

-XII. Restoring [?] the Pre-World War I Economy-

A. Demobilization

1. Food

In the immediate aftermath of World War I, central Europe and Russia were near starvation. One of the principal weapons with which the western allies had fought the war had been a naval blockade enforced by the British fleet: deprive the cities of central Europe of the food that they had imported, and deprive the farms of central Europe of as many of the raw materials to boost agricultural productivity as possible. And during the war the German army made sure that Germany's chemical factories used nitrogen to produce explosives, not fertilizer.

The first task of reconstruction was thus to bring food to the peoples of Europe, mostly under the auspices of the Herbert Hoover-led American Relief Administration. Something like three percent of a year's American national product was spent on relief. Most relief deliveries were financed through loans, not through aid grants. (But the loans were added to war debts that countries owed to the United States government that were in almost all cases not repaid.)

In the immediate aftermath of the war, many feared that the reconversion from war to peace would be difficult. Would there be jobs in the civilian economy for all of the ex-draftees? But fears of an immediate postwar depression were unfounded: 1919 and early 1920 saw a strong worldwide inflationary boom. Governments were still maintaining expenditure at high levels. Governments were anxious to keep nominal interest rates low so that they could refinance their massive war debts on favorable terms. Purchasing power had accumulated during the war, had not been spent because of wartime rationing and shortages, and was unleashed in a surge of business and household inventory-replenishment spending in the year and a half after the end of the war. By the end of 1919 central bankers were worried at the prospect of rapid further inflation. They took steps to restrict credit, and to drive up interest rates. The post-World War I boom cracked, and was followed by a depression, which further complicated the

task of restoring the world economy.

The war, moreover, had brought about a substantial shift in the balance of world competitive advantage. Everyone now had steel industries, chemical industries, and shipping fleets. South American countries that had imported manufactures from Britain for most of a century had found their own industries growing up rapidly during the war, while British capacity was devoted to making uniforms and artillery shells. The European belligerents had similarly built up their heavy, militarily-useful industries. The pattern of world relative prices that would produce net trade flows in balance with desired long-run capital flows had changed. And desired long-run capital flows had changed as well. Inflation—even in terms of the gold prices of commodities—had taught investors that bonds were not safe investments. The Russian Revolution had taught investors that the losses on even government-guaranteed loans could be total.

2. Finance and Inflation

For the half-century before World War I, international trade and finance had operated according to the so-called *gold standard*. Countries had committed themselves to maintaining a fixed parity for their currencies in terms of gold. This meant that:

- international trade was not exposed to significant exchange rate fluctuations, for exchange rates did not fluctuate.
- national monetary policies were very tightly constrained, for any tendency toward inflation would generate, through capital flight or high import demand, a line of bankers at the central bank trying to turn the country's currency into gold.

Faced with an erosion of its gold reserves, central banks were forced to deflate—to raise interest rates, reduce investment, reduce employment, and so reduce imports—in order to avoid the *faux pas* of devaluation.

During World War I, European finance ministers discovered the benefits of inflation, and indeed the necessity of inflation given governments' unwillingness to raise taxes sufficiently to fight the Great War on a balanced-budget basis. On average, the world price level in 1920 was twice as high as it had been in 1914. Thus if countries were to return to gold at

their pre-war parities, the world's gold cover would be only half of what it had been before the war.

Think of the gold reserves of the world as a shock absorber, for shipments of gold (and speculation based on the expectation of such shipments) were what covered temporary imbalances in trade: the postwar world had only half as good a shock absorber as the prewar world. Different countries had inflated to different degrees. If they restored the prewar system of exchange rates, some countries would have had exchange rates that were much too high and other countries would have had exchange rates that were much too low. So the need for shock absorbers would be greater.

The financial side effects of World War I were such as to place the international economic system, and the gold standard as it was to be restored, under more strain than ever before.

During the war different European countries had inflated to different degrees. The structural changes that shifted world trade had altered "equilibrium" balanced-trade real exchange rates. And the end of the era in which foreign investments were seen as near-riskless had altered desired capital flows as well. Thus when the war ended no one knew what exchange rates should be. After March 1919, the British government let the market decide: it prohibited the export of gold, and let the exchange rate of the pound be determined by supply and demand, with an eye toward an eventual restoration of the pre-war gold parity of the pound. By the end of 1919 the pound sterling was worth only \$3.81, some twenty-five percent less than its pre-World War I parity of \$4.86.

