

1933, also devaluing against gold and regaining some of the competitive edge in export pricing lost to England in 1931. Finally it was the turn of France and England to devalue again. In 1936, France broke with gold and became the last major country to emerge from the worst effects of the Great Depression while England devalued again to regain some of the advantage it had lost against the dollar after FDR's devaluations in 1933.

In round after round of devaluation and default, the major economies of the world raced to the bottom, causing massive trade disruption, lost output and wealth destruction along the way. The volatile and self-defeating nature of the international monetary system during that period makes Currency War I the ultimate cautionary tale for today as the world again confronts the challenge of massive unpayable debt.

Currency War I began in 1921 in Weimar Germany when the Reichsbank, Germany's central bank, set about to destroy the value of the German mark through massive money printing and hyperinflation. Presided over by Reichsbank head Dr. Rudolf von Havenstein, a Prussian lawyer-turned-banker, the inflation proceeded primarily through the Reichsbank's purchases of bills from the German government to supply the government with the money needed to fund budget deficits and government spending. This was one of the most destructive and pervasive monetary debasements ever seen in a major developed economy. A myth has persisted ever since that Germany destroyed its currency to get out from under onerous war reparations demanded by England and France in the Treaty of Versailles. In fact, those reparations were tied to "gold marks," defined as a fixed amount of gold or its equivalent in non-German currency, and subsequent treaty protocols were based on a percentage of German exports regardless of the paper currency value. Those gold- and export-related specifications could not be inflated away. However, the Reichsbank did see an opportunity to increase German exports by debasing its currency both to make German goods more affordable abroad—one typical reason for a debasement—as well as to encourage tourism and foreign investment. These methods could provide foreign exchange needed to pay reparations without diminishing the amount of reparations directly.

CHAPTER 4

Currency War I (1921-1936)

"There is hardly a part of the United States where men are not aware that secret private purposes and interests have been running the government."

President Woodrow Wilson

Currency War I began in spectacular fashion in 1921 in the shadow of World War I and wound down to an inconclusive end in 1936. The war was fought in many rounds and on five continents and has great resonance for the twenty-first century. Germany moved first in 1921 with a hyperinflation designed initially to improve competitiveness and then taken to absurd lengths to destroy an economy weighed down by the burden of war reparations. France moved next in 1925 by devaluing the franc before returning to the gold standard, thus gaining an export edge on those like England and the United States who would return to gold at a prewar rate. England broke with gold in 1931, regaining the ground lost to France in 1925. Germany was boosted in 1931 when President Herbert Hoover placed a moratorium on war reparations payments. The moratorium became permanent as a result of the 1932 Lausanne Conference. After 1933 and the rise of Hitler, Germany increasingly went its own way and withdrew from world trade, becoming a more autarkic economy, albeit with links to Austria and Eastern Europe. The United States moved in

As inflation slowly began to take off in late 1921, it was not immediately perceived as a threat. The German people understood that prices were going up, but that did not automatically translate into the equivalent notion that the currency was collapsing. German banks had liabilities nearly equal to their assets and so were largely hedged. Many businesses owned hard assets such as land, plant, equipment and inventories that gained nominal value as the currency collapsed and therefore were also hedged. Some of those companies also owed debts that evaporated as the amounts owed became worthless, and so were enriched by being relieved of their debts. Many large German corporations, predecessors of today's global giants, had operations outside of Germany, which earned hard currency and further insulated their parent companies from the worst effects of the collapse of the mark.

Capital flight is a traditional response to currency collapse. Those who could convert marks into Swiss francs, gold or other stores of value did so and moved their savings abroad. Even the German bourgeoisie was not immediately alarmed as losses in the value of their currency were offset by stock market gains. The fact that these gains were dominated in soon to be worthless marks had not yet occurred to many. Finally, those who held unionized and government jobs were initially hedged as well because the government simply granted wage increases commensurate with inflation.

Of course, not everyone had a government or union job, stock portfolio, hard assets or foreign operations to insulate them. Those most devastated were middle-class pensioners who no longer qualified for raises and savers who kept their funds in banks rather than stocks. These Germans were completely financially ruined. Many were forced to sell their furniture to raise a few marks to pay for food and keep going. Pianos were particularly in demand and became a form of currency on their own. Some elderly couples whose savings had been destroyed would go into the kitchen, hold hands, place their heads in the oven and turn on the gas in a poignant form of suicide. Property crime became rampant and, in the later stages, riots and looting were common.

