasury. Moreau (1954), entries 23, 30 May, 13 June 1927.

(63) Clarke (1967), p. 123.

(64) Arbitrage transactions would have involved selling expensive dollars for cheap sterling, using the sterling to buy gold in London, shipping the gold to Berlin, and reacquiring dollars by floating loans in New York at what promised to become lower interest rates.

(65) Clarke (1967), p. 125.

(66) This was the view, for example, of Adolph Miller, the one professional economist on the Federal Reserve Board, who subsequently described the shift in U.S. monetary policy in 1927 as “one of the most costly errors committed by it [the Federal Reserve System] or any other banking system in the last 75 years.” U.S. Senate (1931), p. 134. Miller was concerned that excessive accommodation of Wall Street's demands for credit was giving rise to unhealthy speculation,

and recommended a policy of “direct pressure,” or of moral suasion, to discourage bank lending to stock brokers, to limit its extent. On the controversy over direct pressure, see below. Miller's views also figure in the debate over monetary policy within the Federal Reserve System in 1930–31. See chapter 8.

(67) A similar argument that Federal Reserve policy in this period was too restrictive rather than too expansionary, albeit based on a somewhat different rationale, appears in Wicker (1966), chapter 9.

(68) NRBNY (Strong Papers), Strong to Norman, 19 September 1927.

(69) Clarke (1967), pp. 39–40, 134–136.

(70) Brown (1940), vol. 1, p. 488.

(71) Nurkse (1944), p. 235.

(72) Burgess (1930), p. 15.

(73) Alternative estimates suggest that the outer sterling area moved into deficit only in 1929. Bank for International Settlements (1953), p. 28; Cairncross and Eichengreen (1983), pp. 47–48.

(74) Columbia University (Harrison Papers, vol. 86), “Memorandum to the Open Market Investment Committee,” July 17, 1928; “Preliminary Memorandum for the Open Market Investment Committee,” April 1, 1929. On the regional dispersion of changes in reserves due to the Fed's 1928–29 open market sales, see Wheelock (1988), p. 12.

(75) Chandler (1958), pp. 423–427; White (1983), p. 123.

(76) Chapter 4 points out that this was an erroneous conclusion to draw from the 1919–21 episode—that the brevity of the postwar recession was attributable to a set of very special circumstances no longer present by 1929.

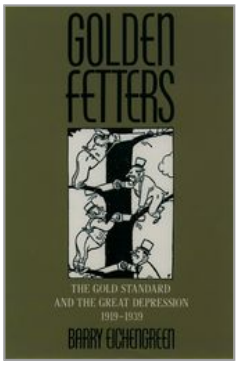
(77) Friedman and Schwartz (1963), pp. 258–259.

(78) Chandler (1958), pp. 429–430.

(79) Federal Reserve Board (1943), p. 481.

(80) Lamont Papers, Box 103, Folder 14, Leffingwell to Lamont, 29 May 1929.

(81) This and all subsequent quotations in this paragraph are from FRBNY (Strong Papers), “Office Correspondence, To Files, From Governor Harrison,” 11 February 1929.



Golden Fetters: The Gold Standard and the Great Depression, 1919-1939
Barry Eichengreen

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Cracks in the Facade

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Abstract and Keywords

This is the second of three chapters that consider the operation of the reconstructed gold standard system following World War I. It analyzes the role of the gold standard in the onset of the Great Depression and shows how, in turn, the slump undercut the foundations of the gold standard system. The first section of the chapter looks at the setting, and the second at the three options available to heavily indebted countries: the orthodox response – to boost exports and limit imports, cut public spending, raise taxes (especially import duties), and apply export bounties; action to suspend export debt service to devote foreign exchange to essential imports; and action to suspend the gold standard. The next three sections look at Australia as a prototypical primary producer – the first country to suspend the gold standard, the suspension of the gold standard by Argentina, Brazil, and Canada, and the situation in Germany. The last two sections discuss the acceleration into Depression, the US policy response, and European repercussions.

Keywords: Argentina, Australia, Brazil, Canada, Europe, Germany, gold standard, Great Depression, interwar period, reconstructed gold standard, responses to debt, suspension of the gold standard, USA

The Great Depression is typically thought to have started in August 1929, when industrial production in the United States began to fall, or in October, the month of the Wall Street crash. But well before that summer, economic activity was already in decline over significant parts of the globe. In Australia and the Netherlands East Indies the deterioration in business conditions was visible at the end of 1927. Recession spread next to Germany and Brazil in 1928 and to Argentina, Canada, and Poland in the first half of 1929.[1] Well before the downturn was evident in the United States, it was already apparent in substantial parts of Central Europe, Latin America, and the Orient.

Although the U.S. economy continued to expand, events in America were directly responsible for the slowdown in other parts of the world. Increasingly restrictive Federal Reserve monetary policy curtailed U.S. foreign lending in the summer of 1928. To defend their gold parities, foreign central banks were forced to raise interest rates and restrict the availability of credit. Primary producers, especially in Latin America, boosted their exports in a desperate scramble for foreign exchange. This only hastened the decline in commodity prices and worsened the deterioration in their balances of payments.

Monetary retrenchment by the Fed in 1928–29 had such powerful effects because it provoked even more dramatic monetary retrenchment in other countries through the operation of the international gold standard. The rate of growth of money supplies (M1) in the United States and Canada declined by 2 percentage points between 1927 and 1928. In Europe the decline was 4 percentage points; in Latin America it was 5 percentage points. (See Table 8.1.) Between 1928 and 1929 the monetary growth rate declined by a further 5 percentage points in the United States and Canada and by an additional 5 points in Europe, 5 points in Latin America, and 5 points in the Far East. Foreign central banks charged with defending their gold parities had no choice but to match the rise in U.S. interest rates to prevent balance-of-payments deficits and reserve losses from driving them from the gold

standard. Many of these countries were already running merchandise trade deficits and were totally dependent on capital imports from the United States for external stability. Hence the decline in U.S. foreign lending had a devastating effect on their external positions. Often a draconian compression of domestic spending was the only option consistent with continued maintenance of the gold standard. (p.223)

Table 8.1. Percentage Change in M1 Between Ends of Successive Years (In Percentage Points)

	1926–27	1927–28	1928–29
North America	5.20	3.04	−0.91
Central and South America	12.14	7.53	2.66
Europe	11.54	7.82	2.45
Far East	1.38	5.37	0.20

Notes: All figures are unweighted averages of data for constituent countries. North America includes Canada and United States. Central and South America includes Argentina, Brazil, Chile, Colombia, Uruguay, Venezuela, El Salvador, and Mexico. Europe includes Belgium, France, Netherlands, Poland, Switzerland, Austria, Germany, Bulgaria, Czechoslovakia, Hungary, Italy, Yugoslavia, Denmark, Finland, Norway, Sweden, the United Kingdom, and Ireland. Far East includes Australia, New Zealand, and Japan.

Source: League of Nations' *Memorandum on Currency and Central Banks* (various issues) except for 1926–27 for the United States, which is taken from Friedman and Schwartz (1963). (League of Nations data for U.S. for 1926 are missing deposits of state and local authorities.)

Herein lies at least part of the explanation for the seriousness of the global contraction. The destabilizing impulse was so powerful precisely because it was not just a restrictive shift in U.S. policy but a restrictive shift in policy worldwide. At the root of that shift was the international gold standard, which tied the economic policies of different nations together.

These same linkages, moreover, provide part of the explanation for the severity of the initial downturn in the United States. When the U.S. economy began to contract in the third quarter of 1929, its decline proved so rapid because foreign economies were already in recession—the restrictive U.S. monetary policy superimposed on already fragile foreign balances of payments having forced restrictive monetary policies on foreign central banks. Hence it was not possible for American producers to sustain output and employment by shifting sales from domestic to foreign markets.

The Federal Reserve and the Bank of France were the only central banks of consequence that retained much freedom of action. Neither initiated expansionary policies to offset the decline in economic activity. The outlooks and actions of the individuals who governed both institutions were powerfully conditioned by events in the recent past. Impressed with the benign effects of its strategy of liquidation when previously pursued during the recession of 1920–21, the Fed stuck by that policy in 1930–31, long after conditions had changed. Equally impressed with the political costs of a policy of inflation, the Bank of France remained passive even when deflation became the real and present danger.

The Setting

A common characteristic of those regions first to experience the economic slowdown was that they imported capital on a large scale in the second half of the 1920s. The fragile economic equilibrium of the period rested squarely on this lending. Germany (p.224)

Table 8.2. Net Short- and Long-Term Portfolio Lending by the United States, 1926–31 (Millions of U.S. Dollars)

	All Countries		South America		Central America		Canada	
Year	Short-term	Long-term	Short-term	Long-term	Short-term	Long-term	Short-term	Long-term
1926	−38.0	724.0	28.0	260.1	−2.5	11.7	39.4	174.5
1927	−70.7	1,081.4	−64.9	287.3	0.2	14.1	41.0	193.8
1928	−83.6	760.8	−0.5	208.2	1.0	15.1	2.8	150.1
1929	−33.7	−67.3	0.2	26.2	−1.8	5.0	6.6	217.1
1930	65.4	471.6	72.6	51.8	−0.3	65.2	36.0	266.7
1931	−29.7	−146.7	−11.2	−20.7	−0.3	−13.2	12.7	148.8

Note: Estimates of the face value of dollar loans issued in the United States, net of amounts taken in foreign countries and in retirement of outstanding debts. Short-term loans are those running five years or less to maturity. Figures for Canada include Newfoundland.

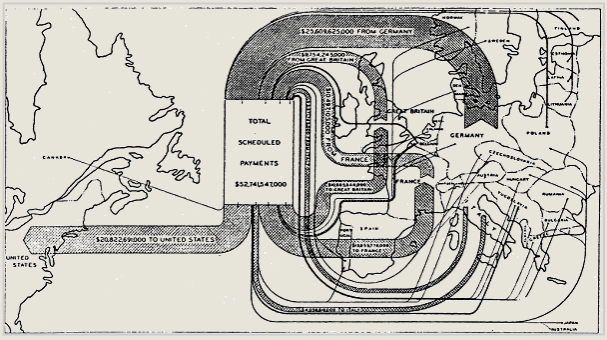
Source: Lewis (1938), pp. 628–629.

promptly paid the annuities required of her by the Dawes Plan during the five years of its operation. The Allies received nearly $2 billion of transfers from Germany between 1924 and 1929. A substantial fraction of the money was passed on from Western Europe to the United States in payment of interest and repayment of principal on war debts. The United States received about $1 billion on war debt account between mid-1926 and mid-1931.[2] American lending to Germany squared the circle by recycling the westward flows. Until 1929 there was no year in which reparations payments exceeded German capital imports.

Central and Eastern Europe traditionally obtained finance from Paris or Berlin. At mid-decade neither center was in a position to extend foreign loans.[3] The new governments of the region therefore turned to New York for accommodation. New York complied. American lending was not directed solely to Europe, however; capital flowed also to Canada, Latin America, and other parts of the world. (See Table 8.2.) Loans to primary-product exporters were needed for financing trade imbalances. The United States traditionally ran merchandise trade surpluses with Europe to finance its deficits with regions that supplied American industry with raw materials. To complete the circuit, Europe ran surpluses with the primary-commodity exporters. In the 1920s, the foreign exchange generated by exports of coffee, beef, wheat, wool, tin, and rubber did not suffice to finance the commodity exporters' purchases of manufactures from Europe and, increasingly, from the United States. Before World War I, in comparable circumstances, the primary producers had (p.225)

(p.226) obtained external finance in Europe. Now their demands were accommodated by the United States.

In the summer of 1928, increasingly



The Flow Of Wealth Involved In War Debt Payments (Situation As Of July I, 1931)

stringent Federal Reserve policy choked off U.S. foreign lending.[4] Speculative investments at home were more attractive than those abroad. Double-digit interest rates on brokers' loans in New York were more appealing than foreign bond flotations on behalf of even the most credit-worthy borrower for financial institutions with access to both markets. Net portfolio lending by the United States declined from more than $1000 million in 1927 to less than $700 million in 1928 and turned negative in 1929. The 30 percent drop between 1927 and 1928 understates the speed of the shift. Virtually all U.S. foreign lending in 1928 took place during the first half of the year.

A heavy adjustment burden was consequently thrust on the debtor nations. The cost of servicing dollar loans was running at about $900 million a year.[5] Through the summer of 1928 additional lending had financed these payments. Suddenly it did not. To keep debt service current, the borrowers were forced to quickly shift their current account balances from deficit to substantial surplus. The $900 million they were asked to raise each year represented about two-and-a-half times the value of the average annual transfer required of Germany under the Dawes Plan. Channeling these resources into debt service entailed a draconian compression of spending. Debtor nations tightened their monetary and fiscal policies to limit domestic spending, strengthen the balance of payments and mobilize resources for service of public debts. Downward pressure on domestic demand was the inevitable result.

Not all countries were affected equally. Bond flotations on behalf of Germany and South America declined abruptly; those for Canada and Central America held up relatively well. The value of German bond flotations abroad fell from a quarterly average of RM 578 million between 1927-III and 1928-II to RM 114 million in 1928-III, RM 273 million in 1928-IV, RM 235 million in 1929-I and RM 75 million in 1929-II. Germany attempted to bridge the gap with short-term borrowing, channelled mainly through the banking system. But soon the creditors began to hesitate. For nearly two years German officials had voiced concern over the rising volume of foreign indebtedness. The U.S. State and Commerce Departments

issued a succession of pointed warnings to American investors. Noting the reparations transfers Germany was responsible for, they questioned whether she could continue to service her already existing debts unless export markets continued to grow. At their peak in 1929, reparations transfers alone reached 15 percent of Germany's gross merchandise exports. As storm clouds gathered on the international economic horizon, American investors drew back.[6]

State and Commerce Department warnings characterized South American borrowing in broadly similar terms. Although no South American country borrowed (p.227) in the same quantities as Germany, several incurred debt-service obligations that were large relative to exports. For reasons similar to those affecting German loans, American investors withdrew from the market for new South American issues in the summer of 1928.

The situation in Central America was different. This was the United States' special sphere of influence. Washington, D.C., essentially controlled, by treaty or military occupation, the finances of Cuba, the Dominican Republic, Haiti, and Nicaragua. Thus, the U.S. government effectively guaranteed loans extended by private investors to these Central American republics and the possibility of default or repudiation did not arise.[7] Like U.S. lending to South America, lending to Central America was depressed by rising interest rates in New York. But with the deterioration of international conditions and the increased riskiness of German and South American bonds, lending to Central America was rendered increasingly attractive relative to other foreign alternatives. In 1930, when U.S. foreign lending recovered temporarily, Central America was favored.

Intimate political and economic relations affected the market for Canadian bonds much as U.S. military presence affected the market for Central American issues. Canada was heavily dependent on the United States for export markets and on New York for finance. Canadian governments seemed no more likely to default on their obligations to U.S. bondholders than on debts to their own constituents. The Canadian economy was gravely affected by the collapse of U.S. lending in 1928.

Rising money rates dried up U.S. lending and drew Canadian capital to New York. But following the 1929 crash, the low level of sovereign risk allowed Canada to reenter the U.S. market on favorable terms.

The collapse of overseas lending posed special difficulties for countries suffering declining export prices. Prices of nonfood agricultural and mineral products had been falling steadily for several years.[8] (See Figure 8.1.) Farmgate prices in the United States, the leading importer of primary products, declined by 7 percent between 1925 and 1926 and by an additional 4 percent between 1926 and 1927.[9] The quantity of foreign exchange generated by a given volume of agricultural exports shrank steadily. Debt-service obligations, in contrast, were fixed in nominal terms. Moreover, the fall in agricultural prices continually exceeded the rate of decline of other prices. For the typical agricultural nation suffering deteriorating terms of trade, the imported capital goods needed to augment its export capacity and diversify its economy absorbed an ever-growing share of the available foreign exchange. (p.228)

In the autumn of 1929, agricultural prices collapsed as the demand for primary commodities plummeted in the industrial countries. (See Figure 8.1.) The average price of agricultural exports fell by 20 percent between 1929 and 1930, by 25 percent between 1930 and 1931. Servicing an external debt fixed in nominal terms became increasingly onerous. So did importing capital equipment and other manufactures. Commodity prices continued to drop at a rate faster than the prices of the manufactured imports the primary producers required.[10]

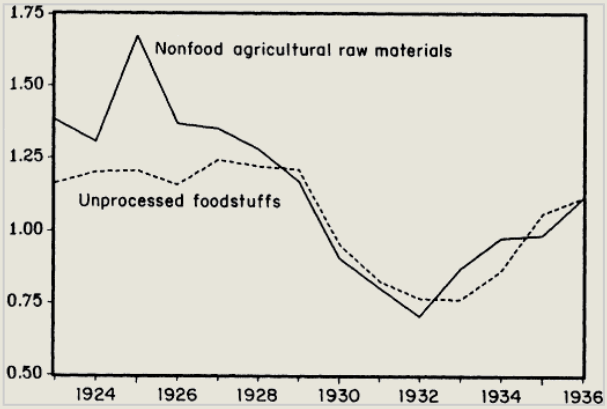


Fig. 8.1. Prices of food and nonfood agricultural commodities relative to manufactures.

The prices of nonfood agriculture commodities, relative to those of manufactures, fell steadily from their 1925 peak. The relative prices of both food and nonfood agricultural prices then declined further following the onset of the 1929 slump.

Source: Grilli and Yang (1988), Appendix I, columns 5, 7–9.

The collapse of commodity prices in the final months of 1929 was so devastating because it was superimposed on the secular deterioration in the terms of trade of commodity exporters. That secular trend was itself a consequence of imbalances in the pattern of international settlements in the 1920s. The lending boom contributed to the expansion of commodity production, encouraging oversupply and intensifying the downward pressure on prices. The foreign loans of the 1920s were not all squandered on municipal

swimming pools and golf courses. Foreign funds had permitted countries to bring new farms, plantations, and mines into production. Railways were extended into remote areas. Roads were built and improved. Port facilities were expanded. Credit was made available for purchasing tractors and farm implements. Any one primary-producing nation could expect to increase its export revenues and national income by expanding productive capacity. But when (p.229)

all countries attempted to do this in the face of inelastic world demand, prices and export revenues were depressed.[11] Other developments reinforced the slump in agricultural prices. World War I encouraged a considerable expansion of acreage under cultivation. Now the diffusion of drought-resistant, quick-maturing strains of wheat permitted still more marginal lands to be cultivated. Improved methods of fertilization and insect control dramatically increased yields. Adoption of the tractor and the combine reduced production costs. Advances in plant breeding

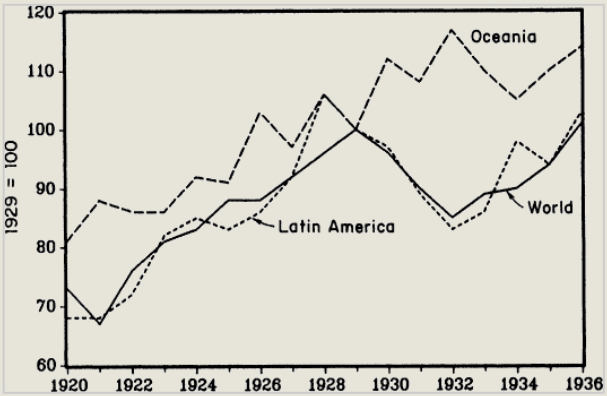


Fig. 8.2. Primary production (excluding meat and milk) 1920–36.

In response to slumping prices, producers of primary commodities tended to cut back output after 1929. Australia and New Zealand, where exports were boosted in a desperate effort to service external debt, provide the one notable exception.

Source: League of Nations, World Production and Prices (various issues).

and mechanical handling and transport further stimulated supplies of a broad range of crops. For all these reasons the volume of production, shown in Figure 8.2, continued to rise through 1929.

Low prices in conjunction with the high volume of production encouraged the accumulation of stocks. Stockpiles of wheat more than doubled between 1925 and 1929. Stocks of sugar, coffee, and cotton grew by at least 25 percent.[12] Commodity markets exhibited many of the same characteristics as equity and bond markets. Commodity traders held stocks in the expectation of capital gains when prices recovered. Events affecting the outlook in one market spilled over to others. Thus the onset of the Depression led traders to revise their forecasts of demand downward and to dump stocks on the market. The collapse of commodity prices accelerated.

(p.230) Dispute arises over the cause of the exceptional speed of the decline in commodity prices in the final quarter of 1929. Kindleberger blames the Wall Street crash for placing pressure on U.S. banks that extended brokers' loans. As these loans went bad and banks in the interior of the United States withdrew correspondent balances that they had previously placed on deposit in New York, the New York banks scrambled for liquidity. They recalled loans to commodity brokers and refused to extend additional credit to those requiring it to carry inventories. Stocks were dumped on the market, provoking a liquidity panic that aggravated the crisis of the commodity-exporting regions.

There is no direct evidence, unfortunately, that credit rationing was primarily responsible for the rapid drop in commodity prices in the final months of 1929.[13] However plausible for New York, it is unlikely that the same mechanism operated in other financial centers, such as London, where banks had not extended a comparable volume of brokers' loans and did not suffer the same distress in the wake of the Crash. With prices in decline, even highly liquid banks had good reason to hesitate before extending credit to those who invested in commodity inventories and who might find themselves unable to pay the money back. Producers and commodity brokers still able to obtain credit had the same

incentive to liquidate stocks now that the industrial economies were moving into recession and demands for industrial raw materials would decline. Moreover, as the demand for commodity imports in Europe and the United States continued to fall, the heavily indebted nations boosted their commodity exports in a desperate effort to generate the foreign exchange needed to service their debts. Their government budgets moved deeper into deficit, threatening their gold parities and forcing countries to suspend commodity-price stabilization schemes that had supported the market in preceding years. It is likely that all these factors, and not just credit rationing, contributed to the commodity price slump.

The Options

Heavily indebted commodity-exporting nations could choose among three courses of action. The orthodox response, as just described, was to boost exports and limit imports so as to mobilize the foreign exchange needed for defending gold convertibility and keeping debt service current. Governments cut public spending. They raised taxes, especially import duties. They applied export bounties. This was the option pursued by virtually every debtor nation until 1929. Argentina, Austria, Australia, Brazil, Bulgaria, Colombia, Germany, Greece, Hungary, Poland, and (p.231) Venezuela all used these devices to significantly strengthen their trade balances between 1928 and 1929. But the precipitous drop in commodity prices after the summer of 1929 rendered even the most heroic adjustments inadequate. Resistance to policies of austerity, which were blamed for worsening the economic crisis or shifting its burden onto the working class, was mounting throughout Central Europe and Latin America. The defection of the SDP from the governing coalition in Germany in 1930 in response to government efforts to impose additional budget cuts was only the most graphic illustration of a general phenomenon.

A second option was to suspend external debt service in order to devote foreign exchange to essential imports. This was the option debtors ultimately turned to starting in 1931. But in 1929 and 1930 they went to great lengths to avoid it. Default threatened to disrupt their access to international capital

markets. After the Wall Street boom had ended, financial experts predicted, only debtors in good standing would be able to borrow abroad. Actually, no country was able to borrow on a significant scale in the 1930s. American lending recovered temporarily in 1930 but collapsed permanently in 1931.[14]

It was impossible to anticipate this in 1929, however. The collapse of the international bond market after 1930 itself reflected, in large part, the prevalence of debt-servicing difficulties. Prior instances of sovereign default had been isolated, and third countries suffered a minimum of damaging repercussions. When Mexico and the Soviet Union repudiated their debts and had been banished from the capital market in the 1920s, other countries were unaffected. This was the basis for the belief that the maintenance of debt service would be rewarded with continued capital market access. Moreover, policymakers feared that default would trigger commercial retaliation. Countries that suspended debt service payments might lose access to the U.S. export market. In fact, little commercial retaliation occurred. But in 1929 no one could anticipate that Franklin Delano Roosevelt would win the presidency in 1932, bringing with him a Secretary of State, Cordell Hull, who staunchly opposed the use of trade policy on behalf of bondholders.

A third option was to suspend the gold standard. If they were willing to allow the exchange rate to depreciate, governments would not be forced to pursue policies designed to compress domestic spending. But, like the suspension of debt service, this was a step they hesitated to take. Convertibility provided a visible signal that the government's financial house was in order, and the gold standard inspired confidence on the part of domestic savers and foreign investors.[15] In an effort to maintain confidence, governments consequently sought to disguise the extent of currency depreciation. They maintained convertibility de jure even when suspending it de facto. They rationed foreign exchange at the official price. Rationing meant that the black market price of foreign exchange could significantly exceed the official price. But by disguising the extent to which the central features of the gold standard had been abridged, the policy limited the damage to the country's

creditworthiness, (p.232) lessened the danger of retaliation, and minimized domestic political repercussions.

The policy of exchange-rate depreciation also had significant advantages. By depreciating the currency, a country's exports might be rendered more competitive in international markets. Domestic producers granted relief from import competition were encouraged to expand production. The domestic-currency prices of commodities would rise by the extent of the exchange-rate depreciation. Insofar as domestic-currency costs lagged behind, there would be an incentive to expand production and exports. Foreign exchange revenues might rise, facilitating the payment of debt service and insuring access to international capital markets. This was the alternative to which policymakers in most heavily indebted, primary-producing countries were ultimately forced to turn.

Australia as a Prototypical Primary Producer

Australia was among the first countries to pursue this third option. Even before the Depression struck, its policy of pegging to the overvalued British pound exacerbated the difficulties of producing primary commodities for export. Its high exchange rate pushed down domestic-currency prices relative to costs. Labor costs were slow to respond because wage standards were laid down by Commonwealth and state arbitration tribunals. Wage awards specified minimum rates of pay by occupation, gender, and region and generally covered periods ranging from one to three years. Though the tribunals eventually reduced their awards to reflect the downward trend of prices, wage rates were indexed to the cost of living rather than to export prices. With Australia's terms of trade turning against it (as shown in Figure 8.3), the cost of living (which included imports, rents, and services, whose prices rose relative to those of primary commodities) fell more slowly than the export price index. This intensified the squeeze on producers of exportable goods. Between 1928 and the end of 1929, Australian export prices fell by nearly 25 percent. Nominal wages in the nonfarm sector fell by less than 5 percent. Until 1931, the Common-wealth Court resisted pressure to reduce nominal wages relative to the cost of living.[16]

The nation entered the crisis with £95 million of international reserves, half in the form of London exchange.[17] As borrowing abroad became increasingly difficult, and in the second quarter of 1929 the trade balance swung from surplus to deficit, these reserves were taxed. Australia initially financed its payments deficit by drawing down the London funds (Australian bank deposits in London). By mid-1930 these had fallen to less than a quarter of their 1928 level. It became necessary to (p.233)

make balance-of-payments settlements in gold. Australia parted with £10 million of gold, about a fifth of all it possessed, in the second half of 1929 alone. The overriding objective of policy was maintaining the nation's

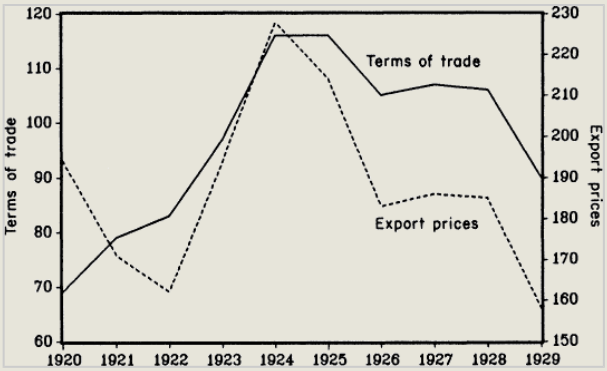


Fig. 8.3. Australian terms of trade and export prices, 1920–29 (1911 = 100).
Australia's export prices deteriorated progressively after peaking in 1924, greatly complicating the task of maintaining external balance.

Source: Copland (*1934*), *p. 14*.

creditworthiness. Borrowing in London had already become difficult; since 1928 British investors had been worrying that, if commodity prices weakened, Australia would be unable to service its existing debt.[18] When the Depression struck, the authorities adopted deflationary policies to limit consumption, discourage imports, and free up domestic goods for export. Public spending was cut. New customs and excise taxes were imposed. But the nation's “rigid” wage system limited the scope for adjustment.[19] Reserve losses undermined confidence

in the currency and placed downward pressure on the pound. By December 1929 exchange quotations had fallen 2½ percent below par. This was as much depreciation as the gold standard allowed. A larger discount would have violated the gold points, giving banks an irresistible incentive to demand gold in exchange for domestic currency and export it to London.

Suspending debt service would have helped to husband remaining reserves. Public debt service absorbed 17 percent of export revenues in 1927–28, a figure that rose to 25 percent with the collapse of trade in 1930–31.[20] Twenty-five percent was roughly the share of exports Germany devoted in 1929 to reparations payments and commercial debt service combined. But for a Commonwealth government whose (p.234) economic strategy was predicated on its ability to borrow abroad, default was unthinkable. One of the first statements of the Scullin Government that took office in January 1930 reaffirmed its commitment to meeting the nation's external obligations.

It was not immediately clear how this objective could be achieved. Cutting real wages would have reduced absorption and stimulated additional production for export, but this was antithetical to a tribunal system committed to maintaining of a living wage. Scullin had been elected on a pledge to preserve the Commonwealth Court of Conciliation and Arbitration, the principal wage tribunal, which was interpreted by the electorate as a pledge to preserve the standard of living. As the Depression deepened, he was forced nonetheless to entertain these and other alternatives. In February 1931 the Commonwealth Court attempted to reduce the real wage by 10 percent. But the Court set only nominal wages, not real wages which depended also on changes in prices. And prices continued to fall, dissipating the decline in production costs. Moreover, the Commonwealth Court set only wage minima; it could not prevent workers and employers from negotiating higher levels of pay. Real wages did not decline.[21] Almost simultaneously, the Labour Government of New South Wales attempted to default on the state debt. Its action was vetoed by the Commonwealth government, which assumed responsibility for debt service.

Capital flight, motivated by expectations of further currency depreciation, intensified the problem. Exporters delayed repatriating their foreign earnings. Importers accelerated their purchases overseas. With reductions in debt service as well as in labor costs ruled out as possible forms of adjustment, the inevitable payments crisis loomed.

Currency depreciation was the obvious solution. But still no country had yet attempted it. The dominant faction within the government and the banking community continued to identify sound finance with exchange rate stability.

To slow the loss of reserves, the authorities therefore encouraged the banks to ration foreign exchange. There was precedent: before the war, Australia like New Zealand had defended a weak exchange rate by rationing credit to importers.[22] Now the banks formed a cartel that provided limited amounts of foreign currency at par. Maintaining the official price of foreign currency and thereby the official exchange rate was designed to eliminate the incentive to export gold. Inevitably it encouraged the development of a black market quoting considerably higher prices for foreign exchange. These discounts provided an increasingly powerful incentive for banks to cheat on their cartel agreement.

In December 1929 Parliament therefore adopted an act requisitioning the trading banks' gold and concentrating it in the Commonwealth Bank (a government-owned but independently operated commercial bank increasingly taking on central banking functions). The following month citizens possessing gold were required to (p.235)

Table 8.3. Commonweath and State Finances 1928–29 to 1934–35 (Millions of Pounds)

	1928–29	1929–30	1930–31	1931–32	1932–33	1933–34	1934–35
Expenditure							
Debt charges	61.1	63.1	68.8	66.1	60.6	58.9	57.3
Businesses	76.5	71.1	54.4	45.6	43.2	43.9	50.6
Social	32.6	32.8	32.6	31.0	40.8	40.8	40.6
Primary industry	8.8	8.8	7.0	7.4	7.6	8.3	9.6
Law and defense	19.9	20.0	18.7	16.9	15.9	16.7	17.9
Other public works	10.3	8.1	3.9	2.4	2.1	2.6	8.9
Other	21.9	20.7	19.2	17.9	17.0	19.5	19.6
TOTAL	230.7	224.6	204.5	187.2	187.2	190.1	199.5
Revenue							
Taxation	88.9	92.1	86.3	86.7	93.5	90.8	95.2
Businesses	72.2	67.8	59.1	57.7	58.2	57.8	61.5
Land revenue	5.1	4.5	3.6	3.6	8.9	3.9	4.0
All other	22.2	21.3	21.6	20.3	19.8	20.2	19.4
TOTAL	188.3	185.7	170.6	168.3	175.3	172.7	180.1
Deficit	42.4	38.9	34.0	18.9	11.9	17.4	19.4

Note: Elements do not always sum to totals due to rounding.

Source: Barnard (1986a).

deliver it to the Commonwealth Bank in exchange for notes.[23] This allowed the exchange rate to fall below the gold export point without leading to specie losses. The de facto suspension of convertibility placed into abeyance one of the central elements of the gold standard, although some of those involved in the decision, such as Sir Robert Gibson, Chairman of the Commonwealth Bank Board, appear not to have understood that.[24] In April 1930 the London exchange was pegged at 94 percent of par, where it remained for most of the year. Even at this lower level, the currency remained significantly overvalued. At the end of 1930, the banks were quoting exchange rates 8½ percent below par, while the outside market was quoting the Australian pound at discounts as large as 18 percent.

Again the government applied orthodox medicine. New import duties and prohibitions were imposed. Starting in August 1930 state and Commonwealth governments adopted another round of economy measures. Between the 1929–30 and 1930–31 fiscal years, the expenditures of Commonwealth and state governments were cut by nearly 10 percent, as shown in Table 8.3.[25] To maximize how efficiently the available foreign exchange was used, the reserves of the banks were pooled. But the growth of the black market discount increased the incentive for banks to welsh on their agreement to ration foreign currency. Without formal controls, the cartel agreement became increasingly difficult to enforce. In January 1931 the Bank of (p.236) New South Wales defected, and rationing collapsed. By the end of the month the rate quoted by the banks had fallen 30 percent below par, where it was repegged.[26] To save face and minimize damage to the nation's creditworthiness in London, other components of the gold standard, notably the statutes linking the Commonwealth Bank's note issue to its specie reserve, were retained. Still, in terms of its implications for import and export prices, this was tantamount to devaluation.[27]

The Response of Other Debtors

Argentina's situation evolved in a parallel manner. Like Australia, Argentina had relied disproportionately on foreign capital to finance domestic development. In 1925–29, foreign debt service absorbed 31 percent of gross exports, an even higher figure than Australia's.[28] A very large bill would come

due if capital imports fell off, and consequently the maintenance of capital-market access was paramount.

Like Australia, Argentina was battered by the collapse of foreign lending and by the slump in primary commodity prices. High call money rates in New York attracted short-term capital from Buenos Aires. No new foreign loan was floated between February 1928 and the end of 1929. Wheat prices fell by nearly 30 percent in the year ending May 1929. The value of export receipts was off by 8 percent between the first semesters of 1928 and 1929.[29]

The Argentine gold standard was managed by two agencies: the *Caja de Conversión* (or Stabilization Office), which stood ready to convert paper pesos into gold, and the *Banco de la Nacion*, which held the system's excess gold reserves. The two agencies served essentially the same functions as the Issue and Banking Departments of the Bank of England. By purchasing notes from the *Caja* in exchange for gold, the *Banco* could raise the ratio of note circulation to gold reserves and impart elasticity to the money supply. It could use the device to sterilize the domestic impact of international gold flows. In 1927–28, when good harvests and liberal foreign lending produced a sizeable balance-of-payments surplus, most of the additional gold went into the reserves of the *Banco* rather than the *Caja*. It therefore failed to increase the note circulation.

However admirable an effort to avoid repeating the inflationary excesses of the 1880s, the policy of sterilization prevented Argentine interest rates from falling sufficiently to discourage British and American lending. Similarly, when the balance of payments weakened after the summer of 1928, gold exports were financed out of the reserves of the *Banco*, not the *Caja*. The change in the note circulation and adjustment through deflation therefore were minimized. Bank credit expanded rather than contracting after the summer of 1928.[30]
(p.237)

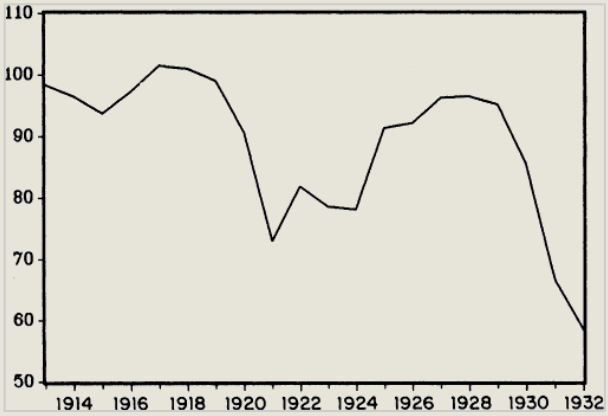


Fig. 8.4. Argentine peso/U.S. dollar exchange rate, 1913–32.

After having been stabilized briefly in 1927–28, the Argentine peso was detached from the gold standard and began to depreciate in 1929.

Source: Peters (*1934*), *p. 166*.

Once international conditions deteriorated, the predictable consequence of this policy of sterilization was a steady decline in reserves. Continuing the policy would have led inevitably to a convertibility crisis. The remarkable feature of Argentine policy is that the gold standard was suspended before the crisis occurred. In December 1929 the *Caja de Conversión* was closed; gold could no longer be freely obtained in exchange for domestic currency. This was something no other country was willing to do until after Britain's abandonment of the gold standard in 1931.

The explanation for this unusual behavior lay in Argentina's budgetary impasse. The budget of the Republic was in substantial deficit throughout the 1920s. So long as foreign borrowing was possible, the deficit posed no threat to convertibility. But once international capital markets closed down, deficits and the gold standard were rendered incompatible. The domestic market for long-term debt was shallow; neither the banks nor the public held many government bonds. The government was forced to finance its deficit by selling floating debt to the *Banco de la Nacion*, in return for currency notes which the *Banco* obtained from the

Caja in exchange for gold. The floating debt rose by 50 percent between 1928 and 1929.[31] For the *Banco* to absorb this “great indigestible lump,” a matching increase in the note circulation was required; this depressed the exchange rate, weakened the balance of payments, and led to further gold losses.[32] Unless the budget was balanced, (p.238) convertibility would be suspended sooner or later. Suspending it sooner would preserve international reserves for use in servicing the debt.

Politicians despaired of balancing the budget. On the eve of the Depression, only 10 percent of public revenues was raised by direct taxation.[33] Import duties were the main source of public revenues, and trade was in free fall. Proposals for an income tax submitted by the government in 1924 and 1928 were blocked by the Congress. The onset of the Depression created large deficits in the budgets of the state railways and post office. Those who purchased their services adamantly resisted higher rates. There was little central control of expenditures. Each minister submitted separate spending plans and defended his budget to the death. It was left to the Chamber of Deputies to reconcile their requests. More often than not the Chamber failed.[34] If the budget battle was lost, it was better to suspend convertibility before reserves were depleted.

From an Argentine perspective, the decision to leave the gold standard was not without precedent. The nation's dependence on foreign lending had always rendered difficult the maintenance of gold convertibility. Suspending convertibility was the traditional response to capital-market disturbances. Inconvertibility may have been associated with inflation, but not to the same extent as in Europe.

Brazil followed after vacillating. In 1929 its foreign debt service amounted to some 20 percent of export receipts, with coffee as the principal source. Coffee, as one foreign commentator observed, was “the pivot on which turn, not only the balance of trade, but also the balance of the national finances.”[35] In 1927 a new coffee defense scheme had been established. The reorganized Coffee Institute, under the authority of the Ministry of Finance, was given responsibility for regulating the export of coffee and for purchasing and

warehousing surplus stocks in the interior. The 50 percent fall in the price of coffee starting in 1929, in addition to weakening the balance of trade, caused a very serious deterioration in the federal budget.

The monetary authorities did what they could to minimize the impact on the balance of payments. The Brazilian Stabilization Office and the *Banco do Brasil* performed the same functions as their Argentine counterparts. Specie flows could be sterilized, as in Argentina, by transfers of gold between the *Banco* and the Stabilization Office. In addition, only a portion of the notes emitted by the Stabilization Office, the Treasury, and the *Banco* were convertible into gold. One of the *Banco*'s responses to the crisis was to acquire as many of these gold notes as possible. For investors unable to obtain gold notes, it was impossible to convert currency into gold. Employing this device, the government minimized gold losses in the second half of 1929.

With convertibility effectively suspended, no mechanism linked the milreis to sterling and the dollar. The currency fell to less than 93 percent of its parity in January 1930. (See Figure 8.5.) Although modest depreciation did not disrupt capital market access, additional currency instability threatened to do so. The long-term (p.239)

Fig. 8.5. Brazilian milreis/pound sterling exchange rate, 1913–30.

The Brazilian milreis, after enjoying six years of relative stability, renewed its depreciation in 1930.

Source: Fritsch (*1989*), *p. 187*.

solution to this problem lay in the hoped-for recovery of coffee prices and foreign lending. But when coffee prices failed to recover, gold shipments were initiated to reverse the currency's fall. These pushed the milreis back up toward par, permitting placement in London and New York of a State of Sao Paulo loan secured by more than 16 million bags of coffee. When the anticipated recovery of coffee prices again failed to materialize, the bankers were left holding the bag (in this case literally), rendering them unwilling to extend another loan on any significant scale.

The coffee defense scheme committed the authorities to purchase coffee at prices significantly above world levels. This pushed their budget into deficit and quickly dissipated the loan proceeds. Demands for government loans by coffee growers and speculators precluded expenditure reductions, while demands for discounts by banks who had extended them credit prevented the adoption of a more restrictive monetary policy. The collapse of trade eroded the receipts of a federal government for which import duties were the single most important source of revenue. Meanwhile, the deterioration of living standards heightened resistance to tax increases. The drain of reserves accelerated with the rise of political unrest following the March 1930 presidential election. In May gold shipments were suspended again, renewing the depreciation of the milreis.

Although Brazil continued to service its debt, sacrificing reserves, the tightening of informal capital controls by Britain and the impact on investor confidence of the October 1930 revolution eliminated remaining opportunities for foreign borrowing. The Brazilian authorities shipped gold in a futile effort to limit the depreciation of the milreis. By the end of 1930, the gold reserve was spent and the *Banco do Brasil*'s exchange reserves were all but exhausted. The right to sell foreign exchange (p.240) was officially restricted to the *Banco do Brasil*, which rationed it at a fixed price. Toward the end of November the *Banco*'s monopoly rights were removed. No alternative remained to currency depreciation and, subsequently, default.

Brazil's experience points up the capacity of an external loan to relax budget and balance-of-payments constraints. Canada provides an even more graphic example. In 1928, high call money rates in New York attracted short-term capital from north of the border. Canada lost a quarter of her gold reserve over the course of the year. As in other debtor countries, reserve losses were sterilized initially. The Department of Finance simply rediscounted securities for the chartered banks.[36] Though call loan rates in New York reached 8 percent, the Department maintained a 4½ percent discount rate from the final quarter of 1928 through the end of 1929. This gave the banks an irresistible incentive to borrow from the government and lend to New York. The government's refusal to raise the discount rate and its hesitation to permit the note issue to fall pushed the gold cover ratio below the legal minimum. The authorities failed to recognize the threat posed to gold convertibility by this policy until it was too late.[37] In late 1929, without any change in statute, the Department of Finance simply stopped redeeming Dominion notes for gold. As in Australia, the banks agreed to an informal embargo on gold exports. With two of the three components of the gold standard—convertibility and free exports—in suspension, the third element—a fixed domestic-currency price of gold—was sure to follow.

Given the swing in the trade balance from a $152 million surplus in 1928 to a $91 million deficit in 1929, it is striking

that the Canadian dollar declined so slightly. The discount on Canadian exchange rarely exceeded 1 percent.[38] In part the explanation lies in the flow of short-term capital from the United States to Canada with the decline in U.S. interest rates following the Wall Street crash. Capital inflows were encouraged by the Canadian government's stated commitment to eliminate the discount on the currency as soon as possible. So long as their commitment remained credible, stabilizing capital inflows propped up the Canadian dollar.[39]

(p.241) But net short-term capital movements, the type of capital flow most responsive to anticipations of exchange rate fluctuations, were small throughout the period. Long-term bond flotations were consistently more important. Contrary to trends in U.S. lending to other countries, U.S. long-term lending to Canada rose from $79 million in 1928 to $133 million in 1929. Thus, the key to the stability of the Canadian dollar lay in the rapid restoration of Canada's access to the New York market. The stated desire to restore the gold parity was only one of many factors that encouraged long-term lending. The others included extensive two-way cross border movements of commodities, labor, short-term funds, and direct foreign investment, all of which rendered it unlikely that Canada would default on her dollar debts. The capital-market access Canada consequently enjoyed was the central factor responsible for the stability of her dollar.

Germany's Precarious Equilibrium

The traditional explanation for the precocious German slump emphasizes this same set of factors. American lending to Germany fell off in the third quarter of 1928. The balance of payments weakened, placing upward pressure on interest rates and creating a capital shortage that depressed investment demand.[40] Hence the German economy weakened even before that of the United States. The growth rate of real net national product at market prices declined from 14 percent in 1926–27 to 1½ percent in 1927–28.[41] (The figures for net national product in Table 8.4 are nominal, not real.) By the second half of 1928, many important economic indicators were already in decline. Germany was then subjected to a second shock when its export markets contracted in 1929.

Several developments seem difficult to reconcile with this conventional view.[42] While the German balance of payments weakened between 1927 and 1928, it nonetheless remained in surplus throughout. The Reichsbank's international reserves continued to rise. It is not obvious, therefore, that a balance of payments problem of a magnitude sufficient to create a domestic credit crisis existed. Moreover, international reserves and monetary aggregates moved in different directions, a fact which sits uneasily with the premise that the balance of payments dictated German credit conditions. Even if the German economy suffered credit stringency in 1928–29, its onset does not seem to coincide with balance of payments trends. Finally, Germany—unlike Australia, Canada, Argentina, and Brazil—was not forced to (p.242)

Table 8.4. German Income, Exports, and External Debt Service, 1925–30 (Billions of Reichsmarks)

Year	Net National Income (Market Prices)	Current Government Revenues (Excluding Borrowing)	Exports	Reparations	Interest Payments Abroad
1925	67.3	12.9	9.5	1.1	0.3
1926	65.5	14.7	10.7	1.2	0.5
1927	80.5	17.1	11.1	1.6	0.7
1928	84.0	18.7	12.6	2.0	0.9
1929	79.5	18.9	13.6	2.3	1.2
1930	71.9	18.8	12.2	1.7	1.4

Sources: Government revenue (all levels of government) and interest payments are from Schuker (1988), pp. 25, 44–45. Net national income at market prices is from Hoffmann (1965), pp. 248–249. Reparations are from Holt-frerich (1986b), p. 152. The column headed Interest Payments Abroad includes dividends and other earnings from property. Exports are from Webb (1989).

suspend gold convertibility and depreciate its currency in 1929, suggesting that the external shock was not sufficiently severe to account for the German slump.

In fact, neither the asynchronous movement of domestic credit and international reserves nor Germany's success in absorbing the external shock undermines the conventional interpretation of the German slump. A number of factors contributed to Germany's singular ability to accommodate the shock. The burden of debt service, though heavy, was smaller as a share of exports than that carried by a number of other debtors. Export revenues held up relatively well. As an exporter of manufactures, Germany did not suffer a terms-of-trade deterioration like that raising the debt-to-export ratios of primary producers. What she achieved through domestic sacrifice, world price movements did not take away.

Moreover, the government could argue that continued good performance would be rewarded by reparations concessions. The Center-Left coalition that ruled in 1929–30 based its economic strategy on the expectation that prompt transfers would lead to a favorable conclusion to the Young Plan negotiations—specifically, to a downward revision of the reparations bill that would permit tax cuts designed to stimulate recovery.[43] There was no such carrot to promote adjustment by Latin American debtors.

Besides the carrot, there was also a stick. Had Germany failed to eliminate its incipient payments deficit, serious consequences would have ensued. If the gold cover fell below 40 percent, confidence in convertibility would have been threatened. It might have been necessary to suspend the gold standard and depreciate the currency.[44] Policymakers worried that depreciation would rekindle hyperinflation, memories of which were still fresh. Fears of inflation would provoke capital flight, disrupting financial markets and depressing investment. Moreover, depreciation would torpedo German hopes of reparations concessions. Thus, in contrast to the (p.243)

situation elsewhere, in Germany there was virtually no support for leaving the gold standard, even after other countries had defected.[45] These

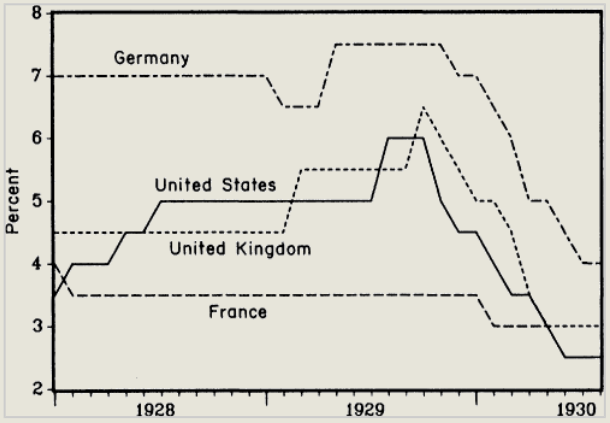


Fig. 8.6. Central bank discount rates, January 1928—August 1930.

The Reichsbank was forced to maintain a higher discount rate than those of other major central banks by the recurrent weakness of Germany's balance of payments.

Source: Banking and Monetary Statistics, pp. 439, 656–659.

considerations compelled drastic retrenchment on the monetary and fiscal fronts. The Reichsbank curtailed the provision of domestic credit by discouraging discounts. Throughout 1928 it kept its discount rate at 7 percent, considerably in excess of central bank discount rates in Paris (3½ percent), London (4½ percent) and New York (3½ to 5 percent). (See Figure 8.6.) By the end of the year, monthly money rates had risen to nearly 9 percent. Aside from 1929-I, short-term interest rates were higher in every quarter between 1928-III and 1929-IV than they had been in the first half of 1928. Call money rates averaged 6.1 percent in 1927, 6.7 percent in 1928, and 7.7 percent in 1929.[46]

April 1929 provided a convincing affirmation of the Reichsbank's resolve. Because of the effects of increasingly restrictive U.S. monetary policy, borrowing from the United States had already fallen off. The short-term capital attracted

by high interest rates in Berlin was now drawn from Paris rather than New York as before.[47] Suddenly French anxiety over the prospect of new reparations negotiations interrupted these inflows. Bank deposits in Germany fell by 5 percent between the end of March and the end of May, withdrawals that many observers attributed to the uneasiness of foreigners. The Reichsbank lost nearly RM 1 billion of reserves in April alone. By the first week of May, the gold cover ratio had fallen alarmingly (p.244)

Table 8.5. German Government Revenue, Expenditure, and Debt, 1925/6–1928/9 (Millions of RM)

	1925/6	1926/7	1927/8	1928/9
Expenditure				
Reich[1]	7,445	8,542	9,315	10,088
Federal States[1]	4,123	4,357	4,585	4,564
Communes[1]	6,734	7,422	8,029	8,461
Hansa Cities[1]	528	595	640	675
Social Insurance[2]	2,449	4,070	4,107	5,079
Total Expenditure	21,279	24,986	26,676	29,667
Revenue				
Reich	7,333	7,689	8,961	9,650
Federal States	3,577	3,942	4,144	3,994
Communes	6,387	7,124	7,541	7,713
Hansa Cities	503	583	628	645
Social Insurance[2]	2,835	4,598	4,921	5,815
Total Public Revenue	20,635	23,936	26,195	27,817
Deficit	644	1,050	481	1,850

(1) Expenditure for Reich, Federal States, Communes, and Hansa Cities includes payments to other public authorities: these net out in the total. Reich revenue and expenditure refer to combined ordinary and extraordinary budgets.

(2) Includes unemployment insurance.

Sources: Reich accounts are from Reparation Commission (1930), pp. 104–105. Social insurance is from Balderston (1990), Table 7.2. Other levels of government are from James (1986), p. 52.

close to the 40 percent statutory minimum. The Reichsbank responded by raising its discount rate to 7½ percent and rationing credit.

These monetary trends also had fiscal implications. Between 1925 and 1927, state and local governments had run budget deficits financed in part by foreign borrowing (see Table 8.5). Starting in the summer of 1928, foreign borrowing became increasingly difficult, and the tax revenues of the states fell off. They were forced to reduce levels of public spending, reversing the trend of previous years and imparting another contractionary impulse to the economy.[48] The budget deficit of the combined public authorities nonetheless continued to widen, reflecting the growing deficits of the Reich. But a substantial part of the rise in Reich spending reflected central government subsidies to the accounts of the unemployment insurance scheme and other social insurance programs. Between January 1928 and January 1929, the number of workers on unemployment relief rose from 1.3 to 1.9 million. An additional 138,000 workers received "crisis relief."[49] Thus, a significant portion (p.245) of the rise in public spending was induced by the economic slowdown. Measured on a constant-employment basis, fiscal policy would have looked much less expansionary.

The policy response accounts for those features of German experience superficially at odds with the capital-scarcity view. Higher interest rates were more than sufficient to prevent a payments deficit. Spending, mainly on investment, was compressed. Output was freed up for export: export revenues rose by 14 percent between 1927 and 1928 despite the stagnation of domestic production. Merchandise imports fell. Higher interest rates attracted short-term capital from abroad. But due to the Reichsbank's restrictive policy, the stock of high-powered money fell over the second half of 1928. That

domestic financial aggregates and the balance of payments moved in different directions in 1928 is not surprising if we recall that the Reichsbank adopted a restrictive posture to minimize gold losses, so much so that it ended up acquiring reserves.[50]

Despite these drastic measures, it is unlikely that Germany could have absorbed the external shock without international assistance. In April 1930, the Young Plan relieved her of part of her burden. Discussions had been underway since February 1929. Events of the subsequent year forced the negotiators to acknowledge that the deteriorating business climate had eroded Germany's capacity to pay. The Young Plan reduced Germany's reparations annuity from RM 2.5 billion to RM 2.0 billion. Special concessions then cut back her liability for the period September 1929 to March 1930 to RM 0.7 billion.[51]

Following the precedent set by the Dawes Plan in 1924, an integral component of the Young Plan rescheduling was a stabilization loan. Germany was lent RM 1.2 billion in 1930, nearly financing her reparations outpayments for the year. She still needed to raise foreign exchange to service the commercial debt. This the Reich did by restricting domestic spending, shifting from trade balance in 1929 to a trade surplus of RM 1.6 billion in 1930.[52] In the absence of a loan, a still larger trade surplus and a still greater compression of domestic spending would have been required. Spending would have had to fall by another 2 percent of GNP, which may not have been feasible politically. In this sense the Young Plan was essential to maintaining the German gold standard.

The Young Plan loan was the last major foreign issue floated on behalf of Germany. As it became evident that the recovery of the New York capital market was only temporary, doubts surfaced about whether Germany would be able to double the resources she transferred abroad. Reserve losses recommenced following the September 1930 elections, in which the Nazis scored disturbing gains.

The short maturity of Reich's own debt rendered the situation precarious. At the end of 1930, RM 10 billion of Germany's foreign debt matured in less than three (p.246) years. This

was half of the total, leaving aside direct foreign investment. A substantial share was debt of the German banking system.[53] If foreign banks and other foreign depositors lost confidence and withdrew their funds, they could more than wipe out the entire proceeds of the Young Plan loan. Then there was the threat to the German banking system, whose liabilities were more liquid than its assets.[54] The withdrawal of French deposits in 1929, when Young Plan negotiations stalled, provided a taste of the future. When a more serious spate of withdrawals occurred in 1930, British and American banks in the process of marketing Young Plan bonds stepped in with credits to prop up the German position. It seemed doubtful that, once they had disposed of their bonds, the banks would be prepared to do so again.

Propagation

By the end of 1929 recession was almost universally evident. Only France, Sweden, and a few of their economic satellites were spared. The downward spiral accelerated as economic activity in the United States moved into decline.

The explanation for the unusually rapid contraction of the U.S. economy in 1929–30, when real GNP fell at twice the rate typical for the first year of a recession, remains the subject of debate. Tight monetary policy prior to the stock market crash, the crash itself, the weakness of consumer spending, and the financial effects of distress in the agricultural sector all could have contributed to the usually rapid decline of U.S. GNP.[55] The explanation is incomplete, however, without a role for deteriorating economic conditions in other parts of the world.[56] Decelerating growth and mounting balance-of-payments problems abroad surely contributed to the American economy's weakness. The decline in incomes in primary-producing regions and the policies of import compression adopted by debtor nations constrained the growth of U.S. exports. The value of U.S. merchandise exports peaked in March, well before industrial production turned down. Seasonal factors were responsible for only a small portion of the decline (see Figure 8.7).[57] Exports were not a sufficiently large share of U.S. production for the deterioration of foreign market conditions to fully account for the weakening of the

economy. But they were another nail in the coffin of American prosperity.