Why was the gold standard not restored immediately after the end of the war? Because of the enormous debts that had been run up during the war. The chief problem of European governments was debt management: how to rollover and, hopefully, someday retire the wartime debt. Thus central banks came under enormous pressure from treasuries to keep interest rates low, but low interest rates could only be obtained by a rapidly-expanding money supply. Hence inflation.

Different rates of inflation in different countries made early restoration of a fixed exchange rate system impossible until the debt management problems of the ex-belligerents had been resolved. Yet in many European countries the problems seemed unresolvable: retiring debt required a government surplus, but government spending must not be reduced below levels consistent with the wartime promises made to the ex-servicemen. No democratic government could hope to survive such a breach of promise.

How about creating a surplus by raising taxes? The wealthy insisted that emergency wartime taxes on the rich be reduced. The working classes insisted that capital be taxed to create a more equal society and to punish war profiteers. If the electoral balance between the middle and the working classes had been less even, then either government promises on spending would have been scaled back (pleasing the rich) or capital would have been taxed (pleasing the working classes), in either event resolving the debt funding problem. But because political and electoral power in post-war Europe was finely balanced, centrist politicians hesitated: they did nothing, hoping either (i) that reparations payments from the Germans would solve their problem for them, or (ii) that something would make it clear whether the road to electoral success was to tax the rich or to cut back on the nascent social insurance state.

While they hesitated central banks continued to keep interest rates low, the money supply continued to grow, demand outran supply, and inflation continued at varying speeds in different countries. In the end inflation eroded the real value of the government's wartime debt enough to make its fiscal problems manageable: the rich were not taxed, government spending was not cut, but holders of government bonds were expropriated by inflation. And afterwards governments could once again turn their attention to restoring the pre-war international economy.

B. Hyperinflation

1. Austria-Hungary

Thus in the aftermath of the war, most European economies resorted--or central banks found themselves forced to resort—to still further bursts of high inflation to meet the post-World War I demand for government spending, in the context of a weakened tax base and the crushing burden of wartime borrowing and reparations demands. The people demand government aid? There are no tax revenues available? Then print money, or create it within the banking system by a stroke of the central bank's pen. And the result is inflation. The result can turn into hyperinflation if the government does not quickly take steps to restore its finances.

The first hyperinflations took place in the successor states to the old Austro-Hungarian empire, Germany's ally during the war that had shattered at the end of 1918 under the pressures of military defeat and

southeastern European nationalism. A small chunk of the empire was added to the territory of the allied power Italy. A large chunk was merged with Serbia into the Kingdom of Yugoslavia. The province of Transylvania was annexed by Romania. A small slice of the former Austro-Hungarian province of Galicia wound up as part of Poland. The Czech and Slovak lands formed a new republic of Czechoslovakia. And the largely Magyar, Hungarian-speaking regions downstream the Danube from Vienna became the fully-independent country of Hungary.

Austria was what was left over.

The Austro-Hungarian empire had been a single economic unit. Now it was split among seven countries, each with its own different currency and its own high tariffs. Industries in one part of the empire had depended on raw materials from another. Now provinces rich in raw materials tried to encourage their own resource-based manufacturing industries, and restricted raw material exports.

The Austrian economy collapsed first. Its capital, Vienna, had been the administrative of a great central and southeastern European empire. After the end of World War I, it had many too many civil servants to govern the small state that was left. The government sought to pay its civil servants, provide relief to the unemployed, and establish its legitimacy. Unable to balance the budget the Austrian government printed paper money. Before World War I, the Austrian crown had been worth a little less than twenty cents. By the late summer of 1922 the crown was worth 1/100 of a cent. The League of Nations, an international organization established at the end of World War I as one of the provisions of the Treaty of Versailles, provided a hard-currency loan on the condition that the Austrian government surrender control over its own currency and finances. The Austrian government was willing: after all, it could no longer print money fast enough to make an appreciable difference in how much it could spend, it could not borrow, and so control over its own currency was useless.

The Austrian currency was pegged to gold. The budget was balanced by severe cuts in expenditures and higher taxes. Unemployment remained high after stabilization. But by the mid-1920s currency stability had been maintained for long enough that the League of Nations withdrew. There were other hyperinflations as well: in Austria prices had risen 14,000-fold during the inflation. In Hungary prices rose 23,000-fold. in Poland prices rose 2.5 million-fold. In Russia prices rose four billion-fold.