In 1922, the inflation turned to hyperinflation as the Reichsbank

gave up trying to control the situation and printed money frantically to meet the demands of union and government workers. A single U.S. dollar became so valuable that American visitors could not spend it because merchants could not locate the millions of marks needed to make change. Diners offered to pay for meals in advance because the price would be vastly higher by the time they finished eating. The demand for banknotes was so great that the Reichsbank engaged numerous private printing firms and used special logistics teams in order to obtain enough paper and ink to keep the printing presses rolling. By 1923, the notes were being printed on one side only to conserve ink.

With economic chaos reigning, France and Belgium invaded the German industrial region of the Ruhr Valley in 1923 in order to secure their interests in reparations. The invasion enabled the occupiers to obtain payment in kind through shipments of manufactured goods and coal. The German workers in the Ruhr responded with work slowdowns, strikes and sabotage. The Reichsbank rewarded the workers and encouraged their resistance by printing more money for higher wages and unemployment benefits.

Germany finally attempted to halt the hyperinflation in November 1923 by creating an alternate currency, the *rentenmark*, which initially circulated side by side with the paper mark. The *rentenmark* was backed by mortgages and by the ability to tax the underlying properties. Their issuance and circulation were carefully managed by the newly appointed currency commissioner, Hjalmar Schacht, a seasoned private banker who would soon replace von Havenstein as head of the Reichsbank. When the final collapse of the mark came shortly after the *rentenmark* was introduced, one *rentenmark* was roughly equal to one trillion marks. The *rentenmark* was a temporary fix and was soon replaced by a new reichsmark backed directly by gold. By 1924, the old hyperinflated paper marks were literally being swept away into dustbins, drains and sewers.

Economic historians customarily treat the 1921-1924 hyperinflation of the Weimar Republic separately from the worldwide beggar-thy-neighbor competitive devaluations of 1931-1936, but this ignores the continuity of competitive devaluations in the interwar

period. The Weimar hyperinflation actually achieved a number of important political goals, a fact that had repercussions throughout the 1920s and 1930s. Hyperinflation unified the German people in opposition to "foreign speculators" and it forced France to show its hand in the Ruhr Valley, thus creating a case for German rearmament. Hyperinflation also evoked some sympathy from England and the United States for alleviation of the harshest demands for reparations emanating from the Versailles Treaty. While the collapse of the mark was not directly linked to the value of reparations payments, Germany could at least argue that its economy had collapsed because of hyperinflation, justifying some form of reparations relief. The currency collapse also strengthened the hand of German industrialists who controlled hard assets in contrast to those relying solely on financial assets. These industrialists emerged from the hyperinflation more powerful than before because of their ability to hoard hard currency abroad and buy up assets of failed enterprises on the cheap at home.

Finally, the hyperinflation showed that countries could, in effect, play with fire when it came to paper currencies, knowing that a simple resort to the gold standard or some other tangible asset such as land could restore order when conditions seemed opportune—exactly what Germany did. This is not to argue that German hyperinflation in 1922 was a carefully thought-out plan, only that hyperinflation can be used as a policy lever. Hyperinflation produces fairly predictable sets of winners and losers and prompts certain behaviors and therefore can be used politically to rearrange social and economic relations among debtors, creditors, labor and capital, while gold is kept available to clean up the wreckage if necessary.

Of course, the costs of hyperinflation were enormous. Trust in German government institutions evaporated and lives were literally destroyed. Yet the episode showed that a major country with natural resources, labor, hard assets and gold available to preserve wealth could emerge from hyperinflation relatively intact. From 1924 to 1929, immediately after the hyperinflation, German industrial production expanded at a faster rate than any other major economy, including the United States. Previously countries had gone off the

gold standard in times of war, a notable example being England's suspension of gold convertibility during and immediately after the Napoleonic Wars. Now Germany had broken the link to gold in a time of peace, albeit the hard peace of the Versailles Treaty. The Reichsbank had demonstrated that in a modern economy a paper currency, unlinked to gold, could be debased in pursuit of purely political goals and those goals could be achieved. This lesson was not lost on other major industrial nations.