The initial stages of the Depression took different forms in debtor and creditor nations. The same decline in lending that weakened the capital account balances of the borrowers strengthened those of the lenders. Since no significant sovereign defaults occurred before 1931, the creditors continued to receive interest transfers (p.247) from abroad. The terms of trade losses of the borrowers were terms of trade gains for the lenders. For all these reasons the payments positions of the creditor countries moved into strong surplus, as shown in Table 8.6. Reserves surged toward the principal net foreign creditors: France, Belgium, the Netherlands, Switzerland, the United Kingdom, and the United States[58] The consequences hinged on the reactions of central banks. The “rules of the game” dictated monetary expansion in countries gaining reserves, monetary contraction in countries experiencing losses. While redistributing the incidence of the Depression from the first

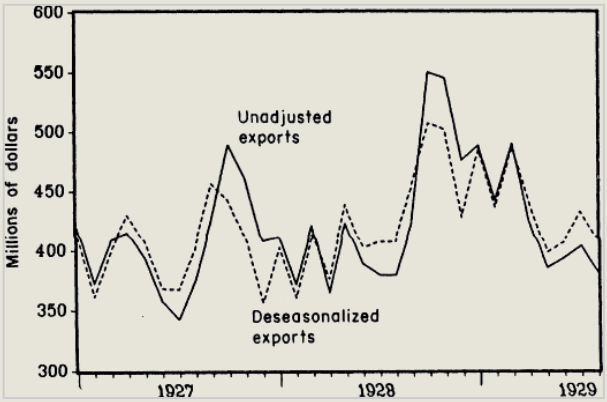


Fig. 8.7. Value of U.S. merchandise exports, 1927–29.

American merchandise exports peaked in March 1929, nearly six months before industrial production turned down. Only a small portion of their decline in the second quarter of the year was due to seasonal factors.

Source: Tinbergen (*1934*), *as deseasonalized by author.*

set of countries to the second, it is not obvious that these offsetting shifts would have necessarily worsened the global slump. Similarly, had all central banks chosen to sterilize international reserve flows, in violation of the “rules,” payments deficits and surpluses would have had no impact on domestic money and credit conditions and no immediate implications for the severity or the incidence of the global depression.

The actual response lay between these extremes. Central banks losing reserves, though they could delay the day of reckoning, were soon forced to restrict domestic credit to defend gold convertibility. Adherence to the gold standard required that reserve losses be allowed to reduce domestic money, credit, prices, and, ultimately, economic activity. Countries that let their currencies depreciate did not face this

(p.248)

Table 8.6. Change in Gold and Total International Reserves of Debtor and Creditor Countries, 1929–31 (Millions of Swiss Francs)

	1929		1930		First half of 1931		Second half of 1931	
	Gold	Total Reserves	Gold	Total Reserves	Gold	Total Reserves	Gold	Total Reserves
6 Creditor Countries	2,831	1,566	4,284	4,650	3,168	3,132	1,936	−450
26 Debtor Countries	−1,515	−1,637	−1,728	−2,276	−1,136	−2,568	−2,200	−3,556

Notes: Creditor countries are United States, United Kingdom, France, Belgium, Netherlands, and Switzerland. Debtor countries are Germany, Italy, Sweden, Czechoslovakia, Austria, Hungary, Bulgaria, Greece, Poland, Lithuania, Latvia, Finland, Denmark, Norway, Danzig, Yugoslavia, Portugal, Romania, Spain, Canada, Australia, India, Argentina, Chile, Brazil, and Japan.

Source: Calculated from Brown (1940), vol. 2, pp. 850–851.

binding constraint. Table 8.7 shows that, following the dramatic fall in reserves and domestic monetary liabilities in 1928–30 that pushed them off the gold standard, debtors with depreciated currencies were able to reverse nearly half the previous year's decline in money supplies in 1930–31.

Central banks gaining reserves, for their part, could choose whether to increase domestic supplies of money and credit or sterilize the impact of reserve inflows. Insofar as they sterilized inflows, they encouraged the continued hemorrhage of gold from the vaults of debtor-country central banks, forcing those countries to redouble their deflationary efforts. Thus, sterilization by the creditors limited the growth of money supplies, a trend clearly evident in the first line of Table 8.7. The monetary base, composed mainly of currency backed by gold, rose much more quickly in the creditor countries than did broad measures of the money supply like

Table 8.7. Percentage Change in Money Supplies (Between Successive Year Ends)

	1929–30		1930–31	
	Monetary Base	M1	Monetary Base	M1
Creditor countries	8.4	0.6	22.1	1.0
Debtors with depreciated currencies	−8.5	−16.8	1.6	7.1
Other debtors	−4.1	0.1	−1.5	−8.6

Columns labeled Monetary Base are percentage change in currency plus coin plus commercial bank deposits with the central bank and other monetary authorities. Columns labeled M1 are percentage change in currency plus coin plus bank sight deposits. Figures in each column are arithmetic means for the countries included in each row.

Creditor countries are United States, United Kingdom, France, Belgium, Netherlands, and Switzerland.

Debtors with depreciated currencies are Canada, Brazil, Chile, Peru, Venezuela, Australia, and New Zealand.

Other debtors are Germany, Italy, Sweden, Czechoslovakia, Austria, Hungary, Bulgaria, Greece, Poland, Lithuania, Latvia, Finland, Denmark, Norway, Danzig, Yugoslavia, Portugal, Romania, Spain, Argentina, and Japan.

Source: Calculated from League of Nations, *Memorandum on Commercial Banking*, 1929–1934.

(p.249) M1. The failure of M1 to grow reflected the stagnation of money demand due to the economic downturn, in conjunction with the shift from deposits to currency in countries like the United States where bank failures were a growing threat. But the problem was the failure of creditor-country central banks to address this inability of their money supplies to grow along with their reserves. In principle, they could have coordinated expansionary initiatives designed to stimulate the growth of broadly defined monetary aggregates in their countries. Their failure to do so only added to the contractionary monetary adjustment required of the debtors. Superimposed on this shift between debtor and creditor countries were changing payments relationships among the creditors. Following the Wall Street crash, interest rates eased in the United States. Funds that had been attracted from Europe were repatriated. In the final two months of 1929, the United States lost gold for the first time since the beginning of the year. The European currencies strengthened against the dollar.

In the wake of the Wall Street crash, central banks reduced their discount rates. The New York Fed cut its rate from 6 to 5 percent in early November and to 4½ percent later in the month. The New York rate was then reduced by successive half-point steps to 2½ percent in June 1930. European central banks followed suit, as shown in Figure 8.6. The Bank of England, whose discount rate had stood half a point above the New York Fed's at the height of the Wall Street boom, reduced Bank rate along with the New York rate, until it again stood half a point above New York in the summer of 1930. The Reichsbank kept its discount rate 1½ points above the Fed's. Even the Bank of France, traditionally hesitant to alter its discount rate, reduced it in successive half-point increments between early 1930 and early 1931. Playing follow the leader,

the major central banks succeeded in coordinating a reduction in interest rates.

By early 1930 the liquidation of foreign funds on Wall Street and reserve transfers among the creditors were complete. American gold losses came to a halt. Still, the creditors continued to gain reserves at the expense of the debtors. In doing so they aggravated the Depression in other parts of the world. The lion's share of these reserves was accumulated by two countries: France and the United States. The Federal Reserve System and the Bank of France both failed to respond decisively to the slump. Neither expanded credit sufficiently to stem the inflow of gold.

Understanding the U.S. Policy Response

In fact, the Fed did respond in the immediate aftermath of the Wall Street crash. Employing expansionary open market operations, it doubled its holdings of government securities between October and November. Its security holdings rose again by the same absolute amount between November and December. Gold flowed out in response. Contemporary observers such as Charles Hardy characterized the open market purchases of October–December 1929 as "enormous."[59]

Significantly, however, the Fed initiated these open market purchases to relieve (p.250) the strain on the money market created by the stock market crash, not to counter the decline in economic activity. As money at call in New York was withdrawn to the interior, New York banks that had extended brokers' loans were embarrassed. The New York Fed leapt into the breach, purchasing $ 132 million of government securities in the wake of the crash. The System as a whole continued to purchase securities at a rate of $25 million a week through November and $40 million a week in December.

Moreover, the open market purchases undertaken by the New York Fed in the immediate aftermath of the crash had not been authorized by the Federal Reserve Board or its Open Market Investment Committee. Members of the Board were less appreciative than George Harrison of the needs of the New York money market and, mindful of the dispute over

discount policy between New York and Washington that had dominated the first half of the year, jealously guarded their prerogatives.[60] The New York bank was called on the carpet. Harrison protested that the directors of individual reserve banks were entitled to exercise judgment and discretion in extraordinary circumstances like those of October. In fact, under the 1923 agreement under which the Open Market Investment Committee had been established, each reserve bank retained the right to purchase securities for its own account, as distinct from the account of the Federal Reserve System.[61] But, in the view of the Board, the New York bank, even if it remained within the letter of the law, had violated the spirit. The Board insisted that ultimate responsibility for monetary policy now rested with Washington. Having repeatedly vetoed the New York Fed's attempts to alter its discount rate, the Board threatened to do so again unless New York promised to refrain from engaging in any further unauthorized open market purchases. By the beginning of November, New York had surrendered. Governor Roy Young of the Board rebuffed Harrison's objections, noting dryly that the Board “had been given most extraordinarily wide powers [and] that as long as the Board had those powers, they would feel free to exercise them.”[62]

Once the New York money market adjusted to the discharge of brokers' loans, open market operations were halted. The question is why they did not proceed. Although the adjustment of the New York money market removed the strains that had impelled the initiation of open market purchases, the rapid decline in industrial production could have justified their extension. On November 12 the Open Market Investment Committee, led by Harrison, recommended that the existing ceiling on open market purchases be raised, but the Federal Reserve Board vetoed its decision. The Board finally approved the Committee's recommendation nearly two weeks later, but only a fraction of the open market purchases permitted under this authorization were undertaken by the year's end. Open market purchases then tapered off. Ignorance of economic conditions is no excuse; by this time the Board was fully aware of the slump.

(p.251) The explanation for the failure to undertake additional open market purchases was the Board's commitment to the policy of liquidation. Those who had indulged in speculative excesses, in monetary policymakers' view, should now be made to pay the price. Investments in inappropriate capacity should be scrapped to restore the productivity of American industry. Conducting additional open market purchases and preventing liquidation from running its course would only reward and encourage the reckless. Monetary expansion would only ignite another round of speculative excesses, leading eventually to another crash and to an even more catastrophic slump. Treasury Secretary Andrew Mellon's notorious advice to Herbert Hoover to “Liquidate labor, liquidate stocks, liquidate the farmers, liquidate real estate . . . purge the rottenness out of the system” neatly encapsulated the dominant view not only within the Treasury but on the Federal Reserve Board as well.[63]

This view had been enshrined in the influential *Tenth Annual Report* of the Federal Reserve Board, published in 1923, and was defended in 1930 by Adolph Miller, the same member of the Federal Reserve Board who had been so alarmed by the stock market's rise in 1928–29. In Miller's view, to now initiate open market purchases would merely ignite another round of stock market speculation, another crash, and a more serious recession. Given the markets' awareness of this danger, credit expansion would only undermine confidence.[64]

That the authoritative statement of this view had appeared in 1923 was no coincidence. The policy of liquidation had been faithfully pursued in the 1920–21 recession, from which the American economy had rebounded quickly. Nearly a decade of buoyant growth had ensued. Federal Reserve officials took away from this episode the lesson that liquidation was salutary. They failed to appreciate that the U.S. economy's quick recovery from the 1920–21 downturn had reflected unusual circumstances. Not yet having returned to the gold standard, countries like Germany, Britain, and Sweden were not forced to match the monetary contraction in the United States in 1920–21. In the wake of World War I, with much European productive capacity still out of commission, the demand for U.S. exports remained immense. An exceptionally

good harvest in 1921 had eased the American economy's adjustment. Reserve System officials did not appreciate the extent to which the U.S. economy's rapid rebound and subsequent growth had been predicated on this unique set of circumstances.[65]

It is something of an exaggeration to portray the opinions of the members of the Federal Reserve Board in these monolithic terms. On several occasions certain Reserve Board members voiced a desire to inject liquidity into the economy to arrest the decline in economic activity. But in the dominant view, lower discount rates would not stem the contraction, though they might stimulate recovery after the economy bottomed out. To establish a sound basis for recovery, liquidation had to be allowed to proceed.

Things might have been different, it is sometimes suggested, if Benjamin Strong (p.252) had not died in 1928.[66] His death deprived the Federal Reserve System of its most dynamic leader and most perceptive monetary policymaker. “Although Harrison tried repeatedly to get others in the System to agree on a program of open market purchases,” one set of Fed critics has written, “he lacked the ability to lead and was unable to persuade the majority to accept his views, as Strong would have done had he lived.”[67]

In fact, although the policy of liquidation was more popular among governors from interior reserve districts than with Harrison and other officials of the New York Fed, the conflict between New York and Washington was not all that great. Harrison was not without sympathy for the liquidationist position. Though he pushed for open market purchases in the first half of 1930, his doubts about intervention deepened over the second half of the year. Only C. S. Hamlin, another member of the Board and, as former Undersecretary of the Treasury, more logically a spokesman for Washington's point of view, consistently argued for action to counter the recession.[68] Other Reserve Board members vacillated between allowing liquidation to run its course and attempting to counter the deepening depression. When a sufficient number switched sides, they might authorize modest open market purchases, as in June 1930. But they might equally well switch

back, as they did later the same month. Indecision was the order of the day.

One liquidationist argument—that the Fed was not just unwilling but incapable of relaxing credit conditions in 1930—does not withstand scrutiny. The argument that the Fed was incapable of offsetting the liquidation of credit started with the observation that the open market operations of late 1929 had failed to increase supplies of money and credit. After holding steady through November, currency in the hands of the public declined for seven consecutive months. After rising between October and November, total reserve bank credit declined precipitously in the first five months of 1930. Despite substantial gold inflows, the domestic assets of the Federal Reserve System fell over calendar year 1930.

Reserve bank credit declined because the Fed's open market purchases had been offset by a fall in member bank discounts with the System. “The Reserve Banks continued to expand their holdings of United States government securities, the only type of credit extension which is under their direct and complete control. But the funds thus put into the market came back through reduction of rediscounts or were applied to the purchase of acceptances which would otherwise have been offered to the Reserve System.”[69] Attempts to expand credit were thereby frustrated by the reduction of member bank discounts.

In fact, the Fed thoroughly understood the reason for the decline in discounts and knew how to limit its extent. According to the Reifler-Burgess doctrine formulated to guide System policy when discount policy was first supplemented with open market operations in 1922, discount rate changes and open market purchases had to be coordinated.[70] The argument ran as follows. Open market purchases first (p.253) led to a rise in commercial bank deposits. The banks then had to decide whether to use the additional resources to repay funds previously borrowed from the Fed or to make other investments. Economic logic suggested that they tended to equate the marginal benefits of the two alternatives. The return on repaying borrowed funds was the discount rate plus the costs in terms of Fed goodwill forgone by banks that

utilized the discount window. The costs of the Fed's disapproval presumably rose with the volume of borrowed funds. The marginal return on other investments declined as banks moved down the demand-for-loans curve. Thus, when the Fed used open market purchases to inject additional liquidity into the financial system, the banks reduced their rediscounts with the Fed and made some additional investments. In a recession, when the demand for loans was inelastic, banks would use most of the additional liquidity to repay borrowing from the Fed rather than make additional loans.

But by lowering discount rates, the Federal Reserve System could reduce the attractiveness of repaying rediscounts with it and encourage member banks to devote their additional liquidity to loans and investments instead. In 1930 the Fed failed to do this with all deliberate speed. The Federal Reserve Bank of New York's discount rate ranged from 4½ percent at the end of 1929 to 2½ percent in mid-1930. Call money rates fell meanwhile from 4½ percent in late 1929 to 2½ percent in mid-1930, in advance of Federal Reserve discount rates.[71] It was just as remunerative for banks to reduce borrowing at the Fed as to extend call loans and advances. In the highly unsettled conditions of early 1930, it was also less risky.

It is sometimes suggested that the Fed failed to reduce discount rates more rapidly because it mistakenly interpreted already low interest rates as evidence of monetary ease.[72] Some Board members may indeed have gained this impression. But even those who interpreted monetary conditions otherwise were disinclined to press for their modification. The pivotal dispute was not whether money was loose or tight. It was whether monetary ease was beneficial or harmful. The dominant liquidationist view was that it was harmful. If money was plentiful, it needed to be prevented from becoming more so. If it was tight, so much the better. Hence the Fed refused to reduce discount rates below 2½ percent. The majority on the Board was reassured rather than alarmed when the additional currency injected into the financial system following the Wall Street crash returned to the central bank via the reduction in member bank rediscounts.

European Repercussions

Once the Fed's open market purchases were halted, gold outflows ceased and gave way to inflows. American gold imports applied additional pressure to countries with relatively weak balance of payments positions. French gold imports compounded (p.254) their difficulties. With economic activity and hence the demand for money holding up relatively well, the Bank of France gained gold throughout 1930. Yet her domestic assets remained virtually unchanged between the beginning and end of the calendar year. France was still immune to the economic slump. Pressure for a more liberal credit policy was therefore all but nonexistent. The notion that the central bank should adopt an “unsound” monetary policy was antithetical to French officials. Monetary expansion conjured up images of inflation and social turmoil like that last experienced in 1926. As early as January 1930, the Council of Regents of the Bank of France warned that the “extreme abundance” of money in France threatened to provoke a new round of inflation.[73]

To prevent such an eventuality, new statutes had been adopted in 1928 to prohibit the Bank of France from conducting most open market operations.[74] Though it still was possible to reduce the discount rate, that instrument had relatively little impact on domestic credit conditions, since the French discount market was narrow.[75] Each additional franc of gold therefore increased the note circulation by only a franc rather than by nearly three francs as theoretically permissible under the 35 percent proportional cover system. If commercial banks repaid rediscounts with the central bank as alternative uses for their funds began to dry up, the domestic assets of the central bank might fail to grow despite the inflow of gold.

Foreign critics such as Ralph Hawtrey criticized Moreau and his colleagues for failing to build “a structure of credit” on their gold imports. By failing to expand domestic credit and to repel gold inflows, they argued, the French had violated the rules of the gold standard game. To facilitate credit expansion. Hawtrey urged changes in the statutes under which the Bank of France operated.[76] Such recommendations failed to take

into account the fear of inflation that remained paramount in the minds of the French electorate.

In fact, French policymakers regarded measures to reverse the deflation as counterproductive. They ascribed the Depression to overly expansionary monetary policies supported by the accumulation of foreign exchange reserves. How else, after all, could the global gold standard have been restored in 1925 when American prices were still 60 percent above 1913 levels?[77] Now that foreign exchange reserves were being liquidated, the necessary deflationary adjustment could finally take place. To frustrate its completion would only set the stage for another speculative boom and, ultimately, an even more disastrous crash.[78]

Yet the French economy was not entirely immune to international flows of gold. Gold inflows led to the growth of currency in the hands of the public. This (p.255)

—*Sioux City Tribune*kept demand and prices relatively high. French consumers consequently continued to import goods from abroad despite the decline of exports. France's trade deficit consequently widened from less than 4 percent of imports in 1928 to 12 percent in 1929 and 18 percent in 1930. The growth of imports relative to exports was not sufficient to stem France's accumulation of gold. Still, French officials invoked the growing trade deficit as evidence

of the operation of the gold standard adjustment mechanism, rejecting British claims that they were violating the rules of the game.[79]

But the trade balance was only one component of the balance of payments. French income from tourism remained strong in 1929 and 1930. Hence the growth of the trade deficit did nothing to arrest capital inflows. As doubts mounted about the stability of other currencies, capital flowed toward France, a country whose reserve position was exceptionally strong, at an accelerating pace.[80] The shift in the trade balance thus failed to contain the “gold avalanche.”

Capital inflows kept interest rates low, while the strength of the franc minimized pressure to raise taxes or cut public spending. The low level of interest rates and the stability of consumer spending stabilized investment, while the absence of balance-of-payments pressure allowed the government to continue its public works program. Through the end of 1930, as a result of these factors, France remained a prosperous island in a sea of depression. Though other countries benefited from their ability to export merchandise to the relatively buoyant French market, they suffered (p.256)

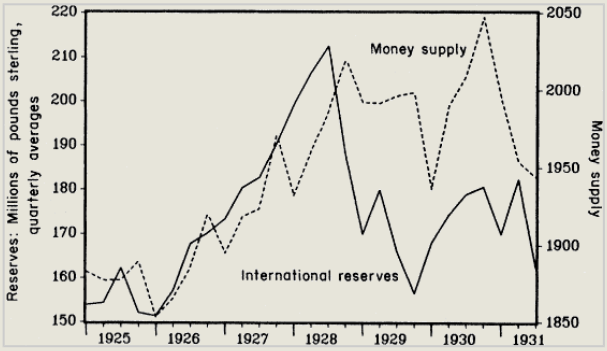


Fig. 8.8. British money supply and international reserves, 1925–31.

British currency circulation and the Bank of England's reserves tended to fluctuate together in accordance with the “rules of the game.” After 1928, however, the Bank sterilized reserve outflows, preventing the decline in reserves from finding full reflection in the money supply.

Source: Moggridge (*1972*).

from the flight of capital to Paris. So long as the Bank of France continued to accumulate gold, the second effect dominated. Like other creditor nations, even Britain, a country perennially wracked by payments problems, regained reserves following the Wall Street crash. (See Figure 8.8.) Although gold imports tapered off after the first quarter of 1930, the Bank of England continued to acquire foreign exchange for the rest of the calendar year. Reserves rose by 15 percent between 1929-IV and 1930-IV.[81] Bank of England officials were quicker than their American counterparts to recognize the slump's severity. But since the middle of 1928, the Bank of England's international reserves had declined relative to the British money supply (as also shown in Figure 8.8). Norman and his colleagues had resisted balance-of-payments pressure to impose further deflation on the domestic economy, sterilizing reserve outflows instead. Now, however, the low level of reserves prevented the Bank of England from reducing its discount rate in advance of the Bank of France and the Federal Reserve.[82] Moreover, those Bank rate reductions that occurred had relatively little effect on domestic activity. Given

the depressed state of the economy, little additional demand for discounts existed. Neither currency outside banks nor clearing bank deposits changed much over the course of 1930. With memory of the February 1929 crisis still fresh, the Bank of England hesitated to engage in expansionary open market operations. The weakness of sterling heightened its sense of caution.

(p.257) The Bank of England might have been able to do more had policy in the United States and France taken a more expansionary turn. But cooperation with the Bank of France and the Federal Reserve was limited to intermittent foreign exchange market intervention. When the sterling exchange rate fell toward the gold export point in September 1930, the Federal Reserve Bank of New York purchased £17.2 million of sterling for dollars.[83] In November, the Bank of France purchased what its Governor described as “small amounts” of sterling in Paris.[84] Together with increased shipments of newly mined gold from Australia and other producing regions where currency depreciation had made gold mining increasingly profitable, the Bank of England scraped through the second half of 1930. But this was only the beginning of its troubles.

Conclusion

By the end of 1930, the worldwide contraction had reached a crucial stage. France and the United States continued to absorb gold from the rest of the world at an alarming rate. Still committed to the gold standard, countries losing reserves had no choice but to redouble their restrictive policies, reinforcing the impact on their economies of the declines in exports and capital imports they had suffered previously. When the first banking crisis struck the United States in the final months of 1930, the American economy seemed poised to join the list of those suffering from the most severe economic crises.

To avoid disaster, government officials had to act. So long as they remained committed to the gold standard, any substantial reflationary initiatives had to be coordinated internationally.

The crucial question was whether policy makers could make the necessary arrangements.

Notes:

(1) Condliffe (1932), p.65.

(2) According to Moulton and Pasvolsky (1932), p. 264, the reparations creditors had received 7489 million marks by the time the books were closed on the Dawes Plan. At an official exchange rate of $0.2382 per reichsmark, this comes to $1784 million. The exact amounts received by the Allies differed slightly from the schedule established in 1924 because Germany's responsibility ended with the mobilization of domestic currency. Its conversion into foreign currency was the responsibility of a transfer committee, which did so only when conditions in the foreign exchange market were propitious. On U.S. war debt receipts, see Moulton and Pasvolsky (1932), pp. 484–485.

(3) My own review and analysis of this literature is Eichengreen (1988b).

(4) The differential between foreign bond yields and domestic medium-grade bond yields shrank after 1927. Eichengreen (1988b), p. 116.

(5) Lary (1943), p. 6, and Table III after p. 216.

(6) Data on German bond flotations abroad are from Balderston (1983), p. 407. On U.S. State and Commerce Department warnings to investors, see Williams (1929), p. 95, and Eichengreen (1988b), pp. 124–125. Extracts from the series of State Department letters on the issue appear in Kuczynski (1932), pp. 10–11.

(7) The United States was authorized to intervene in Panama by the provisions of the Hay-Bunau Varilla Treaty and to object to imprudent fiscal policy in Cuba by the Platt Amendment. Haiti was under U.S. martial law from 1916 to 1931, and the United States was entitled to object to changes in Dominican fiscal policy even after the withdrawal of the Marines in 1924. Angell (1933), pp. 8–27; Stallings (1987), p. 75.

(8) The rise in the nonfood raw material price index for 1925 reflects a surge in the price of natural rubber, which nearly tripled between 1924 and 1925. The weight of natural rubber in the index is 10.3 percent. I thank Maw-Cheng Yang for this information.

(9) Prices recovered slightly in 1928, but they were still more than 30 percent below the levels reached immediately after the war. The index of prices received by farmers for all farm products is from U.S. Department of Commerce (1976), p. 489.

(10) Agricultural prices fell nearly three times as fast as other export prices in 1929–30, nearly twice as fast in 1930–31. Taylor and Taylor (1943), pp. 8–9.

(11) According to League of Nations estimates, global raw material production rose by more than 20 percent between 1925 and 1929. Condliffe (1931), pp. 99; Condliffe (1932), pp. 97–98.

(12) Condliffe (1932), p. 93.

(13) Kindleberger (1986) is the leading proponent of the liquidity panic view. The relevant passage (pp. 112–114) contains no citations to market participants or contemporary observers who accounted for the collapse of commodity prices on these grounds. In fact, comments to this effect do exist. Bertil Ohlin, writing in Condliffe (1932, p. 157), for example, refers to “Stocks [which] could no longer be financed; consequently, large quantities were thrown on the market at a time when the demand for these goods was restricted—the inevitable result was a rapid decline in prices.” The point is not that this mechanism is implausible, for it surely did operate. The question is its importance relative to the other factors about to be described.

(14) Eichengreen (1988b), pp. 137–148.

(15) Like the suspension of debt service, the suspension of convertibility threatened to disrupt access to international capital markets. It could be argued, however, that the damage was easily repaired. By rebuilding reserves and restoring convertibility, a country could regain its access to the capital

market. This was the lesson drawn from prewar experience, as shown by Fishlow (1989).

(16) Information on nominal wages is from Gregory, Ho, McDermott, and Hagan (1988), Figures 11.2 and 11.3, pp. 301–302. The Commonwealth awards are listed by Copland (1934), p. 203. The particular cost of living index used by the Commonwealth Court in fact covered only 60 percent of household expenditure and was disproportionately composed of commodities whose prices were slow to adjust. Copland (1934), p. 18.

(17) Half of the foreign exchange was in fact owned by the trading banks rather than the government. Copland (1934), p. 112.

(18) Schedvin (1970), pp. 99–102.

(19) The quote is from Brown (1940) vol. 2, p. 865.

(20) Butlin and Boyce (1989), p. 195.

(21) This conclusion follows Gregory, Ho, and McDermott (1989), especially pp. 226–229. Their data show a 10 percent increase in actually weekly wages (in Victoria) relative to the basic wage in the first quarter of 1931, as if the Court's reduction in the basic wage had no impact on labor market outcomes.

(22) See chapter 2.

(23) Schedvin (1970), pp. 125–126.

(24) See Schedvin (1970) for details.

(25) I constructed the figures in the table from Barnard (1986b) with the assistance of Ian McLean. Barnard (1986b) subsequently revised his estimates of total net revenue and net expenditure of Commonwealth and State governments, but not his estimates of the components shown in Table 8.3. The revised figures show slightly higher revenues for most years but do not change the overall picture.

(26) Between Britain's suspension of convertibility in September 1931 and the end of the calendar year, the discount against sterling was reduced to 25 percent.

(27) In fact, there were some efforts to relax the gold standard constraints on money supply. For example, in the spring of 1931 Parliament authorized a temporary reduction in the minimum permissible gold cover from 25 to 15 percent. Brown (1940), vol. 2, p. 878.

(28) For additional comparisons with other debtor nations, see Eichengreen (1989c).

(29) O'Connell (1984), p. 195; Joint (1930), pp. 12, 15, 61.

(30) O'Connell (1984), p. 194.

(31) Peters (1934), pp. 64, 74.

(32) As Peters (1934), p. 156 put it, “The decision to abandon the gold standard, without serious effort to retain it, was greatly influenced by the large amounts of government paper held by the banks, and the practical certainty that more would come.”

(33) Chalkley (1929), p. 17.

(34) In the last two years of the Irigoyen Government (which was overthrown in 1930), regular budgetary statistics were not even published. Peters (1934), p. 155.

(35) Irving (1929), p. 9 The 20 percent figure for the ratio of debt service to exports is based on Lomax's (1931, p. 30) estimate of the value of total external debt service.

(36) The Dominion Notes Act of 1875 had established a fiduciary issue of $63.5 million with a 25 percent gold cover. Additional Dominion notes had to be gold backed to the extent of 100 percent. But under the provisions of the Finance Act, adopted as a temporary measure in response to wartime exigencies in 1914, Dominion notes could also be issued if a chartered bank applied to the Department of Finance for a loan and provided securities as collateral. Notes placed in circulation in this manner did not have to be backed with gold.

Borrowing by the banks could not exceed the maximum line of credit granted individually by the Department of Finance each year. But lines of credit were not fully utilized in a typical year, so banks could replenish their reserves at the discount window. Courchene (1969), p. 365; Bordo and Redish (1987), p. 3; Brown (1940), vol. 2, pp. 904–905.

(37) From September 1, 1928, through October 26, 1931, the discount rate remained constant at 4½ percent. Curtis (1932), p. 327, concludes that the authorities were unwilling to contemplate its use as an instrument of monetary control. See also Courchene (1969), pp. 383–384.

(38) The one notable exception was the immediate aftermath of the Wall Street crash. Brown (1940), vol. 2, p. 906.

(39) This is the argument emphasized by Bordo and Redish (1987). Net short-term borrowing rose by $19 million between 1928 and 1929. Lewis (1938), p. 628.

(40) Perhaps the clearest statement of the capital scarcity, or *Kapitalmangel*, hypothesis is Schmidt (1934). Other contemporary analyses emphasizing these factors include the *Report* of Britain's Macmillan Committee (Committee on Finance and Industry, 1931) and League of Nations (1931a).

(41) Net national product at constant 1928 prices is from Hoffmann (1965), Tables 248, 249. Again, the series shown in Table 8.4 is net national income at current prices.

(42) Temin (1971) is the leading critic of the argument that the decline in capital imports from abroad was the proximate cause of the German slump. As will be clear momentarily, I adhere to a modified variant of the conventional view. Additional contributions to this literature include Falkus (1975) and Balderston (1977).

(43) James (1989), pp. 12–13.

(44) In fact, the Reichsbank's gold cover did fall below 40 percent in the wake of the German banking crisis of 1931, but only, as Borchardt (1990) notes, after gold convertibility was

suspended through the imposition of exchange control. See also chapter 9.

(45) Borchardt (1984), pp. 481–482.

(46) Thelwall and Kavanagh (1929), p. 6; Balderston (1983), p. 407; Temin (1971), p. 245.

(47) Thelwall and Kavanagh (1929), p. 7.

(48) Table 8.5 shows the budgets of the states moving deeper into deficit between 1927/28 and 1928/29, but this reflects the endogenous decline of revenues due to the deceleration of economic growth. A measure of the constant employment budget balance of the states would show revenues rising relative to 1927/28 levels and the cyclically-corrected deficit shrinking. On the concept of the constant employment budget balance. see Brown (1956).

(49) James (1986), pp. 53–54; McNeil (1986), p. 240. Unemployment and social insurance subsidies are included in Table 8.5 in the expenditures of the Reich, thereby contributing to the appearance of a central government budget deficit, and also in the revenues of the insurance programs, contributing to their appearance of budget balance.

(50) Nurkse (1944), p. 103; James (1985), p. 352.

(51) Owing to French objections, the special transfer provisions of the Dawes Plan referred to in note 2 above were not retained. Where previously it had been Germany's responsibility to raise the Reichsmarks and the transfer committee's decision to convert them into foreign exchange, the Young Plan transferred to Germany the responsibility for mobilizing the foreign exchange. For further details, see chapter 9.

(52) Schuker (1988), pp. 44–45.

(53) This is the estimate of the Wiggin Committee, cited in Moulton and Pasvolsky (1932), p. 285.

(54) Harris (1935), p. 6.

(55) The literature on the onset of the Depression in the United States is too voluminous to be cited here. Accounts that emphasize monetary policy, the Wall Street crash, and the weakness of consumer spending, respectively, are Field (1984) and Hamilton (1987), Romer (1990), and Temin (1976).

(56) The role of these foreign economic trends is almost entirely neglected in the literature on the American depression. A recent exception is Temin (1989).

(57) Tinbergen (1934), p. 215. I deasonalized U.S. exports by regressing their value on a constant term and dummy variables for months falling in the first, second, and fourth quarters of the year.

(58) In the table, the reserve gains of the creditor countries do not match the losses of the debtor countries because of the omission of countries that are difficult to classify, because of missing data. because of gold mining, and because of efforts by central banks to shift out of increasingly risky foreign exchange in favor of gold.

(59) Hardy (1932), p. 56.

(60) Wicker (1966), pp. 144–145.

(61) Somewhat less than half of the government securities purchased by the New York Fed in the week ending October 30 was ultimately transferred to System Account. Friedman and Schwartz (1963), p.364.

(62) FRBNY (Harrison Papers), “Conversation with Governor Roy Young, Nine O'Clock, November 15, 1929.”

(63) Hoover (1952), p. 30.

(64) Friedman and Schwartz (1963), pp. 371–372. On p. 373 Friedman and Schwartz quote the opinion of Frederic Curtis, Chairman of the Federal Reserve Bank of Boston, to exactly this effect. See also Wicker (1966), pp. 149–150, 155.

(65) See chapter 4.

(66) Friedman and Schwartz (1963), pp. 414–419. See also Chandler (1958).

(67) Brunner and Meltzer (1968), p. 337.

(68) Wicker (1966). p. 147.

(69) Hardy (1932), p. 56.

(70) The term “Reifler-Burgess doctrine” is from Brunner and Meltzer (1968). My interpretation differs somewhat from theirs, as will become apparent below.

(71) The yield on 60 high grade bonds declined more slowly, from slightly more than 4 percent to slightly less. This is not the relevant comparison, however, since banks that purchased bonds would suffer capital losses if interest rates rose again in the future. The fear was widespread, since by February stock prices had already risen by 40 percent from their October low. Interest rate data are from League of Nations (1932), p. 35.

(72) Brunner and Meltzer (1968), pp. 342–343.

(73) Bank of France Archives, *Procès verbaux* of the Council of Regents, 23 January 1930.

(74) See chapter 7.

(75) See Eichengreen (1986b), Appendix. The Governor of the Bank of France argued that this was especially likely in the present uncertain environment, when capital flows responded more to confidence in the convertibility of currencies and less to interest differentials. Bank of France, *Procès verbaux*, 27 November 1930.

(76) These foreign criticisms are recounted, along with the French response, in Royal Institute of International Affairs (1931) and Eichengreen (1986b).

(77) See Rist (1933) for an analysis actually written in 1929. Rist's opinions were taken on board by André Tardieu, the French Prime Minister in 1929–30. See Tardieu (1933).

(78) Bank of France, *Procès verbaux* of the Council of Regents, 23 January 1930.

(79) At home, observers warned that a high price level and a widening trade gap were signs of economic trouble. Charles de Lasteyrie, the Conservative former Finance Minister, worried that high prices spelled competitive difficulties. The economist Henri Michel echoed the warning. Jackson (1985), p. 28.

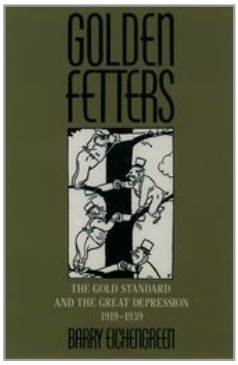
(80) This was the Bank of France's official explanation for the extent of the gold inflow. *Annual Report for 1930*, pp. 8–9.

(81) Moggridge (1972), p. 149.

(82) Sayers (1976), pp. 231–233.

(83) Clarke (1967), pp. 175–176.

(84) Bank of France. *Procès verbaux* of the Council of Regents, 13 November 1930, 20 November 1930.



Golden Fetters: The Gold Standard and the Great Depression, 1919-1939
Barry Eichengreen

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Crisis and Opportunity

Barry Eichengreen (Contributor Webpage)

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Abstract and Keywords

This is the third of three chapters that consider the operation of the reconstructed gold standard system following World War I. It describes the desperate attempts of policy makers to defend the gold standard and analyzes their role in aggravating the Great Depression. At the same time, it suggests that the collapse of the system provided new opportunities for constructive action. The Chinese character for ‘crisis’ combines the symbols for ‘danger’ and ‘opportunity’, and the point made in this chapter (Crisis and Opportunity) is much the same. The different sections of the chapter look at the links between domestic and international financial systems, the Austrian crisis of 1931 (which led, in effect, to it no longer being part of the gold standard system), the spread of the crisis to other countries, the abandonment of the gold standard by Britain, and the implications – which were that the stage had now been set for the collapse of the gold standard system.

Keywords: abandonment of the gold standard, Austria, collapse of the gold standard, domestic financial systems, economic crisis, gold standard, Great Depression, international financial systems, interwar period, reconstructed gold standard

The downward spiral gathered momentum in the winter of 1930–31. Those few countries that so far had managed to resist the Depression now succumbed to its ravages. In 1931 industrial unemployment reached crisis levels: 25 percent in the United States, 21 percent in the United Kingdom, 34 percent in Germany.[1]

After two years of decline, the market's self-equilibrating tendencies should have asserted themselves. Asset prices had fallen to bargain basement levels. An army of unemployed workers was desperate for work, placing downward pressure on wages. Conditions therefore seemed propitious for recovery. As the snows of winter melted, so did the pessimism of investors. “[T]here seemed to be a definite easing of economic and financial conditions,” the League of Nations observed.[2]

Far from improving, however, the situation deteriorated markedly in the second half of 1931. Financial crisis and the collapse of the international gold standard imparted another shock to the world economy. With the spread of financial instability, monetary ease gave way to stringency, and investors lost heart. In the spring and summer, Austria, Hungary, and Germany were forced to suspend gold convertibility and restrict foreign exchange transactions. By September the crisis spread to Britain, and sterling was driven from the gold standard. Nine countries followed Britain off gold in September, five in October, still others in November and December. The international economy was split into three fragments: a group of sterling area countries trading increasingly with Britain, a group of Central European countries isolated behind exchange controls, and a bloc of gold standard countries (the United States, the Netherlands, Belgium, France, Switzerland, and Poland) sheltered behind trade barriers. Uncertainty led members of the gold bloc to liquidate their exchange reserves, shifting balance-of-payments pressure to the United States and forcing still more restrictive policies on the Federal Reserve.

Two full years of depression had significantly weakened the banking system in almost every nation. Revelations of the extent to which their condition had deteriorated provided the spark that ignited the financial crises. But it was not mere happenstance that the conflagration spread so quickly. The gold standard frustrated efforts at containment by limiting the scope for individual central banks to act as domestic lenders of last resort. When officials provided additional liquidity to

(p.259)

domestic banks in an effort to douse the flames, they signaled that they attached higher priority to the stability of the banking system than defense of the gold standard. Depositors rushed to get their money out of the country in advance of devaluation. Any liquidity injected into the banking system just leaked back out as the inevitable balance-of-payments crisis loomed.

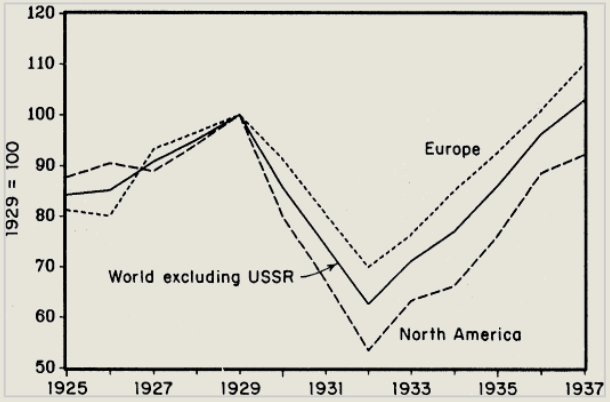


Fig. 9.1. Global indices of manufacturing production, 1925–37.

Output around the world showed remarkably little tendency to recover from the effects of the slump before 1933.

Source: League of Nations (1939).

The only escape from this dilemma, short of going off the gold standard, was international cooperation. International support operations could buttress the weak currency and aid the embattled central bank. The latter would then be able to provide however much liquidity was required to stabilize the domestic banking system without exhausting its reserves and forcing the suspension of gold convertibility. Once the threat to financial stability passed, the foreign loan could be repaid.

A new institution charged with responsibility for international monetary cooperation, the Bank for International Settlements, had been established in 1930. But it proved singularly ineffectual. The B.I.S. was responsible not just for facilitating central bank cooperation but also for managing German reparations transfers. Combining the two functions in one institution proved fatal. Domestic political constraints—specifically Congressional opposition to any initiative involving reparations that threatened the likelihood continued U.S. receipt of war debt payments—prevented the Federal Reserve System from joining. With the Fed excluded from the regular meetings of the B.I.S., it was still necessary, as before, to arrange cooperative efforts on an ad hoc basis. As soon as negotiations began, three familiar obstacles to cooperation—domestic political constraints, international political disputes, and incompatible conceptual frameworks—resurfaced, frustrating attempts to arrange a cooperative response to the 1931 financial crisis. On the (p.260) single occasion when it was most desperately required, international cooperation was not forthcoming.

Links Between Domestic and International Financial Systems

In the spring of 1931, there were grounds for optimism. The first banking crisis in the United States had been short if sharp. The deposits of newly suspended U.S. commercial banks had fallen to less than 10 percent of December 1930 levels by February 1931, as shown in Figure 9.2.[3] The Federal Reserve Board's index of industrial production rose by 7 percent between December and April. Freight car loadings rose by 7 percent between January and March. The Dow-Jones industrial average rebounded by nearly 8 percent, and the same recovery of share prices was evident in other countries. Paris and Zurich lowered their discount rates, allowing capital to flow back to Germany and gold to flow back to Britain. Economic forecasters in the United States predicted that the worst was over and encouraged managers to reactivate their investment plans.[4]

The dark cloud on the horizon was the transfer problem of the heavily indebted nations. Optimism did nothing for their debt-

servicing capacity so long as commodity prices remained depressed. The Smoot-Hawley Tariff imposed by the United States in the summer of 1930 and tariff increases adopted elsewhere in its wake exacerbated the problem. The difficulties facing the debtors were reflected in interest rates. Discount rate reductions in the European financial centers ordinarily induced sympathetic reductions in other parts of the world. Not so in 1931. Despite the decline in North American and Western European discount rates, the central banks of debtor nations in Latin America and Central Europe were forced to maintain high interest rates to restrain demand and discourage capital flight. Of the debtors, only Romania managed to reduce her discount rate in the early months of 1931.

Over much of Latin America, even the most stringent policies proved inadequate. Bolivia, unable to raise new money in New York, suspended interest payments in January 1931. One after another the major Latin American debtors followed suit.[5] The suspension of interest payments moderated the need to compress imports and raise taxes, permitting restrictive policies to be relaxed. For the heavily indebted nations of Latin America, default along with devaluation were necessary prerequisites for recapturing control over domestic economic policy. (p.261)

But the

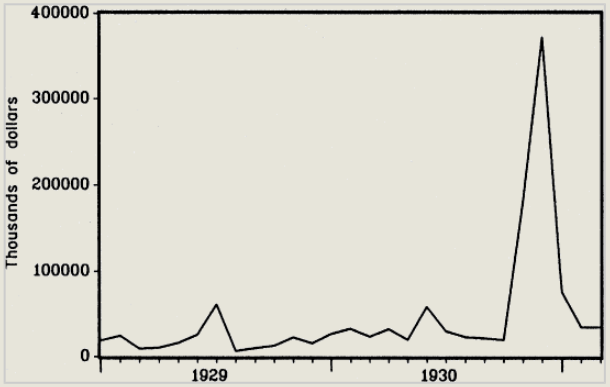


Fig. 9.2. Deposits of banks suspended, January 1929–March 1931.

U.S. bank failures, measured here by the deposits of the banks added to the list of those whose operations were suspended, declined in early 1931 as rapidly as they had risen in late 1930.

Source: Federal Reserve Bulletin (September 1937), p. 909.

reverberations of debt default extended beyond the heavily indebted regions. By reducing the interest income of the lenders, default intensified the balance-of-payments pressure already experienced by certain creditor countries, notably Britain. Interest and dividend income from abroad showed the largest decline of any component of the British balance of payments in the period leading up to the 1931 sterling crisis.

Default also sounded the death knell for international lending. The capital market had begun to recover in 1930; Latin American default brought on a relapse. In 1931 U.S. and British lending fell to a third of the levels that had prevailed in the first half of the preceding year. Default graphically illustrated the special risks of investing in foreign bonds, rendering the creditors unwilling to lend not just to Latin America but also to other parts of the world.

The collapse of lending transformed the Central European financial situation. Following monetary stabilization in the mid-1920s, enterprise and government throughout Central Europe had relied for finance on the flotation of foreign bonds. Suddenly this was no longer possible. Now debtors sought accommodation from their local banking systems. But domestic banks were themselves heavily dependent on foreign funds. German, Austrian, and Hungarian banks all relied extensively on foreign deposits. Private and public borrowers in these countries continued to service their foreign debts, despite the collapse of trade and lending. Their balances of payments deteriorated markedly. Doubts consequently arose about whether the central bank would be able to continue defending the gold standard (p.262) parity. Those doubts prompted the withdrawal of foreign deposits to avoid the capital losses that would be suffered in the event of devaluation. Domestic banks, under pressure of withdrawals, found themselves unable to accommodate borrowers in need.

In Britain, Germany, Austria, and Hungary alike, the withdrawal of foreign deposits was the catalyst for the financial crisis that shattered the gold standard system. Foreign deposits were unusually liquid and responsive to shifts in confidence. The illiquidity of banks' investments and incomplete information about their financial condition encouraged the lack of confidence to spread. Inability of one bank to satisfy the demands of its depositors raised questions about the condition of its competitors. With the entire banking system under pressure, individual banks could not turn to their correspondents for liquidity. The only source of assistance was the central bank in its role as lender of last resort.

Here the gold standard came into play. By withdrawing their deposits in anticipation of devaluation, foreigners' response heightened the likelihood of the very event they feared. As domestic-currency-denominated assets were converted into foreign exchange, the central bank, committed to pegging the exchange rate, was forced to expend gold and foreign exchange reserves on the purchase of domestic currency. Reserves fell toward the danger point, reinforcing doubts about the viability of the gold parity. Inevitably, the drain of

reserves accelerated. To defend the gold parity, the central bank was forced to raise interest rates and restrict credit, aggravating the banking crisis. In effect, the priority the monetary authorities attached to the gold standard prevented them from intervening forcefully in defense of domestic banks.

Even when a country's central bank chose to disregard the risk of an exchangerate crisis and support the domestic banking system, the gold standard limited the effectiveness of its actions. Central banks could inject liquidity into the banking system by purchasing securities and discounting bills held by commercial banks, thereby providing them with additional cash. Either measure accentuated the fall of the gold cover. Some central banks could reduce the cover ratio below its statutory minimum by increasing the fiduciary issue or paying a tax on uncovered currency notes. This nominally provided additional scope for injecting liquidity into the banking system. But if the fall in the cover ratio undermined confidence in convertibility, pressure on the banks would not be relieved. Lender-of-last resort activities that heightened fears of devaluation provoked further withdrawals, capital flight, and a run on international reserves. The additional liquidity injected into the banking system leaked back out without restoring domestic financial stability.

Domestic and international financial instability thus fed on one another. So long as countries remained on the gold standard, the only way out lay in the cooperative provision of lender-of-last resort facilities. If other central banks extended loans to the embattled central bank and otherwise supported the weak currency, the reserve constraint would not bind. Currency speculators would be reassured if the free reserves of the entire group of central banks were made available to the weak-currency country. The domestic lender of last resort could inject reserves into the banking system without undermining confidence in its gold parity. The additional liquidity would not leak back out in response to fears of devaluation.

(p.263) The Bank for International Settlements provided an obvious venue for international support operations. If B.I.S. members could have agreed on a package of aid for the

Austrian National Bank and the German Reichsbank, they might have been encouraged to turn their attention next to more wide-ranging schemes to counter the Depression, such as an internationally coordinated initiative for monetary reflation. The establishment of the B.I.S. in 1930 was an outcome of the latest round of reparations negotiations. The Dawes Plan rescheduling, concluded in 1924, had limited Germany's obligation to raising reparations payments in German currency. Their conversion into foreign exchange was made the responsibility of the Reparation Commission. In return, the Agent General for Reparations Payments was entitled to intervene in German economic policymaking in ways that the Reich government regarded as onerous. In 1930, as part of the Young Plan rescheduling, Germany's “transfer protection” was withdrawn: the Reich rather than the Reparation Commission was made responsible for the conversion of marks into foreign currency. To ease the task, the B.I.S. was created and charged with minimizing reparations-related disturbances to the foreign exchange market.

As envisaged by its architects, led by Emile Francqui, the hero of Belgium's 1926 stabilization and now a delegate to the reparations negotiations, minimizing exchange-market disturbances associated with reparations transfers was only one of the new institution's responsibilities.[6] In addition, the B.I.S. was given trustee functions associated with reparations and asked “to promote the cooperation of central banks.”[7] This was a significant departure. Similar organizations proposed at Brussels in 1920 and at Genoa in 1922 had been stillborn; this was the first such body of consequence.[8]

B.I.S. officials themselves viewed the promotion of cooperation among central banks as the organization's “first object.”[9] Writing in 1936, they described one of the purposes of regular collaboration as to “evolve a common body of monetary doctrine and assure the widest possible measure of common agreement on monetary theory, problems and practice.” This is what is referred to throughout this book as a common conceptual framework; its absence repeatedly proved an obstacle to effective central bank cooperation in 1920s and 1930s. In addition, B.I.S. officials argued, more systematic

coordination of policies would enable central banks “to learn how to avoid doing harm to one another, especially when one central bank is operating in the market of a neighbor.” Thus, the negative cross-border spillovers of policies might finally be taken into account. This would enable central banks to “smooth out the business cycle, and to contribute toward a greater equilibrium in the general level of economic activity.” Finally, regular consultation and exchange of information would cultivate trust and facilitate informed decision making.

Unfortunately, combining within one institution responsibility for overseeing reparations transfers and regularizing monetary policy coordination had debilitating consequences. German reparations were linked to Allied war debts; in light of (p.264) the linkage, Congress refused to allow the Federal Reserve System to join. The B.I.S. encouraged the participation of a consortium of American commercial banks, led by J.P. Morgan & Co. and the First National Bank of New York, to provide it with a channel through which it might intervene to contain disturbances affecting the New York money market. But J.P. Morgan and the First National Bank of New York were no substitutes for the Federal Reserve System when the issue was central bank cooperation. In the absence of Fed membership, the B.I.S. could not provide a venue for regular consultations among the leading central banks. It remained difficult to “evolve a common body of monetary doctrine” and to coordinate measures to “smooth out the business cycle.” Without an adequate venue for regular consultations, that international cooperation that was arranged proved too little, too late.

The Austrian Crisis

Europe's four largest short-term debtors were Germany, Britain, Hungary, and Austria, in descending order of importance. These four countries suffered the most intense financial crises in the summer of 1931. According to Britain's Macmillan Committee, foreigners held some $2000 million of deposits and sterling bills in London.[10] The short-term liabilities of Germany's consolidated banking system, summarized in Table 9.1, were 60 percent of Britain's. The short-term debts of the Austrian and Hungarian banking

systems were each on the order of $120 million to 130 million.[11]

Austria was the first of these countries to experience a financial crisis. Though the Great Depression weakened the position of banks in all countries, Austria's banking system was especially fragile. Intimate relations between banks and industry were a tradition in Austria, where universal banking had prevailed since the middle of the nineteenth century. If anything, the symbiosis of banking and industry was intensified by World War I, in which the banks directly helped to finance, develop, and manage war industries.[12] But the war also reduced the scope for loans to industry by leading to the partition of the Austro-Hungarian Empire. The port-folios of the big industrial banks became increasingly concentrated, regionally and industrially, heightening the financial system's vulnerability to the Depression. Moreover, the hyperinflation of the 1920s had eroded the real value of the banks' capital base, which they failed to fully rebuild thereafter.[13] For all these reasons the big Austrian banks were vulnerable when the Depression struck.

These problems were prominent in the operations of the Credit-Anstalt, Austria's largest deposit bank. The Credit-Anstalt had been a leading participant in the (p.265)

Table 9.1. Short-Term Indebtedness of Certain European Countries (Millions of Dollars)

		Short-term Indebtedness of					
Country	Date	Central Government	Local Authorities	Central Bank	Other Banks	Other Debtors	Total
Austria	IX.1932	14.1	0.3	121.9		19.4	155.7
Hungary	XI.1931	42.8	21.8	25.3	106.7	124.0	320.3
Bulgaria	XII.1931	4.2	3.4	1.1	10.3	23.4	42.4
Poland	XII.1931	0.4	–	5.1		27.9	33.4
Romania	1932	–	–	13.5	23.7	41.9	79.1
Denmark	XII.1932	–	–	25.0		36.2	61.2
Finland	XII.1932	7.5	1.4	4.7	24.4	17.5	55.5
Norway	I.1933		2.2		19.7	106.9	128.8
Germany	IX.1932	148.0		193.6	918.4	963.3	2,223.3

Source: League of Nations (1933b), p. 269.

amalgamation movement of the 1920s. Once it absorbed the Bodenkreditanstalt in 1929, its total assets exceeded those of all other Austrian joint stock banks combined. In 1930 its balance sheet was as large as total central government expenditure; thus if its deposits were frozen, the effect on consumer behavior would be comparable to that of a massive cut in government spending.[14] Clearly, any financial difficulties experienced by the Credit-Anstalt would be felt throughout the Austrian economy.
The financial plight of the institution had been deepening for several years, although the fact was not known to the public or even the government on the eve of the May 1931 crisis. Only on May 11 did bank officers inform the government of the extent of losses for the preceding year, admitting that deteriorating loan performance had completely wiped out the Credit-Anstalt's official capital.[15] Only several days later did the information become public.

The Austrian Government, with the cooperation of the National Bank, leapt to the Credit-Anstalt's defense. The exceptional size of the Credit-Anstalt made it impossible to disregard the devastating effects of the bank's collapse. In addition, for several years the government had pressured the Credit-Anstalt to aid domestic firms suffering the effects of the Depression, which only added to the bank's difficulties; its absorption of the Bodenkreditanstalt in 1929 had been imposed on the reluctant chairman of the Credit-Anstalt to protect the National Bank from losses on the rediscounts it had extended the Bodenkreditanstalt. The Credit-Anstalt did not hesitate to remind public officials of the fact in order to elicit their support.

The government immediately replenished the bank's capital in return for shares. As soon as it became clear that the full faith and credit of the government stood behind the obligations of the Credit-Anstalt, the Vienna Rothschilds offered (p.266)

an additional injection of liquidity. The government planned to dispose of its newly acquired shares as soon as circumstances permitted. This proved more difficult than anticipated. Already the information on losses provided to the government and announced to the public in the second week of May was more than four months out of date. Actual losses through the first quarter of 1931 were certainly much greater.[16] Moreover, it was widely suspected that the Credit-Anstalt had understand its loses for calendar year 1930. Rumors to this effect provoked large-scale withdrawals by domestic and foreign depositors.[17] Other big Viennese banks such as the Wiener Bankverein were thought to have suffered comparable losses. The solvency of the entire banking system was called into question. “Apprehension began to run like mercury throughout the financial world,” as Herbert Hoover put it.[18]

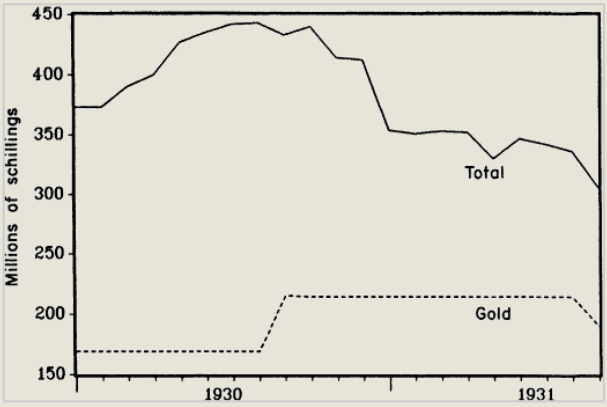


Fig. 9.3. Austrian gold and total reserves, 1930–31.

Austria began to lose international reserves in the final months of 1930, setting the stage for the financial crisis that erupted in the spring of 1931.

Source: Economist Magazine (various issues).

French alarm was heightened by the revelation that Austria and Germany had discussed a customs union. The French viewed this as the first step toward repudiation of the Versailles Treaty, one of whose cornerstones had been the political (p.267) and economic separation of Austria and Germany.[19] The repatriation of French deposits proceeded apace.