And in Germany prices rose one trillion-fold.

2. Germany

A truly runaway hyperinflation has two sources. First, it arises through a fall in the foreign exchange value of the currency—when an adverse balance of payments or capital flight reduces foreign investors' and speculators' relative demand for the currency in question. A falling exchange rate raises the cost of imports, and thus the cost of living. Wages rise as workers try to maintain their standard of living, especially if previous institutional arrangements have linked wages to living costs. Firms paying higher wages raise the prices of the goods they sell, prices rise still further, the foreign exchange value of the currency falls still more, and the cycle continues.

Second, it arises through a large budget deficit that no one believes will be closed in the future. Faced with the prospect of budget deficits for as far ahead as the eye can see, the usual sources of credit to the government dry up: it can no longer borrow to cover the gap between revenues and expenditures. The only alternative is to print more and more banknotes. As government workers and suppliers present their bills to the Treasury, it pays them off with newly-printed pieces of paper.

But what do the workers and suppliers do with these pieces of paper? They hold onto banknotes not because they are a good investment (after all, they pay no interest) but as a convenient, readily-spendable form in which to hold purchasing power. So put more banknotes in the hands of the public and they will spend them. Call "M" the total (nominal) value of readily-spendable purchasing power; call "Y" the total value of production; call "P" the overall level of prices. And let the letter "V" stand for the average individual's propensity to spend out of his or her holdings of money, M: V thus stands for the "velocity" of money.

Then the *quantity theory of money* is the simple statement that:

$$(1) M \times V = P \times Y$$

If the government prints enough new banknotes to double the supply of money, M, and if the propensity to spend cash, V, remains unchanged, then total nominal spending $P \times Y$ will double as well. And if production Y does not rise—if the economy is already near full employment, say; or if the hyperinflation itself disturbs the division of labor and reduces potential

production—then prices P will double as “too much” money chases “too few” goods.

As the government continues to print money, inflation continues. And as the consciousness that your cash will be worth less tomorrow than it is today penetrates the minds of the public, the situation further deteriorates. If cash loses value the longer you hold it, you should spend it as fast as possible. Thus the propensity to spend rises. The velocity of money V is not a constant of nature, but rises alongside past and present inflation.

Thus the paradox noted by the Austrian economist Joseph Schumpeter, who served as Austria's finance minister, briefly, and failed to stop Austria's hyperinflation: the central bank is printing money faster than ever before, the volume of currency—measured in nominal terms—far outstrips even the most fevered imaginings of previous eras, yet no one has any cash: no one has any cash. Because to fail to spend cash is to waste its purchasing power, the velocity of money rises, price rises outstrip the rate of money creation, and the real balances held fall.

The fall in “real balances”—in the money supply divided by the price level—is a very damaging consequence of hyperinflation. For real balances are the grease that keeps the money-based market economy operating. Thus the chaos caused by rapid inflation breaks down the established links between firms and industries, for someone's prices are always ahead or behind the average pace of the inflation. So the productive potential of the economy, Y , drops as well. Unemployment may or may not increase.

With V rising, and Y falling, the quantity theory of money rearranged:

$$(2) P = M \times (V/Y)$$

tells us that in the later stages of the hyperinflation prices rise *faster* than the government can print money. And in the end the hyperinflation loses whatever point it might have had. For the government's ability to spend more than it collects in revenue depends on its ability to print and deliver money as fast as prices rise, and is roughly proportional to M/P , to the *real* stock of readily spendable purchasing power in the hands of the public. But as the “velocity,” the propensity to spend V , rises and as Y , production, falls, the public's holdings of spendable purchasing power in the form of money M/P fall as well.

In the limit the power to boost government spending by printing money almost vanishes. And when the government no longer gains even in the

short-term budgetary sense from the inflation, the situation is ripe for a stabilization: a currency board, a new finance minister, a link to the gold standard, whatever—and then reform can be successfully accomplished as long as the government's post-hyperinflation revenue sources are in line with its post-hyperinflation spending level, and as long as foreign investors and exchange speculators believe in the stabilization.