At exactly the same time the Weimar hyperinflation was spiraling out of control, major industrial nations sent representatives to the Genoa Conference in Italy in the spring of 1922 to consider a return to the gold standard for the first time since before World War I. Prior to 1914, most major economies had a true gold standard in which paper notes existed in a fixed relationship to gold, so both paper and gold coins circulated side by side with one freely convertible into the other. However, these gold standards were mostly swept aside with the coming of World War I as the need to print currency to finance war expenditures became paramount. Now, in 1922, with the Versailles Treaty completed and war reparations established, although on an unsound footing, the world looked again to the anchor of a gold standard.

Yet important changes had taken place since the heyday of the classical gold standard. The United States had created a new central bank in 1913, the Federal Reserve System, with unprecedented powers to regulate interest rates and the supply of money. The interaction of gold stocks and Fed money was still an object of experimentation in the 1920s. Countries had also grown used to the convenience of issuing paper money as needed during the war years of 1914-1918, while citizens had likewise become accustomed to accepting paper money after gold coins had been withdrawn from circulation. The major powers came to the Genoa Conference with a view to reintroducing gold on a more flexible basis, more tightly controlled by the central banks themselves.

From the Genoa Conference there emerged the new gold exchange standard, which differed from the former classical gold standard in significant ways. Participating countries agreed that central bank

reserves could be held not only in gold but in the currencies of other nations; the word "exchange" in "gold exchange standard" simply meant that certain foreign exchange balances would be treated like gold for reserve purposes. This outsourced the burden of the gold standard to those countries with large gold holdings such as the United States. The United States would be responsible for upholding the gold value of the dollar at the \$20.67 per ounce ratio while other nations could hold dollars as a gold proxy. Under this new standard, international accounts would still be settled in gold, but a country might accumulate large balances of foreign exchange before redeeming those balances for bullion.

In addition, gold coins and bullion no longer circulated as freely as before the war. Countries still offered to exchange paper notes for gold, but typically only in large minimum quantities, such as four-hundred-ounce bars, valued at the time at \$8,268 each, equivalent today to over \$110,000. This meant that gold bullion would be used only by central banks, commercial banks and the wealthy, while others would use paper notes backed by the promises of governments to maintain their gold equivalent value. Paper money would still be "as good as gold," but the gold itself would disappear into central bank vaults. England codified these arrangements in the Gold Standard Act of 1925, intended to facilitate the new gold exchange standard.

Notwithstanding the return to a modified gold standard, the currency wars continued and gained momentum. In 1923, the French franc collapsed, although not nearly as badly as the mark had a few years earlier. This collapse memorably paved the way for a golden age of U.S. expatriates living in Paris in the mid-1920s, including Scott and Zelda Fitzgerald and Ernest Hemingway, who reported on the day-to-day effects of the collapse of the French franc for the *Toronto Star*. Americans could afford a comfortable lifestyle in Paris by converting dollars from home into newly devalued francs.

Serious flaws in the gold exchange standard began to emerge almost as soon as it was adopted. The most obvious was the instability that resulted from large accumulations of foreign exchange by surplus countries, followed by unexpected demands for gold from the

deficit countries. In addition, Germany, potentially the largest economy in Europe, lacked sufficient gold to support a money supply large enough to facilitate the international trade that it needed to return its economy to growth. There was an effort to remedy this deficiency in 1924 in the form of the Dawes Plan, named after the American banker and later U.S. vice president Charles Dawes, who was the plan's principal architect. The Dawes Plan was advocated by an international monetary committee convened to deal with the lingering problems of reparations under the Versailles Treaty. The Dawes Plan partially reduced the German reparations payments and provided new loans to Germany so that it could obtain the gold and hard currency reserves needed to support its economy. The combination of the Genoa Conference of 1922, the new and stable rentmark of 1923 and the Dawes Plan of 1924 finally stabilized German finance and allowed its industrial and agricultural bases to expand in a noninflationary way.