That the Austrian trade balance was in deficit throughout the period was not a source of reassurance. So long as short-term capital continued to flow in, as it had in 1930, that balance could be financed. But if capital took flight, the balance of payments would move into deficit, leading to a loss of reserves. This reserve loss in turn would limit the central bank's capacity to support the banking system.

Since 1924 the National Bank had consistently sterilized gold inflows, selling securities from its portfolio or reducing its discounts to minimize the rate of growth of currency in circulation. While contributing to the economy's relatively slow rate of growth, the policy had enabled the Bank to build up a substantial margin of excess reserves. Though liquid reserves of gold and convertible currencies hovered around the statutory minimum of 33⅓ percent of eligible liabilities, the National Bank possessed secondary reserves of dollar and sterling assets sufficient, on April 30, the eve of the crisis, to elevate the ratio of international reserves to domestic liabilities to 72 percent.[20] Thus, the Austrian National Bank was in a significantly stronger position than the German Reichsbank or the Bank of England when they experienced their respective crises. The Austrian crisis consequently took longer than its German or British counterparts to play itself out.

When the Credit-Anstalt's difficulties first became known, the National Bank did not hesitate to discount bills on behalf of the banking system. In the two weeks ending on May 21, the National Bank's bill portfolio rose from 69 to 350 million schillings. By discounting bills, the National Bank increased the note circulation by 235 million schillings, or more than 25 percent, between May 7 and the end of the month. Such a rate of bank note expansion was unprecedented in the period since the schilling's convertibility into gold had been restored following the end of the hyperinflation. This analogy with the period of hyperinflation, which was widely drawn, did not reassure the Austrian public. As they had ten years before, Austrian savers fled into commodities: an exceptionally strong demand sprung up for textiles, furniture, shoes, and jewelry, this at a time when unemployment was rising rapidly.[21] The additional notes reduced the National Bank's cover ratio

significantly, casting doubt over the authorities' commitment to the maintenance of gold convertibility. Many of those who drew down their bank deposits consequently shifted into foreign exchange. By the end of the month, the National Bank's international reserves had declined by 122 million schillings, or by nearly a third of precrisis levels. Had reserve losses continued at this rate, they would have breached the statutory minimum in less than three months, even without any further increase in (p.268) the note circulation. And as the minimum was approached, the run on international reserves was certain to accelerate.

Three steps were taken to stem reserve losses. First, to buttress confidence, the National Bank solicited a foreign loan. Negotiations proved difficult to conclude, however. As early as May 15, the Bank of France agreed in principle to participate in the extension of a loan, but the French Government, led by the nationalistic Pierre Laval, demanded diplomatic concessions, specifically renunciation of the prospective German customs union.[22] The United States, Britain, and Belgium squabbled over shares. Securing a modest $14 million loan, a small fraction of the $100 million of short-term foreign claims on the Credit-Anstalt, required three weeks of protracted negotiations with the Bank for International Settlements.[23]

Delay proved fatal. The B.I.S. credit was exhausted within a week. “It was clear from the beginning,” *The Economist*'s Berlin correspondent wrote of the Credit-Anstalt, “that such an institution could not collapse without the most serious consequences, but the fire might have been localized if the fire brigade had arrived quickly enough upon the scene. It was the delay of several weeks in rendering effective international assistance to the Credit-Anstalt which allowed the fire to spread so widely.”[24]

Efforts to secure a second loan were again stymied by French insistence that Austria renounce the customs union. Belgium and, more surprisingly, Italy sided with France.[25] The Bank of England unilaterally extended a £4.3 million loan and the B.I.S. followed suit, but with reservations that did little to inspire confidence.[26]

Neither were other forms of international monetary cooperation forthcoming. The Bank of France and the Fed failed to increase their discounts of bills or to take other steps to release reserves to Vienna. The Bank of France still lacked the capacity to initiate expansionary open market operations to repel gold inflows.[27] Having done little of consequence in the early months of 1931, the Governors of Federal Reserve Board in April authorized $100 million of security purchases in response to the American banking system's growing instability. But more than a month and a half was allowed to pass before purchases got underway. They were immediately offset by sales of securities by individual reserve banks seeking to strengthen their balance sheets.[28] French and American policies were of no help to Austria.

The second step taken to buttress the National Bank's position was raising the discount rate. Higher interest rates were intended to increase the attractiveness of (p.269) domestic investments and discourage capital flight. But the National Bank was disturbingly slow to act. Only on June 8, a month into the crisis, did it advance the discount rate from 5 to 6 percent. Only on July 23 did the discount rate reach 10 percent. As the first European country to experience a panic, the Austrian authorities could regard it as a localized disturbance—the Credit-Anstalt's problem—rather than as a threat to national solvency. Having entered the crisis with ample reserves, they were slow to recognize that the convertibility of the schilling was endangered.

But the same hesitancy to raise the discount rate was evident also in other countries, in which neither consideration applied. Other factors must therefore have been at work. In Austria as in other countries, the hesitancy to raise discount rates reflected fears that the action would be ineffective and even counterproductive. An annualized interest rate of 10 or even 15 percent scarcely compensated for capital losses of 40 percent like those often suffered with devaluation.[29] There was a danger, moreover, that investors would interpret a punitive discount rate as evidence that the central bank was in dire straits. Rather than reassuring investors, a discount rate increase would only encourage capital flight.

The perceived limitations of discount rate increases and the inadequacy of international cooperation left the Austrian authorities no alternative to the third option: exchange control. In imposing it, they suspended the convertibility of the schilling. The $14 million foreign credit obtained by Austria at the end of May was accompanied by a standstill agreement. Foreign banks agreed not to withdraw deposits in return for promises of favorable future treatment, specifically an Austrian Government guarantee to make good the deposits of ailing banks. The lenders desired the standstill to prevent the $14 million of loan proceeds from being dissipated by capital flight. Austria desired the insulation.

But using exchange control to remove the danger of an external drain would not suffice so long as the danger of an internal drain remained. The National Bank therefore discouraged domestic depositors from demanding gold and foreign exchange. With the cooperation of the big Vienna banks, it rationed foreign currency. The schilling price of the dollar in coffee house transactions had started to rise almost immediately upon news of the Credit-Anstalt's difficulties. By September foreign currency was trading in the coffee houses at 10 to 15 percent premia.[30] Austria, in effect, was no longer part of the gold standard system.

As the crisis spread to Germany and then to Britain and the black market discount rose, informal exchange restrictions began to break down. Valued customers had an incentive to demand foreign exchange from their banks and to resell it at a 15 percent premium on the coffee house market. Banks that failed to obtain that foreign exchange from the central bank risked alienating their favored customers. The banks themselves had a growing incentive to preempt the business and demand foreign exchange for their own account. The authorities were forced to impose formal controls.

On September 21, the first business day after Britain's devaluation, the National (p.270) Bank limited the sale of foreign exchange to “legitimate” import demands. Two weeks later the Ministry of Finance disallowed remittances via money order. Two days after that it promulgated the first exchange control act. The National Bank was granted a

monopoly over foreign exchange dealings. The publication of foreign exchange quotations was prohibited. Commodity exporters were obliged to inform the National Bank of money due and to make deposits to guarantee that foreign exchange proceeds would be surrendered. Although the gold parity was officially maintained, the domestic price of gold and the black market discount rose almost immediately to 40 percent above par.[31]

Austria's decision to opt for exchange control rather than overt depreciation was a legacy of the hyperinflation experienced less than a decade before. In the public mind, inflation and depreciation were indistinguishable. For policymakers, the two phenomena, while distinct, were causally connected. Britain had not yet demonstrated the feasibility of devaluation without inflation.

The Crisis Spreads

Had such difficulties been limited to Vienna, the international gold standard might have staggered on into 1932. Austria would have merely joined the growing list of debtors, including Australia, Canada, Argentina, and Brazil, to have suspended convertibility and covertly depreciated their currencies. But Austria's crisis spread immediately to Hungary. Similar problems then surfaced in Germany and Britain, toppling two of the gold currencies at the center of the international financial system.

Hungary's financial crisis was directly connected to events in neighboring Austria. The Credit-Anstalt possessed a controlling interest in Budapest's largest bank. As soon as the crisis erupted in Vienna, foreign investors withdrew their deposits from this and other Hungarian institutions. By May 15 bank runs in Budapest were underway.

As an agricultural exporter, Hungary already had suffered a terms-of-trade decline and a deterioration in her balance of payments. As part of the 1930 Hague agreements, which rescheduled Hungary's reparations obligation, plans had been laid to float a long-term loan on international markets. This was rendered infeasible by the collapse of lending in 1931. Hence the Hungarian National Bank had few resources to

mobilize for lender-of-last-resort intervention. In the third week of June, a consortium of nine central banks and the B.I.S. extended a $10 million three-month credit to the National Bank. These resources were expended rapidly. In July the banks and the stock exchange were closed. They were reopened only after the government froze foreign deposits and imposed exchange control.

The Credit-Anstalt's investments in Germany, in contrast to Hungary, were relatively insignificant. Contrary to popular belief, German banks maintained only modest balances in Vienna; the Austrian standstill therefore had minimal effect on

(p.271)

the liquidity of their positions. These facts have led some to suggest that the Austrian and German crises were largely independent.[32] In this view, while the Austrian crisis was due to the Credit-Anstalt's difficulties, the German crisis was caused by Chancellor Brüning's June 6 appeal for reparations concessions and by growing international diplomatic tension.

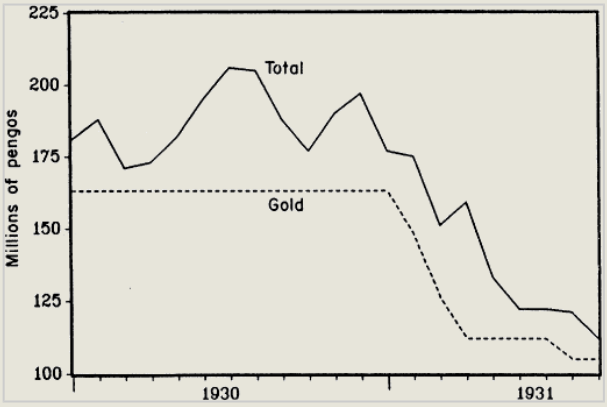


Fig. 9.4. Hungarian gold and total reserves, 1930–31.

Like Figure 9.3 for Austria, this one for Hungary shows a steady loss of reserves in the year preceding the Central European financial crisis of mid-1931.

Source: Economist Magazine (various issues).

Yet the Austrian crisis could undermine financial stability in Germany even in the absence of direct deposit links. The economies and banking systems of the two countries bore a

marked resemblance. Lacking timely information on the state of German finances, investors took the Austrian crisis as a warning. “The world does not distinguish very clearly between the banking and industrial situation in Berlin and that of Vienna,” as *The Economist* put it.[33] Austria's use of standstill agreements also served to undermine the German position. French and British investors who found their Austrian balances frozen were forced to turn to their German deposits for liquidity. And if Austria could freeze foreign deposits, so could its neighbors, notably Germany. Investors hurried, while there was still time, to repatriate their funds.

Germany's payments position was already precarious. Her trade balance, while in surplus in 1930, was only sufficient to finance reparations payments, not commercial (p.272)

debt service as well. External equilibrium required continued capital transfers from abroad. In 1930, capital flowed in, courtesy of the Young Loan and a limited quantity of commercial borrowing, but on a greatly diminished scale. The fall of the Mueller Government in March, Brüning's decision to dissolve the Reichstag in July, and Nazi gains in the September elections all unsettled international markets. In the wake of the election the Reichsbank lost $250 million in gold and foreign exchange, forcing the B.I.S. to support the mark.

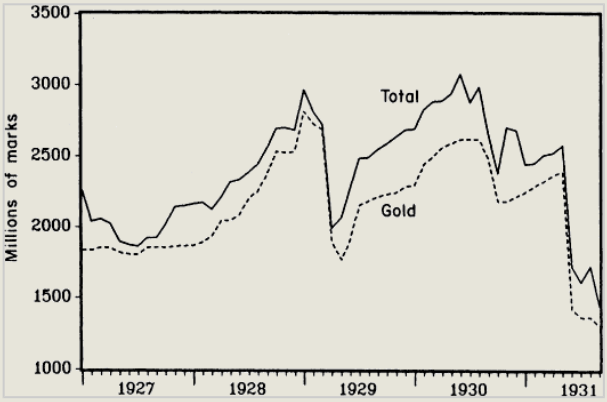


Fig. 9.5. Reichsbank gold and total reserves, 1927–31.

Germany, like Austria and Hungary, began to lose international reserves well before the outbreak of financial crisis in May 1931. Once the crisis erupted, reserves drained out rapidly, reflecting the unusual volume of foreign deposits in the German banking system.

Source: Economist Magazine (various issues).

Confidence was the key variable. As of mid-1930 more than half of all German bank deposits were from foreigners. (See Table 9.2.) At the end of the year, foreign short-term claims on Germany exceeded by a factor of three the total international reserves of the Reichsbank.[34] If foreigners attempted to withdraw that money, not just the German banking system but the gold parity would be casualties.

Political as well as economic uncertainties led potential investors to shy away. Their hesitancy further undermined the financial situation. The banks, with a tradition of intimate

relations with industry, invested heavily in industrial shares, often the shares of the same enterprises to which they had extended loans. The collateral securing these loans took the form of yet more industrial shares. Thus, the slump in share prices had a devastating impact on their balance sheets.

At the end of 1930, the great banks acknowledged that they had suffered extensive (p.273)

Table 9.2. International Position of German Banks (Billions of Reichsmarks)

Date	Due to Foreigners	Due from Foreigners		Net Liability	
		Inclusive of Reichsbank	Exclusive of Reichsbank	Inclusive of Reichsbank	Exclusive of Reichsbank
End of 1926	3.5	2.7	1.8	0.8	1.7
End of 1927	5.7	2.7	2.3	3.0	3.1
Middle of 1928	6.0	2.9	2.3	3.1	3.7
End of 1928	7.6	3.7	3.2	3.9	4.4
Middle of 1929	7.2	3.8	3.3	3.4	3.9
End of 1929	8.6	4.4	3.6	4.2	5.0
Middle of 1930	9.2	4.7	3.7	4.5	5.5

Source: Madden and Nadler (1935), p. 396.

capital losses. They set aside a portion of profits to replenish their capital. Critics questioned whether these steps were adequate, suggesting that published balance sheets had been window dressed to disguise the extent of the losses.[35] Were the critics correct, it

was doubtful that the banks, with their profits collapsing, could do anything about it.
The Credit-Anstalt crisis provoked immediate withdrawals in Berlin. Brüning's use of the event as an occasion to renew his call for reparations concessions further roiled the markets. To maintain confidence, the Reichsbank injected liquidity into the banking system. In June and July the central bank in fact rediscounted over half of the bills in the portfolios of the six large Berlin banks.[36]

But by the second half of June, with financial difficulties continuing to mount, the Reichsbank's capacity to extend additional discounts was approaching exhaustion. In the first two weeks of June, the central bank had lost RM 630 million of gold, or more than a quarter of the total with which it had begun the month. By June 21 its free reserves had fallen virtually to zero. The Reichsbank was forced to ration credit to the banking system, restricting discounts to selected high quality bills.[37] The restriction was to remain in force for two months, until Germany imposed stringent exchange controls.

This limited provision of credit was not enough. A full-fledged banking panic erupted in July. The spark that ignited the panic was the failure of the Nordwolle, a textile firm of some renown. Its failure provoked a run on the Danat Bank, the Nordwolle's principal source of finance and one of the great banks known to be heavily dependent on foreign deposits.[38] The Nordwolle's losses were made public (p.274) in the first week of July. The run on the Danat Bank commenced immediately. Rather than risk additional bank failures, within days the government guaranteed the deposits of the Danat Bank and ordered other banks to suspend cash payments.

The central bank's inability to prevent a general suspension was due to the pressure on its reserves. In its weekly statement of June 23, the Reichsbank had managed to conform to the letter of the gold standard law only with the help of a $5 million overnight deposit by the Bank of England. At the end of the next week its excess reserves remained essentially at zero. Total reserves were 40.1 percent of eligible liabilities, barely in excess of the legal minimum. Additional discounts were

incompatible with adherence to the letter of the gold standard law.

In principle, various steps could have been taken to relax the constraint. The government might have requested a decree suspending convertibility and gold cover requirements entirely. Foreign deposits might have been frozen. Exchange controls might have been imposed. But any of these measures would have spoiled the market for German bonds. They would have antagonized the Allies, who as recently as 1930 had written restrictions on Reichsbank policy into the Hague Treaty. Consent of the Bank for International Settlements or of the Young Plan Arbitral Tribunal was required before the provisions of Germany's gold standard could be modified.[39]

The German Bank Law in fact permitted the General Council of the Reichsbank to reduce the cover ratio to less than 40 percent if the central bank paid a note tax on the deficiency. This was the course it in fact pursued once exchange control was imposed later in 1931. But to allow the cover ratio to fall below 40 percent while the gold standard remained in effect threatened to undermine confidence in the future of convertibility and provoke a run on the Reichsbank's remaining gold and foreign exchange reserves. If reserves were liquidated by a speculative attack, the Reichsbank would lose all capacity to intervene in the foreign exchange market in support of the mark. Currency depreciation and inflation could follow. German central bankers and the financially orthodox Brüning Government were apprehensive about the inflationary consequences of any compromise of the gold standard law. Thus, sustaining confidence dictated maintaining the 40 percent cover ratio at any cost. Things would be different once exchange controls were imposed in order to erect a fire wall against inflation. But so long as gold convertibility remained in effect, maintenance of the 40 percent cover ratio was critical for confidence.

Further intervention was feasible, therefore, only if reserves were replenished. Brüning used emergency decrees to balance the budget, to strengthen the current (p.275) account, and to reassure foreign investors. On June 5, unemployment benefits and crisis support were cut by 6 percent. Civil service salaries

were reduced by 4 to 8 percent. War pensions were lowered by 7 percent. An income tax surcharge was applied, and sugar and petrol duties were raised. Notwithstanding their impact on the domestic economy, these measures might eventually have strengthened the external position. But they had little immediate effect. Reserves could be replenished only with foreign assistance.

Foreign support for the Reichsbank began promisingly. On June 19, in response to withdrawals provoked by the Credit-Anstalt crisis, Hans Luther, the former Finance Minister and Chancellor who succeeded Hjalmar Schacht as Reichsbank President in 1930, inquired with Montagu Norman about the prospects for a $100 million loan from the Bank of England, the Federal Reserve, and the Bank for International Settlements. Negotiations among the three institutions and the Bank of France culminated in an agreement on June 24 to extend a credit in this amount, with the money becoming available a week later.

News of this assistance calmed the market and temporarily halted the Reichsbank's reserve losses. But the Nordwolle's failure and the run on the Danat Bank exhausted the credit.[40] On July 3 the Reichsbank's cover ratio breached the statutory floor. The Gold Discount Bank, an affiliate of the Reichsbank, had negotiated a $50 million line of credit with a consortium of New York banks in the 1920s; the government drew the entire amount at once, raising the cover ratio to 43.6 percent.[41] But it quickly began to fall again. Luther next proposed that members of the German business community loan the Gold Discount Bank 500 million marks, which that institution could turn around and inject into the financial system. Each industrialist hoped that the others would participate, but none was willing to volunteer the first contribution.[42] Reserves continued to decline. On July 9 the Reichsbank, with no room to maneuver, withdrew its support for the Danat Bank. By July 15 central bank reserves had nonetheless fallen below the legal minimum.

In May Britain, France, and the United States balked at extending $14 million to Austria. Now Luther requested as much as $1 billion to tide the Reichsbank over the coming

weeks. His whirlwind trip to London, Paris, and Basel failed to produce results. Montagu Norman complained that the Bank of England was already heavily exposed by the credits it had extended to Austria. No further German credits could be granted, he now insisted, so long as the climate of uncertainty about reparations persisted. Clément Moret of the Bank of France demanded, as a condition for assistance, that the German government renounce Brüning's demand for reopening reparations negotiations.[43]

(p.276) Informed by the Bank of France of the “huge amount” that Luther was now requesting, George Harrison of the New York Fed similarly set down a list of financial and economic conditions that Germany would have to meet before he was prepared to support additional credits.[44] Policies of credit restriction by the Reichsbank would have been required to meet most of these conditions. Credit restriction was precisely the opposite, of course, of what German officials thought was needed. Harrison failed to appreciate the dilemma confronting the Reichsbank. It could restrict domestic credit to defend the gold standard as he recommended, but only if the German authorities were willing to risk the collapse of the banking system. “Rationing of credit,” Harrison cabled the Governor of the Bank of France, “is of course a drastic and disagreeable procedure but it has been applied effectively in Germany in the past without proving to be fatal. On the contrary in each other instance it has been most helpful in repatriating German capital and in checking further outflows of funds and I cannot see why it might not be equally effective at this time.”[45] What Harrison failed to appreciate was that Germany's previous balance-of-payments difficulties—those of 1927, for example—had not arisen in a period when the domestic banking system was on the verge of collapse. Once again, differences in how the monetary authorities conceptualized the crisis led them to recommend different policy actions, and impeded their efforts to arrange a cooperative response.

Negotiations stretched into August without conclusion. The banks were allowed to reopen following the Danat Bank's failure only after the government issued a decree concentrating foreign exchange transactions in the hands of the Reichsbank and freezing foreign deposits, sacrificing its

future ability to borrow for immediate protection against inflation. These early exchange controls were less than effective. During the hyperinflation, merchants and manufacturers had learned to utilize foreign subsidiaries to channel capital abroad, knowledge that came in handy when controls were reimposed. In September, following the negotiation of a standstill agreement with foreign creditors, more stringent controls were applied.

Thus, the failure of international cooperation was the key to Germany's defection from the gold standard system. Credits for Germany would have been financed by Britain, France, and the United States, presumably in equal shares with smaller central banks and the B.I.S. picking up residual amounts. France resisted their extension. Representations of Germany's financial plight, starting with Brüning's June 6 statement, were dismissed in Paris as disingenuous attempts to wring concessions from the reparations creditors. Moret's insistence that Germany denounce the proposed customs union with Austria and cease construction of pocket battleships was unacceptable to the Brüning Government, whose domestic political support was already tenuous.

Bank of England officials, led by Montagu Norman, and influential members (p.277) of the Hoover Administration, possibly including the President himself, were more inclined to share Germany's assessment of the crisis and not France's insistence on diplomatic concessions. But even if France had been willing to concede the customs union and the battleships, the reparations problem would have remained. Until a reparations moratorium was declared, granting further credits was pouring good money after bad. The resources of the Federal Reserve System and the Bank of England would simply end up in the Bank of France. Norman refused to extend credits to the Reichsbank in early July without French reparations concessions. The Hoover Administration opposed the extension of credits on the grounds that they would relieve the pressure on France to compromise. George Harrison of the Federal Reserve Bank of New York informed the Reichsbank that it would have to rely on its own devices.[46]

Thus, the provision of adequate international credits hinged on the negotiation of a reparations moratorium. German officials had been pressing for one ever since the Depression struck; the financial crisis lent new urgency to their demands.[47] Hoover responded on June 20, proposing a one-year moratorium on principal and interest payments on intergovernment debts and reparations.[48] The proposal was hailed in Berlin and endorsed in London as “a very great gesture on the part of the United States.” On Monday June 22, the first trading day following Hoover's announcement, buying on the Berlin stock exchange was so frenzied that most prices could not be ascertained until afternoon. Many climbed by 20 percent by the close of business. Wall Street rose in Berlin's wake.

But Hoover's plan was received in Paris with “incredulous astonishment.”[49] The moratorium was regarded as the first step toward repudiation of the Young Plan and the Hague Agreement. As a precondition for acceding to the moratorium, France renewed its call for Germany to disown the customs union, a demand sure to antagonize German nationalists and erode support for the Brüning Government.

There was widespread doubt that France would agree to the moratorium even if this condition was met. The French Prime Minister, Pierre Laval, had to answer to a Chamber of Deputies insistent that Germany's obligation remained inviolable. His room for maneuver was limited by the right, which opposed all concessions, and by the Radicals, under Herriot, who hoped to see the government fall. Laval had no choice but to insist on payment of the unconditional annuity required under the Young Plan. But he offered to lend it back to the B.I.S. for use in meeting Central Europe's credit needs. To avoid antagonizing domestic interests, Laval specified that B.I.S. loans be extended to financial and commercial concerns, not to the German government. American Treasury Secretary Andrew Mellon, negotiating on behalf of the Hoover Administration, objected that the prohibition on loans to governments and the diversion of funds from Germany to other parts of Central (p.278)

Table 9.3. Financial Effect of the Hoover Moratorium (Thousands of Pounds)

Government of	Suspended Receipts	Suspended Payments	Net Loss (−) or Gain (+)
United States	53,600	Nil	−53,600
Great Britain	42,500	32,800	−9,700
France	39,700	23,600	−16,100
Italy	9,200	7,400	−1,800
Belgium	5,100	2,700	−2,400
Romania	700	750	+50
Yugoslavia	3,900	600	−3,300
Portugal	600	350	−250
Japan	600	Nil	−600
Greece	1,000	650	−350
Canada	900	Nil	−900
Australia	800	3,900	+3,100
New Zealand	330	1,750	+1,420
South Africa	110	Nil	−110
Egypt	90	Nil	−90
Germany	Nil	77,000	+77,000
Hungary	Nil	350	+350
Czechoslovakia	10	1,190	+1,180
Bulgaria	150	400	+250
Austria	Nil	300	+300

Source: The Economist (June 11, 1932).

Europe, as proposed by France, robbed the moratorium of its force. The Americans also protested French demands that deferred payments be made up within five years, not over 25 years as Hoover envisaged.

Negotiations ground to a halt. Hoover finally threatened to go ahead without French agreement. Realizing that war debt and

reparations transfers would be suspended with or without their participation, the French attempted to save face by going along, preserving the appearance of business as usual and insisting on a book-keeping transfer of the unconditional annuity to the B.I.S., which would loan the money back to the German railways.[50] The moratorium had taken three weeks to negotiate. By that time, it was too late to organize an international loan and fend off exchange control.

Thus, the inability of France, Britain, and the United States to engineer an international support operation was ultimately responsible for forcing Germany off the gold standard. That failure was due in turn to the ongoing dispute over war debts and reparations. Since France had more to lose by forgoing reparations than she stood to gain by rescheduling war debts, one can argue that she was asked to make disproportionate concessions. But, as shown in Table 9.3, the immediate sacrifice was even greater for the United States, which had no intergovernmental obligations to offset against war debt repayments due.[51] The problem was not lack of U.S. leadership. It was the failure of cooperation, specifically French unwillingness to go along. (p.279)

Table 9.4 Ratio of Cash Resources to Total Deposits in Certain Countries (At End of June)

Country	1929	1930	1931	1932
France	7.4	9.7	13.9	33.6
United Kingdom	11.3	11.5	11.7	11.5
United States	7.3	7.4	7.6	8.2
Italy	6.9	6.6	6.2	5.9
Germany	3.1	2.7	3.6	3.4
Poland	8.5	8.8	10.7	9.0
Sweden	2.1	2.3	2.1	3.8
Czechoslovakia	6.7	7.3	7.2	7.4
South Africa	10.3	10.0	9.1	10.1
Argentina	17.9	14.2	13.4	17.5

Country	1929	1930	1931	1932
Australia	15.6	13.4	19.2	17.8
Canada	13.3	12.1	10.9	12.2
Chile	14.4	12.6	9.5	26.4
Japan	9.1	9.0	10.1	9.8
New Zealand	12.3	13.0	13.7	11.5

Source: League of Nations (1933b), p. 232.

Britain Abandons Gold

The 1931 sterling crisis differed from financial difficulties in other countries because of the distinctive structure of Britain's banking system. Highly concentrated, traditionally conservative, and linked only loosely to industry, British banks weathered the Depression relatively well. Bank investment portfolios did not suffer as severely as those in other countries. In the United States bank share prices fell even more quickly than the prices of industrial securities. In the United Kingdom, in contrast, bank shares held up better. As late as December 1930 British bank stocks were down only 3 percent from the end of 1928. In June 1931, at the height of Austria and Germany's difficulties, they still stood at 90 percent of late-1928 levels.[52]

The banks had ample reserves to accommodate depositors' demands, and much of the money lent to the London discount market could be mobilized at short notice. (See Table 9.4.) Discount houses specialized in converting the liquid reserves of the clearing banks into more remunerative, less liquid bills of exchange. When the banks recalled their loans to the discount houses, the houses were forced to rediscount bills with the Bank of England. This separation of the deposit-taking and liquidity-transformation functions of the financial system gave the banks an additional layer of insulation. There were no depositors to run on the discount houses. Clearing banks had good information on the discounters they dealt with (p.280) and the Bank of England stood by its commitment to

rediscount in periods of stress. Consequently the British financial system was relatively well insulated.

But as in Austria and Germany, the burden of adjustment rested ultimately on the shoulders of the central bank. The Bank of England had only limited room to maneuver. Its problem was the persistent weakness of the external accounts. The British balance of payments was traditionally supported by surpluses on invisible account (income from shipping, financial, and other services rendered to foreigners, and interest and dividends from abroad). These earnings normally financed Britain's merchandise imports and overseas lending. In 1930, a year of current account balance, the £283 million merchandise trade deficit had been offset by £16 million of earnings from shipping, £17 million from tourism, £40 million from the provision of financial and other services, and, most important, £215 million of interest, profits, and dividends from abroad.[53] This position was sustainable so long as invisible earnings held up and capital outflows were negligible. But if invisible earnings declined and capital took flight, pressure would be placed on reserves.

Every component of the invisible balance weakened between 1930 and 1931. (See Table 9.5.) Earnings from shipping declined by £10 million with the contraction of trade. Earnings from tourism declined by £10 million. The decline in international investment and in the demand for trade credit reduced earnings from financial services by £25 million. And most significantly, interest, profits, and dividends from abroad declined by £60 million. Lower interest rates and declining earnings of foreign companies contributed to these trends. These factors were reflected in the £40 million fall in interest, profits, and dividends from abroad that had already occurred between 1929 and 1930. The additional £60 million drop between 1930 and 1931 reflected debt default in Latin America and the steps taken by Austria, Hungary, and Germany to freeze British deposits and prevent the repatriation of interest earnings. The Austrian crisis rendered illiquid more than £5 million of British deposits, while the German crisis froze at least £70 million of debts to Britain.[54] For Britain as for debtors in Latin America and Central

Europe, the debt crisis and the convertibility crisis were linked.

Unless it was offset by an improvement in other components of the balance of payments, the decline in invisible earnings implied a loss of international reserves. To defend sterling, it was necessary to reduce the trade deficit and attract a capital inflow. Unfortunately, short-term capital was flowing in the wrong direction as a result of mounting doubts about the future stability of sterling. As early as January 1931, one- and three-month forward rates against the U.S. dollar moved to a discount.[55] Within weeks the Labour Prime Minister, Ramsay MacDonald, was questioning his Economic Advisory Council about the risks of a convertibility crisis. The Austrian and German crises them intensified Britain's difficulties. The imposition of exchange controls in Central Europe heightened doubts about the convertibility of other weak gold currencies, of which sterling was the most prominent. On July 13, when the Danat Bank failed, the Bank of England began to lose gold

(p.281)

Table 9.5. Invisible Items in the British Balance of Payments, 1920–38 (Millions of Pounds)

	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
Government[1]												
Debit	70	55	36	30	24	19	20	19	19	19	17	17
Credit	71	80	25	26	17	27	30	34	34	33	36	27
Shipping												
Debit	116	88	86	89	92	86	88	81	76	88	87	85
Credit	290	146	111	128	123	97	102	117	104	114	103	93
Travel												
Debit	22	22	22	24	26	30	31	29	33	33	33	31
Credit	50	53	44	47	49	48	51	55	56	55	50	39
Financial and other services												
Debit	27	16	15	16	19	19	18	18	18	18	15	12
Credit	60	60	60	60	60	60	60	63	65	65	55	30
Interest profits and dividends[2]												
Debit	46	44	60	64	65	63	63	63	64	64	62	48
Credit	292	222	237	240	261	295	300	302	304	307	277	211
Private transfers												

	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
Debit	18	14	13	17	12	11	12	12	11	11	7	7
Credit	21	19	19	19	20	18	17	19	19	18	19	19
Total invisibles												
Debit	299	230	232	240	238	228	232	222	221	233	221	200
Credit	784	580	496	520	530	545	560	590	582	592	540	419
Balance (credit)	485	341	264	280	292	317	328	368	361	359	319	219

(1) Includes transfers and personal expenditure abroad of Armed Forces; excludes interest receipts and payments (included in row 5).

(2) Debits are net of United Kingdom taxes paid by non-residents; credits are net of foreign taxes paid by United Kingdom residents.

Source: Feinstein (1972), p. T84.

for export. Two days later sterling fell sharply against the dollar and the franc. In the week ending July 18, the Bank of England lost £10 million of reserves. By the end of the month, the Bank had lost more than £56 million of gold.[56]

Historians debate whether fiscal and monetary instruments should have been utilized more aggressively to stem the loss of reserves.[57] Bank rate increases, the traditional device for strengthening the capital account, were used hesitantly. The Bank of England took no action until late July, when it advanced Bank rate twice in rapid succession. No further increase was authorized in the remaining seven weeks of the gold standard period.

The traditional explanation for the Bank's inaction is Montagu Norman's ill health. This may be regarded as an analog to the explanation for the Fed's inaction after 1928 that emphasizes Benjamin Strong's untimely death. The Governor of the Bank of England collapsed from exhaustion on July 29, 1931, and played little role in the events of subsequent months. (p.282)

Like its American counterpart, this explanation emphasizing the physical condition of one individual is too facile, however. Norman and his colleagues had been leery for some time of the impact of a high Bank rate on the domestic economy. With

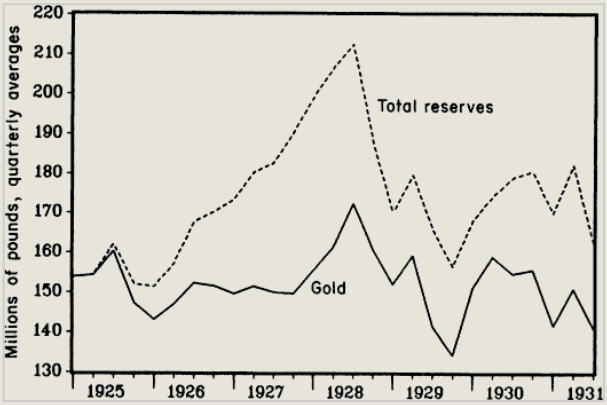


Fig. 9.6. Bank of England gold and foreign exchange reserves, 1925–31.

Starting 1928, the Bank of England suffered a series of balance of payments problems, which manifested themselves in the form of reserve losses.

Source: Bank of England Statistical Summary.

unemployment in excess of 20 percent, aggressive use of Bank rate was sure to draw fire from Labour MPs. In any case, there were doubts that a higher Bank rate would succeed in deflecting the pressure on the central bank. In the nineteenth century, when there had been no question about commitment to the sterling parity, a sufficiently high Bank rate could “draw gold from the moon.” Even in the 1920s, a two-point increase in Bank rate would have attracted capital from abroad in quantities more than sufficient to offset the deterioration in the invisible balance.[58] But Bank rate's power was contingent on the credibility of the commitment to gold. World War I and its aftermath had demonstrated Britain's willingness to suspend convertibility in times of crisis. The actions of Austria and Germany suggested that 1931 might be just such a time. A higher Bank rate might be taken not as reassurance but as an indicator of the severity of Britain's difficulties and hence of the likelihood of suspension.

The stability of the prewar gold standard had rested not just on credibility but on international cooperation. If sterling was to be successfully defended, foreign central banks would have to make clear their willingness to provide assistance. They did so only to a very limited extent. In the final week of July, the Bank of (p.283) England obtained matching credits of £25 million from the Bank of France and the Federal Reserve Bank of New York. The amount was inadequate. It was less than the value of the reserves the Bank of England lost in the second half of July. While temporarily replenishing the Bank's coffers, the foreign credits did not give the Government an opportunity to correct the payments imbalance. The French and American loan was all but exhausted within three weeks of becoming available on August 7. And it appeared unlikely that additional credits could be obtained. The Federal Reserve was increasingly concerned about its own position. George Harrison indicated to the Bank of England that any further credits would have to be obtained from other sources.[59]

Tax increases and public spending reductions, by reducing domestic demand and narrowing the trade deficit, might have helped eliminate the external drain. Even if fiscal retrenchment was slow to alter import and export volumes, the knowledge that improvement was on the way might have reassured the markets and limited capital outflows. Currency speculators were led to focus on the budgetary situation.

Having been in surplus throughout the 1920s (except in 1926, the year of the General Strike), the budget of the combined public authorities moved into deficit in 1930–31. The proximate source of the shift was the growing deficit of the unemployment insurance fund. As the number of unemployed persons rose toward 2.5 million, the projected deficit from the operation of the insurance scheme approached £100 million.[60]

The failure of foreign banks to provide more generous credits reflected their concern over Britain's inability to eliminate her budget deficit. On the Continent, parallels were drawn with the French inflation of the 1920s, which was attributed to public sector deficits. Unless the budget deficit was eliminated, extending additional loans, in the view of Bank of France officials, would simply be throwing good money after

bad. British Treasury officials were aware that J.P. Morgan & Co. would make any American loan to support the pound contingent on budgetary economies in general and reductions in unemployment benefits in particular.[61]

The Labour Government proved incapable of effecting the relevant economies. It was a minority government: Labour had won 287 seats in the 1929 general election, the Conservatives 261, the Liberals 59. Thus, the survival of the government hinged on its ability to retain Liberal support. Labour's working-class constituency, vocally represented in the cabinet by Arthur Henderson, the Foreign Minister, opposed drastic reductions in unemployment benefits and public sector pay. The Liberals opposed tax increases, especially a tariff on imported goods. The battle of the budget could be won only through compromise. It was a compromise that the Labour Government ultimately proved unable to achieve.

(p.284) The dimensions of the problem were first revealed by the Committee on National Expenditure headed by Sir George May. On July 31, 1931, the government published its report projecting a £120 million budget deficit for the year. It recommended £24 million of new taxes and £97 million of spending cuts, notably a £67 million reduction in unemployment insurance outlays (including a 20 percent cut in benefits). By the time the Cabinet met to consider these recommendations, the Labour Government's dour Chancellor of the Exchequer, Philip Snowden, had revised upward the estimate of the budget deficit by nearly 50 percent. Thus, even the painful sacrifices recommended by the May Committee would not suffice. Swallowing hard, the Labour Government proposed £56 million of spending cuts, including £22 million of unemployment insurance expenditures (but no cut in the standard rate of benefit). This was too little to significantly reduce the budget deficit. Inability to break the deadlock led to the fall of the Government on August 23.

It was succeeded by a National Government headed by Ramsay MacDonald, formerly Prime Minister in the deposed Labour Government. The Cabinet was composed of four representatives of Labour, including MacDonald, along with four Conservatives and two Liberals. The new government

unveiled its plan for budgetary economies on September 10. All groups were to bear part of the burden of cuts, although labor was arguably hit the hardest. Spending was cut by £70 million, while taxes were raised by £75 million.[62] Tax increases were split between income taxation and indirect duties on beer, tobacco, and fuel. Unemployment benefit rates were reduced by 10 percent, the benefit period was limited, and contributions to the unemployment insurance fund were raised. These measures enabled the government to borrow $200 million from J.P. Morgan & Co. in New York and a matching amount in Paris. But by that time the central bank's reserves were so depleted that it was questionable whether the cuts went far enough.

Further reductions in spending were not palatable to Labour supporters of the National Government. Public sector pay cuts had already created unrest in the ranks of the Navy and a sailors' protest at Invergordon. The press played the protest as a mutiny, which was an exaggeration.[63] But there was good reason for the events an Invergordon to unsettle the financial markets. They signaled the Government's inability to balance the budget with further reductions in public sector pay and suggested that still more widespread unrest was likely to occur if officials attempted to impose dramatic reductions in unemployment insurance. Given the ability of the Conservative and Liberal members of the Government to block additional taxes, there was no obvious solution to the budgetary deadlock. Capital took flight, threatening the Bank of England's remaining reserves. Britain was forced to suspend convertibility on September 19, bringing the world's brief experiment with an international gold-exchange standard to its inglorious end.

(p.285) It is striking that the polity could be so fragmented that no fiscal compromise proved possible, especially with Britain's majority representation electoral system. The 1929 general election had taken place in a period of party realignment, which is a partial explanation. When the pendulum swung to the right, the Conservatives gained a parliamentary majority, but when it swung to the left in 1929, support was split between the ascending Labour Party and the declining Liberals. Labour and the Liberals were in broad

agreement on the kind of policies to be pursued in a period of expansion, but they disagreed about how the burden of fiscal adjustment should be distributed during economic and financial crisis.[64] With the collapse of the Labour Government, the pendulum swung back to the right. In the October 1931 general election, 472 Conservative supporters of the National Government won seats, giving the Conservatives an enormous parliamentary majority characteristic of a majority representation system. The budget problem was addressed with spending cuts and the imposition of a tariff, one of the Conservative Party's pet projects. But by October the financial crisis was long past. Britain had already been forced off gold.

Implications

The unstable equilibrium of the 1920s had set the stage for the collapse of the gold standard system. The pattern of multilateral settlements hinged on U.S. willingness to recycle its current account surpluses. Initially, American lending proceeded on a large scale. Starting in 1928, however, the collapse of lending created severe difficulties for the debtor nations. The debt defaults in which those difficulties culminated transformed the temporary decline in lending into a permanent collapse. Austria and Germany were among the nations affected most profoundly. Their financial difficulties forced the Austrian National Bank and the German Reichsbank to choose between stability of the domestic banking system and maintenance of the gold standard. After hesitating, they chose domestic financial stability, freezing foreign deposits and replacing gold convertibility with exchange control. The combination of debt defaults and frozen deposits inflicted additional damage on Britain's already weak payments position.

Thus, financial links running from New York to Latin America and Central Europe and from there to London transmitted the destabilizing impulses that brought down the gold standard system. Such impulses were ordinarily contained by the credibility of the commitment to gold and international cooperation. But by 1931 the gold standard's credibility was increasingly questioned. The influence of domestic pressure groups raised doubts that maintenance of the gold standard

would be valued above other objectives. The deepening Depression raised the costs of permitting liquidation to run its course. The doubts prompted by these developments attenuated the stabilizing influence of the market, placing a growing burden on central banks and heightening the importance of international cooperation.

(p.286) Adequate cooperation was not forthcoming, however. Resistance to fiscal retrenchment in Britain and political disarray in Germany rendered private banks unwilling to lend. International political disputes—specifically the reparations tangle and Germany's proposal for a Central European customs union—made the French government hesitate. The Federal Reserve System could not bear the burden alone. Even if it had better appreciated the merits of central bank cooperation, the Fed still would have required the cooperation of the Bank of France and other central banks. The $1 billion demanded by Germany in the summer of 1931, not to mention the staggering amounts presumably required by Britain to defend sterling, was all the free gold the United States possessed. For the Fed to loan the entire amount and leave itself without a cushion was unthinkable. All the reserves at its disposal would soon be needed to defend the dollar.

Thus, in the absence of international cooperation, the gold standard posed an insurmountable barrier to the unilateral pursuit of stabilizing action. Not only were reflationary monetary and fiscal initiatives incompatible with the maintenance of gold convertibility, but efforts to contain domestic financial instability were thwarted and even rendered counterproductive. As domestic banking panics spread contagiously across countries, the monetary authorities stood idly by.

The crisis was also an opportunity, however. By forcing countries off the gold standard, it introduced new policy options. No longer was the unilateral pursuit of reflationary initiatives limited by the gold standard constraints. Reflation no longer required international cooperation. But the desire to initiate reflationary policies had to overcome other obstacles, notably fears that the end of the gold standard marked the beginning of a new inflationary era characterized by financial

and political chaos. Much time was lost before this hesitation to take reflationary action was finally overcome.

Notes:

(1) The figures are annual averages, as reported in Eichengreen and Hatton (1988), pp. 7–8.

(2) League of Nations (1933), p. 70.

(3) *Federal Reserve Bulletin* (September 1937), p. 909. Temin (1989) suggests that the wave of bank failures in 1930 died out so quickly because it did not possess the characteristics of a panic. Much of the rise in the deposits of failed banks was due to Caldwell and Company and the Bank of the United States. Temin's argument is that their difficulties did not disrupt the real economy or demoralize its financial markets because they did not spill over to other banks or to the money market.

(4) Methodist (1938), pp. 86, 88.

(5) Of the major debtors, only Argentina maintained full interest payments on her external debt. Britain was Argentina's most important export market, and the British government was more inclined than its American counterpart to impose trade sanctions in retaliation against default. This combination of forces induced Argentina to maintain debt service throughout the 1930s, in contrast to the other major Latin American debtors. See Abreu (1984).

(6) Schloss (1958), p. 30.

(7) The quotation is from article 10 of the statutes of the Bank.

(8) Schloss (1958), p. 58. On the Brussels and Genoa negotiations, see chapter 6.

(9) This and all subsequent quotations in this paragraph are from the *Fifth Annual Report of the B.I.S* (1936), pp. 41–48.

(10) Its estimate was for the period December 1930 to March 1931. Committee on Finance and Industry (1931), p. 112.

(11) Eichengreen and Portes (1987), p. 26.

(12) Notel (1984), p. 140; Stiefel (1983), p. 417.

(13) Notel (1984), pp. 152–153. According to Schubert (1990), by 1925 the capital base of the big Viennese banks had fallen to from 22.5 to 15.4 of prewar levels. It is relevant to our subsequent discussion that this effect of hyperinflation was evident in Germany as well. See Stolper (1940), p. 113, and Hardach (1984), pp. 214–215.

(14) Schubert (1990), pp. 14–15.

(15) Losses announced on May 11 came to 140 million schillings. Paid up capital was only 125 million schillings. In addition, there was a reserve fund of 40 million schillings. *The Economist* (May 16, 1931), p. 1045.

(16) On May 16 *The Economist* (p. 1045) was already speculating that the bank's actual losses exceeded those officially announced. Actual losses, as reported in the Annual Report to the bank's shareholders submitted to their August 4, 1931, meeting came to 160 million shillings. A copy of the report is contained in Public Record Office (PRO) FO371/15153. Note that this covered operations only through December 30, 1930.

(17) In the first two days of the crisis, the Credit-Anstalt lost 16 percent of its deposits. Within two weeks the total had mounted to 30 percent. Schubert (1990), p. 19. Initially, the bank paid out any sum that was demanded by depositors. By the end of May, it was scrupulously observing all stipulations on time deposits. *The Economist* (June 6, 1931), p. 1218: Ellis (1941), p. 27.

(18) Hoover (1952), p. 63.

(19) The idea of a customs union, designed to cement political as much as economic relations between the two countries, had been under discussion since 1928. See also chapter 8. The attention it received in 1931 resulted from German Chancellor Brüning's attempt to counter National Socialist gains in the September 1930 election. French irritation over the customs union proposal also served to delay the negotiation of

international loans in subsequent stages of the crisis. See pp. 276–277.

(20) At their height at the end of 1930, the National Bank's gold exchange reserves nearly matched the annual trade deficit. Trade balance statistics are from League of Nations (1932), p. 172. Central bank reserves are reported by Nurkse (1944), p. 234.

(21) Schubert (1990), p. 143, cites the *Wiener Boersen-Kurier* (November 16, 1931) to this effect.

(22) Bank of France, *Procès verbaux*, 15 May 1931.

(23) The B.I.S. itself possessed only some $400 million of assets (Clarke, 1967, p. 147). Thus, the magnitude of the support it could extend to a weak currency was decidedly limited.

(24) *The Economist* (June 20, 1931), p. 1326.

(25) PRO FO 371/15150, “British Legation in Vienna to Sir Robert Vansittart,” 10 June 1931.

(26) It was the Bank of England's hope that the breathing space would allow the Austrian government time to sell bonds to the public and use the proceeds to repay the Bank of England for its short-term advance. FRBNY (Harrison Papers), Confidential files, Subject: Austria, June 18, 1931.

(27) Efforts to encourage foreign lending through more favorable tax treatment of foreign securities were ineffectual in the wake of Latin American defaults. Brown (1940), vol. 2, pp. 990–992.

(28) The reserve banks had purchased these securities previously to relieve the pressure on member banks. They now sought to liquidate them. Friedman and Schwartz (1963), p. 378; Wicker (1966), p. 161.

(29) Ellis (1941), p. 360.

(30) Ellis (1941), p. 30.

(31) Ellis (1941), p. 360, and Schubert (1990), p. 25, provide more detailed chronologies of the evolution of Austria's exchange controls.

(32) James (1984) questions the role of the Credit-Anstalt's failure in the German banking crisis on the grounds that German deposits in Austria were minimal. See also James (1986), p. 302. Schuker (1988) similarly places relatively little emphasis on events in Austria in his analysis of the German crisis.

(33) *The Economist* (June 13, 1931), p. 1271.

(34) Madden and Nadler (1935), p. 396; Committee Appointed on the Recommendation of the London Conference (1931), pp. 1–10.

(35) The Deutche-Discounto Bank set aside RM 21 million, the Danatbank RM 10 million, the Dresdner Bank RM 6 million, the Commerzbank RM 5 million. *The Economist Banking Supplement* (May 1931); Palyi (1972), p. 253.

(36) Temin (1989), pp. 68–69.

(37) James (1986), p. 304. This was not the first time the Reichsbank had rationed credit (previous occasions were 1924–25 and 1929). See Madden and Nadler (1935), p. 384.

(38) A further reason depositors regarded the Danat Bank with suspicion was that it had paid unusually high dividends in recent years, which was taken as a sign of unusually speculative investments. James (1986), p. 304.

(39) The Hague Agreements required that “any proposal which may affect the provisions . . . [of the Bank Law] must be submitted by the German Government to the Board of Directors of the Bank for International Settlements.” Statements as to the cover ratio and notes in circulation had to be provided to the Reparations Commissioner daily. H.M. Government (1930), p. 44 and *passim*. The relevant passages of the German Bank Law were inserted directly into the text of the Hague Agreements. See also Brown (1940), vol. 2, p. 942; James (1985), p. 220. As for the Young Plan, Chapter 8,

Section 5 of the Experts' Report, which under the protocol had full status as part of the Young Plan agreement, stated that “The German government undertakes for the purposes of these stipulations as for the general purposes of the plan that the Reichsmark is and shall remain exchangeable into gold or foreign currency in accordance with Section 31 of the present Reichsbank Act.” Cited in Borchardt (1991), p. 245.

(40) The $100 million credit, as Kent (1989), p. 350, notes, was “too small to counteract the groundswell of anxiety amongst overseas investors about the heavy dependence of the German economy upon short-term high-interest foreign credits.”

(41) The Gold Discount Bank had been established in 1924 to obtain foreign short-term credits (mainly in London) and extend trade credit to German exporters. For the central bank to engage in such risky business directly might have cast a shadow over its commitment to gold; thus the Discount Bank was constituted as a separate entity. Later in 1924, the Reichsbank gained a controlling interest in the Gold Discount Bank, which functioned subsequently as its subsidiary.

(42) Kent (1989), p. 350.

(43) Hardach (1982), p. 9.

(44) FRBNY (Harrison Papers), “Harrison conversation with Norman on 8 July 1931,” Confidential Files, Subject: Germany, July 9, 1931; Columbia University (Harrison Papers), “Confidential for Governor” (Harrison to Moret), Outgoing Cablegram—Serial No. 6228, 9 July 1931.

(45) Columbia University (Harrison Papers), “Confidential for Governor” (Harrison to Moret), Outgoing Cablegram—Serial No. 6228, 9 July 1931.

(46) Bennett (1962), p. 276; Clarke (1967), pp. 190–191; James (1985), p. 220.

(47) Bennett (1962), p. 23.

(48) To understand Hoover's action, it is important to note that this was not the first time that he had proposed a moratorium on intergovernmental debts. See chapter 6.

(49) The British reaction is that of Philip Snowden, the British Chancellor of the Exchequer, quoted in *The Economist* (June 27, 1931, p. 1363). The French reaction is as characterized by *The Economist*'s Paris correspondent (June 27, 1931, p. 1376).

(50) *The Economist* (July 11, 1931, p. 55).

(51) It is unclear whether Hoover was motivated by the need for action to stabilize the international economy or by a desire to protect U.S. banks that had invested heavily in Germany. Writing from a distance of 20 years, Hoover claimed to have been motivated by the desire to restore international economic stability. Hoover (1952), pp. 67–70. He claimed to have learned of the extent of American holdings of German trade bills and bank acceptances only in the second half of July. Hoover (1952), pp. 73–74.

(52) Eichengreen and Portes (1987), p. 28.

(53) Feinstein (1972), Appendix Table 38.

(54) Morton (1943), p. 31.

(55) Forward rate data are provided by Einzig (1937b).

(56) PRO T175/56, “Bank of England Gold Movements,” undated.

(57) Two recent surveys of the debate are Cairncross and Eichengreen (1983) and Kunz (1987).

(58) This is the conclusion drawn from the simulation of the British balance of payments between 1926 and 1931 in Cairncross and Eichengreen (1983), pp. 79–82.

(59) For its part, the Bank of France insisted that any French credit be accompanied by a matching credit in New York, PRO T175/56, “French Discussions,” undated. Cairncross and Eichengreen (1983), Table 3.4, p. 66; Clarke (1967), p. 206.

(60) In comparison, the overall deficit of the consolidated public sector was only £28 million. The current account deficit

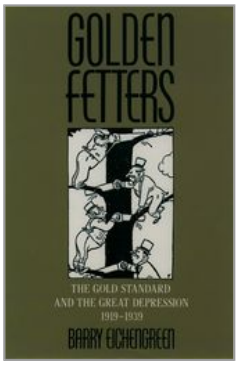
for that portion of the year when sterling remained on gold was projected to reach £67 million.

(61) PRO T175/51, Hopkins to Snowden (undated, but probably 24 July 1931), pp. 5–7.

(62) The revenue and expenditure figures quoted denote full year rates, not the amounts that would be saved or raised before the end of the fiscal year. The £20 million deficit that remained was eliminated on paper by reducing sinking fund appropriations. Mowat (1955), p. 402.

(63) The so-called Ivergordon mutiny was in fact a little more than a mild protest by part of the British navy stationed in Scotland, but news of the event nonetheless had an unsettling effect on financial markets. Mowat (1955), p. 403.

(64) As Mowat (1955, p. 350) described the Labour Party's position in the May 1929 general election, “Labour . . . simply annexed [Liberal leader] Lloyd George's programme, claiming that it could carry it out better than he.”



Golden Fetters: The Gold Standard and the Great Depression, 1919-1939
Barry Eichengreen

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Tentative Adjustments

Barry Eichengreen (Contributor Webpage)

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Abstract and Keywords

This chapter traces the consequences of the disintegration of the gold standard system, contrasting economic recovery in countries that jettisoned gold with continued depression in countries that retained it. An attempt is made to account for their respective policy decisions. The case of the USA emerges as something of an anomaly, and is addressed further in the next chapter. The first section of the chapter looks at the new international economic environment following sterling depreciation and the abandonment of the gold standard by many other countries from 1932 onward. The remaining sections look at the pressure on the dollar, the spread of devaluation, the initial responses to abandonment of the gold standard in the countries concerned, and the responses of the remaining ‘gold bloc’ countries.

Keywords: abandonment of the gold standard, Britain, depreciation, devaluation, economic policy, economic recovery, gold standard, interwar

period, responses to debt, sterling depreciation, suspension of the gold standard, USA

Nineteen thirty-two was the year of transition. Countries that had not yet abandoned the gold standard had to decide whether to do so. Countries that had already suspended gold convertibility had to decide whether to adopt expansionary initiatives or maintain their passive policy stance. Such critical policy decisions would condition the course of economic recovery from the Great Depression.

The devaluation decision reflected two sets of influences: the pressures for and against applied by domestic interest groups, and lingering memories of inflation on the last occasion when gold convertibility had been suspended. The interest-group politics were driven by the tendency for devaluation to raise the prices of internationally traded goods relative to the prices of goods produced for the home market. By relaxing the gold standard constraints, devaluation allowed governments prepared to engage in concerted action to halt the decline in prices. It consequently was favored by producers of internationally-traded goods and by farmers and others heavily incumbered by debts, and opposed by creditors and those who produced goods sold exclusively on the home market.[1]

In countries specializing in exportable goods, producers applied intense pressure to devalue the currency. Where the principal export market was Britain or another country that had already devalued, there was an especially compelling argument for responding in kind so as to stabilize the bilateral exchange rate and prevent the loss of market share. The governments of Denmark and New Zealand, for example, two countries that competed intensely for shares of the British dairy market, came under heavy domestic pressure to devalue. At the other extreme, in countries like France and the United States that were less dependent on international trade, political pressure for devaluation was more moderate. Import-competing sectors could be bought off through the application of tariffs and quotas, leaving (p.288) only exporters as an isolated minority to press for devaluation. It is no coincidence

that Denmark and New Zealand devalued early in the period while France and the United States remained on gold.