The German hyperinflation of 1921 to 1924 has long served as the classic example of this process. The German government began to print money during the war. After the war the budget deficits were greater than ever, prices rose faster, and the fact that prices were rising further widened the budget deficit: revenues were by and large based on what income had been received six months ago; spending depended on the price level now. So six months' worth of inflation was built into the budget deficit. And the faster inflation proceeded, the further revenues fell behind expenditures.

To make matters worse, there was a substantial balance-of-trade deficit, and a widespread fear that anyone to whom German citizens owed debts would find themselves standing in line behind reparations-demanding allied governments whenever payment began.

The reparations question was made even more complicated because no one was sure what Germany would pay to the allies for losing the war, what it could pay, or what sanctions the allied powers would be willing to employ. The British originally demanded a much larger reparations bill than the French or the Italians. Since the allies could not agree, they postponed the question of the reparations that would be demanded to a subsequent conference, but required that Germany pay—as a first, down payment on the total bill—an amount equal to some fifty percent of a post-war year's national product.

The 1921 conference in London to settle on the magnitude of German reparations saw the French and the British switch positions, with France demanding higher figures. The French remembered the reparations burden imposed on the French by the Germans after the 1870-71 Franco-Prussian War, they saw that the United States was refusing to reschedule the war loans it had extended to the French government, they had taken stock of the war damage done to the ten province of northeastern France that had served as the war's principal battlefield, and the government was no longer the wartime coalition but instead the right-of-center *National Bloc*.

The final reparations bill presented was for 340 percent of Germany's 1921 national income, denominated in gold to make sure that inflation and

exchange rate depreciation did not erode the value of the debt, with roughly sixty percent of the debt carried interest-free for some portion of time. The reparations schedule was tied to Germany's "ability to pay," heightening uncertainty about its true magnitude. One proposed schedule for repayment had Germany paying an average of 7.5 percent of its national product over forty years in reparations—and still, in 1962, owing a debt to the allies equal to Germany's entire 1921 national income.

Supporters of the conference said that the bill was well within Germany's capacity to pay: Great Britain had, routinely, transferred some five to ten percent of GDP abroad in overseas lending before World War I. Opponents like John Maynard Keynes pointed out that loans from London had financed purchases of British goods—and that it was extremely unlikely, in a climate of high unemployment, that reparations payments would be spent on boosting German exports to France and Britain. Barry Eichengreen points out that such a transfer would have required that Germany create a surplus of exports relative to imports equal to eighty percent of the value of its trade, and that:

Even had Germany somehow been able to provide this astonishing increase in exports, the allies would have been unwilling to accept it.... German exports would have been heavily concentrated in the products of industries already characterized by intense international competition, like iron, steel, textiles, and coal.... Even while complaining the Germany's effort to meet its reparations obligation was inadequate, the allies raised their import barriers....

The fear of how large the reparations bill would be coupled with the balance of trade deficit led the foreign exchange value of the mark to fall. And rising import prices fed back to rising domestic product prices and wages, and further accelerated inflation.

For a while the government welcomed the inflation: easier to finance spending by printing money than by actually trying to collect taxes. Industrial and mercantile interests also benefitted from inflation: they borrowed from banks, and repayed them in badly depreciated marks. For a while labor benefitted too: unemployment almost vanished, and in the early stages of the inflation at least real wages and thus workers' purchasing power did not fall. By the end of 1922 the German price level was 1,475 times what it had been at the start of World War I.

In January 1923 the French government, faced with the German government's failure to meet the reparations payments schedule that had been imposed on it as part of the post-World War I settlement, sent troops to occupy the Ruhr, the principal industrial region of western Germany. The German government responded with passive resistance: the inhabitants of the Ruhr struck to prevent the French government from extracting reparations deliveries from the occupied area. And the German government printed money to try to maintain the incomes of the passive resisters.

By the end of 1923 the German price level was 1,260,000,000,000 times what it had been at the start of World War I.

The mark was stabilized by a currency reform, that struck twelve zeroes off of the currency, so that one new mark was equal to one trillion old marks. An international loan was made so that Germany could make some reparations payments and build up its hard currency reserves. The new mark was strictly limited in supply—no more printing of bank notes at the request of the Treasury. And once the expectation of future money-printing was gone, the inflation was over.

C. Consequences

1. Political consequences of the German hyperinflation

Upper middle class savings in Germany were wiped out during the hyperinflation. Such savings had usually been invested in bonds and bank accounts, not in equity stocks. So the collapse of the real value of the mark carried with it the collapse of the value of the bonds. Debtors benefitted substantially, for their debts were effectively wiped out. Equity investors benefitted, because the hyperinflation effectively expropriated bondholders' shares of the capital contributed to the enterprise. But the relatively small, financially unsophisticated savers who made up Germany's upper middle class had nothing left.