The devaluation decision reflected the political tug-of-war between debtors and creditors as well. Farmers, with the real value of their mortgage obligations greatly enlarged by the decline of price levels, were in the vanguard of those pressing for devaluation. But American farmers were much more heavily indebted than their French or Belgian counterparts, whose mortgage obligations had been lightened by inflation in the 1920s. Hence American farmers lobbied more intensively for devaluation.[2] Where agricultural areas were also silver mining regions, as in the United States, farmers could ally with those lobbying for devaluation to permit governments to purchase and coin silver. From this perspective it is not surprising that the United States devalued three years earlier than France.

For countries that were home to international financial centers, notably the Netherlands and Switzerland, the stability of the currency mattered more than its level. Foreigners might well be deterred from holding deposits and transacting international financial business in Amsterdam and Zurich if the authorities displayed any hesitancy to defend the guilder and the franc. The Netherlands and Switzerland, not surprisingly, were the last countries to go off gold.

But the gold standard's value as a symbol of financial stability also figured in the decisions of other countries. In countries where a decade before the inability to reach a fiscal agreement provoked persistent inflation, policymakers feared that abandoning the gold standard courted a replay of the same disastrous events. That danger did exist, as France's experience following her 1936 devaluation was to reveal, although it was by no means inevitable, as the experience of countries like Belgium would illustrate. It nevertheless encouraged French policymakers to delay devaluation for as long as possible.

More remarkable still, the same considerations continued to shape the actions of governments even in countries that had already abandoned the gold standard. There too policymakers

worried that inconvertibility opened the door to inflation and financial chaos. Now that the gold standard was gone, it was all the more important, in the prevailing view, for politicians to reaffirm their commitment to budgetary orthodoxy and for central bankers to demonstrate their continued opposition to inflation. Only as it became clear that inconvertibility was not a harbinger of inflation would policymakers adopt a more active role.

Hence the initial response of governments to their newfound freedom was extremely cautious. In most industrial countries that abandoned gold, policymakers hesitated to initiate expansionary open-market operations to actively increase their money supplies and reverse the deflation of previous years. This hesitancy was responsible for the halting pace of economic recovery in 1932. Abandoning the gold standard statutes was necessary but not sufficient to spark the resumption of rapid (p.289) growth. It was also necessary also to abandon the ethos of the gold standard that encouraged the continued pursuit of restrictive policies.

The New International Economic Environment

The first effect of sterling's depreciation was to transfer exchange-market pressure from London to New York. The losses suffered on sterling deposits graphically reminded central bankers of the special risks of holding foreign exchange reserves. They moved quickly to liquidate their dollar balances, demanding that the United States convert them into gold. To defend the gold standard, the Fed refrained from engaging in expansionary open-market operations. Without action by the Fed to offset the effects of the second wave of U.S. bank failures, the American money supply spiraled downward.

The second effect of sterling's depreciation was to lead two dozen other countries to abandon gold. Some, which suffered from the same exchange-market pressures as Britain, had little choice. But other nations that left the gold standard in 1931–32 did so voluntarily. Currency depreciation shifted domestic demand toward items produced at home and rendered exportable goods more competitive in domestic and

international markets. The stimulus to demand halted the downward spiral of industrial production and encouraged investors to take heart. In most of the countries that followed Britain off gold, recovery began in 1932. But by shifting demand away from imported goods and enhancing the competitiveness of exports, currency depreciation intensified the difficulties of the remaining gold standard countries.

Had this been the entire story, the world economy would have stabilized in 1932. The exports of countries with depreciated currencies would have risen while those of gold standard countries continued to fall. Industrial production in countries with depreciated currencies would have risen, while that in gold standard countries fell. Balance-of-payments surpluses would have produced increases in monetary circulation in countries with depreciated currencies, while balance-of-payments deficits produced decreases in note circulation in gold standard countries. Insofar as countries off the gold standard were free to expand their money supplies even faster than they gained international reserves, the stimulus to their economies should have more than offset the restrictive measures required of countries losing gold. If anything, trade and production worldwide should have begun to rise.

They did not. The dollar value of world trade declined by another 16 percent between 1931 and 1932. The League of Nations' index of manufacturing production declined by another 13 percent (see Figure 10.1).[3] Activity in countries with depreciated currencies recovered only haltingly, while output in gold standard countries, notably the United States and France, declined dramatically. Only in 1933 did the worldwide recovery of production commence.

The collapse of international trade reflected the tendency to fight fire with fire, (p.290)

as gold standard countries imposed trade barriers in retaliation against currency depreciation. Just as devaluing countries hoped to shift demand toward their products by changing the exchange rate, gold standard countries sought to offset those shifts by applying import tariffs and quotas. They were only partially successful. The trade balances of gold standard countries weakened in 1932. Those of countries with depreciated currencies strengthened. But improvements in the trade balance, where they occurred, were the product of declining imports, not rising exports. One group of countries limited imports by devaluing, the other by imposing commercial restrictions. The actions of both reinforced the decline of international trade.

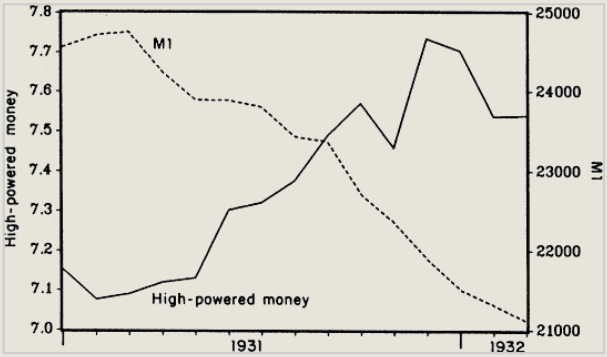


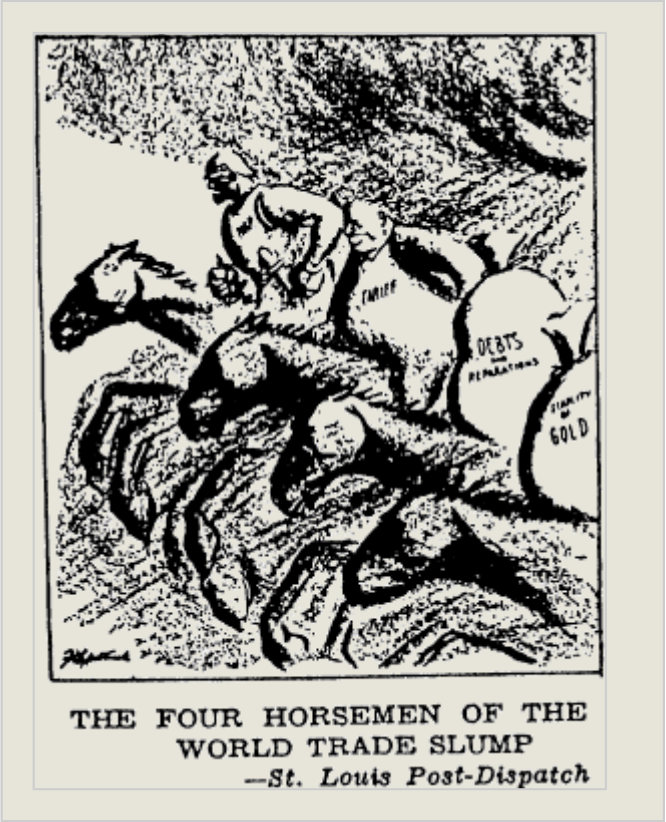
Fig. 10.1. U.S. high-powered money and M1, in millions of dollars, January 1931–March 1932.

In the final quarter of 1931, the Federal Reserve System injected additional high-powered money (mainly currency) into the U.S. economy, but failed to prevent the American money supply from continuing its decline.

Source: Friedman and Schwartz (1963).

These policies should not have had much impact, however, on the level of industrial production worldwide.[4] The failure of economic activity to stabilize reflected not the rise of trade barriers but the tendency of supplies of money and credit to fall more rapidly in gold standard countries than they rose in countries with depreciated currencies. In part this resulted from the shift of foreign exchange reserves into gold. Central banks like the National Bank of Belgium that suffered

extensive capital losses due to sterling's depreciation immediately liquidated their foreign balances. The Bank of France began to liquidate its dollar balances in the (p.291)



final months of 1931 and continued these operations for several years until virtually all its exchange reserves had been converted into gold. —*St. Louis Post-Dispatch*

But with the world supply of monetary gold fixed at a moment in time, not all countries could substitute gold for foreign exchange reserves simultaneously. They were forced to raise central bank discount rates and restrict domestic credit in a desperate effort to acquire gold from one another. Between the ends of 1931 and 1932, the reserve losses of the remaining gold standard countries were double the reserve gains of countries with depreciated currencies.[5] This discrepancy reflected the liquidation of foreign exchange reserves once devaluation rendered them increasingly risky to hold. Central banks scrambled to replace their foreign exchange reserves with gold. By raising interest rates they might acquire additional gold from one another, but for the group as a whole there was only so much gold to go around. Thus, the liquidation of reserves and the policies that accompanied it intensified the worldwide pressure on money supplies.

(p.292) Eventually this pressure was moderated by rising gold production. The decline in commodity prices in gold-standard countries and the rise in the price of gold in terms of depreciated currencies enhanced the profitability of gold mining. New gold fields were developed in Siberia, Australia, New Zealand, Canada, and even Japan.[6] Low grade ores that had been unprofitable to exploit were brought into production. Existing mines were expanded in the United States, Canada, and South Africa. Gold was released from hoards in the Far East. Dishoarding and increased mining moderated the need for the central banks of France, Belgium, Switzerland, the Netherlands, Poland, and the United States to dramatically raise their interest rates and contract their monetary liabilities to acquire gold from one another. But several years would be required before increased gold mining found full reflection in central bank gold reserves.

The real problem was the failure of countries released from their golden fetters to capitalize on their newfound freedom. By initiating open-market purchases, they could have expanded supplies of money and credit much more rapidly than they in fact did. Devaluation unaccompanied by open-market purchases still could stimulate recovery, insofar as it raised the price of imported goods relative to domestic products and shifted demand toward the latter. But recovery would have been significantly more rapid had governments also expanded supplies of money and credit. Doing so would have stimulated domestic demand and, by minimizing the payments surpluses of the devaluing countries, would have relieved the pressure on the remaining gold standard countries. Supplies of money and credit worldwide could have risen rather than falling. The downward spiral of economic activity might have been arrested.

Yet expansionary open-market operations were rare. Few central banks moved quickly to expand the supply of currency even though they were no longer inhibited by a binding gold cover constraint. They settled for lowering their discount rates, encouraging commercial banks to extend additional loans and draw down their excess reserves. But the expansionary impulse remained weak. Money supplies in the sterling area (shown in Table 10.1) remained essentially

unchanged between the ends of 1931 and 1932. The Eastern European countries that imposed exchange control, with their memories of inflation still fresh, hesitated to expand their money supplies. Only in Latin America, where the gold standard had been effectively suspended for several years, was there a significant increase in money stocks in 1932.

Why were European countries with depreciated currencies so hesitant to expand? To a remarkable extent, their actions were still conditioned by attitudes formed during the last episode when the gold standard had been in abeyance. The early 1920s had been marked by inflation, social turmoil, and political instability. Only when domestic interest groups had agreed to compromise over the distribution of incomes and the burden of taxation and had sealed their compact by reimposing the gold standard had this chaos subsided. Central bankers hesitated to capitalize on the suspension of the gold standard until they were convinced that the same would not happen again.

Thus, to release their golden fetters, it was necessary for policymakers to abandon (p.293)

Table 10.1. Percentage Change in M1 Between Ends of Successive Years

Bloc	1931–32	1932–33	1933–34
Gold standard countries	−8.58	−4.37	−0.90
Exchange control countries	−9.44	−2.26	0.44
Sterling area countries	−0.85	3.33	2.13
Other depreciators	13.95	8.13	8.82

Note: Unweighted averages of country data. Gold standard countries are France, Netherlands, Poland, and Switzerland. Exchange control countries are Bulgaria, Germany, Hungary, and Yugoslavia. Sterling area countries are Australia, New Zealand, United Kingdom, Denmark, Norway, Sweden, and Finland. Other depreciators are Brazil, Mexico, El Salvador, Colombia, and Chile. Czechoslovakia and Italy change from gold bloc in 1932–33

to exchange control in 1933–34. The United States switches from gold bloc in 1931–32 to other depreciators in 1932–33.

Source: League of Nations (1936).

not only the gold standard's institutions but also the gold standard's ethos. Disintegration of the institutions did not automatically imply disintegration of the ethos. Political constraints and fears frequently continued to tie policymakers' hands even where a statutory requirement that they defend the gold standard was no longer in effect.

Pressure on the Dollar

Capital that had fled Britain for the United States flowed back now that sterling had been allowed to depreciate. Other European countries, including France, Belgium, the Netherlands and Switzerland, were recipients of American gold as well. Though the U.S. trade balance was still strong, America's loss of competitiveness because of currency depreciation abroad implied subsequent weakness. Devaluation of one of the two leading reserve currencies was a stark reminder that the other could be devalued as well. The greater the pressure on the Federal Reserve Board to adopt reflationary initiatives, the greater the risk of dollar devaluation. The continued rise of American unemployment only intensified that pressure. With 1932 an election year, Congress was sure to exhort the Fed to respond more aggressively. Speculators consequently liquidated their dollar deposits, and central banks converted their dollar reserves into American gold.

France's deposits in New York posed the most serious threat. As long-standing opponents of the gold-exchange standard, the French had been steadily converting into gold the foreign balances they acquired in the course of the 1926–27 stabilization, when they intervened to limit the franc's appreciation. Sterling's depreciation only heightened the urgency Bank of France officials attached to the task. The Bank still held £62.5 million in sterling on September 19, 1931, on which it suffered a capital loss of 35 percent. It sought to minimize its exposure to comparable risks and

buttress confidence in the franc by converting its dollar balances into gold. On (p.294) September 21, two days after Britain's suspension of convertibility, Governor Clément Moret of the Bank of France cabled his counterpart George Harrison in New York, querying whether Harrison “would have any objection to our converting into gold part of our balance with the Federal Reserve Bank of New York and up to what extent.”[7]

For the Bank of France to step up its liquidation of dollars when the United States was losing gold threatened to fatally undermine confidence in the dollar and to destabilize the entire gold standard system. In the prevailing French view, financial stability was essential for economic recovery. And maintenance of the gold standard was critical for financial stability. If the dollar was devalued, U.S. exports would be rendered increasingly competitive in international markets, aggravating the difficulties of France and other European exporters. The French franc would become the next logical candidate for speculative attack. Hence dollar devaluation must be avoided at all cost. A French delegation led by Prime Minister Laval visited the United States in October to hammer out conditions for maintaining the dollar deposits of the Bank of France even temporarily. Stung by the Hoover Moratorium, the French allegedly demanded that U.S. officials agree not to again take unilateral action on war debts and reparations.[8]

Coupled with the external drain was a shift from deposits into currency by an American public alarmed by another wave of bank failures. The classic response of monetary authorities was to lend freely at a punitive rate. After some debate, the discount rate of the New York Fed was raised from 1½ to 2½ percent on October 8 and to 3½ percent a week later in response to “gold loss and currency demands.”[9] The Federal Reserve System discounted freely on behalf of domestic banks needing liquidity.[10] Reserve bank credit outstanding rose by 50 percent between July and October 1931 (see Figure 10.2). Aside from a relapse in November, high-powered money (essentially currency in circulation plus commercial bank deposits at the Fed) increased steadily over the second half of the year.

But due to the shift from deposits to currency, these steps failed to prevent broader measures of the U.S. money supply from declining. Between August and November, M2 (currency in circulation plus commercial bank demand and time (p.295) deposits) fell by 8 percent. M1 (currency plus demand deposits) fell over the same period by 5 percent, as shown in Figure 10.1. These are not annualized rates; the 5 percent fall occurred over a mere three months. The fall in M1 at an annualized rate of more than 25 percent was unprecedented in the short history of the Federal Reserve System.[11]

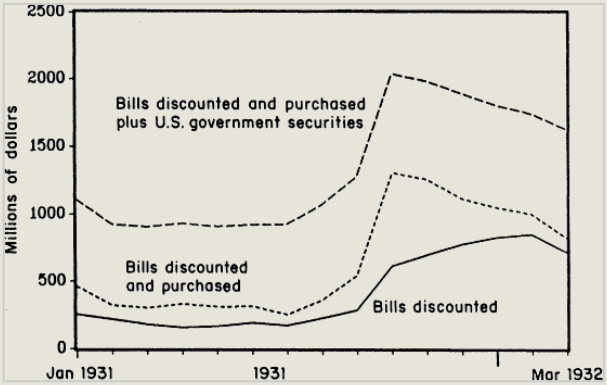


Fig. 10.2. Federal Reserve credit and its components, 1931–32.

Contrary to popular criticism, the Fed actually did inject a considerable quantity of additional domestic credit into the economy between July and October, 1931.

Source: Banking and Monetary Statistics (1943), p. 371.

In principle, the Fed could have used expansionary open market operations to prevent the decline in money supply. It refused to do so for fear of endangering the gold parity. The gold stock fell by 11 percent between September and October. Though the cover ratio still exceeded the statutory minimum, the trend was clear. Reserve bank credit outstanding peaked in October 1931, after which the Fed drew back. There was a one-time surge of open market purchases in December to offset the decline in reserve bank bill portfolios as 90-day bills purchased in the aftermath of the sterling crisis ran off. But this was an exception to the Fed's generally cautious stance.

The decline in reserve bank credit outstanding starting in November, shown in Figure 10.1, permitted the gold reserve to stabilize. It failed to rise, however. The Fed therefore made no move to replenish its portfolio of bills as these continued to mature over the first quarter of 1932.

It is impossible to say whether the dollar would have been driven from the gold standard had the Fed engaged in open market purchases on a scale sufficient to offset the liquidation of deposits. M1 declined by almost $2 billion between August (p.296) 1931 and January 1932. (See Figure 10.2.) Two billion dollars was nearly two-thirds of the gold the Federal Reserve System possessed. It was 2½ times that available after setting aside gold required as backing for eligible liabilities (and nearly 5 times that available following the losses of October). Assuming no change in the demand for money, $2 billion of open market purchases would have led to $2 billion of reserve losses and forced the United States off the gold standard. Had open market purchases restored confidence in the banking system, however, the demand for money might have risen sufficiently to prevent the increment to the money supply from draining gold from the Fed. But as a blatant violation of the rules of the game, extensive open market purchases would not have reassured foreign depositors, notably the French, who were wary of devaluation. Instead of rising, the demand for money might have fallen in anticipation of this eventuality.

Prior to the enactment of the Glass-Steagall Act of February 1932, the Fed was also preoccupied by the problem of free gold. In addition to being required to hold gold equalling 40 percent of Federal Reserve notes in circulation, a reserve requirement typically found in other gold standard countries, reserve banks had to hold other specified assets in amounts equal to 60 percent of notes.[12] Up to 60 percent of the backing could be “eligible securities,” which were limited to commercial, agricultural, and industrial paper and bankers' acceptances purchased by the reserve banks. If reserve banks held government bonds and other ineligible paper in their portfolios to the point that eligible securities fell short of 60 percent of Federal Reserve notes in circulation, the shortfall had to be made up with additional gold. Free gold was the

quantity of gold the Fed possessed after subtracting the value of 40 percent of Federal Reserve notes in circulation and any additional gold required as backing because eligible securities fell short of 60 percent of notes.[13]

These free gold provisions had immediate implications for open market operations. If the Federal Reserve System purchased $100 of government bonds, thereby injecting $100 of currency into circulation, it was required to hold an additional $100 of gold, since the additional government bonds it had acquired were not eligible paper. Free gold declined by $100 dollars, or one for one with the open market purchase. Thus every dollar of excess gold reserves, rather than permitting $2.50 of government bond purchases as seemingly implied by the 40 percent cover ratio, supported only $1 worth.

Following Britain's suspension of convertibility, free gold stood at $800 million. The first month's worth of reserve losses quickly reduced free gold to $400 million.[14] This left the Fed able to purchase only $400 million worth of government bonds, an insignificant quantity relative to the concurrent $2 billion fall in the money supply.

The Fed could circumvent the free gold constraint insofar as member banks could be induced to rediscount commercial paper and bankers' acceptances, since (p.297) these assets were eligible securities. Each dollar's worth of free gold enabled the Fed to acquire $2.50 worth of such rediscounts and acceptances. Were it able to encourage a sufficient volume of rediscounts and acceptances, the Fed could have pyramided $1 billion of additional high-powered money on its remaining $400 million of free gold. But few member banks perceived a large number of attractive investment opportunities for using cash obtained from the Fed. Given their unwillingness to rediscount commercial paper, the Fed would have had to enter the market and purchase eligible bills for its own account.[15] If it had done so to the full extent permitted by the free gold it possessed, the Fed still could have offset only half of the concurrent decline in M1.

Moreover, to continue purchasing bills until the System's free gold was exhausted threatened to undermine confidence in the dollar's convertibility. The Fed would have been forced to contract the monetary base by a multiple of any subsequent loss of gold reserves. Congressional pressure might lead the central bank to hesitate to permit this to occur. Any such hesitation would give foreigners good reason to anticipate modification of the gold standard statutes and incentive to liquidate their dollar-denominated assets. Five hundred million dollars was regarded as the minimum amount of free gold that left an adequate margin for error.[16] On October 8, 1931 Clément Moret, the recently appointed Governor of the Bank of France, warned the Bank's Council of Regents that the decline in free gold to $500 million, at a time when foreign deposits in the United States were perhaps three times that amount, gave grounds for grave concern.[17] At the beginning of 1932, foreign withdrawals and earmarking were proceeding at the rate of $100 million a week. Treasury Secretary Ogden Mills may have been given to hyperbole when he stated subsequently that “we were within two or three weeks of being forced off the gold standard.”[18] But even if the Fed had more than two or three weeks of leeway, the Board nonetheless felt itself constrained by a “limited amount of . . . free gold in the face of European gold withdrawals,” as W. Raldolph Burgess of the Federal Reserve Bank of New York put it.[19]

Devaluation fears had another implication. If they led to the further liquidation of deposits, open market purchases might even fail to relieve the banking crisis. Foreigners would withdraw their funds from U.S. banks to avoid capital losses resulting from devaluation. Governor Eugene Meyer, in testimony before a Senate Committee in 1932, argued that fears of devaluation had rendered intervention ineffectual. “In view of the large drafts on this country by foreigners, and, I believe, some (p.298)

THE FOX WHO LOST HIS BRUSH
—*Los Angeles Times*

remittances by Americans out of the country from fright, purchases of securities by the reserve banks at that time were impracticable. We could not have undertaken anything of that character in October without a loss of gold . . . . Purchases at that time would not have had a stabilizing effect."[20]

One can argue, with benefit of hindsight, that such fears were unfounded or at least greatly exaggerated. But justified or not, they clearly had a profound impact on Federal Reserve policy in the last quarter of 1931 and the first quarter of 1932.

Devaluation Spreads

Comparable pressures afflicted a variety of other countries for which foreign deposits were important or whose balance-of-payments positions were already weak. Not all leapt to defend the gold standard with the alacrity of the United States. Some, such as Sweden and Canada, quickly followed Britain off gold. Others in stronger external positions left the gold standard voluntarily. By the end of September, nine countries, including Sweden, Denmark, Norway, and Canada, had suspended convertibility. In October they were joined by Finland, Portugal, Bolivia, and Salvador, in December by Japan. Eight additional nations defected from the gold standard in the first half of 1932. At its height in 1931, 47 countries had been on gold. By the (p.299) end of 1932 the only significant holdovers

were Belgium, France, Italy, the Netherlands, Poland, Switzerland, and the United States.[21]

The suspension of convertibility, while solving one problem, introduced another. Governments had to decide what to do about the exchange rate. At one extreme, they could repeg to gold, perhaps at a lower parity. At the other, they could allow the exchange rate to float freely. A third alternative was to link the currency to that of a major trading partner. Which option to pursue was the crucial decision that conditioned the course of depression and recovery for the remainder of the decade.

For countries with close economic ties to Britain, the decision was obvious. Had they failed to follow sterling off gold, they would have suffered a decline in export competitiveness and a further fall in production. Devaluing and pegging to sterling limited the exchange rate uncertainty that otherwise might have disrupted their export sales. Insofar as these same countries had borrowed heavily on the London market, a sterling peg minimized the opportunity for exchange-rate fluctuations to alter the domestic-currency cost of debt service. Egypt, India, Iraq, and Portugal abandoned the gold standard immediately and pegged to sterling at the pre-devaluation rate. Australia, already off the gold standard, attached her currency to sterling in December. South Africa, with more invested in the gold standard than any other country, waited a year before suspending convertibility and pegging to sterling at the pre-1931 level. The Scandinavian countries and Japan permitted their currencies to fluctuate before pegging to sterling in 1933.

Canada was the only Commonwealth country to follow a different course. From the middle of 1930 there had been a considerable body of opinion in favor of acknowledging as official the currency's de facto depreciation (described in Chapter 8). Sterling's descent lent new force to the arguments of the pro-devaluation lobby. Within weeks of Britain's suspension, Canada's de facto restraint on gold exports was replaced by an official ban. The Canadian dollar depreciated further. But to allow the currency to fluctuate along with sterling would have disrupted the U.S. export trade.

Significant depreciation would have greatly increased the domestic-currency cost of servicing loans denominated in U.S. dollars.[22] In light of the importance of economic relations with the United States, Canada split the difference, pegging not to sterling but to a sterling-dollar basket with equal weights on the two currencies.

Hence, while depreciating against the United States, the Canadian dollar appreciated against sterling. Exporting to Britain became increasingly difficult. Canadian wheat producers were handicapped by the more rapid depreciation of the Australian pound and the Argentine peso. Exporting to the United States became easier, but the stimulus was limited by the fact that the U.S. economy remained depressed and Canada specialized in products such as newsprint, whose demand was price inelastic.[23] In contrast to industrial production in Britain, industrial output in Canada (p.300)

continued to fall. As evident in Figure 10.3, it began to recover only in 1933 with that of the United States.

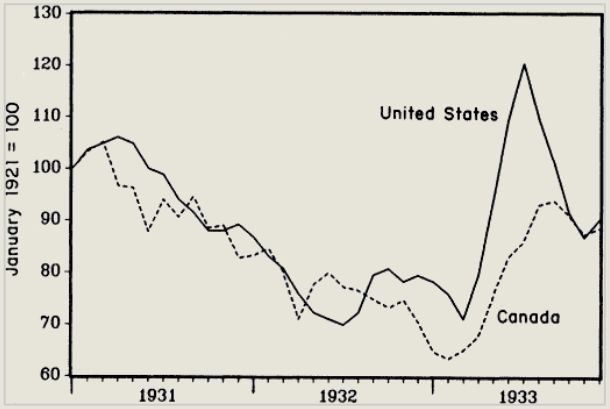


Fig. 10.3. U.S. and Canadian industrial production, 1931–33.

Despite allowing Canada's exchange rate against the U.S. to depreciate starting in September 1931, the Canadian government did not succeed in stemming the fall in Canadian output until U.S. recovery commenced in 1933.

Source: League of Nations, Monthly Statistical Bulletin (various issues).

Such was the case for devaluation. The case against it was predicated on the desire to avoid a recurrence of the inflationary excesses of the previous decade. The argument carried particular weight in France, Belgium, Italy, and Poland, and in the Central European countries now under exchange control. In all these countries, inflation had been symptomatic of the inability to achieve a consensus on the level of public spending and the distribution of taxes. It had been the market's way of reconciling incompatible claims. But inflation had redistributed income from creditors to debtors, polarizing society into competing factions dominated by the propertied and working classes. Failure to resolve the distributional conflict and control inflation had allowed political instability and financial turmoil to persist for nearly a decade. Compromise over the distribution of income and the burden of taxation had been achieved only at the end of a long, debilitating process.

The gold standard symbolized the compromise. Discarding it promised to reopen the debate and to shatter the fragile consensus so laboriously constructed in the second half of the 1920s. As the League of Nations observed,

> there emerged in the countries whose currencies had collapsed only a few years before a firm determination not to let it happen again. The destruction of savings and the economic disorganization produced by the inflations had wrought such havoc that this quite naturally appeared to be the basic evil which must be avoided (p.301) at all costs. There was, indeed, in many of these countries, a tendency to identify inflation with devaluation.[24]

The symbol of the compromise would not have survived for long had it been seen as incompatible with prosperity. But far from incompatible, the gold standard was regarded in these countries as essential for economic recovery. Its indispensability was a corollary of a particular interpretation of the causes of the Great Depression. Over much of Europe, the Depression was regarded as a product of excessive credit creation on the part of central banks that had failed to abide by the rules of the gold standard.[25] In this view, since the end of World War I, productive capacity worldwide had expanded more rapidly than the supply of monetary gold. Since the demand for money rose with productive capacity, lower prices were necessary to provide a matching increase in the supply of real money balances. Under the gold standard, a smooth deflation like that of 1873–93 was the normal response. But central banks had blocked the downward adjustment of prices in the 1920s by creating foreign exchange reserves. The excessively accommodating policies of the Federal Reserve System around the middle of the decade had worked in the same direction. The resultant liberal supplies of credit had fueled speculation in financial markets, raising asset prices to unsustainable heights and setting the stage for their collapse in autumn 1929. With this shock, central banks rushed to liquidate their exchange reserves. Prices fell abruptly to more realistic levels. The sudden deflation was far from smooth: it produced bankruptcies among debtors, discouraged

investment, and disrupted economic activity, provoking the Depression the world was currently suffering.

In this view, the Great Depression was the inevitable consequence of unrealistic policies pursued by central banks in preceding years. To now prevent deflation from running its course threatened to inaugurate another era of speculative excess and, ultimately, another depression. It was better to allow excess liquidity to be purged and prices to fall to sustainable levels. Only when adjustment had run its course would investors be confident that a new era of sound finance was at hand. Only then could recovery commence.[26]

This view of the role for policy was most strongly held in countries that had suffered high inflation a decade before. To a remarkable extent it also prevailed, however, in countries that avoided inflation in the 1920s and now abandoned the gold standard. Policymakers there looked to the experience of their neighbors when gauging the dangers posed by inconvertibility. As a result, they formulated monetary and fiscal policies with caution. More than a year of experience was required to convince them that inconvertibility did not pose an inflationary threat. Gradually they moved from accommodating the credit demands of industry and enterprise to a policy of price stabilization, and then to a policy of reflation. But the transformation was slow. As an observer wrote of Sweden, one of the first countries to adopt a consistent program of price stabilization, “The Board of Directors of the (p.302)

Riksbank apparently formulated their policies during the first part of 1932 much as though Sweden had not abandoned gold."[27] Although the gold standard disintegrated in 1931, its ethos thus continued to influence the formulation of policy even where it no longer prevailed. Policymakers' newfound freedom from its constraints, which would have allowed them to implement more expansionary policies, was very incompletely exploited. For the time being, as a result, recovery also remained incomplete.

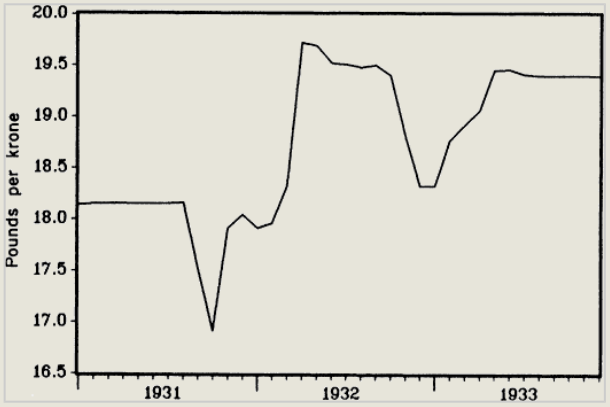


Fig. 10.4. Swedish-British exchange rate, 1931–33.

The Swedish krona appreciated against sterling when Britain abandoned the gold standard in September 1931 but reversed course when Sweden left gold soon thereafter. The krona then depreciated dramatically in 1932 when the Riksbank provided additional liquidity to banks threatened by the Kreuger scandal.

Source: Methorst (*1938*).

The Initial Response

After falling rapidly in the wake of Britain's abandonment of the gold standard, sterling began to recover.[28] From a low of $3.25 in early December 1931, it rose to $3.40 by the end of the year. The sterling exchange rate then continued to strengthen, reaching $3.70 in February 1932.

(p.303) Though policymakers and the British public betrayed anxiety over inflation, little sentiment favored a return to the gold standard. Restoration of the prewar parity in 1925 failed to deliver the benefits anticipated by its proponents. The return to gold had conferred stagnation and unemployment, not prosperity. Hopes had been dashed that the gold standard would be conducive to the rapid expansion of international trade. Any benefits accruing to the City had gone by the board as a result of devaluation. Having been forced off the gold standard once, little doubt existed that the government and the Bank of England might allow the same to happen to it again. No longer was the sterling parity synonymous with exchange-rate stability in peacetime. Investors who held deposits in London and traders who invoiced in sterling had new reason to hedge their bets. They diversified their portfolios and took part of their international financial business to other centers. Hence the case for returning to gold was weaker after 1931 than it had been before 1925.[29]

Allowing the exchange rate to float freely was equally undesirable, however, since currency fluctuations threatened to disrupt the export trade on which British industry relied. The Bank of England, with Treasury encouragement, intervened to damp exchange rate movements. The Bank's first priority was to replenish its international reserves. It was happy initially to sell sterling for foreign exchange and hold down the exchange rate, since those sales enabled it to replenish its foreign currency holdings.[30] Treasury officials such as Ralph Hawtrey recommended buying bills, securities, and foreign assets in order to maintain an exchange rate as low as $3.40. Their rationale was to promote exports, strengthen the trade balance, and stimulate employment. If world prices began to rise subsequently, it then might be desirable to negotiate an international (i.e., Anglo-American) agreement to stabilize prices and, presumably, exchange rates.[31]

By February, six months of evidence to the contrary had finally succeeded in moderating fears that depreciation would ignite an inflationary spiral. The Bank of England reduced its discount rate. By June, Bank rate had been lowered to 2 from 6 percent, where it had stood early in the year. The Treasury

bill rate, which had stood at 5 percent in January, fell to less than 1 percent by September. Beyond reducing interest rates, however, central bank policy remained largely passive. The monetary base (currency in the hands of the public plus deposits at the Bank of England) fell slightly between the third quarter of 1931 and the second quarter of 1932. Only thereafter did the Bank of England allow its monetary liabilities to begin to rise.[32]

The reduction in Bank rate and, with it, market interest rates rendered sterling assets less attractive to foreign investors, and the exchange rate began to weaken (p.304) again. The authorities purchased sterling to moderate its depreciation. The mechanism for so doing was the Exchange Equalisation Account (EEA), opened in July 1932 and charged with responsibility for foreign exchange market intervention. The EEA's assets were controlled by the Treasury, but day-to-day operations were the responsibility of the Bank of England. Despite intervention by the EEA, the exchange rate continued to depreciate, falling to as little as $3.15 in the final months of 1932.[33]

These oscillations, with sterling first rising by 15 percent against the gold currencies and then falling by the same amount, did not deter most Commonwealth countries from pegging to the pound. But they led other countries to hesitate. Some took the period as an opportunity to depress their own currencies and to strengthen their position in export markets.

Denmark and New Zealand, the two leading sources of British dairy imports, were among the countries with the most at stake. Denmark sold 60 percent of her exports to Britain.[34] She was especially dependent on the British market for dairy products once import barriers restricted her access to Germany. Given the importance of the British market, Denmark was quicker than her Scandinavian neighbors to consider stabilizing against sterling. Almost immediately on leaving the gold standard, the Danish central bank applied to the Bank of England for a £250,000 credit to enable it to adopt a sterling peg. The request was rejected as inconsistent with the official British policy of discouraging foreign lending.[35]

Initially, the Danish krone declined quickly, losing nearly a third of its value against the gold currencies over the final quarter of 1931. A sudden loss of confidence in the second largest Danish financial institution threatened a run on the banking system. But with the gold standard in suspension, the National Bank was free to discount on behalf of the banks in need. The central bank refused no applications for credit by banks in temporary difficulties in the final months of 1931. The incipient banking crisis was contained.

As it became clear that Denmark's leading competitor for the British export market, New Zealand, was allowing its currency to slip further below par, Danish exporters lobbied with growing intensity against setting the sterling peg at the traditional bilateral rate. As early as January 1931, the New Zealand pound had depreciated by 10 percent. In 1932 a government committee in New Zealand recommended letting the currency fall to a 25 percent discount against sterling. The foreign-exchange market, anticipating that this recommendation would be adopted, drove the currency down.

These developments were watched closely in Denmark. In April 1932 the krone was first permitted to slip below its traditional sterling rate. In the second half of the year the central bank embarked on a policy of credit expansion designed to raise prices and drive down the exchange rate. Expansionary open market operations (p.305)

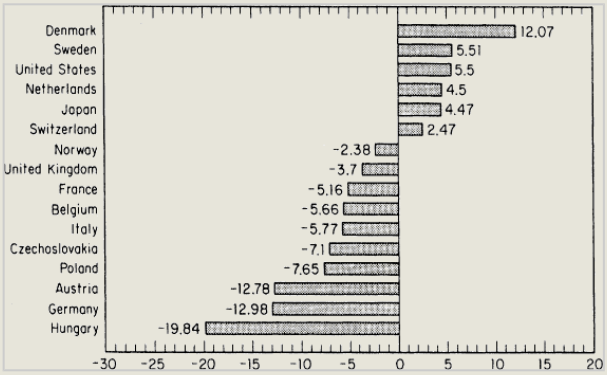


Fig. 10.5. Percentage change in monetary base (notes, coin, and sight deposits with Central Bank), 1931–32.

Only in Denmark, Sweden, and Japan, where the authorities moved decisively to expand domestic credit, and in the U.S., the Netherlands, and Switzerland, which were on the receiving end of international reserve flows, did the monetary base rise between the end of 1931 and the end of 1932.

Source: Computed from League of Nations (1939).

raised the security holdings of the National Bank from 49 million kroner at the end of 1931 to 145 million kroner at the end of 1932. As a result, the monetary base (currency, coin, and deposits at the central bank) grew more quickly over the course of 1932 than in any other country included in Figure 10.5. The currency was allowed to fall by an additional 20 percent against the British pound. With the bilateral rate between Denmark and New Zealand restored to gold standard levels, both countries stabilized their currencies at a 25 percent discount against sterling.[36]

The Danish National Bank's expansionary open market operations were not sufficient to drive up broad measures of the money supply given the continued deterioration of conditions in many of Denmark's export markets, although they did prevent M1 from falling more than marginally over the course of 1932. (See Figure 10.6.) With domestic demand failing to rise significantly, the main impact of Denmark's depreciation was to narrow her trade deficit. The 135 million kroner deficit of 1931 gave way to trade balance in 1932, mainly as a result of declining imports. Exports continued to

fall in 1932, as German import restrictions, French import quotas, and the British General Tariff placed barriers in the way of Danish dairy products, but they recovered in 1933–34. By 1933 Danish industrial production began to rise. (p.306)

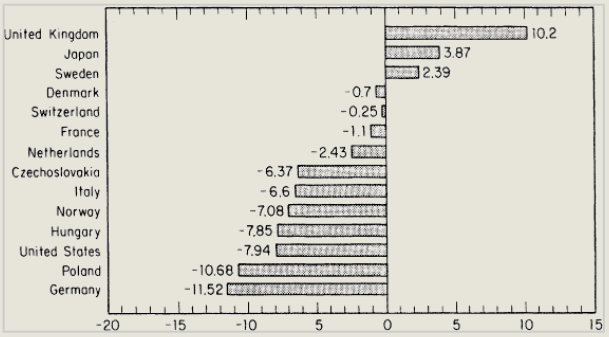


Fig. 10.6. Percentage change in money supply (M1), 1931–32.

Only in the U.K., Japan and Sweden was there a significant rise in money supplies between the ends of 1931 and 1932.

Source: League of Nations, (1939).

Sweden also allowed her currency to fall against sterling. Like Britain, she had little choice whether to devalue. Stockholm had been a recipient of capital inflows over the early months of 1931. The German crisis caused these flows to reverse direction. Foreign banks with funds immobilized in Germany drew down their still-liquid Swedish balances. The international reserves of the Riksbank began to decline in July. The sterling crisis, by raising questions about the exchange rates of Britain's trading partners, accelerated the drain. Sweden was not among those countries with ample international reserves. By September 21, the Riksbank's reserves had fallen nearly to the statutory minimum. The government attempted to defend convertibility by obtaining a foreign loan, but negotiations collapsed over the weekend following Britain's abandonment of gold.[37] On September 27 the Riksbank requested that the government relieve it of responsibility for convertibility.

Like Britain, Sweden retained the option of replenishing reserves and returning to gold, perhaps at a lower parity. The

initial suspension of convertibility was limited to two months, and the Minister of Finance declared the government's intention to return to gold as soon as possible. Although Sweden was not among the countries that had endured persistent depreciation in the 1920s, “there was, even amongst most economists, a widespread fear of inflation.”[38] Trade union agreements were up for renewal, and inflationary expectations threatened to provoke dramatically higher wage demands. To reassure union leaders and foreign investors, the Riksbank raised its discount rate to 8 percent and pressed the commercial banks to limit the credit they extended to importers.[39]

(p.307) When inflation failed to materialize, officials contemplated other options. One possibility was a sterling peg. Speculators, anticipating that the authorities would link the two currencies, drove the krona up and down along with sterling. But exports to Britain were not as important for Sweden as for Denmark. Swedish officials were less concerned about the need for exchange-rate stability to encourage trade than with the need for price stability to spur production and investment.

It is not entirely clear why the Swedish authorities, in contrast to policymakers in other countries, should have focused on price stability rather than other targets. The preferred explanation among economists is, naturally, the power of economic advice. Wicksell, Cassel, and Ohlin had long emphasized the importance of price stability as a precondition for prosperity. Cassel was a close advisor to the Finance Minister. The economists had popularized their views in numerous newspaper articles. Consequently the Swedish public and policymakers were exceptionally “price-level minded.”[40]

There was no guarantee that the Bank of England would pursue policies consistent with price stability. Cassel, Davidsson, and Heckscher therefore recommended that the Riksbank, rather than pegging to sterling, develop a price-level target for monetary policy.[41] The central bank constructed a consumer price index for this purpose.

Even once the Riksbank had decided to formulate monetary policy with reference the price level, it remained to be determined whether the goal should be price stability at current levels or a return to 1929 prices. Eventually the target of stabilizing prices was superseded by a policy of promoting a gradual inflation until the price level was restored to its pre-Depression level. But the transformation was only completed in 1933, when Parliament adopted a report instructing the monetary authorities to bring about “a moderate rise in the internal wholesale price level.” Opinion among professional economists had gravitated to this position by the end of 1932. Not so that of Riksbank officials, who continued to fear inflation. The Board of the Bank affirmed its commitment to preventing price movements abroad from destabilizing the level of Swedish prices, but no more. They indulged in only the most cautious reflationary initiatives.[42]

The krona remained above its traditional parity against sterling into early 1932. In March the situation was transformed by the suicide of Ivar Kreuger, the colorful industrialist and notorious financial operator. Revelations that Kreuger had forged collateral raised doubts about the solvency of enterprises connected with his conglomerate, including its principal creditor, the Skandinaviska Bank. Depositors withdrew their funds, and a financial crisis loomed.

But having already suspended gold convertibility, the Riksbank, like the Danish National Bank, was free to extend accommodation. It purchased more than 200 million kronor worth of government securities in the wake of the Kreuger crisis. In contrast to Austria, Germany, Hungary, and the United States, which experienced their banking crises while still on the gold standard, in Sweden the central bank was (p.308) not prevented from intervening in support of the banking system. The Riksbank was not committed to supporting the exchange rate at a level inconsistent with the provision of additional liquidity.

The expansion of domestic credit, together with the shock to confidence, depressed the exchange rate, as evident from Figure 10.4. Having stood at a 1 percent premium against sterling on the eve of the banking crisis, the krona fell quickly

to a 7½ percent discount. Finding the increase in credit and the fall in the krona to have no discernible inflationary consequences, the Riksbank made no move to reverse them. Thus, Sweden was one of the few countries in which the monetary base rose significantly (by nearly 6 percent) between the ends of 1931 and 1932.[43]

Once the crisis passed, the krona began to recover lost ground. Throughout the summer of 1932 the Riksbank purchased sterling and dollars to limit the currency's appreciation and prevent a fall in the price level.[44] The Riksbank accumulated a considerable quantity of foreign deposits, as shown in Figure 10.8. The krona nevertheless rose nearly to the old bilateral rate against sterling in December.[45] Its fall against the gold currencies strengthened the competitive position of Swedish exporters. The newsprint industry was able to underbid Canadian competition in Europe. The trade deficit declined by 33 percent in 1932; in 1933 it fell to zero.[46] Though industrial production dropped in the wake of the Kreuger crisis, by the fourth quarter of 1932 recovery was underway.

Japan was one of the few other countries where the supply of base money rose over the course of 1932. (Again, see Figure 10.5.) Having suffered a devastating earthquake in 1923 and a banking crisis in 1927, Japan was unable to restore gold convertibility until 1930. By then it was no longer obvious that the gold standard was an engine of economic growth. Members of the opposition Seiyukai Party pressed for monetary expansion. But the controlling Minseito Party, traditionally opposed to inflation and influenced on matters of monetary policy by the Finance Minister, Junnosuke Inoue, former governor of the central bank, insisted on restoring prewar parity.[47]

Its timing could not have been worse. Coming on the heels of the European and American downturn, the return to gold aggravated Japanese industry's competitive difficulties. The Bank of Japan lost gold throughout 1930, forcing it to contract the money supply. The depreciation of sterling exacerbated an already difficult position. British and Japanese textile firms competed directly in Asia. Hence financial markets quickly

identified the yen as an overvalued currency. The Bank of Japan lost ¥350 million of gold in the three months following Britain's suspension. It (p.309) raised its discount rate to 7 percent. Domestic credit grew increasingly stringent. Politicians began to voice reservations about imposing a further restriction of domestic spending on domestic industries already in danger of losing their export markets.

Ultimately, however, it was not the incompatibility of convertibility and industrial recovery that brought down the Japanese gold standard but the incompatibility of the external constraint with the nation's military ambitions. Defense of convertibility required fiscal retrenchment. But significant cuts in government expenditure were impracticable in view of the costs of the Manchurian invasion. This put the Minseito Party, committed to both the gold standard and the Manchurian affair, in an impossible position. On December 13, leadership passed to the opposition. Four days later the new finance minister, Korekiyo Takahashi, reimposed the gold embargo.

Unlike Germany, France, and Belgium, Japan had not experienced inflation and rapid credit expansion in the period preceding its restoration of gold convertibility. Prices held steady between 1922 and 1924. Between 1925 and 1930, not only had they fallen, but they declined more rapidly than in either Britain or the United States. Domestic politics had not been dominated by a sequence of coalition governments whose capacity to govern was undermined by disputes over the fiscal burden. Depreciation was not associated with inflation and political turmoil to the same degree as in Europe. Hence the fiduciary issue (the quantity of unbacked currency and coin that the Bank of Japan was allowed to issue) was increased in July 1932 from ¥120 million to ¥1 billion. The yen was allowed to depreciate by 30 percent in the first month and by 60 percent in the first post-embargo year, much more rapidly than sterling or other inconvertible currencies. This is not to imply that Japanese officials and businessmen were unaware of the inflationary threat. Over the first half of 1932, fears mounted within the business community that depreciation would provoke wage inflation. The Bank of Japan began to intervene to slow the currency's decline. In July the

government imposed the first exchange control law, the Capital Flight Prevention Act. In November it required that all banks report purchases of foreign exchange. Still more stringent foreign exchange controls were imposed the following spring.[48]

But the imperative of financing military spending provided the main impetus for expansion. Instead of cutting public expenditure, the government increased it. Exchange controls limiting the opportunity for Japanese investors to purchase foreign securities encouraged them to absorb domestic bonds. So did reductions in yields on postal savings accounts. Issues that could not be placed with the public were sold directly to the central bank.[49] The monetary base rose by more than 4 percent between the ends of 1931 and 1932. The base rose more quickly than the broader monetary aggregates, indicative of the government's tendency to inject liquidity into the financial system ahead of demand.[50]

(p.310) Within 12 months of devaluation the yen had fallen from a 30 percent premium against sterling to a 40 percent discount. Japanese cloth allegedly was sold in Germany at little more than half of local prices, in Norway for little more than the cost to Norwegian producers of imported yarn, in the Congo at prices 30 to 50 percent below those of Belgian competitors. For the first time Japanese electric light bulbs, machinery, rayon products, and processed foodstuffs appeared in foreign markets.[51] Industrial production recovered strongly, led by the growth of exports.

The Gold Bloc Holds

By conferring a competitive advantage on devaluing countries, depreciation intensified the pressure on the remaining gold currencies. Exporters in gold bloc countries, finding it increasingly difficult to compete internationally, cut back production. Any desire of policymakers to adopt reflationary initiatives was suppressed by the deterioration of the balance of payments.

Import barriers, exchange control, and monetary restriction were the options available to countries still committed to

defending their gold parities. Most had already raised their tariffs in the wake of the U.S. Smoot-Hawley Act and in response to the agricultural slump. Now they imposed additional import taxes and quotas in reaction to foreign devaluation. France imposed quotas on imports of raw materials and foodstuffs starting in July 1931. These were greatly extended in the six months following Britain's abandonment of gold. In February 1932, wheat growers secured legislation requiring that 90 percent of wheat used for flour in France be of domestic origin. The quota system was extended to manufactured products, until by the beginning of 1933 it covered nearly 20 percent of dutiable imports. The Netherlands increased all import tariffs by 25 percent in September 1931. Along with Belgium and Switzerland, it adopted a quota system along French lines.[52]

In Central Europe, tariffs were supplemented by exchange control. To contain pressure on the reichsmark following sterling's depreciation, Germany imposed regulations requiring owners of gold and foreign assets to declare their holdings and sell them to the Reichsbank. The central bank limited the foreign exchange made available to importers and required exporters to surrender to it all foreign currency earnings. Austria responded to the depreciation of sterling by rationing foreign exchange and requiring exporters to surrender foreign currency to the central bank.[53] In France, Belgium, the Netherlands, and Switzerland, however, exchange control was regarded as incompatible with the spirit of the gold standard and consequently was not employed.

With countries that had depreciated their currencies also applying tariffs and quotas, these measures proved inadequate to stem the deterioration in the balance (p.311) of payments of the gold standard countries.[54] Members of the gold bloc were forced to adopt the third option: monetary deflation.

The amount of deflation required depended on the severity of the balance-of-payments disturbance. In France, whose external accounts remained relatively strong, only moderate deflation was required. As late as 1931, the French balance of payments was still in surplus. Even the trade deficit shrank, reflecting the success with which tariffs and quotas

neutralized the impact of devaluation abroad. Little could be done, however, to reverse the deterioration of other components of the external accounts. In 1932, because of the elimination of war debt and reparations receipts and debt default abroad, interest earnings on foreign investments declined to little more than a third of 1931 levels. Short-term capital inflows, so important in 1931, evaporated in 1932. Speculative capital that fled to France in the course of the 1931 financial crisis had been an important credit item on the balance of payments. The short-term capital inflow in 1931 had been four times the size of the trade deficit and three times the size of the trade deficit plus long-term foreign lending. In 1932 it fell to zero.

But with the trade deficit continuing to narrow, France's external accounts remained tenuously balanced. The Bank of France continued to accumulate gold through the first half of 1932, although this reflected renewed efforts to liquidate its foreign deposits rather than any underlying strength of the balance of payments. The sum of the Bank's gold and foreign exchange reserves fell by just over 2½ percent over the course of the calendar year (see Figure 10.7). The small fall in reserves translated into a small decline in the money supply, given the Bank's strict adherence to the gold standard statutes. The monetary base fell by 5 percent, the sum of currency, coin, and commercial bank demand deposits (M1) by somewhat less over the course of 1932.[55]

But monetary stability did not guarantee economic stability so long as economic activity in North America and other parts of the world continued its downward march. Both prices and production in France continued to fall. In 1932 French GNP decreased by 7 percent in real terms. Industrial production fell by 13 percent.

Government revenues declined along with economic activity, forcing the budget into deficit. So long as the external accounts were balanced and the Bank of France's gold reserves still amounted to nearly 75 percent of its liabilities, there was no immediate threat to the franc. But budget deficits had alarming connotations to a French public still preoccupied by their consequences less than a decade earlier.

Foreign investors were skeptical of the capacity of a coalition government to obtain the cooperation of citizens more willing to die for their country than pay taxes to it. Capital began to flow out in anticipation of future difficulties. Though the dollar (p.312)

rather than the franc was to be the principal target of speculators in 1933, it was increasingly clear that the French franc would be next. By the end of 1932 the Bank of France had already begun to lose reserves. Eliminating the budget deficit was no easy task. Although the French electoral system had been reformed in 1927 to reduce the extent of its proportionality, the polity was still fragmented. The 1932 elections produced the first left-wing majority in France since 1926, but it failed to produce a stable majority government. The Socialists were split between the more moderate Vie Socialiste, which favored cooperation with the Radicals, and the Bataille Socialiste, whose members advocated collaboration with the Communists. The Radical Party, situated just to the left of the center of the political spectrum, was itself a loose coalition of moderate politicians representing peasants, independent proprietors, artisans, and

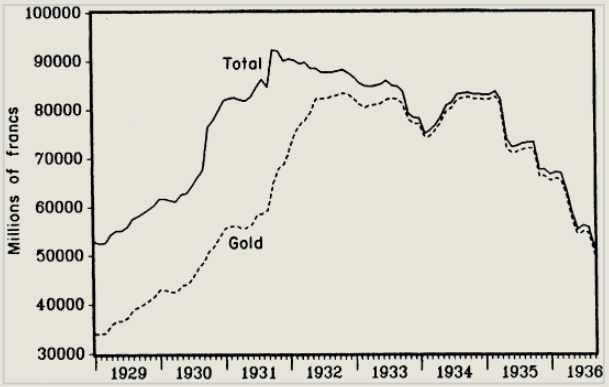


Fig. 10.7. French gold and total reserves, 1929–36.

The Bank of France's international reserves peaked in early 1932. She nonetheless remained in a relatively strong position until 1934, when reserve losses accelerated dramatically.

Source: Banking and Monetary Statistics (1943), pp. 641–642.

civil servants.[56] Many of these groups were hostile to socialism, forcing Herriot, the leader of the Radicals, to reject the minimum demands on which the Socialists conditioned their participation in the coalition. Herriot was forced to form an unstable minority government supported initially by a diverse collection of dissidents on the left and right.

Reflecting the diversity of their support, the Radicals lacked a consistent economic program. The one economic goal all supporters of the party agreed on was the need to maintain financial stability. A Radical Government presided over the inflation of the 1920s and had been brought down by the franc's collapse, inaugurating (p.313) six years of conservative rule. It was essential, therefore, to defend the gold standard so that this would not happen again.

Hence the new Herriot Government sought to redress the fiscal problem with a combination of modest tax increases and expenditure reductions (including a 5 percent cut in civil service salaries). Government employees, organized into powerful syndicates affiliated with the socialist Confederation of Labor, applied political pressure and went on strike. In the Chamber of Deputies, all its proposed economies, aside from cuts in military spending, were vetoed by Socialists and left-wing Radicals on the Finance Commission. Both groups objected to the impact on working-class living standards of public-sector pay cuts. Both demanded the substitution of taxes on the rich. But the parties of the right were still sufficiently powerful to block significant increases in wealth and income taxation. Herriot's fragile coalition collapsed after barely six months. The budget deficit was papered over by including on the revenue side of the accounts certain nonrecurring items, an expedient that promised to aggravate the fiscal crisis the following year.[57] Increasingly financial and political prospects for 1933 began to resemble those of 1923.

Aside from Poland, none of the other European members of the gold bloc (Belgium, the Netherlands, Switzerland, and Czechoslovakia) was threatened in 1932. Several countries experienced serious economic dislocation, but none faced an equally gloomy fiscal outlook. Belgium's position was the least secure. Compared to France, Belgian industry depended more

heavily on exports and, given the importance of trade with Britain, sterling's depreciation dealt it a powerful blow. The agricultural sector was especially vulnerable to the effects of currency depreciation by neighboring countries. Financial intermediaries that lent heavily to industry and agriculture were therefore in a relatively weak position. As exporters began to press for devaluation, the financial interests were understandably restrained in their opposition.[58]

Yet all these considerations mattered less than keeping the budget under control—budgetary equilibrium rendered the defense of convertibility relatively easy. Brussels was one of the principal centers that New York had lost gold to following sterling's depreciation. When American balance of payments problems resurfaced in 1932, Belgium imported even larger quantities of gold from the United States.[59] Until the difficulties of its banking system became better known, Belgium remained a safe haven for financial capital.