This may have been the most important aspect of Germany's early-1920s hyperinflation. People who are not rich but are well-off-pillars of their community, in middle-age, who have done well in economic life and saved enough to feel comfortable—are usually the strongest supporters of relatively democratic, relatively liberal governments. They have done well

enough that they see no great need to move to the right, and they have no particular interest in redistributing income away from the working to the employing class. The fear the redistributive plans of the left. And they value individual freedoms and social peace. The professional and mercantile upper middle classes of Germany should have been the principal support of the post-World War I democracy—the “Weimar Republic”—that had emerged from the collapse of the monarchical, militaristic, semi-democratic German Empire at the end of World War I.

The British economist John Maynard Keynes had seen the political danger from government resort to inflation in 1919, well before Germany embarked on the road that carried the value of the mark from \$0.25 to \$0.00000000000025. He attributed to Lenin the claim that “the best way to destroy the Capitalist System was to debauch its currency” through hyperinflation; and he wrote of how inflation not only:

confiscate[s wealth], but... confiscate[s] *arbitrarily*.... The sight of this arbitrary rearrangement of riches strikes not only at security, but at confidence in the equity of the existing distribution of wealth.... [It] engages all the hidden forces of economic law on the side of destruction, and does so in a manner which not one man in a million is able to diagnose.

Keynes concluded that the European governments which had resorted and were resorting to inflation were “fast rendering impossible a continuation of the social and economic order of the nineteenth century. But they have no plan for replacing it.”

Adolf Hitler, however, *did* have a plan for replacing the social and economic order of the nineteenth century. Through the inflation of the early 1920s, the democratic government of this Weimar Republic did its natural supporters, the prosperous relatively small-scale savers of Germany in the professional and mercantile classes, a most grievous economic injury by confiscating most of their savings. This German class of savers that had lost so much in the inflation of the 1920s—the so-called *mittelstand*, or “middle estate”—would be correspondingly lukewarm in its support of the Weimar constitution and democracy at the end of the 1920s and into the 1930s, when the Nazi Party became a political force in Germany.

2. Economic consequences of Mr. Churchill

Perhaps the best way to stabilize the post-World War I economy would have been to recognize that World War I had completely disrupted the old system, and that it was time to construct a new system with new parities. But general international cooperation was lacking. And so, once they had dealt with their internal problems of debt management, countries took one of three roads to stabilization:

Countries that had experienced hyperinflation simply pegged their currencies to the dollar and to gold at whatever the free-market value was at the end of the hyperinflation. (For example, Austria, Germany, and Hungary.)

Countries that had seen their value against the dollar drop by more than half (but that had not experienced hyperinflation) gave a small sop to creditor interests by recovering a part, but only a small part, of their currencies' values against the dollar before stabilization. (For example, Czechoslovakia, France, and Italy.)

Countries where freely-floating currencies were only a few tens of percent below their pre-World War I dollar values dealt with the problem of stabilization by returning to par: deflating their economies and incurring domestic unemployment in order to restore the pre-World War I peg against gold and the dollar, in the hope that by so demonstrating their credible commitment to the gold standard they would reap increased stability, greater confidence, and lower interest rates. (For example, Britain, the Netherlands, and Scandinavia.)

In Britain, politicians and bankers blamed exchange rate instability for depressing international trade and investment. They saw a stable exchange rate as a necessary prerequisite for the restoration of domestic prosperity.

It is less clear why the stable exchange rate had to be the pre-World War I rate of \$4.86 to the pound. To obtain \$4.86 to the pound and maintain it over the long run would, in post-World War I Britain, require a substantial internal deflation: a reduction in the level of nominal wages and prices of between ten and thirty percent—no one was sure by how much. Such internal deflation would carry with it unemployment, bankruptcy, and labor unrest. It might well destroy whatever government undertook it, for the short-term costs to the electorate were immense—whether to workers rendered unemployed by the depression accompanying deflation, or to manufacturers rendered bankrupt by competition from abroad at an

unrealistic exchange rate.