The same was true of the Netherlands and Switzerland. In Holland, the gold reserve continued to exceed two-thirds of deposits.[60] The Dutch central bank gained substantial quantities of foreign exchange over the course of 1932, as shown in Figure 10.8. As a result of the capital inflow, the supply of high-powered money actually rose, by more than 4 percent as shown in Figure 10.5. Broader monetary aggregates declined only slightly. The intense monetary deflation of subsequent years was not yet evident. But in Holland, as in France, monetary stability was inadequate to

(p.314)

insure economic stability. Industrial production continued to fall, by 12 percent between 1931 and 1932.[61] The continued deterioration in economic conditions elicited remarkably little pressure for devaluation. The desire to maintain Amsterdam's status as an international financial center provided a strong

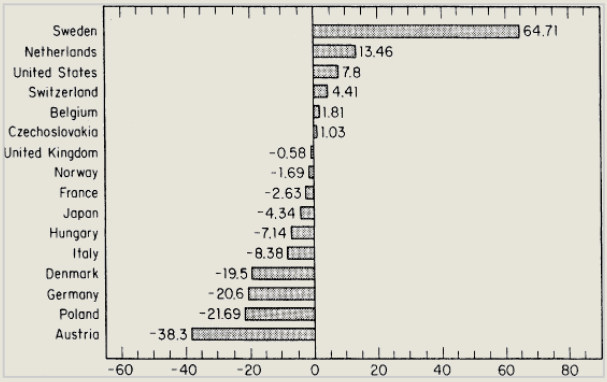


Fig. 10.8. Percentage change in gold and foreign exchange reserves from the end of 1931 to the end of 1932.

Other than Sweden, whose central bank acquired large amounts of foreign exchange in the second half of 1932, the principal countries to accumulate additional international reserves were those still on gold: the Netherlands, the U.S., Switzerland, Belgium, and Czechoslovakia. Of the gold standard countries, only France lost reserves over the period.

Source: League of Nations (1939).

counterweight. In addition, pressure for devaluation was deflected by the peculiar constellation of Dutch politics. Politics were not organized along economic lines. Where an economic interest existed, it was split into Catholic, Protestant, liberal, and socialist “zuilen.”[62] It was often easier for one Catholic zuilen to ally with another than for groups with economic interests in common but social and religious differences to form a coalition. This led to coalitions unified by social and religious commonalities that cut across economic lines. It suppressed distributional conflicts between capital and labor and between sectors producing traded and nontraded goods. Thus, trade unions and the agricultural

lobby were unable to exert effective pressure for devaluation until considerably later.

The United States was the one faithful adherent to the gold standard that had not suffered inflation in the 1920s nor relied heavily on the business of international (p.315) banking. Devaluation was unlikely so long as the Federal Reserve Board remained dominated by liquidationists and the Board was left to formulate policy independently. Sustainable recovery was possible, in the liquidationist view, only after excess liquidity had been purged and prices had been reduced to realistic levels. Only when the financial system had been restored to a firm footing would investors take heart; such restoration was possible only if the gold standard was retained. Hence, left to its own devices, the Board of Governors would have preferred to let liquidation run its course.

But in an election year, Congress was not inclined to grant the Fed this leeway. The legislators first liberalized collateral requirements for Federal Reserve notes, eliminating the free gold problem. They then applied direct pressure for the System to initiate expansionary open-market operations.[63] The Board caved in to the pressure. Under the direction of the Open Market Committee, the 12 reserve banks purchased more than $1 billion of securities between February and June 1932. As George Harrison described the rationale for this program to Bank of France Governor Clément Moret, “This policy is in line with the general program here to arrest the deflation and stimulate some increase in the volume of credit which has been declining very rapidly.”[64]

The effects were not those desired. Although wholesale prices rose by 5 percent in March and by another 3 percent in April, industrial production failed to stabilize. (Figure 10.3 shows its continued tendency to fall through the first half of 1932.) This served to confirm the presumption on the part of members of the Board that monetary expansion was conducive not to economic recovery but to inflation.

The explanation for industry's failure to respond is not hard to find. Industrialists had good reason to anticipate that the Fed's reflationary measures were temporary. Congress was due to

adjourn in July, when members returned to their districts to campaign. Relieved of Congressional pressure, the Fed could revert to its preferred policy of inaction. Knowing this, American industry was skeptical that the open market operations of early 1932 signalled a sustained increase in demand and a permanent improvement in business conditions.[65]

The urgency of reverting to a policy of inaction was heightened by the external drain provoked by the Fed's open market purchases.[66] The United States lost gold in every month from March through June. Net gold exports reached $206 million in June, a level experienced last in the month following sterling's depreciation. Gold under earmark by reserve banks for foreign account rose as well. Between March and June, the monetary gold stock of the United States fell by 11 percent. The French resumed the conversion of dollars into gold. The Bank of England asked the Fed to earmark gold in exchange for British dollar deposits. Shipments of American paper money from Europe in May and June rose to more than $27 million, up from negligible levels in the corresponding months the year before. Reporting on May 8, (p.316) *The New York Times* warned that, owing to fears of devaluation, Europeans were hesitating to accept payment in dollars.[67]

Ample evidence existed that unless open market operations were halted, convertibility would have to be suspended. Odds on Wall Street were reportedly running one to three that the United States would be off the gold standard before the end of June.[68] Collateral requirements applied by district, and some reserve banks were already dangerously close to breaching their statutory cover restrictions. Reserve banks with excess gold reserves could swap them for interest-bearing assets of reserve banks with inadequate gold, as they had in 1920, but this would limit their ability to intervene on behalf of local banks in the event of another upsurge of financial instability. Hence reserve banks with extra gold were reluctant to accommodate reserve banks without it. Those under the most intense pressure consequently withdrew their support for the program of open market purchases.[69]

The Fed's reversion to type was predictable. Nothing had yet challenged its commitment to the gold standard and to liquidation. Correctly anticipating that the Fed would draw back, producers and investors kept to the sidelines. A more fundamental change in circumstances—specifically, abandoning of the gold standard—would be necessary to initiate U.S. economic recovery.

Notes:

(1) By distinguishing the welfare effects of devaluation-induced changes in relative prices according to the sector of the economy in which individuals are employed, I rely on the specific-factors model of trade and production. The alternative would be to invoke the Heckscher-Ohlin model, as in Rogowski (1989), and to distinguish factors of production according to the intensity with which they are utilized in different sectors. The Heckscher-Ohlin model would suggest that devaluation was good for factors utilized intensively in the production of traded goods, rather than for all those employed in traded-goods sectors. The specific-factors model is more appropriate in the short run, when factors find it difficult to move between sectors, while the Heckscher-Ohlin is probably a better approximation to the long run. My reliance on the first model reflects my belief that lobbying for and against alternative policies in the 1930s reflected mainly short-run considerations.

(2) Product mix mattered as well. Where farmers produced internationally traded agricultural commodities, like the wheat farmers of the United States, they pushed hard for devaluation. Where they raised more specialized products for the home market, like the small farmers of France whose output prices held up relatively well, they felt less strongly about the issue.

(3) League of Nations (1938a), p. 123.

(4) The combined effect of a domestic devaluation and a foreign tariff that leaves the international allocation of consumer expenditure unchanged is ambiguous in the theoretical model analyzed in Eichengreen (1989b). Insofar as the policies raise domestic prices relative to those prevailing

externally, they should stimulate aggregate supply. Insofar as higher prices reduce the real value of money balances and thereby place upward pressure on interest rates, demand will tend to be depressed. The two effects work in opposite directions, and their combined impact on output and employment is shown to be small given plausible parameter values.

(5) The reserve losses of countries remaining on gold did not have to equal the reserve gains of countries with depreciated currencies because the liquidation of foreign exchange reserves reduced the international reserves available to the world as a whole. According to Nurkse (1944), Appendices II–III, countries remaining on gold lost $88 million of international reserves between the ends of 1931 and 1932, while countries depreciating by the end of 1931 gained only $37 million. In addition to countries on gold and countries with depreciated currencies, there was a third group of countries: those which retained their official gold parities but imposed exchange controls. Germany, the principal member of this group, lost $42 million of reserves between the ends of 1931 and 1932. The $88 million of reserves lost by the gold standard countries plus the $42 million of reserves lost by Germany minus the $37 million of reserves gained by countries with depreciated currencies comes to $93 million, roughly matching the $105 million decline in international reserves in Nurkse's data. Remaining discrepancies reflect the fact that Nurkse's calculations cover only the principal 24 gold standard countries.

(6) League of Nations (1932), p. 297.

(7) Moret's justification ran as follows. “The abandonment of [the] gold standard by Great Britain involves losses for our national economies and especially for the Bank de France on account of its credit balances in London. It appears to us that we should take steps to react. An increase in the metallic cover of our bank notes appears to us in the present circumstances as of a nature to reinforce the confidence in our national currency.” Columbia University (Harrison Papers), “Confidential for Governor” (Moret to Harrison), Incoming Cablegram—Serial No. 6202, 21 September 1931.

(8) Wheeler-Bennett (1933), p. 121. See also Einzig (1931b). The French decision to accelerate its liquidation of dollar reserves following the devaluation of sterling is described in a memo contained in the Ministry of Finance archives, Min. Fin. B32318, “Note sur la liquidation des devises de la Banque de France,” 23 May, 1933. On the Hoover Moratorium, see chapter 9.

(9) This was Harrison's stated justification for recommending the rate increase. Columbia University (Harrison Papers), “Dr. W.R. Burgess. S.S. Ile de France,” Outgoing Cablegram—Serial No. 7614, 15 October 1931.

(10) Wicker (1966), p. 164. *Eighteenth Annual Report of the Federal Reserve Board Covering Operations for the Year 1931* (1932), p. 1.

(11) The 25 percent figure applies to the period August 1931–January 1932. Friedman and Schwartz (1963), pp. 317–318.

(12) For details, see chapter 7.

(13) The actual provisions determining the quantity of gold backing required by statute were slightly more complicated than this. Again, see chapter 7.

(14) This amount could have been raised to $500 million had the reserve banks reduced their own holdings of Federal Reserve notes. *Nineteenth Annual Report of the Federal Reserve Board for 1932* (1933), p. 18.

(15) After 1928, bills bought outright or under repurchase agreement never exceeded $400 million. Thus, bill purchases would have had to reach unprecedented heights. Moreover, many bills typically purchased by the Fed were bankers' acceptances based on imports into and exports from the United States. With international trade continuing to decline, such bills became increasingly scarce. The Fed would have been forced to rely primarily on acceptances generated in connection with domestic trade in the United States or other countries such as Canada.

(16) This was the view of Benjamin Strong. FRBNY (Strong Papers), Strong to Norman, August 30, 1927. See also Burgess (1929).

(17) Bank of France, *Procès verbaux*, 8 October 1931.

(18) Cited in Hoover (1952), p. 116.

(19) FRBNY Archives (Harrison Papers), Letter from Burgess to Harrison, February 16, 1932. Again, Burgess (1929) sheds light on why events were interpreted in this light.

(20) “Restoring and Maintaining the Average Purchasing Power of the Dollar,” Hearings, Committee on Banking and Currency, U.S. Senate, 72nd Congress, 1st Session (1932), p. 195. Cited in Wicker (1966), p. 168.

(21) For the sake of completeness, other countries on the gold standard as of January 1, 1933, were Albania, Danzig, the Dutch East Indies, and Lithuania.

(22) Parkinson (1934), pp. 83–84. Bordo and Redish (1987) emphasize the increased domestic-currency cost of foreign debt service as a factor in the Canadian decision.

(23) In addition, Canada's principal national competitor in the international newsprint trade. Sweden, had depreciated her currency significantly against the Canadian dollar. See pp. 306–308.

(24) League of Nations (1938b), paragraph 8.

(25) A particularly clear exposition of this view is Rist (1933). Other examples of the genre include Hacault (1930) and Brocard (1932).

(26) A clear statement of these implications appears in Caillaux (1932).

(27) Lester (1939), p. 241.

(28) The initial fall and subsequent recovery of sterling can be understood as an instance of the overshooting phenomenon studied by Dornbusch (1976). His analysis shows that the exchange rate is likely to overshoot its long-run equilibrium

value when foreign exchange markets clear instantaneously but commodity prices are slow to adjust. The overshooting problem was recognized by contemporaries: see, for example, Hall (1935), p. 3, or PRO T175/56, H. D. Henderson, “Pegging the Pound. II,” 6 October 1931, p. 4.

(29) Conversely, supporting sterling at a higher level would have been impossible until reserves were replenished. Howson (1980), p. 6.

(30) As H. A. Siepmann of the Bank of England put it, “we have at one blow repudiated a part of our banking indebtedness to foreigners who entrusted their money to us.” PRO T175/56, “Siepmann to Leith Ross,” 25 September 1931.

(31) PRO T175/56, R.G. Hawtrey, “Pegging the Pound. II,” 28 September 1931, p. 2.

(32) More important was the response of the banking system and the public to lower interest rates: M3 (currency plus all bank deposits) rose by 2 percent in 1932-II and by 6 percent in 1932-III. Estimates of the British money supply are from Capie and Webber (1985).

(33) Sayers (1976), vol. 2, pp. 452–453; see also Lees (1953).

(34) Iversen (1936), p. 77; Kindleberger (1934), pp. 416–417. The net foreign claims of the Danish banking system more than offset foreign claims on Danish banks. Denmark's external debt was almost entirely long term. The debt-to-export ratio (computed using data from Iversen, 1936, p. 72 and Mitchell 1975, p. 304) was only 63 percent at the end of 1930.

(35) PRO T174/56, Untitled Memo to the Chancellor of the Exchequer.

(36) Details on New Zealand's external economic policy are provided by Hawke (1985), chapters 7–8. Precise rates of depreciation were 24 percent for Denmark and 25 percent for New Zealand. Kindleberger (1934), p. 419.

(37) Lindahl (1936), p. 82. For further details on the loan negotiations, see Kjellstrom (1934), pp. 29–30.

(38) Lester (1939), pp. 230–231. See also Kjellstrom (1934), p. 27; Thomas (1936), pp. 185, 187.

(39) Kjellstrom (1934), p. 53; Montgomery (1938), p. 39; Ohlin (1932), p. 269.

(40) Lester (1939), p. 266. See also Jonung (1979), p. 86.

(41) In addition, they recommended the adoption of other measures to promote economic activity once it was certain that price stability had been restored. Jonung (1979), pp. 97–99.

(42) The quote is from Lester (1939), p. 233. Other information in this paragraph is from p. 231.

(43) This is the sum of note circulation, central bank sight liabilities, and token coin held by the public, from the League of Nations (1938c), p. 119.

(44) Kjellstrom (1934), pp. 61–63. The direction of intervention in the summer of 1932 can be inferred from the data on foreign exchange holdings of the Riksbank provided by Kjellstrom on p. 67. More precisely, the new monetary program adopted in May 1932 took as its point of departure the observation that wholesale prices had fallen faster than the cost of living after 1929. It was argued that by reversing this process wholesale prices could be raised without inflating the cost of living.

(45) It then fell back to a 3 percent discount in February 1933. Jonung (1981), p. 301.

(46) Marcus (1954), p. 105; Iversen (1936), p. 76.

(47) Shinjo (1958), p. 5.

(48) Tagaki (1988), p. 9; private correspondence with Shinji Tagaki (December 16, 1988).

(49) Kamii (1937), pp. 35–36; Fukai (1937), pp. 389–390.

(50) Bank deposits increased by 7 percent in 1932 and again in 1933. The rise in the currency/ deposit ratio was the

opposite of the experience in countries such as Britain and Sweden. Shinjo (1958), pp. 10–12.

(51) Dowd (1957), pp. 6–7; Tagaki (1988), pp. 11–13.

(52) Griffiths and Langeveld (1987), p. 5; Jones (1934), pp. 139–144.

(53) See chapter 9. Foreign countries threatened to retaliate against these practices, leading to the negotiation of clearing arrangements.

(54) Brazil, Denmark, and Turkey imposed import quotas and licencing requirements within two months of Britain's devaluation. New import duties and taxes were imposed subsequently by numerous countries with depreciated currencies, including Argentina, Australia, Canada, Denmark, Romania, and Britain.

(55) Figures 10.5 and 10.6 report the League of Nations' estimates of French monetary aggregates in order to maximize comparability with figures for other countries. Alternative estimates for France by Saint-Etienne (1983), Annex 2, paint essentially the same picture.

(56) Larmour (1964), p.31.

(57) Jackson (1985), pp. 57–63.

(58) See the discussion in Baudhuin (1936).

(59) Belgian gold imports from the U.S. came to $15 million in 1931 but $84 million in 1932. *Annual Report of the Federal Reserve Board for the Year 1934* (1935), p. 121.

(60) Verrijn Stuart (1937), p. 246.

(61) Data cited are from Mitchell (1975).

(62) A rough translation of “zuilen” is groups or associations. A detailed analysis of these issues may be found in Griffiths and Langenveld (1987), pp. 13–16 and *passim*. See also chapter 3.

(63) This is the position argued by Epstein and Ferguson (1984).

(64) Columbia University (Harrison Papers), “No. 103, Confidential for Governor Moret” (Harrison to Moret), Outgoing Cablegram—Serial No. 417, 13 April 1932.

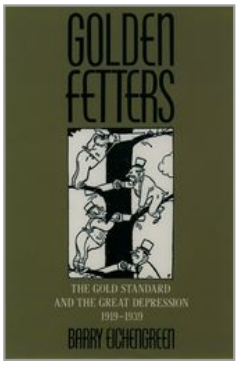
(65) The same point is made by Temin and Wigmore (1990).

(66) Josephson (1972), p. 125.

(67) Min. Fin. B32318, “Note sur les importations d'or,” p. 3. *New York Times*, May 8, 1932.

(68) Nadler and Bogen (1933), p. 86.

(69) Epstein and Ferguson (1984), pp. 973–976.



Golden Fetters: The Gold Standard and the Great Depression, 1919-1939
Barry Eichengreen

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The Dollar and the World Economic Conference

Barry Eichengreen (Contributor Webpage)

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Abstract and Keywords

This chapter analyzes the critical period in the spring of 1933 when American policy was reversed and the dollar devalued. Roosevelt's abandonment of gold coincided with the World Economic Conference, which was held in London in June 1933, in a last attempt to respond cooperatively to the economic crisis. The connections are traced between the dollar's depreciation and the London Conference and an explanation given of why the latter failed. The different sections of the chapter discuss the background to the negotiations, the conference itself, the international monetary repercussions, and the impact of devaluation of the dollar.

Keywords: abandonment of the gold standard, devaluation, dollar, economic crisis, gold standard, international cooperation, international monetary repercussions, interwar period, USA, World Economic Conference

Never was uncertainty about the future of the international economy so pervasive as at the beginning of 1933. While economic conditions had already begun to improve in many countries that left the gold standard in 1931, the situation continued to deteriorate in North America and much of Europe. Balance-of-payments tensions between countries still on the gold standard and those with depreciated currencies showed no sign of abating. In France, the Herriot Government fell at the end of 1932, ostensibly over whether to pay the next installment of its war debt to the United States, in reality over its failure to achieve the budgetary economies viewed as necessary for the franc's stability.[1] Its successor, led by the ineffectual Joseph Paul-Boncour, was equally incapable of forcing through the requisite fiscal measures. Britain's National Government steered a cautious middle course between the imperial ideals of the Chancellor of the Exchequer, Neville Chamberlain, and the internationalism of the Prime Minister, Ramsay MacDonald. Under Hitler, Germany adopted increasingly autarkic policies. The international economic intentions of the newly elected American president, Franklin Delano Roosevelt, remained obscure.

Circumstances hardly seemed propitious for international negotiations. Yet at precisely this juncture, the nations of the world initiated a last-ditch effort to arrange an internationally coordinated response to the Great Depression. In an attempt to stabilize exchange rates, rebuild international trade, eliminate the debt overhang, and stimulate economic recovery, they convened a World Economic Conference in London in June 1933.

The conference was a complete and utter failure. The already fragmented international monetary system splintered into additional currency blocs. Deflationary pressure on the gold standard countries only intensified. International trade remained lodged at low levels. The problem of intergovernmental debts continued as a bone of contention among the Allies, while the overhang of defaulted commercial debts impeded the recovery of international capital markets.

Typically, blame for the failure of the conference is pinned on the American (p.318) president, F.D.R. By taking the dollar off gold midway through the proceedings, Roosevelt is said to have torpedoed efforts to negotiate an exchange-rate stabilization agreement. This explanation emphasizing the actions of one individual is less than totally satisfying. In fact, more systematic obstacles to cooperation lay behind the conference's failure. French, British, and American policymakers were unable to negotiate to an exchange-rate stabilization agreement because they perceived the nature of economic crisis in radically different ways. Lacking a shared diagnosis of the problem, they could not prescribe a cooperative response. Roosevelt's decision to devalue the dollar in the midst of the conference was merely symptomatic of these deeper disagreements.[2]

An international agreement still might have been reached had one group of nations been enticed into concessions on the exchange-rate question in return for concessions on other issues by its foreign counterparts. Britain and the United States might have been convinced to stabilize their currencies, for example, in return for French agreement to relax import tariffs and quotas. Additional purchases by French consumers of American and British goods would have permitted the Bank of England and the Federal Reserve to expand domestic credit and stimulate demand without driving the British and American balances of payments into deficit. France would have gained the exchange rate stability she desired. The United States and Britain would have been able to pursue the reflationary monetary initiatives to which they attached priority. Policymakers in all three countries would have regarded the exchange of concessions as a victory.

Here, however, domestic politics posed an insurmountable obstacle to agreement. Domestic pressures emanating from adversely affected sectors made it impossible for the Daladier Government in France to offer trade concessions. Pressures for reflation and silver monetization in the United States rendered it politically costly, if not impossible, for Roosevelt to stabilize the dollar.

Thus, a combination of incompatible conceptual frameworks and domestic political constraints was ultimately responsible for the conference's failure. Yet it was not an unmitigated economic disaster. Behind the shelter of a floating pound sterling, Britain was free to continue her pursuit of cheap money policies designed to stimulate domestic economic activity. Dollar devaluation similarly allowed the United States to pursue policies designed to stabilize her economy, although it was not until 1934 that those policies found reflection in financial markets and U.S. economic recovery finally got underway. In contrast, the remaining gold standard countries experienced continued depression and suffered the consequences of the collapse of the World Economic Conference.

The Background of Negotiations

An international conference to address global economic imbalances had been contemplated for some time. The debtor nations of Central Europe and Latin America (p.319) had long insisted on the interlocking nature of deflation, tariffs, external debts, and exchange rate instability. They despaired of resolving any of these problems in isolation from the others. As early as 1930, Germany, dissatisfied with the outcome of the Young Plan negotiations, which considered only a subset of international economic questions, had mooted the idea of a conference at which the entire range of issues would be addressed.[3] This possibility was raised again in 1931 during Franco-American discussions of the Hoover Moratorium, and in 1932 during discussions between U.S. Secretary of State Henry Stimson and British officials.[4]

The groundwork was laid at the Lausanne Conference in 1932. The length and depth of the Depression having laid bare the unrealism of the Young Plan Schedule, Lausanne finally abolished German reparations. The delegates revoked the payments schedule in return for German agreement to deliver bonds worth 3 billion gold marks to the creditors. Reparations, already dead, were now effectively buried. At last relieved of this burden, Germany could liberalize her foreign trade, or so the delegates to the Lausanne Conference hoped. They established a committee, known as the Stresa Conference, to

consider means of reviving European trade. Belgium, Holland, and Luxembourg were encouraged to negotiate a customs agreement and start Western European trade down the road toward recovery. Their agreement, signed in Geneva in July 1932, provided an immediate 10 percent cut of tariffs on one another's goods and a schedule for subsequent reductions. Finally, the Lausanne protocols called on the League of Nations to convoke an “International Monetary and Economic Conference” to address international problems on a global scale.

Three obvious impediments limited the success of any such conference: the dispute over war debts, the rise of protectionism, and fundamental disagreement over exchange-rate policy. The British and French decision to terminate reparations had failed to elicit American concessions on war debts. In the summer of 1932, President Hoover proposed to renew his war debt moratorium for a second year, and the initiative attracted Congressional support. But the American public failed to appreciate the contribution of war debt payments to Europe's balance-of-payments difficulties. It remained overwhelmingly opposed to cancellation and viewed extension of the moratorium as another step down that path. Hoover's proposal was not adopted.

Once the Hoover Moratorium expired, Britain and France attempted to reopen negotiations over the payments schedule. But they quickly recognized the expediency of delaying talks until after the November 1932 election, when the need for American politicians to adopt a hard line for campaign purposes would no longer be so pressing. The Europeans also hoped that the new American president and Congress might be more accommodating. Following Roosevelt's victory, the British and French governments made clear that their ratification of the Lausanne reparations agreement was contingent on U.S. war debt concessions. Other European nations simultaneously demanded that war debt negotiations be reopened and affirmed their solidarity by dispatching identically worded notes to Washington.

(p.320) President-elect Roosevelt, seeking to keep his options open, declined to cooperate with the outgoing Hoover

administration in discussions with the European debtors.[5] Since the lame-duck administration was in no position to take the initiative, the Europeans acted unilaterally. France, Belgium, Poland, Hungary, and Estonia defaulted on the war debt installment due on December 15, 1932. Britain made its December 15 payment by earmarking $95.5 million of gold in the vaults of the Bank of England. The veiled threat was that if the United States attempted to repatriate that gold, the Bank of England would liquidate its dollar balances, requiring the Fed to earmark a comparable amount of gold on Britain's behalf.

Default by the European governments inflamed American public opinion and threatened U.S. participation in the World Economic Conference. Invoking the specter of domestic opposition and the threat of nonparticipation, the Roosevelt administration extracted from the Europeans an agreement that war debts would be excluded from the conference agenda. Ultimately, however, it was not U.S. resistance to war debt cancellation but other issues that caused the collapse of negotiations. Nonetheless, the special status attached to war debts, on U.S. insistence, greatly complicated discussions.

Neither were conditions propitious for trade negotiations. As the Depression deepened, so did support for tariff protection in virtually every country. French farmers suffering from a renewed decline in agricultural prices demanded stricter import quotas and objected to all talk of trade liberalization.[6] Contemporaneous with Lausanne was a conference of British Commonwealth nations in Ottawa. The Ottawa Agreements extended preferential access to the British market to Commonwealth producers and gave British producers preferential access to the markets of India and the self-governing dominions. It brought to a close nearly a century of British free trade. In effect, Britain embraced discrimination in trade precisely when Western and Central Europe were being encouraged to reject it. The Ottawa Agreements highlighted the conflict between Britain's desire to reconstruct the international economy and its ambitions to cultivate closer economic ties with the Empire. For all these reasons, the prospects for tariff reductions seemed dim.

The exchange-rate question was the most contentious of all. The French and Belgian governments blamed monetary and financial instability for the Depression and regarded Britain's return to the gold standard as essential for restoring stability and ending the economic crisis. British officials, in contrast, had come to appreciate the advantages of cheap money and the freedom of action they enjoyed with a variable exchange rate. They hesitated to tie their exchange rate and, by implication, their monetary policy to that of institutions like the Bank of France guided by a very different outlook. Aware that sterling's stabilization would be a central issue at any conference, they were unprepared to concede it in the absence of a foreign commitment to reflate. And French fears of inflation made it extremely unlikely that a meaningful commitment would be forthcoming. When asked what would

(p.321)

come of an international conference, Montagu Norman of the Bank of England responded, “Not a thing.”[7] The American position was difficult to gauge. Like his French counterparts, Herbert Hoover believed that financial instability was responsible for the Depression and that maintenance of the gold standard was a prerequisite for sustainable recovery. Hoover saw Britain's return to gold as a central objective of negotiations. He hoped that the conference could be convoked in December 1932 with the Republicans still in charge of U.S. foreign affairs.

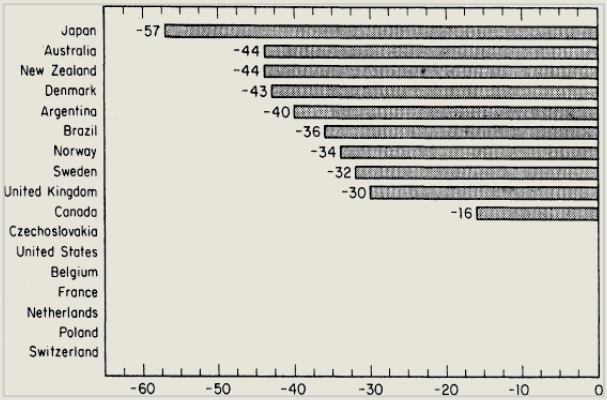


Fig. 11.1. Percentage discount of various currencies relative to their 1929 gold parities as of March 31, 1933.

By March 1933 other currencies had fallen dramatically relative to the U.S. dollar and those few European currencies convertible into gold and free of exchange control (those of Belgium, France, the Netherlands, Poland, and Switzerland).

Source: League of Nations, Economic Survey (1933–34), p. 271.

Roosevelt's overwhelming victory shattered those expectations. The President-elect's international monetary objectives were far from clear. It was not even certain that he would agree to participate in the conference once France and the others defaulted on their war debts. By the time he decided to proceed, Roosevelt was already gravitating toward dollar devaluation. Increasingly his views resembled those that informed British policymaking. By the summer of 1933

Roosevelt had come to attach priority to monetary reflation designed to restore U.S. prices to pre-Depression (p.322) levels. Given French unwillingness to engage in monetary reflation, he decided against exchange-rate stabilization.

Despite the extent of disagreement on the exchange rate question, it was still possible to envisage an agreement that would benefit all parties. In return for British and American agreement to stabilize their exchange rates, the French might have agreed to relax their tariffs and quotas. France would have thereby obtained the exchange rate stability she desired. Increased French imports of American and British goods would have permitted the Bank of England and the Fed to pursue the expansionary policies to which they attached priority without threatening the stability of sterling and the dollar. The combination of measures would have helped to relieve the balance-of-payments pressures that had provoked tariffs, quotas, and currency depreciation in the first place.

This chain of *quid pro quos* remained no less feasible after the United States abandoned gold. Before April 1933, a mutually acceptable package would have entailed British agreement to stabilize, French agreement to liberalize, and U.S. agreement to forgive war debts or reduce tariffs. After April 1933, it would have required Britain to stabilize, France to liberalize, and the United States to stabilize the dollar and perhaps grant war debt or tariff concessions. Roosevelt's preemptive strike may have increased the tariff reductions that France (and perhaps also Britain) would have to offer. But it did not obviously alter the basic package.

Officials in all three countries were aware of the scope for a mutually beneficial exchange of concessions. The exchange of tariff concessions for exchange rate stabilization had been implicit in the Draft Annotated Agenda of the Committee of Experts that met in advance of the London Conference. American Treasury Secretary Ogden Mills sketched the terms of this deal in the final months of the Hoover administration. Officials within the French Ministry of Finance anticipated that the government would be asked to barter trade liberalization for monetary stabilization by countries that blamed French import quotas for the instability of currencies.[8]

Here, however, domestic politics intervened. Domestic pressures made it impossible for France to offer tariff concessions. Pressures for reflation and silver monetization in the United States caused Roosevelt to hesitate in stabilizing the dollar. Though a policy trade acceptable to negotiators may have existed, it was not acceptable to those whose support they relied on. As Herbert Feis, then a forty-year-old economic advisor to the U.S. State Department and member of Roosevelt's inner circle, subsequently wrote, the program sketched by the Committee of Experts “was fallacious for one primary reason: the governments concerned were no longer in a position to carry it out.”[9]

(p.323) The Dollar Devalued

The prelude to dollar devaluation was the banking panic that greeted Roosevelt on taking office. The drumbeat of bank failures had been mounting steadily. In mid-February, bank runs led Michigan Governor William A. Comstock to shut his state's banking system for a week. Runs and bank holidays spread to every corner of the nation. Roosevelt's first action in office was to declare a national bank holiday.

The vulnerability of the American banking system is typically ascribed to the cumulative effects of the Depression.[10] Declining bond prices and loan defaults had weakened the banks' capital position. The timing of the collapse is credited to Congress which, critical of the use of public monies to bail out the banks, ordered publication of loans made by the Reconstruction Finance Corporation. The RFC, established in January 1932, had been endowed with capital of $500 million and empowered to extend extraordinary loans to banks in need. Members of Congress were critical of RFC's tendency to devote the bulk of its resources to aiding large banks. They questioned the integrity and impartiality of the bankers who served on the RFC advisory committee. Thus, starting in November 1932, House Speaker John Nance Garner forced publication of the RFC's current-month lists of loans, and in early 1933 Garner and Representative Hamilton Fish of New York secured the public release of all recipients before July 1932. The release of information on the RFC's operations showed particular banks in dire straits. The revelation that the

Union Guardian Trust Company of Detroit had been advanced more than $16 million by the RFC, for example, was demoralizing for a Detroit “renowned for its local patriotism and sense of tradition, in which sound finance had played an important part.”[11] The Guardian Trust was part of a holding company that controlled other local banks and trust companies, providing a channel through which the contagion of fear could spread. The bank was closely tied to the automotive industry; its perilous condition raised fears for the stability of the entire regional economy.[12]

The Michigan bank holiday drained funds from neighboring states to make payments that normally would have been met with checks drawn on local banks. Michigan-based corporations obtained cash for their payrolls from Chicago and New York City. The consequent drain of cash from those cities' banks unsettled depositors throughout Illinois and New York. In the four days following announcement of the Michigan bank holiday, the Chicago Fed lost more than $75 million of currency. State legislatures restricted the percentage of a customer's balance that could be withdrawn, heightening depositor unease. By March 2, eleven states had (p.324) declared bank holidays, and others had enacted legislation permitting state banking commissioners to limit withdrawals.[13]

The Fed was sensitive to the banking system's need for liquidity. But by the beginning of March, its gold cover had fallen to 45 percent. Provision of additional liquidity therefore threatened to breach the gold standard statutes and force the suspension of gold convertibility. To avoid the capital losses they would suffer with devaluation, foreigners liquidated their dollar balances. Sterling rose from $3.34 on January 7 to $3.43 on February 11. The forward discount, a rough measure of the market's expectation of future dollar movements, widened steadily, reaching 2¼ cents on February 18. On February 16, two days after announcement of the Michigan bank holiday, the Associated Press reported from Paris that “The dollar sank to-day in what bankers described as a demoralized market reflecting French concern over the Michigan banking situation.”[14] Gates McGarrah, one of the American directors of the Bank for International Settlements and long-time official of

the New York Fed, telephoned Harrison from Europe on February 23 to warn that “there was a good deal of concern and worry in Europe about the American banking position.”[15]

The Bank of England intervened to prevent sterling from rising further by purchasing $150 million in the first three weeks of February. But Norman was unwilling to accumulate additional dollars. On February 24 he warned Harrison that he planned to request that the Fed earmark gold on the Bank of England's behalf.[16] In the month of February, the Fed lost more than $174 million of gold through export and earmarking.[17] Had the Bank of England carried out its threat to convert its dollar balances, it could have doubled this amount.

Americans in a position to obtain gold or foreign securities responded in similar fashion. As a result, much of the liquidity injected into the U.S. banking system leaked back out almost immediately. Domestic residents protected themselves against devaluation by hoarding gold coin and gold certificates. The volume of gold coin and certificates outside the Treasury and Federal Reserve banks, shown in Figure 11.2, rose markedly in February. As they had in the wake of Britain's abandonment of gold, American depositors shifted into gold to avoid the capital losses holders of U.S. currency would suffer with devaluation.[18] (p.325)

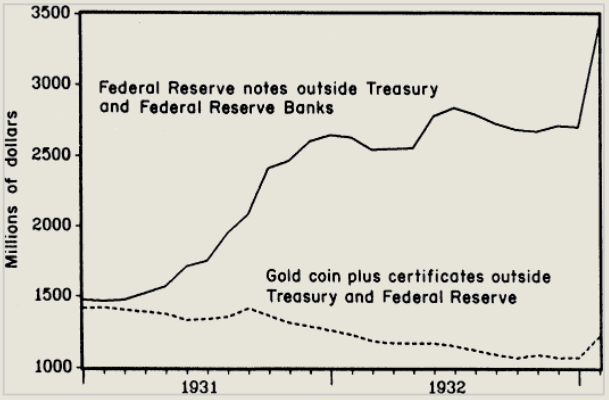


Fig. 11.2. Gold coin, gold certificates, and Federal Reserve notes in circulation. When a full-scale banking panic erupted in early 1933, American savers converted their deposits into more secure Federal Reserve notes, gold coin, and gold certificates. *Source: Annual Report of the Federal Reserve Bank for 1933, p. 142.*

Gold losses were spread unevenly among reserve banks. New York experienced the greatest pressure. Not only did the New York Fed have to provide assistance to district banks suffering withdrawals by domestic depositors, but the vast majority of foreign deposits were held by New York banks. In addition, difficulties in Michigan and elsewhere in the interior led to the liquidation of correspondent balances in New York. On March 4, when U.S. monetary gold reserves were 44 percent of the note and deposit liabilities of the Federal Reserve System, those of the Federal Reserve Bank of New York had fallen to the statutory 40 percent minimum.[19] Until the New York Fed secured additional gold, it lacked the capacity to rediscount bills of any kind. Commercial banks in the leading U.S. financial center had nowhere to turn for liquidity. “The 40 per cent gold cover clause thus proved the neck of the bottle,” two experts concluded, “and was the chief factor which finally forced a general closing of the banks.”[20]

In principle, the New York Fed could have obtained additional gold from other districts it had itself extended liquidity to thirteen years before.[21] In the two weeks from February 21 to

March 2, other reserve banks discounted $210 million of bills on behalf of the New York Fed and helped it to replenish its gold reserves in still (p.326) other ways.[22] On March 1, the Federal Reserve Bank of Chicago, the principal repository of the System's excess gold reserves, lent $105 million to its New York counterpart by purchasing $75 million of government bonds and $40 million of acceptances under a repurchase agreement. Without this transaction, the New York bank's statement for March 1st would have shown its reserve to be below the legal minimum.[23]

On March 3, interdistrict cooperation was withdrawn. The Chicago Fed refused to purchase or rediscount an additional $150 million of government securities on behalf of the New York Fed. Chicago had its own problems. Michigan residents had withdrawn what money they could from Illinois banks. The neighboring Michigan bank holiday had disturbed confidence among local depositors. Outlying banks in the Chicago district were suffering runs. The relatively strong banks of the Loop were experiencing withdrawals by corporations and individuals anticipating a general moratorium. The Chicago bankers were skeptical that New York, which was losing gold to foreigners as fast as shipping space became available, would be significantly strengthened by the transfer of funds, but they were convinced their own position would be weakened. New York's gold losses could be stemmed, in their view, only by some fundamental change in policy. And the Federal Reserve System could not agree on what that change should be.[24]

The First National Bank of Chicago, which had $75 million of Federal Reserve notes in its vaults, threatened to redeem them for gold unless the Chicago Fed agreed to send no more gold to New York.[25] The Chicago Fed caved in to the threat. The following day, the Federal Reserve Board considered the situation but declined to compel the Chicago Fed to cooperate with New York.[26] With its reserve at the legal minimum, the New York Fed was left without the capacity to provide additional liquidity to commercial banks in its district. With the leading U.S. financial center demoralized, a general moratorium was at hand.

What set off the crisis in the first place? The deterioration of commercial bank investment portfolios surely played a role. But this deterioration had been going on for some time and it is far from clear why it should have led to a panic in the first week of March. Similarly, the effects of RFC operations are not clear-cut. While revelations concerning RFC loans could have damaged the reputation of particular banks, the fact that the RFC was extending liquidity to banks in need should have buttressed confidence in the banking system.

The new element in March 1933 that undermined confidence and eroded the Fed's lender-of-last resort capacity was the expectation of dollar devaluation. Fears that Roosevelt might devalue the dollar induced depositors to withdraw their balances even from U.S. banks that were fundamentally strong in order to redeem their Federal Reserve notes for gold. The outgoing Treasury Secretary Ogden Mills (p.327) got at least half the story right when he observed that “It was not the maintenance of the gold standard that caused the banking panic of 1933 and the outflow of gold . . . it was the definite and growing fear that the new administration meant to do what they ultimately did—that is abandon the gold standard.”[27]

Roosevelt had avoided raising the devaluation issue during the election campaign, leaving discussion of monetary questions to sound-money Democrats like Carter Glass.[28] The Democratic Platform featured no detailed monetary proposals, pledging only “a sound currency to be preserved at all hazards.” Yet some of the President-elect's economic advisors, such as the Cornell University agricultural economist George Warren, were known to favor stabilizing the dollar prices of commodities and pushing them up if necessary.[29] Barring reflation by the other gold standard countries, the proposal was tantamount to devaluation.

The new president was sure to encounter pressure to reflate even if doing so risked devaluation. A significant minority of business, spoken for by the Committee for the Nation to Rebuild Prices and Purchasing Power, advocated expansionary initiatives. Its three hundred members endorsed abandonment of the gold standard if necessary to raise prices. Inflationist

sentiment had been mounting in Congress since the beginning of 1933.[30] As the rate of farm foreclosure rose, senators from agricultural states, such as Elmer Thomas and John Simpson of Oklahoma and Tom Connally of Texas, pressed for the adoption of monetary policies designed to restore prices to the levels prevailing in the 1920s. Thomas advocated issuing unbacked currency sufficient to raise prices to 1921–28 levels. Connally proposed reducing the gold content of the dollar by a third, the equivalent of a 33 percent devaluation. Though Connally's amendment, submitted to the Senate in January, was defeated, the sympathetic hearing it received illustrated the growing influence of the devaluation lobby. Representative Huey Long of Louisiana and Senator Burton Wheeler of Montana lobbied for a bill that would have required the government to purchase silver, at its current market price under Long's plan, at the traditional bimetallic ratio of 16 to 1 under Wheeler's, and pay for it with notes or certificates with full legal tender status. No one denied the incompatibility of these proposals with the dollar's continued convertibility into gold. Thomas explicitly invoked the advantages of devaluation currently accruing to Britain and cited the stimulus from currency depreciation enjoyed by the French and Italian economies a decade earlier.[31]

Foreign developments strengthened the hand of Congressmen advocating unilateral action. Sterling's decline in the second half of 1932 lowered U.S. import prices, intensifying the competitive difficulties of American producers. French default on the December war loan installment weakened the hand of the internationalists in Congress.

(p.328) In private, Roosevelt had for some time evinced a willingness to contemplate devaluation. He discussed it at a meeting in Albany a month after his electoral victory. In conversations with journalists and leading businessmen, he acknowledged that devaluation might be a necessary corollary of effective reflationary action. He made clear to potential members of the Cabinet his unwillingness to preclude the option. He encouraged suspicions by appointing to his Administration individuals such as Secretary-of-Agriculture-Designate Henry Wallace who openly favored devaluation.

Speculation about Roosevelt's intentions was rife. “During the last half of January,” one observer recalled, “the banking and financial community fairly sizzled with rumors from Warm Springs that soft money of some sort must be expected in the new administration. Wall Street operators who were widely recognized as political intimates of Mr. Roosevelt whispered to their business associates that dollar revalorization was much in the air.”[32] On January 30 a *Washington Herald* report that Roosevelt had committed to a policy of concerted reflation was read into the *Congressional Record*. Bankers, economists, and members of the outgoing Hoover administration, including the President himself, publicly urged the incoming president to affirm his opposition to devaluation.[33] Among Republicans, Roosevelt's refusal to speak out against devaluation was taken to indicate that he favored it.[34]

The interregnum between election and inauguration stretched on for four months—no circumstance could have been more conducive to a run on the dollar. Roosevelt declined to do anything to stifle devaluation fears. He issued no statement of reassurance. Had he done so, speculators still would have been tempted by the one-way bet. If expectations of devaluation were disappointed, they could repurchase the dollars they had sold previously, incurring only the transaction cost. If their expectations were met, they would avoid substantial capital losses on their dollar assets. Hence they had every incentive to convert their dollar balances into gold certificates or foreign exchange. George Harrison of the New York Fed recognized that the United States was experiencing not merely domestic bank runs but an incipient convertibility crisis. On February 23 he warned his fellow directors that the crisis “represents something more than a hoarding of currency, which reflects a distrust of banks. It represents in itself a distrust of the currency and is inspired by talk of the devaluation of the dollar.”[35]

The gold drain accelerated as Roosevelt's inauguration approached. In the vanguard of the flight from the dollar, according to the *Wall Street Journal*, were speculators in Europe's financial centers. In the week ending March 1, the Fed lost $116 million in gold due to earmarking. On March 3

alone, according to one estimate, more than $109 million of gold was placed under earmark in New York.[36]

(p.329) A massive shift out of deposits and into currency and gold was beginning. By the end of Roosevelt's inauguration day, every state of the Union was wholly or partly under banking restrictions. On Friday, March 3, the Federal Reserve Board and representatives of the financial community pressed Hoover to declare a national bank holiday. Failing to secure Roosevelt's assent, the outgoing president demurred. With brokers' loans unavailable and distress sales looming, the New York Stock Exchange and other exchanges nationwide suspended operations on March 4. The banking system would be closed for business on Monday, March 6, with or without Roosevelt's intervention. By declaring a bank holiday on Monday under authority granted the president by the Trading with the Enemy Act, a hold-over from World War I, Roosevelt merely bowed to the inevitable.

Just as expectations of devaluation figured in the banking crisis, they played a prominent role in restoring financial stability. On taking office, Roosevelt could have actively attempted to depress the dollar. His refusal surprised those who had been betting that he was a devaluationist and revived confidence in the currency. On March 5 the new Secretary of the Treasury, William Woodin, assured the country that the United States had not gone off the gold standard.[37] On March 6 the *Times* of London assured its readers that there was little likelihood of the United States being driven from gold. On March 7th the United Press reported the *Daily Telegraph*'s opinion that “America should be able to resume the gold standard old dollar parity and hold it.”[38] At his first press conference on March 8, Roosevelt asserted that the gold standard was safe. As days passed and Roosevelt failed to take the United States off the gold standard, funds began to flow back into the banks. Sentiment was widespread that Roosevelt's bank holiday and other expedients were only temporary.[39]

True, an effective bank holiday required that restrictions on the banks' freedom to pay out currency be accompanied by restrictions on the right to export gold. On March 9 Roosevelt

pushed through both Houses of Congress emergency legislation authorizing him to regulate or prohibit the export, hoarding, or earmarking of gold or silver, and empowering the Secretary of the Treasury to require the surrender of all gold coin, bullion, and certificates held by the public. Although the banks, on reopening, were still barred from engaging in most foreign exchange transactions and from paying out gold or gold certificates, exports of gold under earmark for foreign governments or central banks and for the Bank for International Settlements were allowed. Licenses, though required, were granted. The gold standard had not been abolished. So long as the restriction of gold payments was seen as a transitory expedient, there was no reason for the dollar to decline. Friedman and Schwartz suggest that the restriction was regarded in precisely this way. “The suspension [of free gold exports] was presumably regarded as part of the banking emergency,” they write, “and hence expected to be temporary.”[40]

(p.330) Market participants had good reason to regard the situation as sustainable. The U.S. balance of payments, after all, remained fundamentally strong. After having sunk on March 3 to 3.95 cents against the French franc, when dealings in dollars resumed ten days later the U.S. exchange rate recovered to 3.92 cents. For the next month the dollar remained continuously within the gold points against the franc and other gold currencies. The gold holdings of the Federal Reserve System rose by more than $700 million between March 11 and April 19.

Once devaluation fears receded, the liquidation of deposits came to a halt. Between March 11 and April 19, as the public shifted back out of currency into deposits, Federal Reserve notes in circulation fell by $838 million. It seems unlikely that the embargo on private gold exports played a significant role. Though depositors could no longer convert their dollar balances into gold, they could still exchange their dollars for foreign currency so long as those foreign currency purchases could be justified as legitimate business transactions. New York banks may have been barred from engaging in speculative foreign exchange transactions, but it was still possible to freely sell dollars in London and Paris. Nor does it

appear that exchange rate stability was maintained by purchases of dollars on the part of foreign central banks. The foreign exchange holdings of the Bank of France, for example, declined between the end of February and the end of March and again between the end of March and the end of April.[41] The public, rather than the authorities, exhibited a new willingness to hold dollars. Without devaluation fears, funds flowed into dollars and back into the U.S. banking system.

Perhaps other factors contributed to the rapid restoration of financial stability. On March 7 the Federal Reserve Board compelled other reserve banks to resume interdistrict rediscounting on behalf of the New York Fed. This allowed the New York Fed to do the same for member banks. But in the absence of other changes, the Federal Reserve System would have continued to lose gold. Eventually the System's excess gold reserves would have been exhausted, and cover restrictions would have bound again. Perhaps Roosevelt's optimistic air had favorable psychological effects. Perhaps, by interrupting the contagion of fear, the bank holiday allowed depositors to collect their wits. Perhaps increased federal oversight of the banks helped to restore confidence, although this is hard to imagine given the arbitrary standards used to determine which banks were in a position to reopen.[42] It is difficult to know how significant these psychological effects were. In any case, the only fundamental change in policy that accompanied them was Roosevelt's decision to remain on gold.

The dollar's strength persisted through mid-April. At that point the situation deteriorated abruptly. The exchange rate sank toward the gold export point and the Treasury licensed gold exports to stem its fall. In the third week of April, $500,000 of gold was exported to Holland. This was a mere drop in the bucket. Reports circulated that Dutch investors had mobilized $125 million to speculate against the dollar. Between April 15 and 17, additional licenses were granted for a further $9 million of gold exports to France, but the dollar showed no sign of strengthening.[43]

(p.331) The break in the market was caused by anticipations of a shift in U.S. policy. Having been undecided as recently as mid-March, Roosevelt finally opted for devaluation. By mid-

April the market got wind of his intentions. The president had grown convinced that ending the Depression required raising prices to their 1929 level. “Washington and Wall Street buzz with talk of an imminent inflation,” read a *Business Week* article prepared for publication on April 19.[44]
Restoring prices to these levels required more monetary reflation than was consistent with maintaining gold convertibility, given French views of the matter. Referring to April 11–15, the *New York Times* remarked, “The week's discussions in the markets were largely given up to mental pictures of a depreciated currency.”[45]

So pragmatic a president must have been influenced by mounting congressional pressure. In 1933 the agricultural bloc and the silverites finally formed an effective Congressional alliance.[46] In debate over Senator Burton Wheeler's Amendment to the farm bill, which would have permitted unlimited coinage of silver at a ratio of 16 to 1, senators from silver-mining states repeatedly invoked the plight of the farmers, prescribing monetary measures designed to raise prices. Senators from agricultural states stressed that the difficulties of their constituents were shared by industrial regions as well. On April 17 the Senate defeated the Wheeler Amendment by 33 to 43. All fourteen senators from the seven silver-mining states of the West had voted for the amendment; they were joined by nearly twenty others from the Mid-west and South. The Administration was aware that at least ten senators had withheld their support only because of the extremity of the measure.[47] It is no coincidence that this vote coincided with the decline in the dollar to the gold export point.

Roosevelt sought to channel these pressures by endorsing the more moderate Thomas Amendment. According to Raymond Moley, Roosevelt's leading advisor, the president still had no specific economic program in mind and agreed to the Thomas Amendment as a way of containing the rebellion of the Senate inflationists. “The cold fact,” wrote Moley, “is that the inflationary movement attained such formidable strength by April 18 that Roosevelt realized that he could not block it, that he could, at most, try to direct it.”[48] The Thomas Amendment

and the gold embargo were the most conservative steps that Roosevelt could take in response to inflationist pressure.[49]

The Thomas Amendment authorized Roosevelt to stimulate inflation in a number of ways. He could instruct the Fed to purchase up to $3 billion of government securities. If the Fed refused, he could authorize the issue of $3 billion of (p.332) greenbacks. He could reduce the gold content of the dollar. He could authorize the coinage of silver. Though he had been forced to accommodate mounting inflationist pressure in Congress, Roosevelt may have been happy with these options, both because they were consistent with his own activist inclinations and because they permitted him to derail more radical proposals.

Over the unanimous opposition of the Federal Reserve Board, Roosevelt embargoed gold exports by halting the issue of export licenses. Under the circumstances, he had little choice. The provision of the Thomas Amendment requiring extensive open market purchases would have led to another run on the Fed's gold reserves had it not been accompanied by the embargo.

The dollar fell abruptly. Between April 15 and April 22, the price of sterling rose from $3.44 to $3.81. After briefly reversing direction, it rose to more than $4 in early May. Thereafter it fluctuated uneasily awaiting information about Roosevelt's intentions and the outcome of the World Economic Conference.

The World Economic Conference

By the time Roosevelt took the dollar off gold on April 19, the preparatory meetings of experts had given way to consultations among ministers and heads of state. MacDonald and Herriot were already in transit to the United States to meet with the American president. MacDonald is reported to have learned of the dollar's devaluation from a bulletin tacked to his ship's notice board.

Recognizing the disruptive nature of the exchange rate issue, the three leaders attempted to negotiate an international monetary accord that would be presented to the conference as

a fait accompli. Roosevelt's advisors proposed stabilizing the dollar against the franc and the pound at a level 25 percent below what had prevailed before the events of April. The President offered to settle for 15 percent. He suggested a joint stabilization fund responsible for intervention if exchange rates diverged from desired levels. His willingness to stabilize under these conditions appears to have been sincere.[50] But the French and the British accepted neither the rate nor the mechanism. The three powers agreed only to negotiate a convention to stabilize currencies for the duration of the conference that opened in London on June 12.

On June 15 the three governments reached a provisional agreement. They agreed to fix the price of sterling at $4, plus or minus no more than 12 cents, for the duration of the conference. This agreement was tempered by a variety of escape clauses.[51] Unfortunately, in the period preceding its announcement the markets were flooded with misinformation. The American delegation in London had failed to keep the President and his advisors informed of its progress, Washington complained.[52] “All kinds of wild reports here about stabilization at some fixed rate,” (p.333) reported Roosevelt, “some reports saying around four dollars and other reports at other rates.”[53] Reflecting anticipations of stabilization at a relatively high level, the dollar began to rise. It gained 4 percent against the gold currencies on June 16 alone.

The effects were devastating. Financial and commodity markets, which had strengthened dramatically following the suspension of convertibility, reversed course. Stock prices tumbled. Commodity prices turned down. Observers were unanimous in attributing the reaction to investors' fears that the Fed and the Treasury, to support the restabilized dollar, would have to renew their restrictive policies. The response eliminated any residual uncertainty Roosevelt may have harbored about exchange rate policy. He rejected his advisors' plan to stabilize exchange rates even temporarily as inconsistent with the goal of internal price stability and industrial recovery. Even temporary stabilization, Randolph Burgess, Deputy Governor of the Federal Reserve Bank of

New York, explained to his superior George Harrison via transatlantic telephone on June 17, was now regarded in Washington as posing “a severe shock to domestic business and price recovery.”[54] As the U.S. delegation conveyed Roosevelt's position,

> The American government at Washington finds that measures of temporary stabilization now would be untimely. The reason why it is considered untimely, is because the American government feels that its efforts to raise prices are the most important contribution it can make, and that anything that would interfere with these efforts and possibly cause a violent *price recession* would harm the conference more than the lack of an immediate agreement for temporary stabilization.[55]

The dollar resumed its fall. Roosevelt offered to intervene only if it declined “excessively.” A second stabilization plan agreed to on June 30 by, among others, Raymond Moley, was again rejected by the American president in the famous “bombshell” message in which he derided efforts to stabilize exchange rates as “old fetishes of so-called international bankers” and dismissed as “a specious fallacy” the argument that exchange-rate stability was necessary for recovery.[56]

Neither the Americans nor the British were interested in exchange rate stability for its own sake. Both now attached priority to price stability and to freedom of action. Both hesitated to forego exchange rate flexibility, since it facilitated the unilateral pursuit of policies consistent with their price level targets. Only if the French, Dutch, and Swiss demonstrated a willingness to reflate and committed to expansionary policies would the British and Americans willingly link their fortunes to those of the gold standard countries. “We are interested in American commodity prices,” read a statement of the U.S. delegation. “What is to be the value of the dollar in terms of foreign currencies is not and cannot be our immediate concern.” This declaration amplified an earlier statement by Neville Chamberlain, the British Chancellor of the Exchequer, who identified as a precondition for exchange rate (p.334)

"For she is the belle of New York,
The subject of all the gold talk"
—*Daily Express*, London

stabilization "a rise in the general level of wholesale prices of commodities sufficient to restore equilibrium between prices and costs."[57] There was good reason to question whether France, and hence the other gold standard countries, would go along. Monetary reflation would have required revising the statutes prohibiting the Bank of France from engaging in expansionary open market operations. The problem was raised in January at the second meeting of the Preparatory Committee of Experts of the World Economic Conference, when the British demanded, as a condition of returning to gold, that France modify its central bank regulations in order to encourage a more even international distribution of gold. The British proposed that cover ratios be reduced and expansionary open market operations be legalized. "There is, it is to be feared, little chance of real cooperation by the Bank of France in this policy," Sir Frederick Phillips of H.M. Treasury admitted. Nonetheless, the British delegates repeated these demands, without naming France, in their Declaration of Policy at the conference's outset.[58]

France was unwilling to accede—inflationary fears were still rife. French officials continued to argue that reckless credit expansion would devastate investor (p.335) confidence. They dismissed schemes for raising world prices as artificial and counterproductive. Exchange-rate stabilization, they argued, by encouraging trade and investment was not just necessary but sufficient to stimulate recovery.[59]

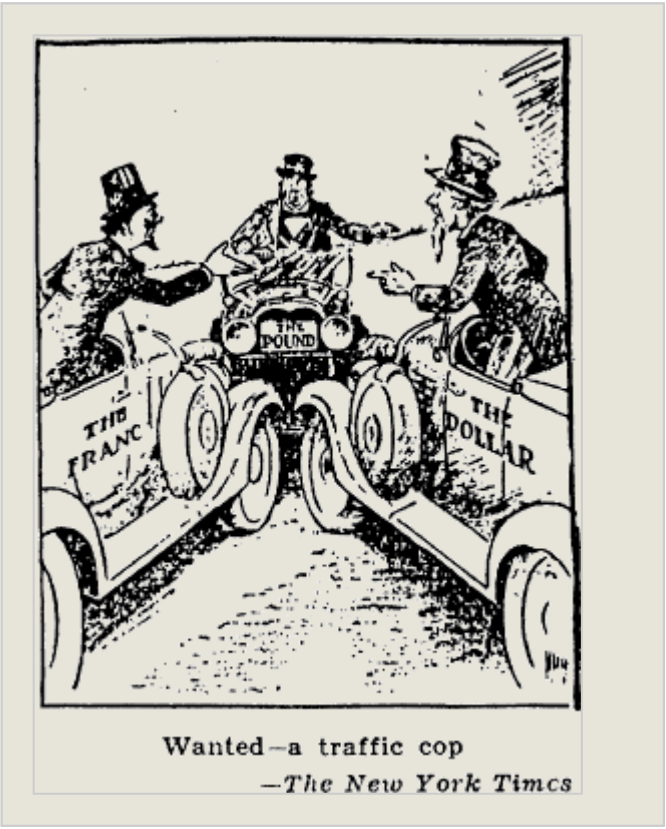
Thus, tying sterling or the dollar to the franc promised to tie an albatross around the necks of American and British

policymakers. Unilateral reflation, in comparison, had few costs and significant potential benefits. The French rebuttal was that simultaneous action was superior to unilateral reflation. Reflationary initiatives adopted unilaterally were weakened, they observed, by their tendency to depress price levels in neighboring countries. This beggar-thy-neighbor effect minimized the benefits to the initiating country. Exchange-rate changes also depressed foreign trade and investment. “How are we to restore the circulation of goods,” asked French Prime Minister Edouard Daladier, “if the measure of value continues to depend on hazard or chance?” “Who would be prepared to lend,” echoed his Foreign Minister, Georges Bonnet, “with the fear of being repaid in depreciated currency always before his eyes?”[60]

Neither the British nor the Americans denied the advantages of coordinated action. “His Majesty's Government . . . are convinced that well co-ordinated action between the leading Central Banks is likely to have more effect in improving world conditions than isolated efforts by particular countries,” read one memorandum from the British Embassy to the U.S. Department of State.[61] Instead, they denied that coordinated action was feasible in light of French reservations regarding expansion.