Why was the government ruling Britain in 1925 willing to run such risks? P.J. Grigg was private secretary to the Chancellor of the Exchequer at the time. He reports a dinner at which supporters and opponents of return argued in front of the Chancellor. Reginald McKenna (a former wartime Chancellor of the Exchequer himself) and John Maynard Keynes argued that overvaluation would discourage exports, create unemployment, put downward pressure on wages, and trigger waves of strikes. P.J. Grigg thought that Keynes did not argue his case very well—but given that the introduction to Grigg's memoirs denounces economists (like Keynes) who tried to teach Britain to “live beyond its means on its wits,” it is doubtful that Grigg would have found Keynes and McKenna convincing no matter how well they argued their case.

In the last analysis the political risks of postponing the return to the gold standard seemed large and immediate; the economic risks of return seemed vague, distant, and uncertain. Thus the decision was made to return to the gold standard after World War I. Moreover, the decision was to return at largely the pre-World War I currency parities, and to restore the prewar system of exchange rates. They were thought to be more credible, that is, it was thought that investors would have more confidence that they would be maintained than that newly chosen parities (corresponding to real exchange rates in “fundamental equilibrium”) would be chosen. It was thought that the additional benefits in terms of credibility would more than offset the adjustment costs necessary to bring the world economy back into balance on the gold standard.

Benjamin Strong, leader of the U.S. central bank, analyzed Bank of England head Montagu Norman's decision:

Mr. Norman's feelings, shared by me, indicated that the alternative—failure of a resumption of gold payments—being a confession by the British government that it was impossible to resume, would be followed by a long period of unsettled conditions too serious really to contemplate—violent fluctuations in the exchanges, progressive deterioration of foreign currencies vis-a-vis the dollar; it would provide an incentive to all advancing novel ideas other than the gold standard, and incentive to governments to undertake inflation; it might, indeed, result in some kind of monetary crisis which would finally result in ultimate restoration of gold but only

after a period of hardship and suffering, and possibly some social and political disorder.

For the commitment to gold convertibility to be credible, the argument ran, it had to be immutable: fixed forever. Once you abandon \$4.86 for, say, \$4.16, you raise the possibility that the commitment to \$4.16 might be abandoned as well. There were other reasons for return as well: the belief that return to the pre-World War I parity was necessary to demonstrate that Britain was still the preeminent superpower, the special role played by the City of London's financiers in Britain, the fear that devaluing the pound against the dollar would raise the real cost of Britain's war debts to the U.S.

This analysis was wrong. Instead, it was the resumption of the gold standard that was followed by hardship and suffering, and by social and political disorder.

In late 1924 sterling speculators bid up the price of the pound almost to its pre-World War I parity, realizing that the act of Parliament suspending Britain's adherence to the gold standard expired in 1925, and that the ruling—Conservative—government would be extremely unlikely to ask for an extension. Britain's finance minister—the Chancellor of the Exchequer—Winston Churchill announced that Britain would return to the gold standard on April 25, 1925.

The appreciation of the pound from its early-1920s average value of approximately \$3.80 to its par value of \$4.86 had taken place without any shift in the relative level of British prices. Thus British industries from coal mining to textile to chemical and steel manufacturers found themselves facing severe competitive difficulties. Britain's return to gold in 1925 resulted in unemployment in export industries, and a push for wage reductions to make industry more competitive.

Britain's problems were accentuated because sterling speculators could see what the Bank of England could not: that returning to the gold standard at an overvalued parity signalled the likely vulnerability and not the strength of the pound sterling. In order to balance its payments, the Bank of England had to keep British interest rates above American interest rates. Higher interest rates depressed investment, further increasing unemployment. The slow growth and double-digit unemployment that plagued the British economy in the late 1920s were the result of the decision to return at the pre-World War I parity.



Social conflict—at its strongest in the General Strike of 1926—broke out over the distribution of the adjustment burden. The British economy had to be depressed in order to avoid losing gold. British unemployment remained high relative to the pre-World War I standard throughout the 1920's.