France might still have extracted British and American concessions on exchange rate and monetary questions if they had offered something in return. The obvious possibility was tariff and quota reductions.[62] British negotiators viewed trade liberalization by France as a necessary concomitant of any stabilization of sterling. With both the depreciation of sterling and monetary expansion in France ruled out, the balance-of-payments constraint would bind the Bank of England unless French commodity imports rose. The American representatives on the Preparatory Committee of Experts similarly emphasized trade liberalization as the French quid pro quo for stabilization by Britain, removal of exchange controls by Germany, and war debt cancellation by the United States. Cordell Hull, chairman of the American delegation to London, placed great weight on removing tariffs and quotas.

Unfortunately, the Daladier government was in no position to offer such concessions. It was one in a series of eleven ministries to hold power in the period of political instability from May 1932 to May 1936. The Radical Party at the center (p.336)



Wanted—a traffic cop
—*The New York Times*

of the governing coalitions of the period was a minority in the Chamber of Deputies. Daladier was forced repeatedly to extend concessions to both the Socialists and the moderate right to retain their support. The Daladier Government depended in particular on the support of Deputies from predominantly agricultural *départements*, who returned Radical, Federation Francaise, or Vie Socialiste Deputies to the Chamber. In spring 1933, with the fall of agricultural prices, Daladier came under intense pressure from these deputies to introduce more comprehensive measures establishing minimum wheat prices.[63] A bill to that effect was passed unanimously in the Senate and all but unanimously in the Chamber.

Clearly, any attempt to support domestic wheat prices would fail if import restrictions were relaxed. Agricultural interests were vigilant, therefore, to the possibility that the government might offer commercial concessions. Each *département* had a Chamber of Agriculture that met regularly and lobbied elected

representatives and ministerial officials. The records of the French Ministry of Finance are bulging with letters from these Chambers denouncing commercial concessions.[64] In addition, special associations were formed to represent the interests of producers of particular products—by the 1930s one half of farmers belonged to such unions. These organizations are characterized as the “first really effective farm (p.337) pressure groups France had ever known.”[65] They lobbied the members of the Chamber of Deputies with special intensity. Though farmers made up only a third of the national electorate, rural voters accounted for the electoral majority in more than half of all districts.[66]

Along with Henri Queuille, the Minister of Agriculture, the leading Cabinet spokesman for the protectionists within the Daladier government was Louis Serre, the Minister of Commerce. In early April, at an interministerial conference to determine the French position for the London Conference, Serre noted that other countries would demand the suppression of quotas and the reduction of tariffs. He proposed raising tariffs immediately to provide scope for reducing them later without undercutting the protection afforded agriculture and industry. Those present agreed that it was unacceptable for the government to bargain away France's policy of tariffs and quotas.[67] Thus, the Daladier ministry was quite incapable of offering trade liberalization in return for commitments by foreign countries to stabilize their exchange rates and adapt their monetary policies to that of the Bank of France.

None of this is to deny that the dollar's oscillations and Roosevelt's derisive statements about the gold standard complicated efforts to negotiate an international agreement. But domestic political impediments and disagreements in France, Britain, and the United States over the role for monetary policy would have impeded the negotiation of a cooperative solution even if the dollar had remained tied to gold.

International Monetary Repercussions

The conference sputtered to a close with the adoption of pro forma resolutions but without agreement on matters of substance. The gold standard countries suffered the consequences. Dollar devaluation led observers to anticipate the competitive depreciation of sterling, which would induce Britain's trading partners, such as Denmark and Sweden, to follow suit, thereby undermining the gold bloc's external position. As early as June the gold currencies, most notably the Dutch guilder, suffered speculative sales. Not only did the Netherlands trade extensively with her Scandinavian neighbors, but she was engaged in a dispute with Germany over the suspension of service on Dawes and Young Plan bonds held by Dutch investors. German balances were withdrawn from Amsterdam to prevent Dutch officials from freezing them in reprisal.

The gold standard countries moved to buttress Holland's external position. Following Roosevelt's July 3 “bombshell message,” which sounded the death knell for dollar stabilization, France, Belgium, the Netherlands, Switzerland, and Italy (p.338) issued a joint declaration. It affirmed their commitment to gold and announced their intention to cooperate in defending their parities. The signatories vowed to make their collective reserves available in support of the weakest gold currency. The heads of their central banks met in Paris five days later to formalize the agreement. Speculation against the guilder subsided once it became known that the reserves of the entire bloc could be enlisted in its support.

Britain's response was to formalize the sterling area. Delegates from all Commonwealth countries, with the exception of Ireland, signed the British Empire Currency Declaration. It reiterated their commitment to avoiding undue fluctuations in the purchasing power of gold. Monetary policy was to be directed toward reflation until the pre-Depression relationship of prices to costs had been restored.

The British Empire Currency Declaration also affirmed the desirability of extending exchange-rate stability over a wider

area, ideally through a general return to the international gold standard. But it was feasible to stabilize exchange rates between the sterling area and the gold bloc only if the members of the two groups agreed to common reflationary policies. Lacking such agreement, the signatories hoped to secure some of the benefits of exchange-rate stability by adopting a sterling peg.[68] Aware of this desire for stability, France asked Britain to join in signing the declaration issued by the gold bloc countries. The British government refused. By signing this document, Chamberlain warned, Britain might cause the Commonwealth to question its commitment to price stabilization. Fears that Britain had turned to a policy of dear money might lead to the breakup of the sterling area and to renewed currency instability.[69]

The British Empire Currency Declaration encouraged other countries, even ones outside the Commonwealth, to adopt a sterling peg to “make possible the attainment of exchange-rate stability over a still wider area.”[70] The growing instability of the dollar and formalization of the sterling area enhanced the attractiveness of this option. Denmark, Sweden, and Argentina quickly joined the sterling area. Stabilizing against sterling minimized the risk of holding foreign exchange reserves in London. From 37 percent of total reserves at the end of 1931, the share of foreign exchange in the reserves of fifteen sterling area countries rose to 51 percent by the end of 1933.[71] The solidification of the sterling area thus helped to reverse the liquidation of exchange reserves experienced in preceding years.

The United States, in contrast, did little to encourage other countries to peg to the dollar or hold exchange reserves in New York. It allowed the dollar to fluctuate against the European currencies, which hardly enhanced the dollar's key currency status.

Guidance for U.S. monetary policy was drawn from peculiar quarters. Roosevelt had been impressed by charts prepared by the agricultural economist George (p.339)

Warren displaying the correlation between the dollar price of agricultural commodities and the dollar price of gold.

Under increasingly intense pressure from the agricultural sector, which suffered a renewed decline in crop prices starting in July, the President embraced Warren's program to influence commodity prices by manipulating gold prices. In September he instructed the Reconstruction Finance (p.340) Corporation to buy all newly mined gold of domestic origin at a price equal to the highest price in any free gold market. The RFC was authorized to finance its purchases by issuing its own notes backed by the unconditional guarantee of the U.S. government. Purchases in September and October took place at prices that ranged from $29 an ounce to slightly more than $32. (The old gold standard parity had been $20.67 an ounce.) Starting on October 25, Warren, Federal Farm Board Governor (soon to be Treasury Secretary) Henry Morgenthau, and Jesse Jones met each morning in the President's bedroom to set progressively higher prices of gold.

The effects were not all those Roosevelt and his advisors had desired. Warren's link between gold prices and commodity prices suffered from two significant sources of slippage: that between the dollar price of gold and the exchange rate, and that between the exchange rate and commodity prices. The link between the dollar price of gold and the exchange rate was loosened by the U.S. gold embargo, which disrupted

arbitrage between the U.S. and European gold markets. Without the embargo, arbitrage in the gold market would have raised the dollar price of French francs and the dollar price of gold by the same proportion.[72] But with arbitrage disrupted, the exchange rate could move independently, to an extent. Fluctuations in the exchange rate between the franc and the dollar were driven as much by expected future events as by the current dollar price of gold. At first, the dollar depreciated, much as Roosevelt desired; by mid-November the franc cost 6.52 U.S. cents. (The old gold standard parity had been 3.92 U.S. cents.) Rumors of exchange-rate stabilization then swept the market. The dollar recovered and the price of a French franc fell to 5.91 U.S. cents despite no noticeable change in the U.S. Treasury's purchase price of gold.

The link between the dollar exchange rate and U.S. commodity prices was no more predictable. Between April 1 and July 18, commodity prices rose while the exchange rate depreciated, as Warren had predicted. But commodity prices rose significantly faster than the exchange rate, as Figure 11.3 clearly reveals. Moody's index of staple commodity prices rose by more than 70 percent; the dollar price of sterling, the exchange rate shown in the figure, rose by just over 40 percent.

The source of this divergence was expectations of British monetary policy.[73] The (p.341)

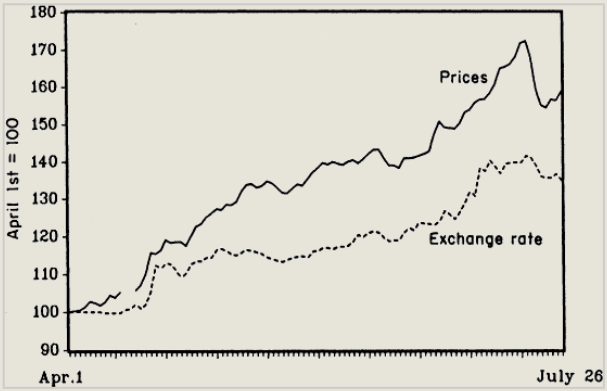


Fig. 11.3. Sterling exchange rate and U.S. staple commodity prices, 1933.
U.S. commodity prices rose even faster than the exchange rate depreciated once the U.S. abandoned the gold standard in April 1933.
Source: Kindleberger (*1973*), *pp. 222–223*.

divergence between the dollar price of commodities and the dollar price of sterling grew large in July, immediately before the delegates meeting in London filed their reports and draft resolutions. The monetary group presented a weakly worded statement. Clearly, the British government would not be bound by the outcome of the conference. It would be free to initiate policies that would place upward pressure on domestic commodity prices. British wholesale prices in fact rose by nearly 5 percent between April and July alone.[74] The rise in the dollar price of commodities reflected not only the expected rate of depreciation of the dollar in London but also the expected rise in the sterling price of commodities.

For the moment, monetary policies in the British Commonwealth worked in Washington's favor. Like Roosevelt's own policy, they exerted upward pressure on U.S. commodity prices. But there was no guarantee that this would remain the case. By September, the dollar price of commodities had begun to fall, absolutely and relative to the sterling-dollar exchange rate. Having expanded at an annual rate of more than 2.5 percent over the first half of 1933, the British money supply declined at an even faster rate over the second half.[75] British commodity prices stopped rising, and American reflation slowed. (p.342)

Impact of Dollar

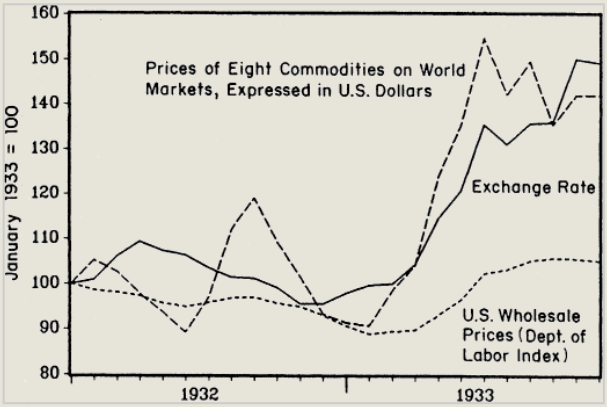


Fig. 11.4. Sterling/dollar exchange rate and dollar commodity prices, 1932–33. There was no rigid link between the sterling-dollar exchange rate and U.S. commodity prices. Having risen faster than the exchange rate between April and July, commodity prices fell relative to the exchange rate subsequently. *Source: Survey of Current Business (1936 supplement)*.

Devaluation

American share prices recovered quickly from their March 1933 trough. Although they gave back ground after July, stock prices were still 63 percent higher in December than they had been in March, and 40 percent higher than they had been in January before the banking panic and closure of the American stock market.[76] Investment responded immediately to the stock market's revaluation of existing plant and equipment. From its April low, new orders for “plant equipment” [sic] rose sharply for five successive months. The production of investment goods increased by 58 percent between the first and second quarters of 1933.[77] It fell back subsequently, however. The consumption response was still more uneven. Since higher prices were not yet accompanied by higher wages, inflation meant lower incomes even for those fortunate enough to be employed. Until the effects of increased

investment spending ramified through the economy, there was little reason for incomes and hence consumption to rise dramatically. Industrial production remained volatile, fluctuating between April and December of 1933 around levels about 15 percent above those of the preceding year (see Figure 11.5).

The recovery of American output was not more sustained because the stimulus lent by policy was so limited. While authorizing the Treasury to intervene with purchases (p.343) of gold on the international market, Roosevelt could not compel the Fed to support this action with extensive purchases of government securities designed to increase the money supply. In response to Presidential pressure, the Fed purchased modest amounts of government securities, $385 million worth, between late May and late October, but these had little impact on domestic markets. High-powered money (currency in circulation plus private deposits at the Fed) actually fell, by $56 million, or 1.3 percent, between March and December 1933, as the United States continued to export gold. With the restoration of confidence in the banking system, willingness to hold bank deposits rose relative to the willingness to hold currency: M1 (currency plus

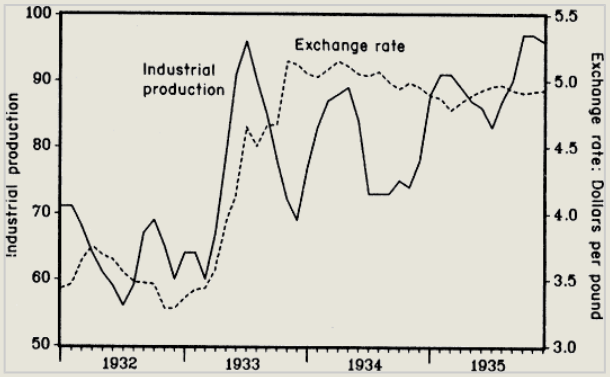


Fig. 11.5. Dollar/pound exchange rate and U.S. industrial production.
Depreciation of the dollar starting April 1933 coincided with the rapid recovery of industrial production. The rise in output was not sustained, however. Industrial production fell back in the final months of 1933 and fluctuated unevenly thereafter.

Source: Survey of Current Business (various issues).

commercial bank demand deposits) rose by 3.7 percent over the period, M3 (currency plus all bank deposits) by 1.8 percent.[78] These amounts were small. Though a higher dollar price of gold meant a depreciated dollar and increased domestic commodity prices, it did not imply increased domestic demand in the absence of the increased provision of money and credit.

Nor did foreign demands for U.S. exports recover strongly with the dollar's depreciation. The decline in the dollar had little impact on the U.S. balance of trade. Throughout the summer, American exporters had good reason to anticipate that further depreciation was in the works. They held back exports in the hope of reaping additional profits as the dollar price of foreign exchange continued to rise. Importers, (p.344) in contrast, accelerated their purchases to avoid possible future increases in the dollar cost of foreign currency. The volume of U.S. imports rose by 10 percent between 1932 and 1933. In contrast, exports stagnated. The consequence was a deteriorating balance of trade.

Thus, the modest stimulus applied to domestic demand, in conjunction with the failure of foreign demand for U.S. merchandise exports to rise strongly with the dollar's depreciation, limited the recovery of U.S. industrial production in 1933. Output recovered strongly in the immediate aftermath of the suspension of convertibility, reflecting investors' hopes that a comprehensive package of expansionary measures would be adopted. It fell back subsequently when it became apparent that America's departure from the gold standard had not inaugurated a new era of rapid monetary expansion.[79]

The National Industrial Recovery Act, the cornerstone of Roosevelt's First New Deal, also contributed, perversely, to the slow recovery of American output and employment. Signed into law on June 16, 1933, the NIRA provided the basis for codes of “fair competition” adopted by 450 industries, covering 23 million workers, in its first year of operation. By January 1934, 80 percent of American industry was covered.[80] All of these codes established minimum wages of 40 cents an hour, and many revised upward the entire structure of industry wages. Depreciation raised the dollar prices of internationally traded goods, but by increasing the cost of

living it also placed upward pressure on labor costs. By reinforcing the second effect, the provisions of the NIRA affecting labor costs reduced the supply response that followed devaluation. But in contrast to the situation in France three years later, accompanying policies in the United States, while not uniformly helpful, were at the same time insufficient to neutralize devaluation's stimulative effects.[81]

(p.345) Since American exporters did not respond aggressively, other countries were not inundated with U.S. goods. Moreover, international capital movements did little to offset trade balance trends. Currency traders had no reason to purchase dollars until they saw evidence that Roosevelt's policy of progressively depreciating the exchange rate was complete. The United States thus continued to export gold through the end of 1933. This minimized the beggar-thy-neighbor effects.[82] Although the uncertainty about future dollar movements created by Roosevelt's gold buying program minimized the stimulus to the U.S. economy, it also minimized the damaging repercussions abroad.

Starting in 1934, however, the beggar-thy-neighbor effects kicked in with a vengeance. Once Roosevelt stabilized the devalued dollar in January, the U.S. trade balance rebounded strongly. Exporters began to ship the goods they had previously held up in the expectation of a further rise in dollar prices as the exchange rate continued to depreciate. No longer was there an incentive to accelerate purchases of imported goods. A massive capital flow toward the United States quickly got underway. Speculators who had sold dollars in anticipation of further depreciation now covered their positions. Six-hundred-fifty million dollars of gold was acquired by the Treasury in the two months following the dollar's stabilization. As Hitler's actions became increasingly unsettling, European capital began to migrate toward the United States. The U.S. capital outflows of 1933 were more than fully offset by the inflows of 1934. The year 1935 then saw capital inflows into the United States on an unprecedented scale. The U.S. monetary base rose by more than 14 percent between December 1933 and December 1934, as persistent gold inflows increased the monetary circulation. M1 rose by 15 percent, M2 by 11 percent. Both the

stabilization of the domestic price of gold, which made dollar deposits more attractive, (p.346) and capital flight from Europe contributed to the expansion of the money supply and propelled the recovery of the U.S. economy.[83]

Had the Fed expanded domestic credit more rapidly, it could have minimized these gold and capital inflows from abroad. The increase in the demand for money and credit associated with American economic recovery could have been satisfied out of domestic sources without requiring inflows of financial capital and gold. Those few occasions when the Fed allowed domestic credit to expand illustrated its capacity to influence the direction of international capital flows. Toward the beginning of August 1934, for example, Roosevelt, employing powers granted him under the Thomas Amendment, ordered all silver in the United States to be exchanged for currency within 90 days. Simultaneously, the U.S. government began purchasing silver in London, Shanghai, and other centers. Currency in circulation moved upward.[84] In September, for the first time since January, net gold exports were positive. The $60 million rise in currency in circulation between the ends of August and September led to a $19 million loss of gold.[85]

But aside from a few exceptional operations like the silver purchases of August 1934, U.S. monetary policy remained largely passive. Since the depreciation of the dollar relaxed the external constraint, this was no longer necessarily so. With monetary gold revalued from $20.67 to $35 an ounce, the Treasury could have printed an additional $3 billion of paper money or gold certificates without violating the gold cover statutes that remained.[86] Instead, the bulk of the revaluation profit was assigned to the Exchange Stabilization Fund established in 1934, which hardly required extensive resources to support what was, if anything, an overly strong dollar. Nor did the Federal Reserve System initiate expansionary action. “During 1934,” the Federal Reserve Board reported, “there were no further open-market purchases of securities by the Federal Reserve Banks.”[87] The Fed's discount rate was kept above short-term market interest

rates, removing the discount window as a mechanism for monetary expansion.[88]

Thus, the increase in U.S. money supply in 1934 was entirely attributable to the accumulation of foreign reserves. The inflow of gold could have supported a much larger increase in the money supply than it actually did. Between January and December 1934, U.S. gold reserves rose by $1409 million, but currency in circulation increased by only $247 million. Between January and December 1935, the increase in gold reserves came to $1734 million, the increase in currency circulation (p.347) to only $502 million.[89] American policy seemed expressly designed to maximize the drain of gold from the rest of the world and to intensify the pressure on the gold bloc countries.

Once again, the explanation for America's failure to pursue more expansionary initiatives lay in fears of inflation. The expansion of domestic credit was a subject of concern because of its potential inflationary effects.[90] The growing accumulation of excess reserves by the commercial banks reinforced these concerns. There was a “general fear,” in the words of William McChesney Martin, Sr., the governor of the Federal Reserve Bank of St. Louis, that “excess reserves of the present magnitude must sooner or later set in motion inflationary forces which, if not dealt with before they get strongly underway, may prove impossible to control.”[91]

Gradually U.S. industrial production began to rise. But its recovery remained hesitant as a result of U.S. policymakers' failure to capitalize on their newfound freedom. Although gold continued to cascade toward the United States, sterilization minimized the stimulus to the American economy and intensified the pressure on the remaining gold standard countries. Devaluation may have freed the Fed and the Roosevelt administration of their golden fetters, but they failed to take full advantage of their liberty. France, Belgium, and the other members of the European gold bloc would suffer the most damaging consequences.

Notes:

(1) See chapter 10. In the spring of 1932, the French electorate had ousted the rightist Laval government and replaced it with a leftist Herriot coalition. The Socialists had refused to join the coalition, defeating Herriot's efforts to deal with the budgetary problem. Jackson (1985), pp. 62–63.

(2) The account in Kindleberger (1973), Chapter 9, is representative of the standard view placing the blame squarely on Roosevelt's shoulders.

(3) Bennett (1962), p. 32.

(4) Feis (1966), pp. 21–23; Moore (1972), pp. 23–24. On the Hoover Moratorium, see chapter 9.

(5) Moley (1966), pp. 27–30.

(6) An abundant harvest in 1932 was heavily responsible for this trend. In the year ending in April 1933, French wheat prices fell by 40 percent. See Eichengreen and Uzan (1990).

(7) Feis (1966), p. 23. As early as mid-November, the French representatives were warning their government of British insistence that any plan to stabilize sterling be made contingent on an agreement to raise the level of world prices. Min. Fin. B23217, “Note au sujet de la Conference Mondiale,” 15 November 1932.

(8) On the report of the Committee of Experts, see League of Nations (1933a). Mills's views are described by Moore (1972), pp. 67. French premonitions are described by Feis (1966), pp. 33, 116; Moore (1972), p. 74; Min. Fin. B32317, “Note sur la 2nd Reunion de la Commission preparatoire de la Conference de Londres,” 29 December 1932; Min. Fin. B32317, “Note au sujet de la Conference Mondiale,” 15 November 1932; Min. Fin. B32319, “Note sur la situation de la France à la conference économique mondiale,” 1 March 1933.

(9) Feis (1966), p. 116. Another historian concluded similarly that the proponents of this scheme ignored “serious domestic opposition . . . in many countries” to each of its elements. Moore (1972), p. 74.

(10) The banking crisis of February—March 1933 clearly reflected several years of mounting economic and financial difficulties. I do not attempt to provide here a complete analysis of these developments. My concern is with the relationship between the banking crisis and the convertibility crisis and specifically with two issues: how the banking crisis strengthened the case for devaluation, and how expectations of devaluation deepened the banking crisis.

(11) Hodson (1938), pp. 208–209. See also Einzig (1933), pp. 67–68.

(12) Kennedy (1973), pp. 77–80.

(13) James (1938), pp. 1053–1054. A detailed account of the spread of the crisis is provided by Kennedy (1973).

(14) Cited in Nadler and Bogen (1933), p. 147.

(15) FRBNY (Harrison Papers), “To Confidential files from Governor Harrison,” February 23, 1933.

(16) FRBNY. Summary of Norman telephone call to Harrison, “To Confidential files from Governor Harrison,” Friday, February 24, 1933.

(17) Einzig (1937a), p. 474; *Twentieth Annual Report of the Federal Reserve Board for 1933* (1934), p. 138. The $174 million figure includes also $13 million of gold losses due to other factors.

(18) *Twentieth Annual Report of the Federal Reserve Board for 1933* (1934), p. 142; Ballantine (1948), pp. 134–135. On February 9th, W. P. Conway, a vice president of the Guaranty Trust Co., described to George Harrison the case of a conservative customer who requested and obtained a loan of $6,000 to purchase gold. But Conway suggested that even larger speculative transactions were being undertaken by foreign companies maintaining accounts with Guaranty Trust. Columbia University (Harrison Papers, vol. 46), “To Confidential Files from Governor Harrison; Guaranty Trust Company. Requests for and custody of gold for account of customers,” 9 February 1933.

(19) This refers to the statement dated March 8, although the reserve banks had suspended operations on March 4.

(20) Nadler and Bogen (1933), p. 154.

(21) For a description of transfers of gold in 1920 from the New York Fed to other reserve banks, see chapter 4.

(22) Brown (1940), vol. II. p. 1248.

(23) On March 2 New York took another $60 million. James (1938), p. 1060; Kennedy (1973), pp. 150–151.

(24) “In the final two months prior to the banking holiday, there was nothing that could be called a System policy . . . Each Bank was operating on its own.” Friedman and Schwartz (1963), p. 391.

(25) Wigmore (1987), p. 747.

(26) James (1938), pp. 1062–1063.

(27) *New York Times* (May 15, 1935), p. 4. Mills failed to point out the other half of the equation: that bank failures arising for independent reasons might induce a flight from the dollar by foreign depositors and a drain of gold from the Federal Reserve System.

(28) Kennedy (1973), p. 60.

(29) Lindley (1933), pp. 19–24.

(30) See, for example, the report in *Business Week* (January 18, 1933), p. 15.

(31) Romasco (1983), p. 35.

(32) Sullivan (1936), pp. 68–69.

(33) *Congressional Record—Senate* (January 30, 1933, pp. 2864–2865). A letter to Roosevelt from twenty leading economists urging retention of the gold standard was made public on January 2. *Commercial and Financial Chronicle* (January 7, 1933), p. 71. See also Wigmore (1987), pp. 743–744; Kindleberger (1973), p. 197.

(34) Hoover (1952), vol. 3, pp. 201–202; Sullivan (1936), pp. 69–77.

(35) Meeting of the Board of Governors of the Federal Reserve Bank of New York, February 23, 1933, Harrison Papers, cited in Feis (1966), p. 347.

(36) Freidel (1973), p. 179; Hodson (1938), p. 211; Nadler and Bogen (1933), p. 155.

(37) In Woodin's words, “It is ridiculous and misleading to say that we have gone off the gold standard, anymore than we have gone off the currency standard. We are definitely on the gold standard. Gold merely cannot be obtained for several days.” Quoted in *Commercial and Financial Chronicle* (March 11, 1933), p. 1666.

(38) Both views from London were reported in the *Commercial and Financial Chronicle* on March 11 (pp. 1142–1143).

(39) Johnson (1939), p. 10.

(40) Friedman and Schwartz (1963), p. 463.

(41) Federal Reserve Board (1943), p. 642.

(42) Beard and Smith (1940), pp. 78–81; Moley (1966), p. 155; Wigmore (1987), p. 752.

(43) Paris (1938), p. 17; Lindley (1933), pp. 117–118.

(44) *Business Week* (April 19, 1933), p. 1.

(45) *New York Times* (April 17, 1933), p. 21.

(46) See Nichols (1934).

(47) Moley (1939), p. 158.

(48) Moley (1939), p. 159.

(49) Brynes (1958), p. 77. Some historians question whether Roosevelt was in fact forced by domestic political considerations to accept the Thomas Amendment. See, for example, Freidel (1973), pp. 331, 333. For present purposes, it

is necessary only to observe that domestic politics influenced the decision. As Wicker (1971, p.868) puts it, “Without the fear of irresponsible congressional action to goad him into a decision, dollar depreciation probably would not have occurred when it did. But conditions in the foreign exchange market were also ripe for some kind of government action to stabilize the dollar.”

(50) Feis (1966), p. 147.

(51) U.S. Department of State (1933), I, p. 643.

(52) FRBNY (Harrison Papers), Telephone conversation with Governor Harrison in London, to Confidential files from L.W. Knoke, 16 June 1933.

(53) U.S. Department of State (1933), I, p. 641.

(54) FRBNY (Harrison Papers), “Transatlantic telephone conversation between Mr. Burgess and Governor Harrison, to files from Allen Sproul,” 17 June 1933.

(55) Emphasis added. Cited in Pasvolsky (1933), p. 70.

(56) U.S. Department of State (1933), I, p. 673.

(57) U.S. Department of State (1933), I, p. 693; League of Nations, *Journal of the Monetary and Economic Conference*, no. 5, June 15, 1933, p. 24.

(58) PRO T188/78, “Note by Sir F. Phillips on Monetary Policy,” 8 March 1933; Pasvolsky (1933), pp. 23–24; Jackson (1985), p. 169.

(59) The furthest French representatives would go toward cooperation was to propose a fund of aid from governments to central banks seeking to eliminate exchange controls. This proposal, also mooted at Lausanne, was not enthusiastically received. Min. Fin. B32318, “Note au sujet de la constitution d'un fonds destiné à faciliter l'abolition des restrictions de change.” October 10, 1932.

(60) Cited in Hodson (1938), pp. 183, 201.

(61) U.S. Department of State (1933), I, p. 466.

(62) Of this French negotiators were fully aware. Min. Fin. B32317, “Note sur la situation de la France,” March 1, 1933; “Rapport,” April 8, 1933, *ibid*.

(63) Though the bill was quickly passed, it was not clear that the government would in fact intervene to set a binding floor on domestic wheat prices, since it lacked fiscal room for maneuver. Jackson (1985), pp. 83–89.

(64) These letters were forwarded to the Finance Minister by the Finance Commission of the Chamber of Deputies. They can be found in Min. Fin. B32321.

(65) Wright (1955), p. 79. Only in Brittany did agricultural unions fail to take root. See Moulin (1988), chapter 4.

(66) According to Wright (1964, p. 14), only one in four Deputies could safely ignore rural interests if he hoped to be reelected. The electorate for the Senate was if anything even more disproportionately rural.

(67) Min. Fin. B32317, “Compte-rendu de la 2eme seance de la commission interministérielle,” 8 April 1933.

(68) PRO Cab 29/143, “Declaration by Delegations of the British Commonwealth.”

(69) PRO Cab 29/142, “Note of a Conversation in the Treasury Board Room on Sunday, 2nd July at 5.45 PM.” “Note of a Conversation in the Treasury Board Room on Sunday, 2 July 1933, at 6.15 PM.” Min. Fin. B32320, “Le Ministre des Affaires Étrangères, A Monsieur Le Ministre des Finances,” 4 July 1933.

(70) PRO Cab 29/143, “Declaration by Delegations of the British Commonwealth.”

(71) Nurkse (1944), p. 55.

(72) Assume no embargo on U.S. gold exports. Arbitrage between the American and French gold markets then would have then taken place through the following mechanism. If the price of gold was $30 in New York, arbitrageurs could have purchased an ounce of gold for 30 U.S. dollars, shipped it to

Paris, and converted it at the Bank of France for 765 francs, the price fixed by the provisions of the French gold standard. If the U.S. gold price rose by 10 percent, to $33, arbitrageurs could then have purchased an ounce of gold for $33, shipped it to Paris, and still only obtained 765 French francs. The franc price of the dollar would have risen from 30/765 to 33/765, or by 10 percent. Some fluctuations of this sort would have been possible even without the embargo, due to costs of shipping and insurance. (These costs are what gave rise under the gold standard to the so-called gold points, described in chapter 2.) But without the gold embargo, fluctuations on the order of 10 percent, as in November–December 1933, would not have been possible. See also Johnson (1939), pp. 25–26.

(73) The popular explanation for the more rapid rise of commodity prices is that traders drove them up in expectation of subsequent dollar devaluation. Anticipating that Roosevelt would take steps to depress the dollar, speculators rushed to take advantage of the higher dollar prices that would be received for commodity exports given unchanged sterling prices. This explanation cannot be correct, however. Speculators had equal incentive to purchase foreign currencies in anticipation of subsequent dollar devaluation, driving up the dollar price of sterling to the same extent.

(74) This is the movement in the Board of Trade index, from Methorst (1938), p. 207.

(75) Computed from Capie and Webber's (1985, p. 87) figures for the change in M3 between December 1932 and June 1933 and between July 1933 and January 1934.

(76) Board of Governors of the Federal Reserve System (1943), p. 481.

(77) Temin and Wigmore (1990), Table 2 and Figure 2.

(78) On the Fed's open market purchases, see Wicker (1971), pp. 870–871. Figures in the text are calculated from Friedman and Schwartz's (1963) appendix tables.

(79) Thus, my interpretation differs from that of Temin and Wigmore (1990), who argue that devaluation of the dollar

decisively signalled a “change in regime,” in the terminology of Sargent (1986a), leading American investors and producers to anticipate a more expansionary policy on the part of U.S. authorities freed from the gold standard constraints. The argument here is that producers and investors were, by the second half of 1933, disappointed by the absence of evidence of more expansionary policies. Industrial production consequently fell back, and its sustained recovery had to await stabilization of the dollar in 1934, along with the concomitant growth of commodity exports and capital imports.

(80) Additional details on the operation of the NIRA codes may be found in Weinstein (1981).

(81) I regressed the percentage change in the nominal wage on a constant term, a dummy variable for the period when a NIRA code was in place, employment and the dollar price of gold (where the last variable is a proxy for the effects of currency depreciation), the percentage change in output prices and the percentage change in nominal wages lagged in one month. Monthly data for the period February 1923-June 1936 were used. Data on employment, wages, and prices are from Beney (1936). The dates of the NIRA codes are from U.S. National Recovery Administration (various issues). The exchange rate (the dollar price of gold) is from Warren and Pearson (1935). Results are shown in the following table.

The relative magnitude of the effects of the NIRA codes and of dollar devaluation varies by industry. But the sum of the two effects is small relative to the concurrent rise in the dollar price of gold and in the wholesale price index, verifying that dollar devaluation still should have had similar effects. Similar regressions are also reported by Brown (1985). On the comparison with France, see chapter 12.

Effect of Devaluation and Nira Codes on Money Wages (Dependent Variable Is Percentage Change in Money Wages Since Previous Month)

Industry	Constant	Industry Employment	Percent Change in Product Prices	Price of Gold	NIRA Dummy	Lagged Percent Change in Wages	R^2
Woolen textiles	0.180 (0.073)	0.040 (0.016)	0.042 (0.018)	0.026 (0.015)	0.017 (0.007)	0.863 (0.025)	.96
Iron and steel	0.114 (0.035)	0.013 (0.004)	0.001 (0.005)	0.001 (0.003)	0.003 (0.001)	0.880 (0.023)	.95
Furniture	−0.050 (0.102)	0.040 (0.012)	0.056 (0.021)	0.045 (0.012)	0.011 (0.007)	0.885 (0.022)	.96
Leather and tanning	3.333 (0.050)	0.026 (0.015)	0.050 (0.013)	0.032 (0.010)	0.011 (0.004)	0.008 (0.001)	.96
Lumber and milling	0.031 (0.118)	0.024 (0.021)	−0.001 (0.039)	0.040 (0.017)	−0.002 (0.010)	0.945 (0.023)	.94

(82) That the extent of the beggar-thy-neighbor effects is proportional to the volume of gold inflows received by the devaluing country is demonstrated by Eichengreen and Sachs (1986).

(83) The role of capital inflows in initiating sustained recovery in the United States is also emphasized by Lee (1989), although Lee's explanation for the capital movements is quite different. See also Bloomfield (1950).

(84) The other component of the monetary base, bank deposits at reserve banks, also moved up in August before falling back in September. Friedman and Schwartz (1963), p. 740.

(85) *Twenty-First Annual Report of the Federal Reserve Board for 1934* (1935), pp. 8–9, 122–123. The increase in the supply of currency led to a loss of gold because it was not accompanied by an increase in the demand for money. Friedman and Schwartz's estimates of M1 and M3 both show declines between August and September. Friedman and Schwartz (1963), p. 714.

(86) Friedman and Schwartz (1963), p. 470.

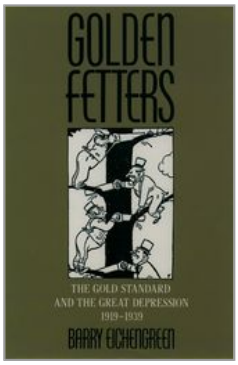
(87) *Twenty-First Annual Report of the Federal Reserve Board for 1934* (1935), p. 14.

(88) Friedman and Schwartz (1963), pp. 513–514.

(89) Gold reserves include those of both the Fed and the Treasury, as reported in Board of Governors of the Federal Reserve System (1943), pp. 415, 546.

(90) Friedman and Schwartz (1963), p. 514.

(91) Statement read by Governor Martin at December 17, 1935 meeting, Harrison Papers, Open Market, vol. III, cited in Friedman and Schwartz (1963), pp. 522–523.



Golden Fetters: The Gold Standard and the Great Depression, 1919-1939
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Toward the Tripartite Agreement

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Abstract and Keywords

By 1934, it was impossible to ignore the contrast between the persistence of depression in gold standard countries and the acceleration of recovery in the rest of the world; the continued allegiance to gold by several European countries, led by France, has consequently been regarded as an enigma. This chapter shows how domestic politics combined with collective memory of inflationary chaos in the 1920s to sustain resistance to currency depreciation. Indeed, inflation anxiety in the gold bloc was not entirely unfounded, and sometimes it proved self-fulfilling. When currency depreciation finally came to France in 1936, it was accompanied by inflation and social turmoil, but not by the beneficial effects evident in other countries. Here, as in the rest of the book, historical and political factors, not just economics, bear the burden of explanation.

Keywords: abandonment of the gold standard, depreciation, economic depression, economic recovery, Europe, France, gold standard, inflation, interwar period, social turmoil

Between 1934 and 1936, the last vestiges of the gold standard crumbled and disappeared from the international scene. One after another, the countries of the gold bloc were forced to suspend convertibility. Devaluation of the dollar, by cheapening U.S. goods on international markets, greatly intensified the balance-of-payments pressure on its members. The massive flow of financial capital and gold toward the United States augmented the drain of reserves from the coffers of their central banks. Each subsequent devaluation further intensified the pressure on those few countries remaining on gold. Their governments attempted to apply additional deflationary measures to defend their gold parities.

But by mid-decade, the opponents of deflation had finally gained sufficient influence to block the imposition of further economy measures. The connection between devaluation and economic recovery in countries that had abandoned the gold standard was increasingly difficult to deny. Deflation and defense of the gold standard, in contrast, had not stabilized economic activity and inaugurated economic recovery, as predicted by the advocates of financial orthodoxy. Rather, it had only added to the burdens shouldered by debtors, wage earners, and the unemployed. After 1933, these groups stiffened their resistance to the call for sacrifices in the cause of financial stability. Policymakers were pulled in two incompatible directions. As one British official described the dilemma of the French government in 1935, it was “torn between the insistence of the financial authorities on economies, and the resistance of Parliament to their imposition.”[1]

The governments of France, Belgium, Switzerland, the Netherlands, and Poland, pulled in these two incompatible directions, were unable to act decisively. Turmoil in the financial sphere spilled over into the political arena; in turn, political chaos further disrupted financial affairs. Ultimately, devaluation was forced on France and its partners in the gold bloc only after a protracted policy deadlock and a destructive political struggle.

For the countries of the gold bloc as for other nations that had preceded them off gold, devaluation was followed by the resumption of economic growth. The one exception to this generalization was France. The 1936 devaluation of the franc initiated a period of inflation and economic stagnation, not a resumption of growth. In France, more than in any other country that devalued its currency, memories of (p.349) high inflation a decade before were still fresh. Those memories were vivid precisely because the political problems they were associated with remained far from resolution. In France, more than in any other country, the question of income distribution was still actively contested. Workers demanded increased money wages in compensation for devaluation and were well positioned to obtain them. The protracted French slump and the impotence of a succession of centrist ministries produced another swing in political power, this time to the left. The Popular Front Government which assumed power in 1936 acceded to labor's demands for increased wages and reduced hours at the same time it devalued the currency. These initiatives increased labor costs and discouraged production. Production costs rose and economic activity fell in the wake of devaluation, precisely the opposite of the response in other countries. In conjunction with increased demand, French policies to restrict supply produced inflation rather than economic recovery.

The lesson of the French experience was that devaluation was necessary but not sufficient for economic recovery. Devaluation rendered feasible the unilateral adoption of policies to stimulate supply and demand but provided no guarantee that they would be pursued. Sustained recovery required the implementation of a consistent package of reflationary measures.

The experience of the United States in 1937 underscored the point. In 1937 contractionary monetary and fiscal policies produced another recession in the United States. Devaluation, the United States learned, was no automatic safeguard against the adoption of destabilizing measures. But in contrast to the situation in 1929, this time other countries were not compelled by the gold standard constraints to follow America's example. Policy in other countries remained stimulatory, and the

European economies continued along their stable upward path. Ultimately the United States too was a beneficiary, as foreign demand helped pull its economy out of the 1937 recession.

Strains on the International System

To minimize the damage to their economies from Roosevelt's policy of depreciation, other countries allowed their currencies to drift downward along with the dollar. In the year from March 31, 1933, the currencies of the sterling area declined by an additional 8 percent against those of the gold bloc. So long as Roosevelt continued to actively depress the dollar, short-term capital flowed continually from New York to London to avoid capital losses on dollar-denominated assets. Hence sterling's fall remained moderate compared to the decline of the dollar. The dollar price of sterling rose as high as $5.15 in November 1933. The British authorities intervened to limit the pound's appreciation against the dollar, selling sterling for gold and foreign currencies. As a result, the Bank of England's gold reserve rose by more than 50 percent over the course of 1933.

Once Roosevelt pegged the domestic-currency price of gold at $35 in January 1934, the capital flow reversed direction. Members of the outer sterling area began to run down their London balances, and the growth of British gold reserves came to a halt. Starting in the spring of 1934, sterling and its affiliated currencies declined (p.350)

steadily, as shown in Figure 12.1. Within a year, the sterling-dollar rate had returned to its traditional level of $4.86. The first round of devaluations was complete. The winners were countries like Sweden and Japan, who most clearly saw devaluation as an opportunity to pursue reflationary policies. Other nations with depreciated currencies, including the United States and United Kingdom, benefited as well. In Britain and the United States, as in virtually every country to leave the gold standard, economic recovery got underway. Having severed their golden fetters, policymakers in these countries were able to adopt more expansionary monetary and fiscal policies designed to spur the recovery of their economies.

Fig. 12.1. Sterling/dollar exchange rate, 1934–35.

Once the U.S. repegged to gold in early 1934, sterling was allowed to depreciate against the dollar, intensifying further the competitive pressure suffered by Britain's European trading partners.

Source: Survey of Current Business (various issues).

The losers were nations still on gold, whose currencies had by this time appreciated by 67 percent against sterling and the dollar. Throughout the gold bloc—in France, Belgium, the Netherlands, Switzerland, Poland, and Czechoslovakia—economic conditions continued to deteriorate. In 1934 industrial production in countries still on gold remained 22 percent below 1929 levels (Table 12.1). Industrial output in

the sterling area, in contrast, had risen by 9 percent relative to 1929. For other countries that had left the gold standard by 1934, the comparable figure was 3 percent.[2]

The United States was the principal source of pressure on the international system and the gold bloc in particular. Gold and financial capital flowed inexorably (p.351)

(p.352)

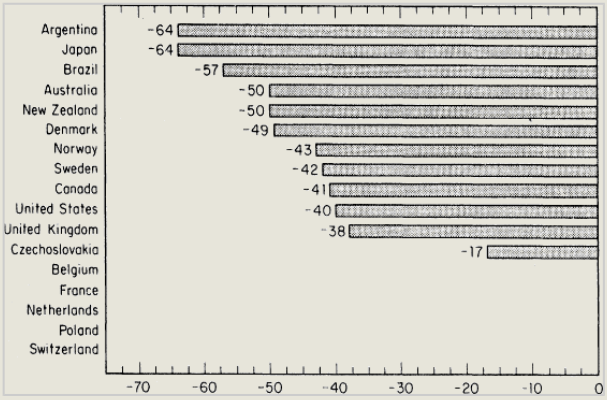


Fig. 12.2. Percentage discount of various currencies relative to their 1929 gold parities as of March 31, 1934.

By March 1934 foreign currencies had depreciated still further against those of gold bloc countries (Belgium, France, the Netherlands, Poland, and Switzerland).

Source: League of Nations, Economic Survey (1933–34), p. 271.

Table 12.2. Gold Reserves of Central Banks and Governments (In Millions of Gold Dollars)

	End of 1934	End of 1935	Loss (−) or Gain (+) During 1935	End of 1936	Loss (−) or Gain (+) During 1936
Group 1 (Countries losing gold reserves in 1936)					
France	5444.8	4395.4	−1049.4	2995.2	−1400.2
Spain	740.1	734.7	−5.4	718.4[1]	−16.3
Italy	517.8	269.7	−248.1	208.2	−61.5
Czechoslovakia	112.0	112.5	+0.5	91.0	−21.5
Germany	31.9	33.3	+1.4	26.8	−6.5
Poland	95.6	84.4	−11.2	74.8	−9.6
South Africa	183.6	212.0	+28.4	203.0	−9.0
Greece	39.7	34.2	−5.5	26.3	−7.9
Australia	5.6	5.6	0	3.7	−1.9
Canada	133.9	189.0	+55.1	188.4	−0.6
Ecuador	5.4	4.1	−1.3	3.1	−1.0
Total	7392.1	6151.7	−1240.4	4315.7	−1536.0
Group 2 (Countries experiencing no change in gold reserves in 1936)					
Albania	2.3	2.5	+0.2	2.5	0
Algeria	14.0	14.0	0	14.0	0
Uruguay	81.7	76.8	−4.9	76.8	0
Austria	45.4	45.8	0.4	45.7	−0.1

	End of 1934	End of 1935	Loss (−) or Gain (+) During 1935	End of 1936	Loss (−) or Gain (+) During 1936
Belgian Congo	2.9	2.9	0	2.9	0
Denmark	60.4	53.5	−6.9	53.5	0
Egypt	54.8	54.8	0	54.8	0
Estonia	12.6	15.5	+2.9	15.5	0
India	274.5	274.5	0	274.5	0
Latvia	15.1	15.2	+0.1	15.2	0
New Zealand	24.7	23.1	−1.6	23.1	0
Total	939.0	974.8	+35.8	1031.9	+57.1
Group 3 (Countries gaining gold reserves in 1936)					
Portugal	67.6	68.1	+0.5	68.2	+0.1
Bulgaria	18.9	19.4	+0.5	20.2	+0.8
Morocco	7.4	7.3	−0.1	8.0	+0.7
Danzig	7.8	3.9	−3.9	5.6	+1.7
Hungary	23.4	23.4	0	24.9	+1.5
Peru	19.4	20.0	+0.6	20.1	+0.1
Chile	28.9	29.3	+0.4	29.5	+0.2
Colombia	19.3	15.7	−3.6	19.1	+3.4
Turkey	22.0	23.6	+1.6	25.7	+2.1

	End of 1934	End of 1935	Loss (−) or Gain (+) During 1935	End of 1936	Loss (−) or Gain (+) During 1936
Romania	103.9	109.1	+5.2	113.6	+4.5
Yugoslavia	53.2	42.7	−10.5	48.5	+5.8
Lithuania	8.8	6.1	−2.7	12.4	+6.3
Norway	61.2	84.0	+22.8	97.6	+13.6
Finland	13.7	20.1	+6.4	30.4	+10.3
Belgium	589.6	610.5	+20.9	631.9	+21.4
Japan	393.6	425.4	+31.8	462.8	+37.4
Netherlands	575.1	439.5	−135.6	491.5	+52.0
Sweden	159.4	185.0	+25.6	240.0	+55.0
Argentina	403.4	443.7	+40.3	500.7	+57.0
Switzerland	626.6	455.7	−170.9	657.2	+201.5
U.S.S.R.	744.3	839.3[2]	+95.0	na	na
United Kingdom	1,584.3	1,648.4	+64.1	2,584.5	+936.1
U.S.A.	8,238.0	10,125.2	+1,887.2	1,125,736	+1,132.4
Total[3]	12,593.2	14,333.0	+1,739.9	16,819.8	+2,486.7

(1) July 1936.

(2) September 1934.

(3) Not including the U.S.S.R. na denotes not available.

Source: Constructed from Board of Governors of the Federal Reserve System (1943), pp. 544–555.

toward the United States. American producers used their newfound competitive advantage to expand exports to the gold bloc countries and crowd them out of third markets.[3] Almost every country still on gold suffered a trade deficit and a slow-but-steady depletion of its international reserves (see Table 12.2 and Figure 12.3).

The French situation was monitored with particular concern, not just by foreign currency speculators but by government officials throughout the gold bloc. A stable franc was essential to maintaining the gold bloc. Without French participation, there was no force to the argument that adherence to the gold standard conferred (p.353) exchange rate stability on the participants and encouraged international trade. Belgium, the Netherlands, Switzerland, Poland, and Czechoslovakia hardly constituted a currency area of any consequence. Were the franc devalued, gold would no longer be a plausible basis for international monetary relations, and devaluation of the other gold currencies would surely follow.

The Bank of France had begun to lose gold and foreign exchange reserves almost immediately following Roosevelt's decision to take the United States off the gold standard. Over the course of 1933, it lost 10 percent of its total international reserves (and 8 percent in the second half of the year alone). In 1934 it managed to rebuild its reserve position to early-1933 levels by reducing the trade deficit and attracting financial capital from abroad. The 1934 trade deficit shrank to half of its 1933 level, impressive testimony to the vigor with which import quotas and deflationary measures were applied. Had quotas been relaxed, however, French policy-makers quickly would have learned that domestic deflation had not gone far enough. Between 1929 and the end of 1934, wholesale prices in France (adjusted for the exchange rate) had risen by 14 percent against the United States, by 18 percent against the United Kingdom and Sweden, and by a staggering 93 percent (p.354)

Table 12.3. Price Levels as a Percentage of 1929 Purchasing Power Parities (1929 = 100)

	Cost of Franc			Cost of Sterling		
	XII 1933	XII 1934	V 1935	XII 1933	XII 1934	V 1935
Germany	92.5	74.5	73.9	72.3	62.6	62.8
Hungary	111.8	80.6	75.3	87.2	67.8	63.9
Austria	98.4	83.1	80.6	76.8	69.9	68.5
Czechoslovakia	91.6	86.6	84.0	71.5	72.8	71.4
Switzerland	100.4	87.0	87.3	78.5	73.3	74.2
Italy	112.6	98.0	92.1	88.0	82.5	78.4
Poland	108.5	98.7	98.8	84.8	83.0	84.0
Bulgaria	129.7	104.4	99.1	101.3	88.0	84.2
France	—	—	—	78.1	84.2	85.0
China	134.5	119.0	101.9	105.1	100.2	86.7
Albania	119.6	107.4	102.0[1]	93.5	90.6	86.7[1]
Netherlands	119.6	101.4	102.6	93.5	85.1	87.2
Peru	127.7	110.1	104.9	99.6	92.6	89.2
Portugal	109.0	103.3	107.0	85.2	87.0	90.9
United States	136.3	114.3	108.3	106.6	96.2	92.0

	Cost of Franc			Cost of Sterling		
	XII 1933	XII 1934	V 1935	XII 1933	XII 1934	V 1935
Yugoslavia	133.4	115.3	110.9	104.1	97.2	94.3
South Africa	106.8	99.2	114.7[1]	82.8	83.0	97.6[1]
Belgium	115.2	102.9	115.4	90.0	86.8	98.0
Finland	123.9	115.9	116.1	96.7	97.5	98.6
Greece	137.0	116.0	116.2	107.0	97.7	98.8
United Kingdom	128.0	118.7	117.6	—	—	—
Sweden	130.9	118.2	118.0	102.3	99.4	100.4
Norway	129.1	118.6	118.5	100.8	100.0	100.8
Canada	139.6	122.4	120.6	109.1	103.1	102.5
New Zealand	136.1	126.6	123.5	106.0	105.7	104.9
Denmark	138.2	124.5	128.2	108.0	104.8	109.0
Estonia	126.7	127.4	130.6	98.8	107.2	111.0
Spain	158.4	132.7[2]	132.7[2]	123.7	113.0[2]	113.0[2]
Chile	188.0	150.9	139.7	147.0	127.1	118.8
India	152.8	145.3	139.9	119.3	122.3	119.0
Australia	152.1	141.6	144.7[1]	118.4	118.4	122.9[1]

	Cost of Franc			Cost of Sterling		
	XII 1933	XII 1934	V 1935	XII 1933	XII 1934	V 1935
Argentina	132.8	152.9	151.2[1]	103.9	128.8	128.5[1]
Japan	206.0	193.9	190.7	160.8	163.4	162.0

(1) April.

(2) November.

The relationship between the general level of wholesale prices in each country and in (a) France and (b) the United Kingdom in 1929 is taken as 100. The relationship in each subsequent period (on the basis 1929 = 100) is taken as the purchasing-power-parity exchange rate, and the actual exchange rate prevailing in that period is then expressed as a percentage of the purchasing-power-parity rate.

Source: Abridged from League of Nations (1935c), p. LXXX.

against Japan.[4] (These numbers are shown, along with analogous figures for other countries, in the second column of Table 12.3). For the time being, capital inflows financed the trade deficit that remained; foreign investors were still confident in the solidity of the Bank of France's position.

(p.355) French observers could reassure themselves that there was little immediate danger of the nation being driven from the gold standard. They tended to forget, in their complacency, that the Austrian National Bank had entered the 1931 crisis with a ratio of international reserves to monetary liabilities comparable to what the Bank of France currently possessed, but that once confidence was disturbed and capital took flight, less than six months had been required to drive Austria from the gold standard. In the case of France, the Stavisky scandal of early 1934, discussed momentarily, illustrated how rapidly a shock to confidence could produce an alarming loss of reserves.

The precedent of 1931 was particularly disturbing when placed against the backdrop of France's fiscal deadlock. A further compression of domestic spending was required to bring France's merchandise trade into balance in the wake of currency depreciation by the United States and the sterling area. But the one component of spending directly at the command of the government, namely its budget, continued to elude control. The lack of consensus on how to restore budgetary equilibrium manifested itself as ministerial instability. Six Radical-led cabinets succeeded one another between June 1932 and February 1934. The Socialists still supported the governing coalition but continued to refuse to participate in it. Lacking broad-based support, none of these governments made headway on the budgetary problem. Each cabinet was squeezed between opposition on the left to spending economies and resistance on the right to higher taxes. The longer the dispute simmered, the more polarized the polity became. Nationalist-conservative organizations such as the *Croix de Feu* gained ground on the right; on the left the Communists scored victories in local elections.

The sole objective on which a consensus existed was the need to defend the gold standard. Only a handful of prominent dissidents departed from this view. The Radical journalist

Bertrand de Jouvenel suggested at the beginning of 1933 that the franc and the dollar be devalued simultaneously. The Socialist Deputy Barthelemy Montagnon advocated reflation and devaluation along British lines. Starting in

(p.356) 1934 the moderate former Finance Minister Paul Reynaud began to campaign for devaluation. Their

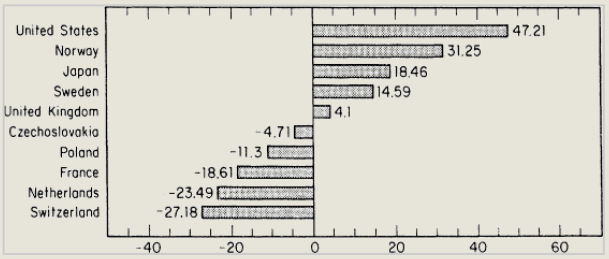


Fig. 12.3. Percentage change in gold and foreign exchange reserves from the end of 1934 to the end of 1935.