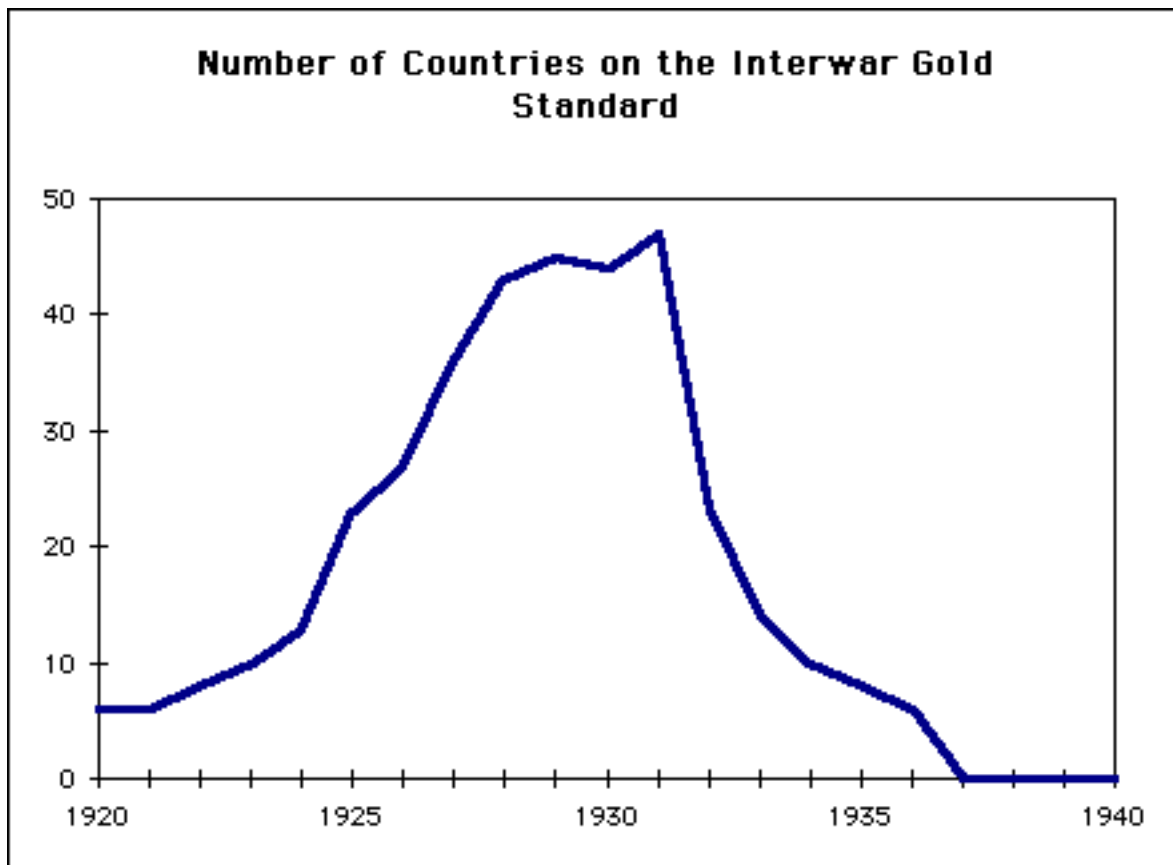
Perhaps the policy of restoration would ultimately have worked. Near double-digit unemployment and slack export demand did reduce British costs and wages. British unions lost forty percent of their members in the decade after the end of World War I.

But before Britain's adjustment to its return to gold at an overvalued parity was complete, the Great Depression of the 1930s arrived.

D. The Restored Gold Standard

1. The restored system

Great Britain returned to the gold standard in 1925. The French franc was stabilized in mid-1926. The Italian lira was stabilized by the end of 1927. To all intents and purposes, the restoration of the gold standard was then complete.



Peripheral countries in Latin America and elsewhere whose adherence to the gold standard had been tenuous or wanting before World War I joined the interwar gold standard and established independent central banks, in the hope of reaping the benefits that they had seen accruing to those who adhered to the pre-World War I gold standard.

While Britain had an overvalued currency, France and the United States had undervalued currencies. They exported more than they imported,

loaned some of the surplus abroad, and used the rest to acquire more gold. These two countries held more than 60 percent of the world's monetary gold by 1929; their share of world trade was less than one-third that proportion. But neither the U.S. nor France was willing to tolerate the domestic inflation that would have restored balance, and removed the tendency for their two countries to continue to accumulate gold.