The U.S. acquired massive amounts of gold over the course of 1935, mainly at the expense of the remaining gold bloc members (Poland, France, the Netherlands, and Switzerland).

Source: League of Nations (1939).

recommendations garnered little support. Devaluation was certain to ignite an explosive inflation, officials of the Treasury and Bank of France cautioned successive prime ministers.[5] Removing the discipline of the gold standard, they warned, promised to provoke unreasonable wage demands, spiralling price inflation, and consequent increases in interest rates, which were scarcely conductive to the investment in plant and equipment required for recovery. The requisite investment would be forthcoming only if financial stability—in other words, the gold standard—was maintained at any cost.

For ministers to have accepted devaluationist arguments in any case would have laid bare their inability to manage the nation's fiscal affairs. It was only by invoking the need to defend the gold standard, and hence to maintain price stability

and set the stage for recovery, that the dispute over income distribution might be contained and fiscal compromise might be achieved. The question was whether a coalition existed capable of securing support for the fiscal sacrifices that were a pre-requisite for maintaining external balance.

The year 1934 was the last occasion for such a coalition. The incident that revealed this was the Stavisky affair, a scandal linking an inconsequential swindler connected with a municipal pawnshop in Bayonne and Albert Dalimier, Minister of the Colonies in the cabinet of Premier Camille Chautemps.[6] The scandal brought down the Chautemps Government that had succeeded Daladier, returning the latter to office. Daladier attempted to act against Chiappe, the Prefect of Police and an associate of Stavisky. But Chiappe was a favorite of the conservatives, and Daladier's decision provoked violent demonstrations by the right on February 6, 1934, toppling his cabinet.

This turmoil undermined confidence in the Radical Party's ability to govern. Any residual hopes that its leaders might be able to hammer out a fiscal compromise were a casualty of this violent display of rightist opposition and the general loss of confidence in Radical leadership. The Bank of France consequently lost 2.6 million francs of gold in the first two weeks of February. The American press increasingly predicted the franc's devaluation. Walter Lippmann, in a *New York Herald* article that drew the attention of the Bank of France and the Treasury, concluded that a French devaluation was inevitable.[7]

The political crisis and the threat to the franc were regarded as sufficiently grave to warrant extraordinary political action. A Government of National Union led by ex-President Gaston Doumergue, now seventy-two years old, and including four former premiers was quickly formed. Doumergue was granted plenary powers to (p.357) raise taxes and reduce public spending by decree. In April he used these powers to cut the salaries of civil servants and the pensions of war veterans.

Doumergue's economies made a modest dent in the deficit and, more important, demonstrated the nation's willingness to

remove fiscal policy from the political arena by delegating to a grand coalition the powers of decree necessary for balancing the budget.[8] International capital flows reacted accordingly. The Bank of France's gold reserves rose by more than 10 percent between February and September.[9]

But the failure of Doumergue's economies to moderate the economic slump, as had been predicted once again by the advocates of financial orthodoxy, undermined the popularity of his National Union Government. Doumergue's decrees only imposed additional burdens on wage earners and other low-income groups without countering the Depression or even securing the position of the franc. The parties of the left vowed that this was the last time they would accede to conservative arguments of the need for spending cuts.

Though political problems were less serious elsewhere in the gold bloc, the current economic situation was, if anything, more difficult still. Belgium, the Netherlands, and Switzerland all lost gold reserves between the ends of 1933 and 1934.[10] All ran trade deficits. All saw their competitive positions deteriorate. The Dutch situation was ameliorated by improving conditions in the markets for rubber and other products of the Dutch colonies. But in the rest of the gold bloc, conditions continued to worsen.

The Dominos Fall

The gold bloc, established by France, Belgium, the Netherlands, Switzerland, Italy, Poland, and Czechoslovakia following the collapse of the 1933 World Economic Conference, began to crumble within six months of its formation. Czechoslovakia devalued in February 1934. Italy, still nominally on the gold standard, applied exchange controls so stringent as to render her gold bloc status meaningless. Belgium came under speculative pressure and was forced to devalue in March 1935. The last vestiges of the gold standard collapsed with devaluation by France, Switzerland, and the Netherlands in September 1936.

The final throes of the gold standard in these countries are described below. But the repercussions of their financial difficulties extended beyond national borders. Each successive

devaluation weakened the competitive position of the remaining gold standard countries. To limit foreign inroads into domestic markets, their governments tightened quotas and applied duties against imports from countries with depreciated currencies. Between 1933 and 1934, Belgium imports fell by 7 percent, Swiss imports by 10 percent, Dutch imports by 14 percent, French imports by 19 percent. These were the largest declines experienced anywhere in the western (p.358) world.[11] But even if imports were successfully compressed, little could be done to counter the loss of export sales to countries with depreciated currencies. The inevitable rise in unemployment in the gold bloc countries widened the gap between government expenditures and receipts, requiring further budgetary economies. International tensions induced governments throughout Europe to increase military spending, aggravating the budgetary squeeze. Fearing that decisive action would not be taken to close the budget deficit and stem the loss of reserves, investors began shifting financial capital abroad.

Meanwhile, rising unemployment provoked opposition to the policy of deflation and, at last, growing criticism of the gold standard. The salutary effects of devaluation abroad were increasingly difficult to deny. Belgium's rapid recovery following her devaluation, for example, helped to nail shut the coffin of French advocates of deflation and gold convertibility. In the summer of 1935, after Belgium's devaluation, a Paris-based campaign to take France off the gold standard finally began to garner significant political support.

The effects of currency depreciation depended, as always, on accompanying policies. In countries where domestic credit was expanded vigorously once the gold standard constraints were relaxed, industrial production rebounded quickly. Domestic demand was fueled by the expansion of credit. Exports played a secondary role: monetary expansion tended to drive up domestic prices, so the depreciation of the nominal exchange rate produced little change in international competitiveness. In countries where the monetary authorities responded more cautiously, prices did not rise to the same extent. The depreciation of the nominal exchange rate enhanced international competitiveness, stimulating export

sales. Less domestic credit expansion meant less domestic demand. Although export demand compensated to a degree, the recovery of output and employment was less pronounced.

The two patterns are epitomized by the contrasting experiences of Czechoslovakia and Belgium. Both were small industrial countries heavily dependent on foreign trade. Both devalued in 1934–35. But the two pursued very different monetary policies following devaluation. In Belgium, devaluation prompted rapid monetary expansion; the economy experienced a vigorous recovery led by domestic demand. In Czechoslovakia, a more conservative monetary policy was pursued; recovery was slower and more dependent on export markets.

Devaluation came only at the end of an extended period of crisis, even more so for Belgium than for Czechoslovakia. Since Britain was one of Belgium's leading markets and British producers were her principal international competitors, the fall of sterling was particularly damaging to the Belgian economy. The unemployment rate among manual workers in Belgian industry rose from 4 percent in 1930 to 20 percent in 1932, where it remained lodged until 1935.[12]

(p.359) The Belgian government initially applied the orthodox medicine. Income taxes, excise duties, and import tariffs were raised in a futile effort to balance the budget. Public salaries, old age pensions, and unemployment benefits were cut. But the policy of wage reductions met growing resistance. By 1933 nominal hourly earnings had already been reduced by 11 percent from 1931 levels.[13] Further cuts threatened to render fixed obligations like mortgage payments impossible to meet. The socialist leader Henri de Man mobilized the working class to oppose additional reductions.

The policy of deflation encountered yet another obstacle: the fragility of the banking system. The problem facing Belgian policymakers in 1933 was similar to that experienced two years earlier in Austria and Germany. Belgian banks had expanded rapidly in the second half of the 1920s. Their liabilities had grown by 50 percent between 1927 and 1930, but capitalization had not risen apace. Loans to industry and

purchases of industrial equities had expanded more quickly than other commercial bank assets, heightening the vulnerability of earnings to the effects of the slump.[14] Several small Belgian banks encountered difficulties in 1933. One major bank, the Allgemeene Bankvereeniging, was forced to write off a third of its capital due to loan losses. In March 1934 the *Banque Belge du Travail*, the leading Socialist bank, was unable to meet its obligations. Later in the year other large banks were in a similar position.[15]

The banking crisis raised the possibility that the Belgian National Bank might be forced to intervene as lender of last resort to such an extent that the expansion of domestic credit violated the gold standard statutes and undermined confidence in convertibility. The Socialist Party pressed the authorities to take whatever steps were necessary to keep the *Banque Belge du Travail* out of receivership. Belgian conservatives, in contrast, welcomed the possibility that the leading Socialist bank might fail and cautioned the government against intervention, most especially against any actions that might pose a threat to gold convertibility. The government compromised, authorizing the Postal Savings Bank to extend loans not to the *Banque Belge du Travail* itself but to other intermediaries that had deposited their own liabilities with the Socialist bank and whose own solvency was therefore threatened.[16] In addition, the National Bank reduced its discount rate in the spring and summer of 1934 even though it was losing gold. The obvious interpretation was that it was violating the rules of the gold standard game in order to relieve the pressure on the banking system. As in Austria and Germany in 1931 and the United States in 1933, this heightened unease in the currency markets, prompting the liquidation (p.360) of bank balances by investors who attached a nonnegligible probability to devaluation.

More systematic intervention on behalf of the banking system clearly was required. But leftist politicians favoring extensive provision of credit to savings bankings, perhaps along the lines of the U.S. Reconstruction Finance Corporation, were opposed by conservatives unsympathetic to the plight of banks whose clients supported the Socialist Party. For those who

attached priority to defense of the gold standard, it was unclear which position was to be preferred. If legislators rejected a banking bill along American lines, the entire financial system might come crashing down. If they accepted it, the extensive provision of credit might create doubts about the adequacy of the National Bank's gold reserves, causing any additional liquidity that the central bank injected into the banking system simply to leak back out. A legislative deadlock combined the worst of both worlds. At the end of 1934 a bill finally was passed creating an agency to extend credit to problem banks. In the short run, its adoption buttressed the position of the banking system. In the long run, it undermined the capacity of the National Bank to defend the gold standard and, by provoking the liquidation of foreign deposits, weakened the position of the banks.

That Belgium's international trade and payments remained far from equilibrium confounded the problem. A group of respected academic economists warned that the restoration of external balance required a further 25 to 30 percent reduction in Belgian wages and prices. And if sterling and the dollar continued to decline against the gold currencies, this figure would have to be revised upward. Belgium's leading academic economist, Fernand Baudhuin, concluding that the economic costs had reached prohibitive levels, published a series of pro-devaluation tracts in the popular press. In September 1934 Baudhuin was appointed advisor to the Minister of Finance. Emile Francqui, who as minister without portfolio in the National Union Government had presided of the currency's stabilization in 1926, and who as governor of the *Société Générale de Belgique* was an influential figure in financial circles, was thought to be moderating his opposition to devaluation.[17] Even advisors to the National Bank admitted privately that reflation required devaluation.

But devaluation still connoted inflation in the minds of the public and many policymakers. “The Belgians had clearly in mind the franc depreciation of the ’twenties,” wrote one observer of Belgian affairs, “and they recalled devaluation as part of the inflationary process. Consequently many thought that inflation and devaluation were bound to go together.”[18]

Rising opposition on the left nonetheless led central bank officials to vacillate. In the summer of 1934, the policy of deflation was relaxed. The National Bank's discount rate was lowered, as described above, in an effort to revive economic activity and relieve the pressure on the banking system. The predictable result was a liquidation (p.361) of foreign deposits and a loss of reserves. Thus, the authorities' efforts to inject liquidity into the banking system proved counterproductive.

> As the conviction grew that the franc would have to be devalued, more and more people, individuals and corporations, wished to take precautions and to invest their funds in foreign currencies. This was the principal reason for deposit withdrawals in 1934 and 1935. . . . In many cases deposits were withdrawn by depositors who did not have any doubt about the solidity of their bank, but who wished to get rid of their francs.[19]

The National Bank was forced to ship gold to defend the exchange rate. Gold losses mounted, prompting the government in September 1934 to request French assistance in defending the gold parity. Its proposal that France relax her quotas on imports of Belgian goods was rejected by Paris. France imported from Belgium mainly items like glassware and leather goods that were also produced by domestic industries already suffering from intense competition; those domestic interest groups were capable of blocking all proposals for trade liberalization. Neither did suggestions that France might extend Belgium a loan yield concrete results. Though a foreign loan might have provided breathing space, it would not have helped rectify the underlying payments imbalance. Indeed, Germany's experience with reparations suggested that a foreign loan might be counterproductive if France refused to provide Belgium the market access necessary to pay it back. Once more, international cooperation among the gold standard countries proved impossible to arrange.

As sterling renewed its decline against the dollar and the gold bloc currencies in the second half of 1934, the pressure on the Belgian balance of payments intensified. The National Bank presented the government a report stressing the

incompatibility of unilateral reflation and gold convertibility. Even from this unexpected quarter, there were suggestions that devaluation might be preferable to further deflation.[20]

In November the government fell and was replaced by a more conservative cabinet headed by Albert Theunis. Three new cabinet members were prominently associated with big business and high finance. Francqui, the hero of 1926, was made minister without portfolio. Complaining that the "*Société Générale* had merely opened a new branch in Brussels," the Socialists refused to participate in the new government. The financial situation continued to deteriorate. The Treasury bought time by securing a 100,000 guilder loan from Holland; the Dutch bankers protected themselves against the risk of devaluation by specifying that repayment be made in gold.[21]

But as French officials predicted the previous September when they had been approached for a loan, its extension provided no more than a brief respite, and by adding to the nation's external obligations weakened its position in the long run. In March 1935, after a short period of stability, the exchange rate declined sharply on spot and forward markets. A British government decision to limit steel imports, (p.362) thereby blockading one of Belgian industry's principal export markets, was the immediate occasion for the crisis. Theunis made a lightning trip to Paris to consult with his French counterpart. No concrete assistance was forthcoming. His advisors counseled devaluation.[22]

Forced to act, Theunis imposed exchange controls. The control decree prohibited purchases of foreign exchange, except for imports of merchandise, without the authorization of the newly established Central Exchange Office. Gold exports, other than by the National Bank, were prohibited. The controls proved reasonably effective initially, and the spot rate stabilized. But the exchange control decree failed to mention Belgian currency; soon there were reports of airplanes spiriting Belgian bank notes to London, Paris, and Amsterdam, to be sold for whatever they would bring.[23] The exchange rate renewed its decline. To support it the National Bank was again forced to draw down its reserves.

Unable to contain the crisis, the Theunis Ministry resigned on March 19, 1935. Foreign exchange trading descended into turmoil. The young and inexperienced King Leopold was unable to convince any of the leading political parties to form a government. Finally a government of national union was formed, headed by Paul Van Zeeland, a Director of the central bank with little political experience. The new government included representatives of the three major parties. Its five Socialist members included Henri de Man and other outspoken opponents of deflation. A substantial faction of the cabinet was thought to favor devaluation. Speculators anticipated this eventuality, selling francs and forcing the authorities to intervene in the currency's support. In the two weeks ending on March 28, the National Bank lost nearly 10 percent of its remaining gold. It was said that the leading Brussels banks had no cash remaining in their tills. At that point the Brussels Bourse was closed and exchange market intervention was suspended. The currency quickly sank to a 12 percent discount against gold.

The crisis confronting Van Zeeland resembled nothing so much as what had faced Franklin Delano Roosevelt in the United States two years before. Van Zeeland's reaction was similar. In a series of stirring speeches to Parliament, he demanded changes in the nation's monetary statutes designed to facilitate reflation.[24] As in Britain four years earlier, the individuals who had most fervently denied the advantages of devaluation embraced them now that inconvertibility was an established fact. Van Zeeland blamed Belgium's overvalued currency for having depressed the export trades and forcing the banking system to limit the provision of credit. The Prime Minister now portrayed the gold standard not as a guarantor of financial stability but as the fundamental cause of unemployment. Devaluation, (p.363) Van Zeeland argued, was the tonic required by the labor market and the export trades. Parliament agreed. Within twenty-four hours it adopted legislation suspending convertibility and empowering the King to devalue the currency by up to 30 percent.

On Sunday, March 31, the Belgian franc was devalued by 28 percent. This percentage was precisely the change in relative prices, according to calculations by the Institute of Economic

Sciences of the University of Louvain, needed to restore the competitive position of Belgian exporters.[25] A larger devaluation ran an unacceptable risk of British retaliation. The Cabinet discussed the possibility of joining the sterling area in order to further reduce this danger. But doing so was regarded as an admission that the departure from gold was permanent, which the governor of the central bank still opposed. Instead, an exchange equalization account was established to peg the exchange rate against the gold bloc currencies at its new, lower level.

The new monetary law instructed the National Bank to write up the domestic-currency value of its gold reserves by 33 percent. It empowered the government to employ the capital gains "in execution of the policy of economic recovery."[26] A fifth of the capital gains went to repay state debt to the National Bank and other official creditors. Thirty percent was turned over to the Exchange Equalization Fund for use in intervention. But, significantly, the remainder was used as backing for monetary expansion. A *Fons de rentes*, with a capitalization of 800 million francs, was established to support the prices of government bonds. In the final three quarters of 1935, this fund purchased some 600 million francs worth of *rentes*. Its purchases strengthened the balance-sheet position of the banks, placed downward pressure on interest rates, and expanded the domestic credit supply. An Institute of Rediscount and Guarantee was created to extend loans to industrial, commercial, and agricultural enterprises. No limit was placed on its right to rediscount at the central bank. As a result of this combination of initiatives, the money supply rose sharply. Note circulation expanded by 22 percent between the ends of 1933 and 1935.[27]

Because of the dramatic monetary expansion that accompanied devaluation, recovery quickly got underway. With the rise in credit stimulating domestic demand, output and employment rebounded sharply. Industrial production rose by 8 percent between the first and second quarters of 1935 and by another 11 percent by the fourth quarter of the year.[28] (See Table 12.4.) Industrial production grew more rapidly between March 1935 and March 1936 in Belgium than

anywhere else in the western world. Stock prices rose by 39 percent in the first post-devaluation (p.364)

Table 12.4. Czech and Belgian Responses to Devaluation (B. = Belgium C. = Czechoslovakia)

Quarterly Averages		Industrial Production (1929 = 100)		Building Activity (1929 = 100)		Foreign Trade: Imports in Billions of National Currency		Foreign Trade: Exports in Billions of National Currency		Foreign Trade: Balance in Millions		Wholesale Prices (1929 = 100)		Cost of Living (1929 = 100)	
		B.	C.	B.	C.	B.	C.	B.	C.	B.	C.	B.	C.	B.	C.
1933		71.4	60.2	92.6	51.9	3.71	1.46	3.51	1.46	−198	+6	58.9	72.2	82.6	90.7
1934	I	67.5	62.2	76.5	30.6	3.65	1.42	3.56	1.47	−83	+29	56.7	72.1	80.9	89.3
	II	65.1	69.8	92.4	65.1	3.34	1.59	3.30	1.67	−41	+76	55.5	73.6	77.0	89.9
	III	64.6	67.9	77.0	49.9	3.16	1.56	3.14	1.97	−22	+405	55.4	75.4	79.1	90.4
	IV	67.5	66.1	62.0	30.7	3.56	1.79	3.44	2.17	−115	+382	54.9	75.8	80.5	89.4
1935	I	66.5	64.8	76.1	27.3	3.23	1.35	3.30	1.58	+62	+233	54.9	76.5	76.9	89.3
	II	71.5	67.4	133.1	44.4	4.32	1.54	3.83	1.70	−492	+160	64.2	77.8	77.1	90.9
	III	71.2	69.4	105.6	51.5	4.31	1.64	3.96	1.85	−347	+208	65.2	77.1	80.9	92.8

Source: League of Nations (1937b), p. 52.

quarter. Building activity, one measure of domestic investment, increased by 74 percent.[29]
Monetary expansion naturally placed upward pressure on prices. Between the first and fourth quarters of 1935, the 28 percent depreciation of the exchange rate was accompanied by a 19 percent rise in wholesale prices. Fears of an inflationary spiral remained. The government used moral suasion and regulation for restraining the rise in prices. It encouraged shopkeepers to post signs reading “Against an unjustified increase in the cost of living; we cooperate loyally with the government.”[30] But with ample excess capacity, the pressure of demand was not sufficient to allow inflation to elude control. More than anything else, the government's anti-inflation campaign signaled that the association of depreciation with inflation remained remarkably persistent.

Without a dramatic change in relative prices, the Belgian trade balance failed to improve. Export volumes were stagnant, while imports rose dramatically.[31] But the deterioration in the current account of the balance of payments was swamped by the capital account improvement. Despite the expansion of domestic credit, the (p.365) post-devaluation boom, in conjunction with the restoration of stability to the banking system, ignited a surge of capital inflows. The gold reserve of the central bank rose immediately and continued to increase through 1936.

Czechoslovakia followed a different course from Belgium in the aftermath of its devaluation, although the devaluation policy itself was quite similar. By 1934, the orthodox policy of reducing prices and costs to maintain international competitiveness and defend the gold standard had come to be regarded as a failure. In February the authorities decided on a one-time devaluation of the crown. Wholesale prices adjusted for exchange-rate changes had risen, according to official calculations, by an average of 17 percent relative to those of the United States and United Kingdom. Hence the authorities decided on a 17 percent devaluation to eliminate the differential. Czech prices moved slowly upward in the wake of the devaluation, but at nowhere near the pace that would have eliminated the improvement in competitiveness resulting from devaluation.[32]

The change in prices found quick reflection in the nation's foreign trade. The value of Czech exports rose by 14 percent between the first and second quarters of 1934 and at an even faster rate over the rest of the year. Import values also rose, but more slowly. The trade accounts moved from balance in 1933 to strong surplus in 1934. Manufacturing activity reacted in the same direction, although its response was more muted. After jumping by more than 12 percent in the quarter following devaluation, industrial production fell back, although not to 1934-I levels.

A relatively passive monetary policy was the explanation for the surge of exports, the muted response of industry, and the relative stability of prices. Devaluation was not used as an occasion to expand domestic credit. The 17 percent capital gain on the gold reserve, rather than backing an increase in the money supply, was devoted to repaying government debt to the central bank.[33] Nor did the central bank capitalize on the reduction in its legal minimum cash reserve from 35 to 25 percent at the time of devaluation. Currency circulation remained essentially flat, and little change occurred in the National Bank's discounts and advances (see Table 12.5). Without an increase in domestic credit, there was only modest stimulus to domestic demand. Little upward pressure on prices took place. The only incentive for increasing production came from the improved competitiveness of Czech exports of manufactures. The increase in the demand for money that accompanied the post-devaluation recovery was accommodated by importing gold and capital from abroad. As in Belgium, abandoning the gold standard was the key to economic recovery, but because of the very different package of domestic policies that accompanied devaluation, Czechoslovakia's recovery followed a very different path.

France's Crisis

By the end of 1935 this most recent round of exchange-rate changes had worked its way through the international system. Leaving aside the surviving members of the (p.366)

Table 12.5. Czechoslovak Finance, 1933–35 (Millions of Crowns)

End of	December 1933	June 1934	December 1934	June 1935	December 1935
National Bank					
Gold	1,708[1]	2,663	2,680	2,691	2,690
Foreign exchange	918[1]	13	229	325	80
Bill portfolio	1,234	895	892	757	602
Advances on securities	461	546	422	346	731
Note circulation	5,906	5,524	5,640	5,780	5,761
Sight deposits	871	630	766	742	411
					September 1935
Commercial Bank Assets					
Cash	2,194	2,079	2,417	2,705	2,562
Bills discounted	2,053	1,784	1,991	1,941	2,184
Investments and securities	3,100	2,958	2,971	3,224	3,287
Loans and advances	13,461	13,572	13,505	13,231	13,369
Deposits in					
Commercial banks	19,608	19,431	19,618	20,002	20,363
Savings banks[2]	32,239	31,915	32,300	32,594	32,538

(1) 2,048 and 1,112 million Kc, respectively, if calculated at new parity.

(2) Savings banks in Bohemia, Moravia-Silesia, and Slovakia; people's credit and savings associations in Bohemia and Moravia-Silesia; district agricultural credit and savings associations in Bohemia. Excluding deposits with the Schultze-Delitsch and Raiffeisen co-operative credit associations.

Source: League of Nations, *Commercial Banks* (1963d), p. 60.

gold bloc (France, Switzerland, the Netherlands, and Poland), currencies had declined by an average of 70 percent from their 1929 gold parities.[34] Some currencies, mainly in Latin America and Asia, had depreciated still further. Others, mainly in Central Europe, were artificially supported by exchange control. But to a first approximation, unilateral devaluation had restored the relative prices of inconvertible currencies to their pre-Depression levels. Buffeted by currency instability and diplomatic tensions, international trade failed to recover significantly. The volume of trade rose by less than 3 percent over the course of 1935. If 1932–35 trends continued, trade volumes would only reattain their 1929 level in 1942. Tariffs and quantitative restrictions showed few signs of being rolled back. Germany negotiated new bilateral agreements with the nations of Central and Southern Europe. Austria and Hungary concluded new clearing arrangements with Italy. A solitary glimmer of hope was the Reciprocal Trade Agreements Act passed by the U.S. Congress in 1934, which provided a basis for bilateral tariff reductions. But mounting international tensions did not bode well for the future of trade. In the year preceding France's devaluation, Hitler denounced the Locarno Treaty, which prohibited him from remilitarizing the (p.367) Rhineland. Italy invaded Ethiopia. Border incidents between Japanese troops in Manchuria and Soviet troops in Mongolia increased in frequency.

Despite the slow recovery of international trade, currency devaluation still had salutary effects. By making possible the pursuit of more expansionary policies, devaluation encouraged

recovery based on domestic demand. Between 1933 and 1935, as a result of the pursuit of those policies, global industrial production rose at an annual average rate of nearly 10 percent.[35] If that growth rate was maintained, by 1937 industrial output would again exceed its 1929 peak. Activity in heavy industry, notably steel, coal, and shipbuilding, remained depressed, although by 1935 rearmament started to provide some stimulus. As recovery gathered momentum in the United States, the demand for primary products finally began to rise. By 1935 the overhang of stocks of staple commodities had fallen by 20 percent from 1932 levels. The downward spiral of primary commodity prices was finally arrested.

Only the members of the gold bloc failed to share in this worldwide recovery. The incompatibility of reflationary measures with the maintenance of gold convertibility remained an insurmountable obstacle. France lost 20 percent of her gold reserves in 1935, the Netherlands 25 percent, Switzerland 40 percent. Their difficulties intensified in May 1935 in the aftermath of Belgium's devaluation. This defection from the gold bloc, attributed to domestic discontent with deflation, raised questions about the resolve of the remaining members. Sterling's fall in the early months of 1935 further weakened their competitive position. Even more damaging was the continued flow of capital and gold toward the United States. In 1935 the United States effectively absorbed the entire volume of global gold production, plus Eastern dishoarding and half of the losses of France, the Netherlands, and Switzerland.

Opposition to deflation, like that evident in Belgium in 1934, surfaced elsewhere in the gold bloc in 1935. In France, civil servants and war veterans mobilized to oppose pension and salary cuts. In the Netherlands, opposition to further economies mounted following the Belgian crisis. The shipping interests of Rotterdam grew increasingly critical of Amsterdam's policies as Belgium's devaluation shifted port traffic from their docks to Antwerp's. The first Colijn Government fell over opposition to its economy bill. In Switzerland, resistance took the form of a ballot initiative mandating public employment creation, centralized wage and price setting designed to limit wage cuts, control of the capital

market, and financial assistance for agriculture and trade. Clearly, Roosevelt's New Deal had not gone unnoticed by the Swiss. Though defeated in June 1935, the initiative garnered impressive support and gave rise to a considerable quantity of capital flight.[36]

In France, the ministry formed in November 1934, led by Pierre-Etienne Flandin, a middle-class liberal with a reputation for economic expertise, placed recovery (p.368) at the head of its agenda.[37] A political moderate, Flandin more than any other premier of the period was positioned to lead France out of the economic crisis. Flandin proceeded on the assumption that currency devaluation was not politically acceptable. But he recognized that further deflation was no longer viable either. Ultimately, this put him in an untenable position.

Flandin's public strategy was to assume that through economic growth France could circumvent the external constraint. Recovery, he argued, would reactivate the idle capacity of the export industries, strengthening the balance of trade. By raising tax revenues and reducing outlays on unemployment relief, it would solve the budgetary problem.[38] There is some question about whether Flandin privately believed that reflation and the maintenance of gold convertibility were compatible. Informed opinion suggested that he was fully aware that his policies ran the risk of devaluation, and that he was willing to accept that option if necessary.[39]

“The Flandin experiment” involved a variety of measures for stimulating output and employment. The government and the Bank of France pursued more liberal credit policies. Citing British experience with cheap money, Flandin regarded lower interest rates as the key to economic recovery. His government made no effort to retrench on the fiscal front. Inspired by the American New Deal, Flandin encouraged the adoption of legislation to cartelize French industry. To spread the burden of unemployment, he encouraged the reduction of working hours and the suppression of overtime.[40]

Lacking initiatives to balance the budget, the government was reconciled to issuing additional debt. To avoid driving up the

long-term interest rates industrial borrowing depended on, Flandin vowed to solicit no new long-term loans. Government borrowing was shifted to the market's short end. The Bank of France was encouraged to discount treasury bills. Its governor, Clément Moret, recognizing the incompatibility of the program with gold convertibility, was not inclined to cooperate. In January 1935 Flandin replaced him with the more compliant Jean Tannery. The ceiling on Treasury bill issues was raised by 50 percent, and the Bank of France agreed to extend 30-day advances to private borrowers offering treasury bills as collateral.

Predictably, these policies ran up against the external constraint. Import volumes rose by 12 percent between January and March 1935. Though some increase in foreign trade was normal for seasonal reasons, this time the volume of imports rose twice as fast as the volume of exports.[41] The Belgian crisis only aggravated the French situation. Under other circumstances, Belgian capital might have fled to neighboring France. But with the Flandin reflation underway, the Belgian crisis only served to undermine confidence in the French franc. The Bank of France (p.369)

gained a negligible volume of gold and foreign exchange in March before losing significant quantities in April. In May there began what British observers referred to as a “very vigorous flight from the franc.” “Taking a long view,” one British official commented, “it is difficult to see how France can ultimately avoid a suspension of the gold standard or a further devaluation of the franc.”[42]

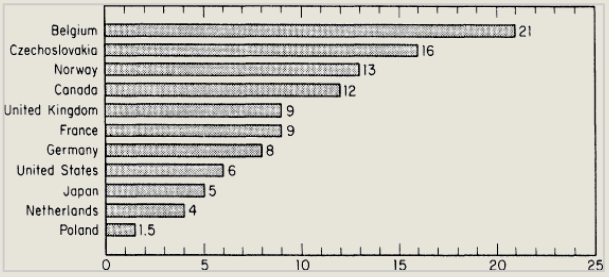


Fig. 12.4. Percentage change in industrial production, March 1935 to March 1936.

Industrial production in Belgium and Czechoslovakia recovered with exceptional vigor following their respective devaluations.

Source: League of Nations, Economic Survey (1935–36), p. 15.

The Bank of France, unsurprisingly, was forced to intervene on the foreign exchange market. Its gold reserves fell by 2 percent in May 1935 and by an alarming 11 percent in June. The dramatic transformation of France's external position is clearly evident in Figure 12.4. The loss of confidence spread quickly to the Netherlands and Switzerland. The central banks of all three countries raised their discount rates to stem the loss of reserves. The increase in the French rate, from 2½ to 6 percent in a week, was extraordinary for a central bank traditionally reluctant to utilize this instrument.

But credit restriction did not suffice so long as the budget remained in deficit. Higher interest rates only increased debt-service costs and aggravated the fiscal crisis. Flandin was forced to choose between reflation and recovery on the one hand, deflation and convertibility on the other. He opted for the second.

The external crisis was an inevitable consequence of Flandin's policy of unilateral reflation, yet the literature on the period seems to suggest otherwise. It emphasizes intrigue and conflict between the government and the Bank of France. If only the Bank had been more compliant, it suggests, Flandin's reflationary efforts would not have been defeated. The notorious “200 Families” who had the exclusive right to vote at shareholders' meetings are said to have frustrated the government's reflationary program by refusing to allow the central bank to cooperate fully in discounting treasury bills. The Council of Regents, dominated by the financially (p.370)

orthodox de Rothschild and de Wendel, quickly forced Flandin's appointee Tannery to toe the line and to resist the Treasury's requests for additional

M. Laval strikes a heavy blow to restore the national economy
—*Humanite*, Paris

accommodation. The Treasury experienced acute difficulties. Repeatedly its cash resources were adequate for no more than a couple of days.[43]

Contemporary emphasis on such intrigue had political utility; the left found it useful to blame the “200 Families” for France's economic ills in the 1936 electoral campaign.[44] But political utility and sound economics were different matters. In fact, had the Bank of France willingly bowed to the government's wishes and discounted more treasury bills, the

threat to gold convertibility would have only come sooner and been more severe. The Council of Regents was no more able than the Treasury or Flandin's Cabinet to circumvent the external constraint.

To defend the franc, in the first week of May 1935 Flandin requested powers of decree to raise taxes and cut public spending. But by May opinion in Paris was “becoming more and more reconciled to devaluation” and more and more opposed to further deflation, as one French official described the situation to Sir Frederick Leith-Ross, chief economic advisor to the British government. The Belgian example had profoundly influenced public opinion, strengthening the devaluationists' hand.[45] Moreover, deflationary measures were clearly inconsistent with Flandin's avowed commitment to reflation. The contradiction undermined the basis of his support. His request for backing for a policy he did not believe in was dismissed as pathetic. Parliament denied him plenary powers, and the Flandin government fell.

(p.371) The coalition that succeeded it lasted barely a week. As much from exhaustion as anything else, Parliament then granted powers of decree to a new government headed by Pierre Laval. Laval cultivated the image of a down-to-earth peasant, attempting to make a virtue of his ignorance of economics and finance.[46] The government like the peasant, he insisted, had to live within its means. He quickly reversed Flandin's reflationary program, issuing more than five hundred deflationary decrees. To sugar-coat the deflationary pill, nominally-denominated debts were revised. Rents and mortgages were unilaterally decreased by 10 percent. Interest payments on government bonds were reduced by decree. Other decrees allowed debtors to break contracts that had been signed prior to the deflation. To make his government's program more palatable to the public, Laval again attempted to induce Britain to stabilize the sterling exchange.[47] Whitehall refused to consider anything of the kind.

On the budgetary front, surtaxes were imposed on incomes in excess of 80,000 francs and on the profits of arms manufacturers. The government unilaterally reduced all categories of public spending by 10 percent. The cuts

extended to local authorities, colonial administrations, and the railways. They extended even to some categories of defense spending, despite mounting international tensions. Laval initially sought to apply the 10 percent rule to the salaries of public servants, but opposition forced him to draw back. Public sector employees had already been subjected to salary cuts under Doumergue in 1934. Now their discontent was palpable. Strikes in the naval dockyards of Brest and Toulon were put down only by the government's prominent display of machine guns. In a compromise, civil service salaries were reduced by only 3 to 5 percent.

From the point of view of the deflationary strategy, this was a critical failure. Laval's inability to obtain one-half to two-thirds of the public-sector salary economies he desired not only widened the budgetary gap directly but discouraged other groups from acceding to the economies demanded of them. In Italy, Mussolini had twice imposed across-the-board cuts in wages, salaries, prices, rents, and other fixed charges. In a democracy like France, however, such reductions could only result from negotiations with a myriad of separate parties. Any failure threatened to bring about the breakdown of the entire process.[48]

According to official projections, the measures actually taken, while sufficient to reduce the budget deficit by approximately 10,000 million francs, or nearly 25 percent of receipts, still represented only half the increment needed to balance the budget.[49] Moreover, official projections ignored the depressing effect of deflation on (p.372) the level of activity and, thereby, on the value of revenues. Indeed, other measures taken by the government were sure to heighten this effect. Flandin had bequeathed several costly off-budget programs to which Laval was still obligated for political reasons, notably a project of supporting agricultural markets by purchasing surplus stocks at above-market prices. With the threat of Nazi Germany becoming increasingly disturbing, certain categories of military spending were placed off budget, insulating them from Laval's decrees. Moreover, decrees reorganizing the cartels and intervening in the labor market, required to defuse opposition to deflation, were certain to restrict supply and depress government receipts.

Most important of all, official budget estimates were based on economic conditions in the previous year. If the French economic situation continued to deteriorate, so would revenues, widening the fiscal gap. Insofar as fiscal economies depressed spending and worsened the recession, they would magnify the effect. As it transpired, Laval's painful economies generated only half the revenues that had been projected.[50] And mounting public opposition prevented the adoption of further economy measures. The government had no alternative but to live with budget deficits.

Deficits implied additional debt. But mounting fears of devaluation led investors to demand interest premia on new government issues. Moreover, Laval's decree laws reducing interest payments on treasury bonds reinforced the caution of French investors. The yield on *rentes* rose from 3.75 percent in 1935-I to 4.08 percent in 1935-IV.[51] A long-term loan issued in December was placed only with difficulty. The authorities hesitated to issue additional long-term debt not only because of these rising interest rates but also because it would crowd out borrowing for industrial investment.

The alternative was to issue treasury bills and encourage the Bank of France to discount them. The practice was abhorrent to a public that had lived through the inflation of the 1920s. But with the failure of five years of deflation to initiate recovery and mounting pressure for military spending, criticism of the policy was surprisingly subdued. Starting in the summer of 1935, treasury bills were issued to finance government spending and were rediscounted in increasing numbers by the Bank of France. The statutory limit on Treasury bill issues was technically breached in January 1936. A 3 billion franc foreign loan was obtained, but it sustained the government only temporarily.

The only alternative was to lift the ceiling on treasury bill issues and obtain additional credit from the central bank. In the first half of 1936, the Bank of France discounted perhaps two-thirds of all newly issued treasury bills.[52] The monetary authorities sought to disguise the magnitude of their operations, combining treasury bills with other discounts in their official statement. Efforts to deceive were

counterproductive. “It is commonly assumed,” noted the League of Nations in the (p.373)

spring of 1936, “that the whole of this increase [in discounts] consists of treasury bills.”[53] Laval's liberal credit policy, in conjunction with continued budget deficits, pushed prices upward. Growing calls for devaluation in the Chamber of Deputies added fuel to the inflationary fire. French wholesale prices rose by 17 percent between July 1935 and February 1936. Prices were rising in other countries as well, but considerably slower. Of the countries surveyed by the League of Nations, only in Belgium did prices rise more quickly in the year ending in March 1936 (see Figure 12.6).[54] And while Belgium had gone off the gold standard, France of course had not.

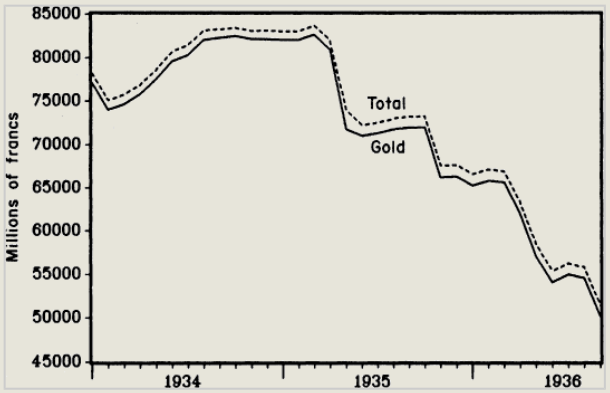


Fig. 12.5. International reserves of the Bank of France, 1934–36.

The Bank of France's gold reserves began to decline sharply following Belgium's devaluation in the spring of 1935.

Source: Board of Governors of the Federal Reserve System (1943).

The impact on the balance of payments was predictable. The value of commodity exports fell sharply. Stabilizing capital inflows were not forthcoming. In the year ending in March 1936, the Bank of France lost 20 percent of its gold reserve. At an extraordinary Saturday meeting of the Council of the Bank of France on March 28, the discount rate was raised from 3½

to 5 percent. Rumors began to circulate in Paris that the government planned to impose a gold embargo on Good Friday and devalue the franc.[55] Despite the Minister of Finance's emphatic denials, the Bank of France continued to hemorrhage gold. The Bank lost an additional 9 percent of its gold reserve in April and May. Though the cover ratio still exceeded the statutory minimum, the trend was clear. (p.374)

The Economic

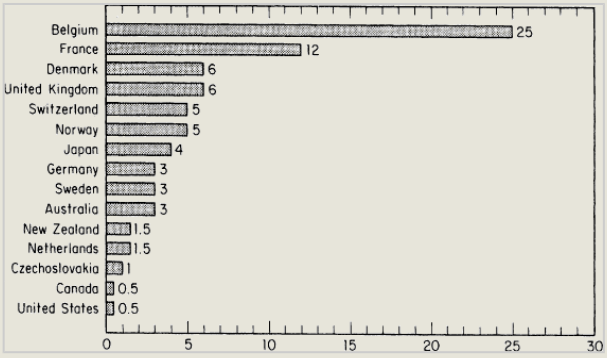


Fig. 12.6. Percentage change in wholesale prices, March 1935 to March 1936.

Only in Belgium did prices rise more quickly than in France in the year ending in March 1936. And unlike Belgium, which had devalued, France was still on the gold standard.

Source: League of Nations, Economic Survey (1935–36), p. 15.

Consequences of the Popular Front

Opposition to deflation had reached the boiling point. Laval was forced to resign in January 1936 over discontent with his deflationary program; he was replaced by Albert Sarraut, who headed a caretaker government that held power until the spring elections. The deflationary policy had hit the middle classes, which voted Radical, with particular force, driving Radical leaders into negotiations with other parties of the left.

Negotiating with the Socialists implied negotiating with the Communists, since the two parties had successfully collaborated during the May 1935 municipal elections. The Socialist-Communist coalition had won an alarming number of votes in the Radicals' traditional rural strongholds. Despite their long-standing suspicion of the Communists, a growing number of Radicals concluded that their party had no choice but to join this coalition. In July 1935 leaders of the three parties pledged their united opposition to fascism at home and abroad. Laval's “decrees of misery” helped solidify their alliance.[56] In January 1936 the Radicals officials joined the Socialists and Communists in a popular front. In anticipation of the 1936 parliamentary elections, the three parties developed an economic program for which the American New Deal was again the model.

The three constituent parties of the Popular Front won only 2 percent more of the vote in April 1936 than they received in 1932. Thanks to their alliance, however, they gained control of parliament. As leader of the Socialist Party, which occupied the middle ground between the Radicals and the Communists and garnered more (p.375) votes than either of them, Leon Blum was the logical head of the Popular Front Government. Like Roosevelt, Blum took office in an atmosphere of crisis. His accession to power was heralded by a wave of sit-in strikes. Factories, shops, and public places were occupied by workers demanding pay increases, shorter hours, and improved conditions. Output fell by 6 percent in June. Capital took flight, threatening the convertibility of the franc. Conversations in French became increasingly commonplace in the City of London, as French citizens made arrangements to open sterling bank accounts.

As a free-thinking intellectual, Blum like Roosevelt was unwilling to commit himself to a particular international economic strategy. Like Roosevelt, Blum had maintained a safe distance from the proponents of devaluation during the electoral campaign, adopting the slogan “neither devaluation nor deflation.” This strategy was not designed to deflect the opposition of the financially orthodox right, as in Roosevelt's first presidential campaign, since Blum had no hope of garnering its votes anyway. Rather, Blum needed to distance

himself from devaluation to retain the support of the far left. The Communist Party opposed devaluation with special vehemence. Not only did devaluation symbolize the government's defeat by market forces, but it promised to restore economic growth only by raising the cost of living and reducing living standards.

The sincerity of Blum's opposition to devaluation, like Roosevelt's, was widely questioned. The presumption in Washington among U.S. Treasury Secretary Henry Morgenthau and his advisors was that Blum had decided upon devaluation even before taking office.[57]

The official strategy of the Popular Front Government was to restore economic growth by stimulating demand. Like Flandin before him, Blum denied any conflict between demand-driven growth and the external constraint, arguing that a policy of reinvigorating the economy and the export trades in particular would actually strengthen the balance of payments. The government proposed 20 million francs worth of public works spending, with 3 million francs worth scheduled for 1936. To finance these outlays, it planned to rely on discounts of treasury bills by the Bank of France.

Accompanying these demand-side initiatives were measures to encourage work sharing and to restrict supply. The Popular Front Government explicitly cited Roosevelt's New Deal as the inspiration for its program.[58] Employers were compelled to sign the *Accord de Matignon* granting trade union recognition, collective bargaining privileges, and wage increases. Following the precedent established by Laval, the work week was shortened again, but this time without any accompanying reduction in pay. The government legislated an annual paid vacation and a 40-hour week. Wages were raised by 7 percent for high-paid workers and by up to 15 percent for the lower paid. Neither employers nor the Blum Government had much choice. Concessions by employers were needed to quell labor unrest; legislative initiatives were necessary to retain the support of the Socialist and Communist partners in the (p.376) coalition. Other elements of the French “New Deal” raised the school-leaving age and nationalized the armaments industry. A National Wheat Office, resembling the U.S.

Agricultural Adjustment Administration, was created to regulate the distribution of wheat and support its price.

Like Flandin and Laval, Blum saw cheap money as the key to economic recovery. In this if not in his other initiatives, he had the support of industry, which demanded cheap credit as compensation for increased labor costs.[59] Like Flandin before him, Blum replaced the governor of the Bank of France to assure the central bank's cooperation. In addition, he reorganized the Council of Regents on whose support the governor relied. The regents traditionally had been elected by the Bank's 200 largest shareholders (the notorious “200 Families” of the parliamentary campaign). Under Blum's reforms, only two of the Council's twenty members would henceforth be elected by the shareholders; the majority would be appointed by the government. Legislation was adopted instructing the central bank to extend credits to industry at a rate of 3 percent, in amounts equal to the costs imposed on producers by the new labor legislation. The state guaranteed the credits. In addition, the government asked the Bank of France to extend it credits sufficient to eliminate any shortfall of private purchases of treasury bills.

The 40-hour week was phased in starting in the autumn. The increase in wages, however, was immediate. Nominal labor costs, adjusting for holiday pay, rose initially by 18 to 20 percent.[60] Flandin and Laval had already demonstrated that cheap money and deficit spending were capable of stimulating the economy. (Industrial production had risen by 3 percent over the second half of 1935 and by fully 6 percent in the first four months of 1936.) But under the Popular Front Government, the stimulus to demand was more than offset by wage increases and other measures that restricted supply. Together, increased demand and reduced supply drove up wholesale prices by 4 percent in July and 2 percent in August. (These are the absolute changes in the price level, not annualized inflation rates.) The rise in domestic costs and decline in industrial output depressed exports. Devaluation was widely anticipated. Even conservative politicians, such as Caillaux, recognizing that the government was incapable of resisting the pressure for higher wages and prices, advocated

devaluation as a necessary adjustment.[61] As capital flowed out, gold was drained from the Bank of France.

To bolster the external position, standard expedients were applied. Investors had to register their foreign assets in an effort to discourage capital flight. Government bonds were issued in small denominations in the hope of recouping gold hoarded by the private sector.[62]

These measures, together with the August holiday, provided momentary relief. But by September, gold losses resumed. One after another, prominent individuals previously opposed to devaluation, including Rist and Germain-Martin, defected from the gold standard camp. The financial press, led by Frédéric Jenny, Financial (p.377) Editor of *Le Temps*, and Michel Mitzakis, financial editor of *L'Intransigeant*, capitulated next. Increasingly it was acknowledged that the gold standard and the Popular Front's economic program were mutually incompatible. Barring the imposition of draconian exchange controls, devaluation was regarded as inevitable.

Seeing the writing on the wall, the British Exchange Equalization Account, which had been purchasing francs to hold down sterling, moved to convert them into gold.[63] The currency crisis intensified. The Blum Government prohibited the sale of gold coin, restricted purchases of foreign currency, and required tourists to declare whether they were taking gold out of the country. The law mandating penalties against persons spreading rumors of devaluation or speculating in foreign currency was strengthened; by late August fifty prosecutions had been instituted and fifteen foreigners had been expelled under its provisions.

Predictably, these desperate measures did more to shake confidence than restore it. In the second week of September, the franc began to weaken dramatically due to fears of devaluation.[64] By the second half of September, the situation was critical. The Bank of France might have hung on for a few more weeks. But the arguments of the general staff, that remaining gold would be needed as a war chest, carried the day. On September 26 the government allowed the Bank of France to suspend its support of the franc, effectively

abandoning the gold standard. The disintegration of the gold standard, begun by Britain's devaluation in September 1931, ended five years later, almost to the day.

Coordinated Devaluation of Sorts

Every prior devaluation had been taken unilaterally. But this time especially compelling arguments existed for coordinating the action internationally. Unlike Britain in 1931 and the United States in 1933, France had good reason to worry about retaliation. When Britain devalued, other major countries were still committed to their gold parities. When the United States devalued, Britain could allow sterling to decline to offset the change in American competitiveness; but since the United States was a large economy little dependent on trade, the Roosevelt Administration had not been deterred, and in any case France and much of Europe had still been on gold. Now there was every reason to think that sterling would be allowed to fall to offset the decline in the franc, just as it had offset the decline in the dollar in 1934–35.[65] Although the dollar had been repegged, the United States refused to rule out a further increase in the domestic-currency price of gold.

Competitive devaluation, if employed by Britain and the United States, might prevent the prices of French exports from falling relative to those of the competition. If so, depreciation of the franc would benefit the French economy only insofar as it occasioned expansionary monetary and fiscal policies. Here the popular association (p.378) of depreciation with inflation imposed another constraint. Fears of inflation had been fanned by the rise in prices over the summer of 1936. The Blum Government would have to adopt a relatively conservative stance to maintain investor confidence. Hence it viewed avoiding competitive depreciation as essential for a successful devaluation.[66]

Five years of haphazard exchange-rate changes had paved the way for negotiations. As early as January 1935, the French had discussed with the British the idea of a coordinated devaluation by all the gold bloc currencies, followed by monetary stabilization and a reduction of trade barriers. The Bank for International Settlements, in its *Annual Report* for

1935, renewed the case for stabilization. In July of that year its directors announced their support for the cooperative management of exchange rates.

Developments in the United States and Britain also pointed to an improved climate for negotiations. While continuing to attach priority to freedom of action, British officials were growing increasingly concerned about the disruptive effects of currency instability. They recommended a one-time devaluation of the franc to eliminate competitive imbalances and remove the incentive for adverse speculation.[67] They also hoped that the French devaluation could be limited in order to minimize the danger of U.S. retaliation that would require a further depreciation of sterling. They were willing to discuss the matter. But they feared, as in 1933, that tripartite negotiations would provide a vehicle for Franco-American pressure for the stabilization of sterling, rather than the restoration of equilibrium between the dollar and the franc. French and American pressure had to be strenuously applied to elicit British cooperation.

Advisors to the U.S. State and Treasury Departments, such as Alvin Hansen and Jacob Viner, also warned that the spread of currency instability was a major obstacle in sustaining the U.S. economic recovery. Moreover, with American prices drifting upward, Washington was growing increasingly concerned over inflation. American officials wished to avoid having to offset the franc's devaluation with an inflationary currency depreciation of their own. Already in 1935 the Roosevelt administration had made known its willingness to discuss currency stabilization with France. As early as January the economic attaché to the American embassy in London had conveyed to his French counterpart his government's willingness “in principle” to engage in a conversation regarding exchange rate stabilization. In a broadcast interview, Treasury Secretary Morgenthau affirmed American willingness to discuss currency stabilization over a wider area.[68] Though willing to engage in tripartite discussions with the British and French, the Americans shied away from French proposals for multilateral stabilization negotiations like those conducted (p.379) in London in 1933. “I would no more sit in on a world monetary conference than jump out of this

window,” Morgenthau asserted on June 20 when Emmanuel Monick, French Finance Minister Vincent Ariol's special emissary, put his proposal for a conference of not just the United States, Britain, and France but of all other concerned countries to U.S. Treasury officials in Washington, D.C.[69]

Morgenthau's preference, for which he had already enlisted Roosevelt's support, was a unilateral devaluation of the franc of no more than 20 to 25 percent. If France limited its devaluation to this amount. Morgenthau was prepared to promise that the United States would not retaliate. A similar commitment presumably could be obtained from the British. But a unilateral devaluation was not acceptable to the new Popular Front government. Having vowed to defend the stability of the currency during the electoral campaign, it would be embarrassing for Blum to now devalue it by 25 percent. But by representing the change in parity as part of an international agreement, the government might portray it as a “monetary adjustment” or “realignment” rather than a loathsome devaluation. Such an agreement was politically necessary for Blum and his cabinet. They “had to dress [devaluation] up and make it look attractive to the French people as a French accomplishment,” as Morgenthau put it.[70]

Having found no takers for their multilateral conference, Blum and Ariol's next proposal was for an agreement limited to the three major currencies. In the opening days of September, Ariol circulated a draft agreement specifying narrow fluctuation bands for sterling, the dollar, and the franc. The three nations, under this proposal, would agree not to devalue except by mutual consent. They would coordinate support operations for maintaining the stability of bilateral rates. Once the crisis passed, they would move to restore gold convertibility. Although the Americans were mildly receptive, the British, perceiving another scheme to tie their hands, rejected Ariol's draft as “hopeless.”[71]

Running out of time, the French dropped their proposal for fixed parities. Next they eliminated their demand for an eventual return to gold. All that was left was a statement of intent by the three governments to avoid competitive depreciation and retaliatory trade policies, and an implicit

understanding that if the French devaluation stayed within acceptable limits it would not be offset. Morgenthau's view that tripartite exchange-rate negotiations were motivated mainly by the French need, for domestic political reasons, “to dress up” devaluation as a political accomplishment was clearly not far off the mark.

Following the vetting of texts in London and Washington, statements were issued simultaneously in the three national capitals.[72] The declaration, known as the Tripartite Agreement, affirmed the desire of the three principals to cooperate in minimizing exchange rate instability. No country, they declared, would henceforth (p.380) manipulate the exchange rate “to obtain an unreasonable competitive advantage.” The three governments reiterated their commitment to free international trade and their opposition to exchange control. Other nations were invited to issue similar statements and to thereby join the tripartite club.

French foreign exchange and stock markets were closed for a week while Parliament, called into special session, passed a law regularizing the depreciation of the franc. Devaluation was limited to 25 percent. Gold exports were prohibited except with government approval. Bank of France reserves were revalued to reflect the rise in the domestic-currency price of gold. The largest share of the capital gain was credited to the account of a newly created exchange equalization fund.

France's defection destroyed the remaining advantages of gold bloc membership. Switzerland and the Netherlands followed France off gold immediately. Other countries took the opportunity to adjust their exchange rates. The Italian lira was devalued to the level of the dollar. The Czech crown was devalued for a second time. Turkey, Greece, and Latvia, which had previously pegged to the French or Swiss francs, joined the sterling area. The Tripartite Agreement was hailed as the dawn of a new cooperative age. “A streak of sunlight had broken through the dark clouds of nationalism,” according to the *New York Times*. “International cooperation was still possible.”[73] This was extravagant praise for an agreement whose only concrete accomplishment was to prevent a single

round of competitive currency depreciation. The Tripartite Agreement did not represent reconstruction of the international monetary order. The major bilateral rates had not been stabilized—there had been no return to gold. Nor did the agreement represent a significant step toward the stabilization of output and employment. No international agreement to coordinate expansionary monetary or fiscal initiatives resulted. Tariff barriers were not reduced.

It has become fashionable to dismiss the Tripartite Agreement as cosmetic—as no more than an empty declaration required by France for domestic consumption.[74] In fact, it represented something more. By limiting France's devaluation and removing the need for an offsetting devaluation of the dollar, the agreement helped to solidify the $35 gold price, providing a nominal anchor for the international system. By removing the need for an offsetting devaluation by Britain, it allowed the French to peg the franc to sterling at approximately 105 from the reopening of the markets on October 2 until March 1937. The franc renewed its depreciation thereafter, but only after an extended period of stability.[75]

The Tripartite Agreement reduced the risks associated with certain forms of intervention in the foreign exchange market, encouraging governments to counter short-term currency fluctuations. In negotiations between mid-September and mid-October, first Britain and France and then the United States agreed to redeem in gold any foreign exchange their counterparts acquired. Each morning the three exchange equalization funds announced the price at which they would convert into (p.381) gold at the end of the day any of their currency accumulated by the other countries. The measure thereby reduced the risks of intra-daily support operations.[76]

The fact that currencies had been adjusted closer to sustainable levels allowed governments to intervene to damp exchange-rate fluctuations without quickly exhausting their reserves. Throughout the winter of 1936–37, the French intervened to support the franc, the British to limit the appreciation of sterling. The dollar prices of both currencies were relatively stable. The franc renewed its decline in April 1937, before being stabilized again toward the end of 1938.

Sterling was allowed to decline from $5 to $4.68 in the second half of 1938, but otherwise the sterling-dollar rate remained remarkably stable.