2. Vulnerabilities

Most countries tried to stretch the gold reserves of the system to cover a larger nominal volume of international trade transactions than before the war by concentrating gold inside of central banks. Many countries reacted to the shortage of gold by deciding that they would hold the reserves of their central banks--the funds to be spent in order to preserve liquidity and restore confidence in a financial crisis--in foreign exchange: holding either dollars or pounds. Thus they transformed the gold standard into a *gold exchange standard*. This created an additional point of vulnerability in the system, for what if the currencies held as exchange reserves themselves came under speculative attack? Reserves are valuable because their worth and stability are unquestioned.

This imbalance in the distribution of gold produced a built-in deflationary bias in the monetary policies of all countries outside of France and the United States throughout the late 1920's and early 1930's. Unless they kept interest rates high and domestic investment and consumption low, countries with low gold reserves were in danger of losing their small remaining gold reserves and of being forced off the newly restored gold standard unless they took care to keep their economies on a deflationary path.

All central banks agreed that it was worthwhile to maintain the newly-restored gold standard. Thus the industrial economies had in committing themselves to the gold standard implicitly adopted a policy of slow deflationary pressure, always on the edge of being forced off the gold standard or into severe domestic recession by the next adverse economic shock. British central banker Montagu Norman was later to describe the late 1920s as years that he, the Bank of England, and the country had spent "under the harrow."

3. Labor parties, welfare states, and the interwar gold standard

Before the interwar period the idea that the aggregate health of the economy was the government's business, and that the government was responsible for in some way maintaining a stable price level and a high level of production, was a fringe idea. It might have been part of socialist, but not of mainstream politics. There were panics, depressions, and deflations, but they were regarded more as acts of nature than as acts to be prevented by government. Public works in time of depression were beneficial in the same sense that flood relief was beneficial. But the idea that a government could and should manage the economy as a whole was as foreign as the idea that a government could and should manage the weather.

World War I and the decades following changed this. Wartime inflation everywhere and postwar inflation in countries like France and Germany made it very obvious that the government could, and on occasion would, allow a massive shift in the level of prices and thus upset the distribution of wealth. The high unemployment period of the 1920s (and even more so the 1930s) made it obvious that the market system did not consistently produce full employment. *Macroeconomic* events—unemployment and inflation—had as large an effect on individuals' total lifetime incomes as the independent success or failure of their businesses or the expansion or contraction of their crafts. Governments' pursuit of policies of inflation and failure to control unemployment were seen to have as much of an impact on people's lives as any element of personal skill or luck.

Thus *macroeconomics* emerged: individual prosperity depended on inflation and the business cycle. Hence booms and busts, panics and recessions became of interest not only to Wall Street and to large manufacturers, but to everyone. The delivery of a healthy macroeconomy became a touchstone by which politicians were judged. And politicians responded, eagerly consulting economists to learn how to deliver certain prosperity.

The birth of macroeconomics created grave problems for the restored gold standard. Part of the functioning of the gold standard is that countries running balance of payments deficits experience deflation, and high unemployment. A balance of payments deficit sees reserves leave the country, the money stock shrink, and aggregate demand decline. But no modern democracy interested in macroeconomic management can afford to ignore such a recession—it must take steps to counteract the recession and to boost demand or risk losing office. Attempts to head off the gold

standard adjustment process will generate capital flight, a drain on reserves, and eventual collapse of the currency.

This danger is summarized in what is sometimes called the Eichengreen doctrine, or alternatively the monetary policy Trilemma. A country can have two of:

- (i) a fixed exchange rate system
- (ii) free capital mobility, and
- (iii) modern democratic politics oriented toward preserving full employment.

But it cannot have all three. Fixed exchange rates and modern democratic politics can coexist as long as capital mobility is restricted so that large-scale speculative attacks on the currency cannot develop. Fixed exchange rates and free capital mobility can coexist as long as democratic politics are absent—so that a government does not feel the need to intervene to stimulate aggregate demand during a gold standard-generated deflation. Free capital mobility and modern democratic politics can coexist as long as exchange rates are floating.

The Eichengreen doctrine suggests that there was no way in which the sacrifices made to restore pre-World War I gold-standard parities in Europe could ever have borne fruit. The government could point to its restoration of the pre-World War I parity, and say that it showed that the government's commitment to the gold standard was immutable.

International speculators would watch the polls, and conclude that the first time that commitment to the gold standard clashed with the maintenance of high employment and thus of political popularity, the gold standard would go over the side: there is nothing worse than attempting to establish the credibility of an incredible commitment.

And indeed in 1931 the British government was to cast the gold standard over the side, well before the nadir of the Great Depression.