Thus, the three years following the Tripartite Agreement were marked by less turbulence in international financial markets than the four preceding years. Clarke notes that the sterling-dollar rate fluctuated within a narrower band in the first six months that followed the agreement than in 1934–35 or in the first three quarters of 1936.[77] In fact, the point is general. The variability of the change in the American, French, Belgian, Dutch, and Swiss exchange rates against sterling, shown in the first panel of Table 12.6, was on average less than half as large in 1937–39 as it had been in 1932–36. The only exception to the rule was the French franc, reflecting its renewed instability starting in the second half of 1937. With greater exchange rate stability came a reduced risk of engaging in foreign-exchange-market transactions: as shown in the second panel of Table 12.6, the exchange-risk premium (measured ex post as the forward exchange rate minus the spot exchange rate that actually prevailed when the forward contract matured) fell by a third in the post-Tripartite Agreement period.[78]

It was possible therefore to begin to reestablish normal relations between national financial markets. The variability of interest rate differentials, an obvious measure of the extent of international capital market-integration (measured in Table 12.6 as the real interest rate in London minus the real interest rate in Paris, Brussels, Amsterdam, Zurich, or New York), also declined by a third after 1936.[79] (p.382)

Table 12.6. Variability of Exchange Rates and Real Interest Rates Before and After the Tripartite Agreement

Means			Standard Deviations	
	Before	After	Before	After
	Percentage Change in Exchange Spot Rate			
United States	2.17	0.46	3.42	0.43
France	1.28	1.90	1.34	3.85
Belgium	1.86	0.47	4.59	0.44
Netherlands	1.33	0.46	1.31	0.57
Switzerland	1.35	0.40	1.33	0.43
Group	1.60	0.74	2.76	1.77
	Exchange Risk Premium			
United States	−1.92	0.24	7.44	1.39
France	1.86	−3.68	2.77	7.90
Belgium	−0.87	1.10	9.38	2.33
Netherlands	1.70	0.07	2.87	1.29
Switzerland	1.63	0.03	2.80	1.14
Group	0.48	−0.45	5.78	3.81
	Real Interest Differential			
United States	0.62	0.07	1.33	1.12
France	−1.64	−1.13	2.21	2.04
Belgium	−1.46	−1.12	2.18	1.23
Netherlands	−0.87	0.49	2.07	0.93
Switzerland	−1.09	−0.32	1.36	1.05
Group	−0.89	−0.40	1.87	1.33

Notes: The period before the Tripartite Agreement is January 1932 through August 1936; the period after is October 1936 through June 1939.

Source: See text.

The franc's devaluation and the currency adjustments that accompanied it brought the gold standard era to a close. The only major currency still pegged to gold was the U.S. dollar. Other countries allowed a free market in neither gold nor foreign exchange. Nothing better symbolized the demise of the gold standard system than the fact that by 1937 the only country free from exchange control and still on gold at its pre-Depression parity was Albania.[80]

(p.383) The Aftermath

If the experience of other countries was any guide, devaluation should have released France from the Depression. This time, however, proponents of the policy were disappointed. Real share prices in Paris, rather than rising, fell by 10 percent between 1936 and 1937. The recovery of industrial production was halting at best. After rising at a quarterly rate of 2 percent between the fourth quarter of 1936 and the second quarter of 1937, in the third quarter of 1937 French industrial output fell back to pre-Depression levels. A second recovery was also aborted. Not until early 1938 did industrial production again reach the levels of the third quarter of 1936. Some fall in unemployment and some rise in the production of capital goods occurred in the wake of devaluation. But the benefits were small compared to those enjoyed by previous countries that went off gold.

Neither was there an improvement in France's external position. The French trade balance deteriorated sharply in 1936–37. Within four months of devaluation, capital flight was again underway. The authorities intervened to limit the franc's depreciation. But the Bank of France continued to lose reserves, forcing the government to abandon its policy of borrowing from the central bank. In June 1937 Blum requested powers of decree. These were refused, and the government fell. Again the stock market was closed. Again the government devalued the franc. Again external balance was not restored.

The Popular Front's own explanation for its program's failure emphasized the hostility of the right. Devaluation in France worked less well than in Britain, its leaders alleged, because in

France the policy was undertaken by a government of the left whose efforts were undermined by business and financial interests.[81] Savers, rather than committing their funds to domestic uses, continued to channel their assets abroad. Manufacturers refused to initiate investment projects even after the parity change had restored the competitive position of the French economy. The perverse response of investment was the most distinctive feature of the French devaluation. In contrast to U.S. experience in 1933, where the production of investment goods rose by more than 50 percent in the quarter following devaluation, French investment failed to recover between 1936 and 1937, and in 1938 resumed its decline.

Critics of the government argued that ample justification existed for the skepticism of savers and investors. Blum's administration ran large budget deficits in the year following devaluation. According to the opposition, investors feared that removal of the gold standard constraints, rather than permitting the adoption of sensible reflationary measures, opened the door for the Popular Front Government to pursue all manner of irresponsible fiscal and financial policies. Instead of stimulating the economy, devaluation and budget deficits promoted fears of inflation, financial turmoil, and capital flight. Inept monetary and financial policies aggravated the confidence crisis, according to the government's critics. Failure to quickly (p.384) stabilize the franc at its new, lower level made it all the more difficult to reverse the direction of capital flight.[82]

Comparison with U.S. experience three years previously casts doubt on each of these explanations. The U.S. devaluation ignited a successful economic recovery. Yet uncertainty about Roosevelt's program had been every bit as pervasive initially as uncertainty about Blum's. Roosevelt's intervention in labor and commodity markets had proven as far-reaching. The dollar had not been quickly stabilized at a new, lower level. The federal budget deficit in the United States had been 59 percent of expenditures in 1932 and 57 percent in 1933, or nearly 5 percent of GNP. The comparable figures for France were remarkably similar: 30 percent of expenditures and 7 percent of GNP in 1936, 32 and 7 percent in 1937.[83] Indeed, most countries that devalued in the 1930s did so from a

position of substantial budget deficit. France was by no means unusual.

A more compelling explanation for the failure of France's devaluation lies in other economic policies. These imparted to the economy a negative supply shock on a massive scale. Pressure for wage increases was unrelenting. Though there was a decline in strike activity immediately following the *Accord de Matignon*, there were new outbreaks over the course of the subsequent year. Between 1936 and 1937, average weekly hours fell from 46 to little more than 40.[84] Workers demanded further increases in hourly rates to prevent weekly earnings from falling with the reduction in hours. In Paris and its environs, hourly wage rates rose, from a base of 100 in June 1936, to 115 in September 1936, 121 in December 1936, 150 in March 1937, and 159 in June 1937. The increase outside Paris was more moderate but nonetheless striking.[85] The increase in wages consistently outstripped the concurrent rise in prices. Instead of falling, as was typical in countries depreciating their currencies, real wages rose dramatically in Paris, and modestly elsewhere in France, between 1936 and 1937 (see Figure 12.7).

Normally, some increase in hourly labor productivity would have been associated with the fall in weekly hours. In 1936–37 that increase was minimized by labor-management conflict—or, in the League of Nations' antiseptic terms, by "a lack of cordial relations between workers and employers."[86] The rise in labor productivity was dwarfed by the increase in real labor costs.[87] Producers did what they (p.385)

could to pass along the increase in costs, but domestic regulation and international competition limited the scope for doing so.

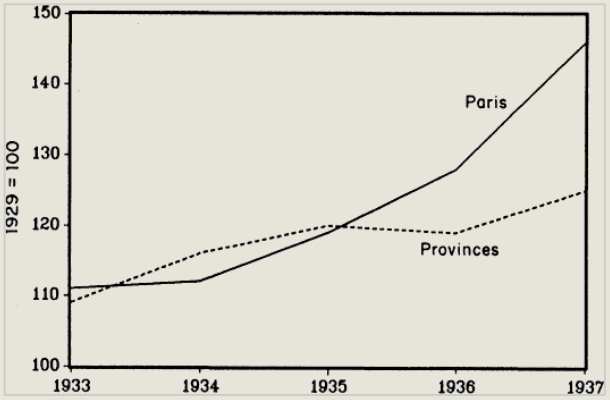


Fig. 12.7. French real wages, 1933–37. In contrast to the experience of other countries, in France currency depreciation did not produce a significant reduction in real wages and costs of production.

Source: ILO Yearbook (1938), p. 357.

Blum's devaluation of the franc consequently failed to reverse two principal distortions imparted by years of deflation: rising real costs of production and falling profitability. With higher wages putting upward pressure on costs, there was little incentive to expand production. With higher costs putting upward pressure on prices, there was little improvement in the terms of trade. Hence little increase in exports occurred. With no improvement in profitability, there was little incentive for additional investment. The government's reaction to the rise in prices, the deterioration of the trade balance, and the weakness of the exchange rate was to retrench on the fiscal front. Instead of encouraging supply in response to the pressure of demand, it reduced demand to accommodate limited supply.

Once again the U.S. comparison is revealing. The NIRA codes had helped push up U.S. wages and prices following the dollar's devaluation. Average hourly earnings in U.S. manufacturing rose by 20 percent between 1933 and 1934 and by 2 percent between 1934 and 1935. Wholesale prices rose by 14 and 7 percent over those same two years.[88] By this

measure, real wages rose by 6 percent in 1933–34 before declining by 5 per cent in 1934–35. Assuming any increase in labor productivity, or at least no decline, as economic activity in the United States began to recover, the rise in unit labor costs in the United States was only a fraction of their post-devaluation rise in France.

(p.386) The New International Environment

Having risen steadily for several years, global industrial production turned down in the early months of 1937. By the fourth quarter of the year, employment was falling as well. The slump persisted into 1938, when growth resumed.

Though France's difficulties were one factor in the worldwide slowdown, the contractionary impulse emanating from the United States was considerably more important. The United States still purchased more than a seventh of the exports of the rest of the world. It was the single largest capital-importing nation. By 1937, the United States was experiencing a full-fledged recession. Just as it had been in 1929, the U.S. downturn was exceptionally severe. Industrial production declined by nearly 30 percent between August 1937 and January 1938, more than four times as fast as in any other industrial country except Belgium.[89]

The popular explanation for the American recession rested on excessive inventory accumulation. Undue optimism on the part of industrialists, analysts of the American economy concluded, encouraged firms to produce ahead of demand. Stocks rose rapidly in automobiles, steel and textiles. When inventories were finally recognized as excessive, production was scaled back. Recession was the inevitable result.[90]

In fact, there is good reason to doubt that inventory accumulation was at the root of the recession. It is more likely that excessive inventories were a result of the economic slowdown rather than an independent cause. As the growth of demand slowed, producers accumulated inventories, leading them ultimately to curtail production.[91]

What caused the decline in demand that produced the excessive inventories? The answer is economic policy. The

1937 increase of $1.2 billion in old age, railroad retirement, and unemployment trust fund taxes represented an amount equal to 45 percent of that year's federal budget deficit. The $1.7 billion veteran's bonus that had stimulated consumption spending in 1936 was not repeated in 1937, nor was its contribution to demand replaced by another form of public spending. Had fiscal policy remained neutral, one would expect to have seen the deficit widen in the recession, as tax revenues fell and outlays on income maintenance rose. In fact, the federal budget deficit declined from $4.4 billion in 1936 to $2.7 billion in 1937, or from 5.3 to 3.0 percent of GNP. The constant employment budget balance, according to calculations by the concept's inventor, E. Cary Brown, swung from $5 billion in 1936 to $0.6 billion in 1937, or from 2.5 to 0.1 percent of GNP.[92]

Accompanying this fiscal shift was a more restrictive monetary policy. Starting (p.387) in autumn 1935 the Federal Open Market Committee had expressed concern about the inflationary potential of excess reserves. A series of memoranda submitted to the Federal Reserve Board in the second half of 1935 and early 1936 warned that the accumulation of liquidity in the banking system threatened to set off renewed inflation at any time. “The Committee is of the opinion,” reported the Board in its 1935 annual report, “that steps should be taken by the Reserve System as promptly as may be possible to absorb at least some of these excess reserves, not with a view to checking some further expansion of credit, but rather to put the System in a better position to act effectively in the event that credit expansion should go too far.”[93] With commodity prices rising rapidly, the Fed raised required reserve ratios, by 50 percent in August 1936 and another 50 percent in early 1937. Simultaneously, the Treasury stepped up its sterilization of gold and capital inflows.

In 1937, as in 1929, the United States imparted the principal destabilizing impulse to the world economy. But in 1937 the consequences were different. Between 1929 and 1930, when U.S. industrial production had fallen by nearly 20 percent, industrial output in Europe had declined by nearly 10 percent. Now when U.S. industrial production fell by more than 12

percent between the first and second quarters of 1937, industrial output in Europe fell by a mere 1.5 percent. (Figures for Europe exclude the U.S.S.R. They are displayed in Figure 12.8.) The explanation for the contrast between 1929 and 1937 lay not in any decline in America's position in the international economy. In 1937 it was still the world's leading commodity importer. In 1937 it absorbed 2½ times as much gold as all other surplus countries combined. Yet in 1937–38, its recession had much less impact on other countries than in 1929–30.

The explanation for the contrast is straightforward. Liberated from the gold standard, other countries were not forced to match deflationary policies in the United States with their own deflationary initiatives. There was little tightening of monetary conditions outside the United States. The rate of growth of North American money supplies fell to zero in 1936–37, but in Europe money supplies continued to grow at nearly a 7 percent annual rate, down only slightly from 1935–36 levels (see Table 12.7).

Nor was there much fiscal retrenchment outside the United States. Britain commenced an ambitious program of military spending in 1937, a quarter of it financed by government borrowing. In Germany and Japan, budgetary expenditure, directed heavily toward rearmament, was maintained at high levels. Military spending on this scale would not have been possible had these countries still been on gold.[94] In the event, the American recession had little discernible impact on economic activity in Britain, Germany, or Japan. (p.388)

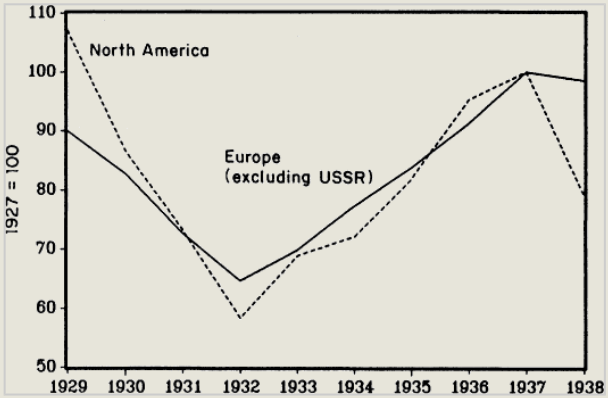


Fig. 12.8. Industrial production in Europe and North America, 1929–38.

In 1937–38, in contrast to 1929–32, industrial production in Europe did not move closely with industrial production in North America. European policymakers used the freedom of action provided by abandoning the gold standard to adopt more expansionary policies than those pursued in the United States.

Source: League of Nations, (1938a), p. 103.

The U.S. demand for gold in 1937 was satisfied almost exclusively by two countries: France and Japan. Rather than deflating in response to their gold losses, both allowed their currencies to depreciate. In Latin America, exchange rates were allowed to depreciate substantially over the second half of 1937. In selected Latin American countries, as well as in Central and Eastern Europe, exchange control was tightened, providing further insulation from the external shock. In the second half of 1938, depreciation spread to the sterling area. These exchange rate changes reconciled

Table 12.7. Percentage Change in M1 Between Ends of Successive Years (In Percentage Points)

	1935–36	1936–37
North America	17.61	−0.07
Central and South America	12.36	4.37

	1935–36	1936–37
Europe	8.83	6.56
Far East	9.08	10.24

Notes: All figures are unweighted averages of data for constituent countries. North America includes Canada and United States. Central and South America includes Argentina, Brazil, Chile, Colombia, Uruguay, Venezuela, El Salvador, and Mexico. Europe includes Belgium, France, Netherlands, Poland, Switzerland, Austria, Germany, Bulgaria, Czechoslovakia, Hungary, Italy, Yugoslavia, Denmark, Finland, Norway, Sweden, United Kingdom, and Ireland. Far East includes Australia, New Zealand, and Japan.

Source: League of Nations' *Memorandum on Currency and Central Banks* (various issues).

(p.389) deflation in the United States with expansionary policies in other parts of the world.

Superficially, the parallels between 1929 and 1937 were alarming. As in 1929, the United States had imparted a destabilizing impulse to the world economy. A tightening of American policy led to a decline in economic activity and a stock market crash on October 19, 1937. This time, however, recession did not culminate in depression. By the second half of 1938, output in the United States and abroad had resumed its upward movement. One reason may be that U.S. policymakers had learned from experience. Federal spending was increased and the Treasury's gold sterilization program suspended in response to the slowdown. The new safety net of bank regulation prevented the spread of financial crisis. Another reason may have been the stimulus of rapidly rising military spending around the world. But the central factor is surely that it was no longer necessary for other countries to fight fire with fire—to meet deflation with deflation. It was only possible for them to pursue more expansionary policies than those of the United States because they had been freed from their golden fetters.

Notes:

(1) PRO FO 371/19861, Mr. Lloyd Thomas to Mr. Eden. “Memorandum respecting the French budget for 1936.” January 8, 1936, p. 2.

(2) These figures are unweighted averages of data for individual countries, as described in Table 12.1.

(Table 12.1.) Percentage Growth of Industrial Production, 1929–36

	1929–32	1929–33	1929–34	1929–35	1929–36
Gold bloc countries	−28.17	−22.60	−21.84	−20.60	−13.94
Exchange control countries	−35.70	−31.70	−21.24	−10.28	−2.30
Sterling area countries	−8.75	−2.53	8.88	18.05	27.77
Other countries with depreciated currencies	−17.48	−1.63	3.26	14.13	27.06

Note: Figures are calculated as unweighted averages of country data. *Gold bloc:* Belgium, France, Netherlands, Poland, and Switzerland. *Exchange control:* Austria, Czechoslovakia, Germany, Hungary, and Italy. *Sterling area:* Denmark, Finland, New Zealand, Norway, Sweden, and the United Kingdom. *Other depreciators:* Brazil, Colombia, Chile, Mexico, Costa Rica, Guatemala, Nicaragua, El Salvador, and the United States.

Source: Constructed from League of Nations (1938a), Mitchell (1975), Butlin (1984), Urquhart and Buckley (1965), and Thorp (1984).

(3) Even nations with floating currencies felt the impact of American export penetration abroad. The trade deficit of the

sterling area doubled, for example, between 1933 and 1934. League of Nations (1935a), p. 28.

(4) League of Nations (1935), p. 221.

(5) Mouré (1988), pp. 274–277.

(6) Short-lived governments under the Radicals Serraut and Chautemps had succeeded the Daladier Government, when Daladier was refused support for his proposal to cut public sector salaries. A contemporary account of the Stavisky affair and the reaction it provoked is Werth (1934). A recent portrait is Large (1990), chapter 1.

(7) Bank of France, *Procès verbaux*. 22 February 1934. The Bank of France's difficulties in early 1934 were aggravated by the fact that the United States stabilized the dollar in January of that year, prompting Americans who had shifted their savings to the gold bloc countries to protect themselves from capital losses on dollar-denominated assets to repatriate their funds. See chapter 11.

(8) Germain-Martin (1936), pp. 258–266.

(9) Foreign exchange reserves remained virtually unchanged. Federal Reserve Board (1943), p. 642.

(10) League of Nations (1935a), p. 250.

(11) Globally, the only exceptions to this statement were China, the U.S.S.R., Algeria, and the Netherlands East Indies. The U.S.S.R., under Stalin, withdrew from the international economy. China, on the silver standard, saw her currency appreciate against that of countries that devalued. Algeria and the Netherlands East Indies, whose imports fell by 8 percent, were effectively members of the gold bloc. The Algerian economy was tied to France and used the franc as its currency, while the Netherlands Indies used the Dutch guilder. League of Nations (1935a), p. 165.

(12) Goossens, Peeters, and Pepermans (1988), p. 307.

(13) Eichengreen and Hatton (1988), p. 21.

(14) Chlepner (1943), pp. 61–62. “The period of prosperity after 1926 seems to have tempted a member of small and medium-sized banks to imitate the activities of the *Société Générale*, without the resources or the century-long experience of that institution behind them. PRO FO 371/18786, “Memorandum reflecting the financial and economic situation in Belgium,” 1 May 1935, p. 1.

(15) Details on the banking problem are provided by Triffin (1937) and Van der Wee and Tavernier (1975).

(16) These were cooperative societies that had established savings departments called *caisses d’épargne*. The *caisses* accepted deposits that were invested in government securities or deposited in other banks.

(17) Francqui did, however, while still arguing that “devaluation was opposed to the general interest,” admit in public that it might prove inevitable unless the government took urgent steps to balance the accounts. His interview with *Le Loir*, printed on 4 October 1934, is contained in PRO FO 371/17620.

(18) Shepherd (1936), p. 199.

(19) Chlepner (1943), p. 73.

(20) Van der Wee and Tavernier (1975), p. 275.

(21) Min. Fin. B12678, Telegram, Brussels, 4 December 1934.

(22) Van der Wee and Tavernier (1975), pp. 275–276. In fact, the French offered to increase their quotas on imports from Belgium by 100 million francs, but this was only a fraction of the additional 800 million francs worth of export revenues that Belgian experts figured defense of the currency required. Baudhuin (1946), Vol. 1. p. 330. The French Finance Ministry's more ambitious plan to convert its quotas to import duties, and thereby permit Belgium to increase its sales, was made contingent on foreign reciprocation, and therefore proved impossible to arrange in the short run. “Note sur un projet de politique du bloc-or,” Min. Fin. B32321, 12 March 1935.

(23) Shepherd (1936), p. 205.

(24) Shepherd (1936), p. 207.

(25) Twenty-eight percent was the change in the ratio of British to Belgian wholesale prices from 1928 to March 1935. Shepherd (1936), p. 213.

(26) Shepherd (1936), p. 218.

(27) Since the increase in money supply was supply driven, there was a fall in the money multiplier. Thus, broader measures of the money supply expanded only half as quickly as note circulation. The year 1935 is compared with 1933 because the volume of commercial bank deposits is not readily available for 1934. That for 1933 and 1935 is drawn from League of Nations (1938c), pp. 63, 71. Van der Wee and Tavernier (1975, pp. 428–429), on the basis of somewhat different data, calculate that the money multiplier (the ratio of M 1 to the monetary base) fell from 1.68 in 1933 to 1.54 in 1935.

(28) League of Nations (1936a), p. 52.

(29) League of Nations statistics suggest that only in the U.S.S.R. did industrial production rise more rapidly over the period, although there are reasons to take Soviet figures for the 1930s with a grain of salt. The prices of variable securities are from Methorst (1938), p. 33, while the index of building activity is from League of Nations (1936b), p. 52.

(30) Shepherd (1936), p. 218.

(31) Another factor, in addition to the evolution of relative prices, that contributed to the stagnation of exports was the government's policy of preventing “exchange dumping” in order to minimize the danger of French commercial retaliation. The Belgian government pledged that exporters would not reduce their foreign currency prices if foreign governments promised to apply no new barriers against Belgian goods. An export licensing system was to developed to gather data on export prices and enforce the agreement.

(32) League of Nations (1936a), p. 52.

(33) The debt in question was non-interest bearing, highlighting the purely bookkeeping nature of the transaction. League of Nations (1936a), p. 50.

(34) In the United States, for example, where the dollar had been devalued from $20.66 to $35 an ounce, the ratio was 59 percent (20.66/59).

(35) This is the League of Nation's index of industrial production excluding the Soviet Union. If the U.S.S.R. is included, the growth of industrial production is even more impressive. League of Nations (1936b), p. 13.

(36) Einzig (1937a), p. 43; Hodson (1938), pp. 370–371. And over the six months preceding the defeat of the initiative, Swiss banks suffered a persistent drain of deposits, raising fears for the stability of the franc. Min. Fin. B31730, “La situation difficile des banques suisses,” 10 August 1935.

(37) This paragraph relies on the account of Jackson (1985), chapter 5.

(38) So reported Frederick Leith-Ross on the basis of a conversation with Flandin. PRO T188/109. “Leith-Ross to Hopkins,” 24 March 1936.

(39) So Sir Henry Strakosch informed British Treasury officials on the basis of a conversation with “a personal friend of M. Flandin.” PRO T188/109, “Sir R. Hopkins, Mr. Fergusson,” 29 January 1935.

(40) Sauvy (1984), pp. 162–171, provides an analysis of the Flandin experiment.

(41) Methorst (1938), p. 107.

(42) PRO FO371/19601, “Circular on Present Economic Outlook,” July 1935, pp. 16, 18.

(43) See, for example, Einzig (1937a), pp. 49–52.

(44) See below, p. 30.

(45) PRO T188/116, “Note of an Interview with M. Monick on 16th May 1935.”

(46) Bernard and Dubief (1985), p. 287; Jackson (1985), p. 105.

(47) Laval “aggressively” attacked Sir Frederick Leith-Ross across a table at the Palais Royale on July 9, 1935, arguing that his was “a courageous government but his position would be impossible by October or November if [the British] were not in a position to join in a stabilisation agreement.” PRO FO 371/19601, “Economic Developments and Stabilisation of Currencies,” 15 July 1935.

(48) As Einzig (1937a, p. 62) put it, “M. Laval did not realize that what could be done in a totalitarian state could not be done in a democratic state. He had no power to compel industrial workmen to accept cuts, or to enforce an all-round reduction of commodity prices. Such a thing is impossible in a democratic country in time of peace.”

(49) League of Nations (1935a), p. 258; Sauvy (1984), vol. III, p. 380.

(50) Jackson (1985), pp. 107–108. Contemporary estimates put the figure at 60 percent. League of Nations (1936a), p. 294.

(51) League of Nations (1938c), p. 139.

(52) League of Nations (1936b), p. 294.

(53) League of Nations (1936a), p. 49.

(54) League of Nations (1936b), p. 15.

(55) PRO FO 371/19862, “Financial Situation in France,” 30 March 1936.

(56) Jackson (1985), pp. 131–132.

(57) Jackson (1988), p. 164; Sauvy (1984), p. 270.

(58) The opposition, for their part, dismissed Blum's proposals as “Rooseveltism on a Lilliputian scale.” PRO FO371/19863, “Sir G. Clerk telegram of 17 June 1936.”

(59) Marjolin (1938), p. 142.

(60) Caillaux's June 11 article in *Le République* is contained in PRO FO 371/19863.

(61) In addition, Parliament passed a bill in August authorizing departmental committees to extend low-interest loans to otherwise solvent enterprises suffering from the rise in labor costs.

(62) League of Nations (1936b), p. 296.

(63) Hodson (1938), pp. 411–412.

(64) So reported the British Embassy in Paris to the Foreign Office. PRO FO 371/19864, Telegram of September 9, 1936.

(65) French conversations with British experts such as Ralph Hawtrey did nothing to disabuse them of this notion. Min. Fin. B12678, “Notes de conversation avec Mr. Hawtrey,” April 1936.

(66) Einzig (1937a), p. 207.

(67) Drummond (1979), p. 9.

(68) Min. Fin. B32323, “L'attache financier à l’ambassade de France à Londres à Monsieur le Ministre de Finances,” 17 January 1935. Monick suggested to Leith-Ross in January 1935 the possibility of a coordinated devaluation of the gold bloc currencies. PRO T188/109, “Note of an interview with M. Monick,” 23 January 1935. Jackson (1985), p. 174; Clarke (1977), pp. 8–10; League of Nations (1935a), p. 227; B.I.S. (1935), p. 70.

(69) Blum (1959), vol. 1, p. 156.

(70) Blum (1959), vol. 1, p. 157.

(71) Clarke (1977), pp. 34–35.

(72) The texts of the three statements appear in Bank for International Settlements (1937), Annex VII. The preceding negotiations are described in U.S. Department of State (1933), vol. 1, pp. 535–552 and passim.

(73) “Restoring Monetary Order,” *New York Times* (4 October 1936).

(74) The introduction to Drummond (1979) provides a survey of views of the importance of the agreement.

(75) See below. p. 383.

(76) In the wake of the 1933 World Economic Conference, the gold bloc countries had agreed to a similar convention. See Mouré (1988), p. 149. But the 1936 agreement was considerably weaker. In 1933 the gold bloc countries had been committed to stabilizing the gold price indefinitely. Now there was nothing to prevent countries from raising that price each morning, imposing capital losses on other countries that supported them on a persistent basis.

(77) Clarke (1977), p. 57.

(78) The measure of variability used here is the standard deviation, following Eichengreen (1989e).

(79) The real interest rate for each country is calculated as the nominal interest rate minus the actual rate of wholesale price inflation over the period. The exchange rate, interest rate, and wholesale price data used in these calculations are taken from Einzig (1937b) and various issues of the *Economist*. The decline in the variability of the real interest differential reflected a decline not only in the exchange risk premium but also in the covered interest differential (the nominal interest differential net of the forward foreign exchange discount) and in the rate of real exchange rate depreciation. This first of these two effects plausibly reflects a decline in the risk of expected changes in exchange controls like those which so disrupted international capital markets in the first half of the 1930s. The second reflects the greater stability of relative commodity prices when nominal exchange rates are more stable. See Frankel and MacArthur (1988). Additional details on the calculations appear in Eichengreen and James (1990).

(80) Bank for International Settlements, *Annual Report* (1937), p. 24. Germany, Poland, and Lithuania officially retained their pre-Depression parities, although all international transactions were tightly regulated by exchange control. Belgium was the only Western country that preserved an open market for gold,

with the government standing ready to purchase and sell gold to all comers at the new domestic-currency price.

(81) Bernard and Dubief (1985), p. 314.

(82) A new tax on speculators who had obtained gold from the Bank of France and now wished to reconvert it into francs did not help. Arndt (1944), pp. 144–145; Bernard and Dubief (1985), p. 314.

(83) Data for the United States are from U.S. Department of Commerce (1976); those for France are from Sauvy (1984), p. 380, correcting for arithmetic errors.

(84) I.L.O. (1938), pp. 86–87.

(85) In the provinces, the initial rise in money wages was larger still, according to Kalecki (1938), p. 26. The author also suggests that the actual increase in wages was larger than that reported because, prior to the Blum Government reforms, the trade union rates that provided the basis for government statistics were not uniformly observed.

(86) League of Nations (1937a), p. 210.

(87) Kalecki (1938), p. 27, Jackson (1988), p. 175, notes that Kalecki's estimates are for factories employing more than 100 workers only. Citing evidence from the mining industry, he suggests that productivity economywide may have actually fallen over the period.

(88) On the contribution of the NIRA to these changes in wages and prices, see chapter 11, note 81.

(89) Roose (1954), p. 25. The international comparisons are calculated from League of Nations (1938a), p. 195.

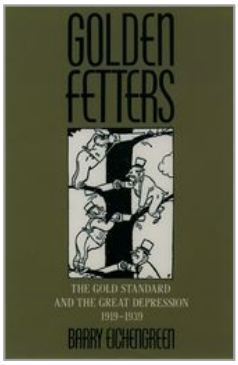
(90) Accounting for the accumulation of inventories is beyond the scope of this study. Some observers emphasize undue optimism on the part of entrepreneurs; others fear that labor unrest provoked by inflation would disrupt ongoing production.

(91) “The reduction in stocks which accompanied the collapse of 1937,” the American economist Lloyd Metzler wrote, “was probably more a result of fear of inventory losses than of a feeling that inventories were excessive.” Cited in Roose (1954), p. 186. A similar conclusion is reached by Slichter (1938).

(92) Brown (1956), pp. 864–865. Accounts emphasizing the role of fiscal policy include Hansen (1938), Ayres (1939), and Roose (1954).

(93) The memoranda on excess reserves are collected in FRBNY, Box 250A, “Reserves.” On the perceived danger of inflation, see especially “Excess Reserves and Federal Reserve Policy,” 19 September 1935, p.9 and *passim*. The quote in the text is from Board of Governors of the Federal Reserve System, *Twenty-Second Annual Report of the Board of Governors of the Federal Reserve System Covering Operations for the Year 1935* (1936), pp. 231–232.

(94) If, by coincidence, all the nations concerned had increased government spending at a particular rate, one can imagine that no one of their exchange rates would have weakened and, therefore, that the presence of the gold standard would have made no difference. But in the absence of international coordination of expenditure policies, which was inconceivable in the climate of growing international hostilities, it is hard to imagine this result.



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Conclusion

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Abstract and Keywords

The legacy of the gold standard and the Great Depression continued to influence both the economic behavior of individuals and the policies of governments through the remainder of the interwar years. That influence persisted into World War II, into the postwar period, and indeed to the end of the twentieth century. This concluding chapter describes some of the implications of that persistence for the postwar international economic order.

Keywords: economic policy, gold standard, Great Depression, postwar international economic order

Problems with the operation of the gold standard and the unprecedented rise in unemployment were more than two notable aspects of the economic crisis of the 1930s. They were connected in ways that compounded and reinforced one another. This is the central theme of the present book. Problems with the gold standard contributed directly to the

collapse of output and to the increase in unemployment that began in 1929. The downward spiral of output and employment exacerbated the difficulty of operating the gold standard, further depressing levels of economic activity. But as with the fever of a flu-ridden patient, a point came where the severity of the symptoms signaled imminent recovery. The collapse of output and employment had proceeded so far that the gold standard could no longer be supported. Once its provisions were finally removed from the international scene, economic recovery could commence.

The interwar gold standard's problems become comprehensible when the circumstances in which it operated are contrasted with those that prevailed before World War I. Before the war the operation of the international monetary system rested on the credibility of the commitment to gold convertibility and on international cooperation. That credibility was predicated on the insulation enjoyed by central bankers and other government officials from pressures to adapt policy to potentially incompatible ends. Such insulation reflected the fact that the connections between monetary policy and unemployment were only vaguely understood. Those most concerned about the domestic consequences of international monetary policies had as yet acquired only limited political influence. The kind of fiscal dislocations that would perturb the gold standard system subsequently, requiring a concerted and sometimes painful response from monetary policymakers, remained few and far between.

The credibility of the prewar commitment to gold thus depended on a unique constellation of political and economic factors. In addition, however, the viability of the gold standard system rested on international cooperation. Even in unexceptional periods, the system's smooth functioning required central banks to harmonize their policies. In times of crisis, collective support operations were needed to prop up weak currencies. By helping the country in the most delicately balanced position, collective support minimized the danger that a crisis would collapse the entire house of cards. Collective support was necessary because the resources required for stabilizing intervention sometimes exceeded those at the disposal of (p.391) any one gold standard country.

Indeed, in the most serious crises, the Bank of England, the central bank normally in the strongest position, was the target of attack.

This account portrays the classical gold standard as a more multipolar system than typically depicted in recent literature. The point is not, however, that all countries and currencies were equal. To paraphrase George Orwell in *Animal Farm*, some currencies were more equal than others. But even the currency that was “most equal,” the British pound, was sometimes dependent on collective support from abroad. Without international cooperation, it is likely that sterling's convertibility into gold would have been suspended at least twice in the last quarter-century of the classical gold standard era. For the Bank of England to suspend convertibility might not have been a fatal blow to the international system. But the action surely would have diminished the willingness of investors to hold sterling balances and of foreign governments to maintain sterling reserves. The international gold standard's subsequent operation would have been very different. Thus, precisely those who insist most strongly that Britain and the Bank of England played singular roles in the operation of the pre-1913 gold standard must acknowledge the importance of international cooperation.

International cooperation was not automatically arranged whenever circumstances warranted, however. It became prevalent only in the final decades leading up to World War I, after an extended period of learning and adaptation. It was possible because no international disputes as divisive as the war debts and reparations tangle of the 1920s existed. Domestic opposition to central bank cooperation was muted as a result of the insulation from political pressures that monetary policymakers enjoyed. The acquisition over many years of a common conceptual approach to financial management provided a framework conducive to international monetary cooperation. The extent of international cooperation thus rested on a specific conjuncture of political, economic, and intellectual circumstances unique to the late-nineteenth and early-twentieth centuries.

World War I transformed those circumstances. The credibility of the commitment to gold was undermined by the erosion of central bankers' insulation from political pressures. In response to Europe's postwar experience with inflation and stabilization, explicit analyses of the links from restrictive monetary policy to unemployment were articulated and widely circulated. Although the details of those analyses differed across countries, they served to heighten awareness, wherever they appeared, of the impact of monetary policy on domestic economic conditions. Individuals and groups adversely affected by high interest rates and credit restriction increasingly resisted their implementation. The growing political influence of the working classes intensified pressure to adapt monetary policy toward employment targets. Fiscal imbalances and distributional conflicts magnified the strain felt by monetary policymakers.

A shadow was cast over the credibility of the commitment to gold. No longer did private capital exhibit the same tendency to flow in stabilizing directions as it had before World War I. The markets, rather than minimizing the need for government intervention, subjected the authorities' stated commitment to early and repeated test.

(p.392) Those tests underscored the need for international cooperation. But the critical preconditions that facilitated its practice previously were shattered by the war. International political disputes over war debts and reparations roiled the waters. Political reforms motivated by the experience of the war weakened the position of governments; newly dependent on special interests for political support, postwar administrations found it increasingly difficult to surmount domestic objections to international concessions. Different experiences with inflation during and after the war bequeathed competing conceptual frameworks that impeded efforts to agree on a common response to international monetary problems.

Because of these changes, when the gold standard was battered by the Great Depression it proved incapable of withstanding the strain. But the Depression was not simply a misfortune arising in 1929 for reasons unrelated to the gold

standard's operation. The prior operation of the gold standard had played a central role in the coming of the Depression. The roots of the problem lay in World War I—the war created imbalances in the pattern of international settlements that persisted throughout the 1920s. Those imbalances greatly intensified the strains on the international monetary system. The war strengthened the competitive position of American industry and transformed the United States from a net foreign debtor to a creditor nation. It unleashed a westward flow of reparations and war-debt repayments. It fundamentally strengthened America's balance-of-payments position and weakened that of other parts of the world. The pattern of international settlements, and the stability of the interwar gold standard itself, therefore hinged on the continued willingness of the United States to recycle its balance-of-payments surpluses.

When the Federal Reserve System tightened money in 1928 and U.S. foreign lending fell off, the international monetary and financial system came under stress. With the evaporation of capital flows from the United States to Europe and Latin America, foreign balance of payments deficits widened. Central banks suffering reserve losses were forced to retrench. The most drastic measures were required of those countries whose balance-of-payments positions were already weak. As a rule, most foreign countries were in weaker payments positions than the United States. By superimposing additional strain on an already fragile foreign balance-of-payments situation, monetary retrenchment by the Fed thereby provoked even more pronounced monetary retrenchment abroad. This combination of events, and not merely the shift in monetary policy in the United States, set the stage for the 1929 downturn.

Once this fact is acknowledged, inadequately understood aspects of the Great Depression fall into place. The reason why, for example, economic activity began to decline in capital-importing nations even before the downturn became evident in the United States is that the interplay of U.S. policy with imbalances in the pattern of international settlements compelled other countries to adopt significantly more restrictive monetary policies in 1928, and to alter their

policies even more radically than that of the Federal Reserve. Because the initial stages of the economic downturn in the United States were so severe, to cite another example, the preceding downturn in other countries led to an early decline in U.S. exports.

Similarly, the failure of monetary and fiscal authorities to take offsetting action once the Depression was underway is no longer perplexing once one acknowledges (p.393) the role of gold standard constraints. Unilateral action to increase public expenditure or make available additional money and credit was certain to create balance-of-payments deficits where they did not already exist and to magnify those deficits with which central banks were already attempting to cope. In either case gold convertibility would be threatened. Even the provision of liquidity to a banking system in distress might cast doubt over the official commitment to gold, prompting the transfer of bank deposits out of the country and aggravating the problem of domestic financial instability. The Federal Reserve and the Bank of France, possessing extensive gold reserves, were less immediately threatened than other central banks. But even they had very limited room for maneuver.

At this point international cooperation should have come into play. By coordinating their expansionary initiatives internationally, governments could have circumvented the dilemma of choosing between reflation and the maintenance of gold convertibility. By offering international loans, they could have facilitated the provision of liquidity to banking systems in distress. But international political disputes, domestic political constraints, and incompatible conceptual frameworks proved insurmountable obstacles to cooperation. Given this failure to cooperate, abandoning the gold standard became a necessary precondition for economic recovery.

Once they shed their golden fetters, policymakers had several new policy options available. They could expand the money supply. They could provide liquidity to the banking system at the first sign of distress. They could increase the level of government expenditure. They could take these actions unilaterally, without any need for assistance from foreign countries to neutralize the impact on the exchange rate.

It was not so much devaluation in and of itself that mattered, in other words, but the expansionary policies whose unilateral adoption was facilitated by abandonment of the gold standard. This is why the devaluation cycle of the 1930s, which by 1937 had restored the relative prices of different national currencies to early-1931 levels, had beneficial effects despite having achieved no lasting change in bilateral exchange rates. Those beneficial effects followed from the stabilizing domestic impact of the expansionary policies governments adopted in the wake of devaluation. Insofar as expansionary initiatives were pursued, the domestic benefits of the policy shift exceeded the costs incurred by the trading partners of the devaluing countries. Since this was true of every country that abandoned the gold standard, economic recovery worldwide was stimulated by the time that every country, at the end of the process, finally abandoned gold.

Nothing guaranteed that governments suspending gold convertibility would take reflationary action. Abandoning the gold standard permitted the adoption of reflationary initiatives but did not compel it. Recovery required discarding not just the gold standard statutes but also the gold standard ethos. Six months to a year of experience with inconvertibility typically was required before governments abandoned that ethos and began to experiment cautiously with expansionary initiatives. Policymakers in some countries went to incredible lengths to defend the gold standard, precluding all option of reflationary policies.

Shifting political coalitions go some way toward explaining these cross-country (p.394) variations in economic policy responses to the Great Depression. But to simply tote up the number of creditors and debtors, or to attempt to weigh the political influence of producers of traded and nontraded goods, is to miss what was special about the political economy of economic policymaking in the 1930s. The single best predictor of which countries in the 1930s allowed their currencies to depreciate and pursued reflationary initiatives, instead of clinging to the gold standard or adopting equally stifling exchange controls, was the experience with inflation a decade before. Countries that had endured persistent inflation in the 1920s were loath to permit currency depreciation and to

expand their money supplies. They continued to associate depreciation and monetary expansion with inflation, even in the midst of the most catastrophic deflation of the twentieth century. They showed remarkable persistence in rejecting arguments for devaluation and reflation in the face of incontrovertible evidence of their beneficial effects in other countries.

To attribute the depth and duration of the Great Depression to the narrow vision of policymakers, however, is not only intellectually unsatisfying but misleading. The refusal of policymakers in these countries to abandon the gold standard reflected rational fears that doing so might provoke renewed inflation. The persistent inflation of the previous decade was a socially debilitating by-product of a bitter dispute over income distribution and the burden of taxation. In countries where the structure of the electoral system produced a succession of weak governments, a peaceful end to this distributional war of attrition proved especially difficult to arrange. Only when the costs of inflation reached intolerable levels was a truce declared.

Reestablishment of the gold standard sealed the pact between competing distributional interests. The gold standard entailed an implicit code of conduct for budgetary policy. Its reestablishment enhanced, although it far from guaranteed, central bank autonomy. It provided a set of institutions to guide, if not regiment, the formulation of policies with prominent distributional consequences.

Abandoning the gold standard promised to again throw these issues up for grabs, as it did in France in 1936. This prospect was most alarming in countries with weak governments, where in exchange for political support incumbent administrations were forced to offer concessions to a variety of special interest groups. The strength or weakness of governments depended on many factors, prominent among which was the structure of electoral institutions. Between the wars, the problems of governmental instability and distributional conflict proved most intractable in countries with proportional representation electoral systems, which

delivered a proliferation of political parties, coalition rule, and weak administrations.

With time, political institutions, like economic policies, could be altered in response to changing circumstances. Establishing a new set of political institutions entailed high costs, however, which served as a barrier to change. And altering political institutions required political consensus. When political institutions themselves represented an obstacle to consensus, the undesirable state of affairs could become locked in. In the 1930s, as a consequence, policymakers in various countries found themselves incapable of fighting themselves out of the straitjacket of the gold standard. As a result of their inaction, their economies failed to escape the clutches of the Great Depression.

(p.395) The Postwar World in an Interwar Mirror

Refracted through the lens of history, a prominent feature of the two generations since the end of World War II is the absence of a business-cycle convulsion comparable in severity to the Depression of the 1930s. Cyclical instability persists but not on a scale that approaches the experience of the interwar years.

According to the Whig interpretation of the shift, greater economic stability is a beneficent effect of social learning and consequent improvements in institutional design. Governments and their electors, in this view, learned important lessons from the economic catastrophe of the 1930s. They grasped the need for regulation to discourage financial excesses that might otherwise threaten the stability of their nations' banking systems. They came to appreciate the need for deposit insurance as a device to limit the scope for panic among bank depositors. Governments adopted automatic stabilizers, namely programs like unemployment insurance, where public spending rises automatically when private spending falls. Compared to the interwar years, they more adeptly utilized monetary and fiscal policies to stabilize the economy.

The postwar development of the international monetary system sits uneasily with this interpretation. To be sure,

international monetary institutions were comprehensively reformed during and immediately after World War II. Indeed, plans emanating from the British and American Treasuries that inspired and guided the reforms were explicitly designed to respond to the perceived shortcomings of the gold-exchange standard of the 1920s and prevent a recurrence of the international monetary chaos of the 1930s.[1] Yet establishment of a new framework at Bretton Woods in 1944 can hardly be credited with having inaugurated a golden age of international monetary stability. The first step toward activating the new international monetary order, Britain's abortive restoration of convertibility in 1947, was an unmitigated disaster that had to be reversed in short order. A round of major devaluations, bearing the earmarks of the competitive devaluations of the 1930s, followed in 1949–50. Nearly a decade passed before the nations of Europe finally succeeded in restoring currency convertibility in 1958. The Bretton Woods System that can be said to have begun to operate only then on an international scale survived for barely thirteen years, collapsing the first time the system experienced a major disturbance, namely the acceleration of American inflation in the late 1960s. Ever since the United States suspended the convertibility of the dollar into gold in 1971, the major currencies have once again been permitted to fluctuate against one another much as they did in the 1930s.

The turbulence of postwar international monetary relations is perplexing when viewed against the backdrop of the concurrent decline of business-cycle instability. Problems in the international monetary sphere played a leading role in the spread of cyclical instability in the 1920s and 1930s. Although international monetary problems were hardly eliminated by postwar reconstruction of the international economic system, the severity of business-cycle fluctuations nonetheless diminished considerably.

(p.396) Perhaps this characterization of post-World War II international monetary experience is too negative. What mattered was not the changing particulars of international monetary arrangements—currency convertibility or inconvertibility, pegged or floating exchange rates, for instance—but the opportunity provided by postwar reforms to

regularize international monetary cooperation.[2] The International Monetary Fund and the World Bank offered venues in which countries could meet periodically to exchange information, discuss monetary strategies, and remind one another of the foreign repercussions of domestic economic policies. The B.I.S., the EEC Commission, the Economic Policy Committee of the OECD, and the meetings of the Group of Ten provided additional opportunities to exchange information and opinion.[3] Regular consultation made it easier than in the 1920s to arrange simultaneous adjustments of domestic policies from which no one nation would benefit if those policy changes were undertaken in isolation, but from which all those countries involved would gain if the changes were undertaken jointly. By possessing established venues for arranging cooperative support for a currency under attack, it was easier than in the 1920s to mobilize the international support operations needed to protect whatever currency happened to be the weak link in the international monetary chain.[4]

These new developments appear even more important when it is acknowledged that the formulation of monetary policy became still more politicized after World War II. Statements by government officials that they were prepared to defend the exchange rate, whatever the domestic economic and political cost, were even less credible than in the 1920s. The rise of international cooperation may have offset to some extent the decline in the credibility of commitments to particular exchange rates. Not only did there now exist a means through which the process of cooperation could be regularized, but no disputes as contentious as the war debts and German reparations of the 1920s divided Europe and the United States after World War II or again contaminated efforts to cooperate. If anything, the perception of a common external threat, emanating from Eastern Europe, had the opposite effect. The hegemony of the Keynesian model endowed policymakers in different countries with a common conceptual framework, facilitating efforts at international cooperation.

The basis for international monetary cooperation was remarkably similar to what prevailed before 1913. In normal periods, the leading country, after World War II the United States, provided a focal point for harmonizing policies

internationally. The Federal Reserve expanded and contracted credit as required to help (p.397) stabilize the U.S. economy. Given the weight of the United States in international economic transactions and the consequent synchronization of business cycle fluctuations internationally, other central banks simply followed the Fed's lead.[5] Insofar as they succeeded in harmonizing their policies, each central bank could damp fluctuations in economic activity without threatening the stability of its exchange rate. In times of crisis, cooperative support operations were required. The monthly meetings of the B.I.S. were used, starting in the 1960s, to arrange three-month lines of credit for the British pound. Subsequently, Britain also obtained longer term credit from a collective of national creditors through two “Basle Group Arrangements.” When it was the dollar that came under stress, other countries provided collective support to the Fed through gold pooling, reserve swaps, and other devices.[6] Again, a striking parallel exists with the British position prior to 1913.

Ad hoc cooperation ultimately proved inadequate to sustain the Bretton Woods System beyond 1971. It is important to ask, therefore, why proposals to institutionalize the process had not been adopted after World War II. Why the failure to establish a formal set of rules and procedures, and an enforcement mechanism, to regiment cooperative action? Ironically, the existence of a dominant economic power able and willing to veto such proposals led to their defeat. It was American officials who struck from the first unpublished draft of Harry Dexter White's plan for postwar monetary reconstruction articles providing for international oversight of domestic monetary and fiscal policies.[7] White's initial conception of those provisions may have been unrealistically ambitious. Yet one can imagine that, given sufficient U.S. leadership, policymakers worldwide might have sacrificed some autonomy over domestic monetary and fiscal policies in return for greater international cooperation. It is precisely in exceptional circumstances, like those of 1944, that elected officials are most receptive to radical alternatives. To willingly compromise their autonomy, the British would have had to feel confident that other countries were equally committed to the maintenance of full employment. Other countries needed also

to believe that international oversight would be even-handed. Whether this was possible we will never know. Officials in the United States, which, as the world's dominant economic power and repository of the majority of the free world's gold reserves, was the nation that would have the most autonomy over domestic policy, were unwilling to concede the point.

The influence of the United States over the structure of postwar international monetary institutions did not end there. America's international leverage was sufficient to enable her to resist pressure for concessions on the issue of liquidity. The British plan for postwar monetary reconstruction, drawn up under the guidance of John Maynard Keynes, proposed making available $26 billion of credits to countries (p.398) that found it necessary to run temporary payments deficits. The United States, anticipating that it, as the principal surplus country, would be the one to extend the vast majority of the credits, sought to limit their total amount to $5 billion and the maximum American obligation to $2 billion. The final compromise more closely resembled American's opening bid than Britain's: an $8.8 billion total and a $2.75 ceiling on the U.S. obligation.

These credits were limited by the quantity of gold that member countries contributed to the International Monetary Fund. Thus, a casualty of American self-interest was Britain's scheme to regulate the global supply of international reserves through the centralized provision of a synthetic reserve asset. Keynes proposed that the new international clearing union, which evolved ultimately into the International Monetary Fund, should have the power to create paper credits that its members would be obligated to accept in balance-of-payments settlement. It would be able to adjust the supply of credits to meet the liquidity needs of the expanding international economy. But if these paper claims all ended up in American hands, this amounted to giving foreign countries a printing press to be used to create dollars for purchasing American goods. Sensitive to the Congressional opposition this would provoke, White opposed the creation of a new international money. For liquidity the Bretton Woods System would have to rely on gold and the dollar. The Mlynarski Paradox of the

1920s returned with a vengeance in the guise of the Triffin Dilemma.[8]

American dominance of the negotiations also was responsible for the inadequacies of the international adjustment mechanism under Bretton Woods. Owing to American opposition, no sanctions on surplus countries were instituted. No incentives for adjustment by countries persistently gaining reserves, other than the ultimately unworkable scarce currency clause, were incorporated into the Bretton Woods Agreement. Anticipating that the United States would be the main surplus country after the war, American officials used their leverage to eliminate provisions that might have forced them to revalue the dollar or pay a tax on their international reserves.

One can imagine circumstances in which a dominant power facilitates the conclusion of an agreement conducive to international stability—when it uses its influence to fashion institutions for cooperatively structuring and managing international relations. If the adequacy of such institutions is gauged by their durability and resiliency, then it is hard to apply this argument to international monetary relations after World War II. It was precisely America's dominance of the postwar international economy that allowed U.S. officials to resist international pressures to sacrifice narrowly defined domestic interests. American hegemony may have been the basis for the post-World War II international monetary order, but it was also the source of the contradictions that gave rise subsequently to international monetary instability.

To close with a call for international cooperation would seem to be weak soup for dinner at the end of a bitter cold day. But if there is one irrefutable lesson of the (p.399) interwar experience, it is, as W. Arthur Lewis wrote in his survey of the 1920s and 1930s, that “without international cooperation we are lost.”[9]

Another lesson concerns the circumstances under which economic cooperation is easiest to arrange. Contrary to some theories of international politics, the history of international monetary relations suggests that a durable basis for

cooperation has been most successfully achieved when the balance of economic power is distributed relatively evenly among countries.[10] A dominant power may be able to foist the facade of cooperation on other countries. The reality is a different thing. International monetary arrangements imposed by a dominant country have tended to reflect the self-interest of that power and therefore have proved unsuitable as soon as its relative economic power began to decline. They consequently have failed to provide a durable basis for economic collaboration. Mechanisms for cooperation arranged by mutual consent rather than imposed from above have exhibited greater resiliency—this is an implication of the last twenty years of experience with the classical gold standard. The progress of monetary reform in the European Community in the 1990s is also consonant with this view.

The increasingly multipolar nature of the world economy is not, therefore, a recipe for disaster. The consequences of the shift depend on whether the countries of the world, like the members of the European Community before them, capitalize on the opportunity to institutionalize the basis for economic cooperation. Steps to contain international political disputes, an efficient mechanism for aggregating political preferences to moderate the opposition of special interest groups to initiatives taken in the interest of international cooperation, and development of a common conceptual framework for economic management can further the cause.[11] These are all matters that, in principle, are within the control of societies and their governments. Between the wars they were allowed to elude control, with catastrophic consequences. (p.400)

Notes:

(1) The definitive account of the Bretton Woods negotiations remains Gardner (1956). A useful introduction to the operation of the Bretton Woods System is Tew (1988).

(2) Note that I refer here to efforts to “regularize” rather than to “institutionalize” cooperation. When I say that cooperation becomes regularized. I mean that it occurs more frequently, that is arranged in similar venues, and that it tends to take on a common form. When I say that cooperation becomes

institutionalized, I mean that formal rules and structures are established that lend it more of an automatic character.

(3) Scammel (1983, p. 114) similarly argues that the 1950s saw significant progress in the extent of international monetary and economic cooperation, mainly in Europe.

(4) Not only could the IMF provide balance-of-payments loans directly, but international consultations gave rise to other mechanisms for collective support, notably the European Payments Union of the 1950s. The definitive treatment of the EPU is Kaplan and Schleiminger (1989).

(5) Evidence on the tendency for European central banks to follow the Fed's lead during the 1960s, based on the timing of interest rate movements, is provided by Giovannini (1989).

(6) The gold pool, Basle Group Arrangements, and swap network are all described by Tew (1988), pp. 109–110 and *passim*.

(7) Block (1977), p.47. According to an early version of the White Plan, “any monetary or general price measure or policy” that was a source of serious inflationary or deflationary pressure or contributed to balance-of-payments disequilibrium would have to be changed if so demanded by countries possessing four-fifths of the votes in the fund. See Horsefield (1969), vol. III, p. 44.

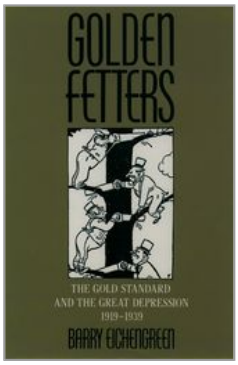
(8) See chapter 7.

(9) Lewis (1949), p. 200.

(10) See Eichengreen (1989a) and Emerson et al. (1990).

(11) At the time of writing, the issue of designing mechanisms for efficiently aggregating the preferences of special interest groups in such a way as to balance voice for minorities against the advantages of governmental stability is clearly evident in two spheres: in the European Community, which is debating how to structure control of a European central bank; and in Eastern Europe, where the revival of democracy, however admirable, has vested special interest groups with considerable capacity to frustrate the implementation of

economic policy options. On this last point, see Dornbusch (1990).



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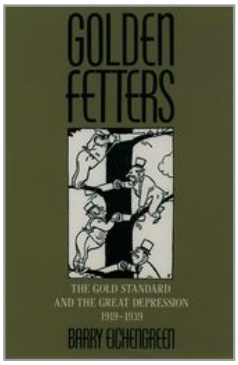

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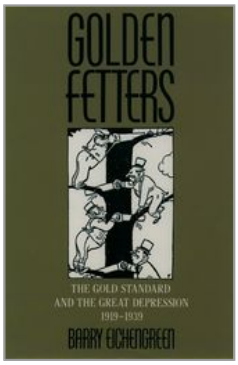

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(p.429) Index