The system of fixed exchange rates in place from 1925 to 1931 meant that, for the time being, currency wars would play out using the gold account and interest rates rather than exchange rates. The smooth functioning of the gold exchange standard in this period depended on the so-called "rules of the game." These expected nations experiencing large gold inflows to ease monetary conditions, accomplished in part by lowering interest rates, to allow their economies to expand, while those experiencing gold outflows would tighten monetary conditions and raise interest rates, resulting in an economic contraction. Eventually the contracting economy would find that prices and wages were low enough to cause its goods to be cheaper and more competitive internationally, while the expanding economy would experience the opposite. At this point the flows would reverse, with the former gold outflow country attracting inflows as it ran a trade surplus based on cheaper goods, while the expanding economy would begin to run a trade deficit and experience gold outflows.

The gold exchange standard was a self-equilibrating system with one critical weakness. In a pure gold standard, the gold supply was the monetary base and did the work of causing economic expansion

and contraction, whereas, under the gold exchange standard, currency reserves also played a role. This meant that central banks were able to make interest rate and other monetary policy decisions involving currency reserves as part of the adjustment process. It was in these policy-driven adjustments, rather than the operation of gold itself, that the system eventually began to break down.

One of the peculiarities of paper money is that it is simultaneously an asset of the party holding it and a liability of the bank issuing it. Gold, on the other hand, is typically only an asset, except in cases—uncommon in the 1920s—where it is loaned from one bank to another. Adjustment transactions in gold are therefore usually a zero-sum game. If gold moves from England to France, the money supply of England decreases and the money supply of France increases by the amount of the gold.

The system could function reasonably well as long as France was willing to accept sterling in trade and redeposit the sterling in English banks to help maintain the sterling money supply. However, if the Banque de France suddenly withdrew these deposits and demanded gold from the Bank of England, the English money supply would contract sharply. Instead of smooth, gradual adjustments as typically occurred under the classical gold standard, the new system was vulnerable to sharp, destabilizing swings that could quickly turn to panic.

A country running deficits under the gold exchange standard could find itself like a tenant whose landlord does not collect rent payments for a year and then suddenly demands immediate payment of twelve months' back rent. Some tenants would have saved for the inevitable rainy day, but many others would not be able to resist the easy credit and would find themselves short of funds and facing eviction. Countries could be similarly embarrassed if they were short of gold when a trading partner came to redeem its foreign exchange. The gold exchange standard was intended to combine the best features of the gold and paper systems, but actually combined some of the worst, especially the built-in instability resulting from unexpected redemptions for gold.

By 1927, with gold and foreign exchange accumulating steadily in

France and flowing heavily from England, it was England's role under the rules of the game to raise interest rates and force a contraction, which, over time, would make its economy more competitive. But Montagu Norman, governor of the Bank of England, refused to raise rates, partly because he anticipated a political backlash and also because he felt the French inflow was due to an unfairly undervalued franc. The French, for their part, refused to revalue, but suggested they might do so in the future, creating further uncertainty and encouraging speculation in both sterling and francs.

Separately, the United States, after cutting interest rates in 1927, began a series of rate increases in 1928 that proved highly contractionary. These rate increases were the opposite of what the United States should have done under the rules of the game, given its dominant position in gold and continuing gold inflows. Yet just as domestic political considerations caused England to refuse to raise rates in 1927, the Fed's decision to raise rates the following year when it should have lowered them was also driven by domestic concerns, specifically the fear of an asset bubble in U.S. stock prices. In short, participants in the gold exchange standard were putting domestic considerations ahead of the rules of the game and thereby disrupting the smooth functioning of the gold exchange standard itself.

There was another flaw in the gold exchange standard that ran deeper than the lack of coordination by the central banks of England, the United States, France and Germany. This flaw involved the price at which gold had been fixed to the dollar in order to anchor the new standard. Throughout World War I, countries had printed enormous amounts of paper currency to finance war debts while the supply of gold expanded very little. Moreover, the gold that did exist did not remain static but flowed increasingly toward the United States, while relatively little remained in Europe. Reconciling the postwar paper-gold ratio with the prewar gold price posed a major dilemma after 1919. One choice was to contract the paper money supply to target the prewar gold price. This would be highly deflationary and would cause a steep decline in overall price levels in order to get back to the prewar price of gold. The other choice was to revalue gold upward so as to support the new price level given the

expansion in the paper money supply. Raising the price of gold meant permanently devaluing the currency. The choice was between deflation and devaluation.

It is one thing when prices drift downward over time due to innovation, scalability or other efficiencies. This might be considered “good” deflation and is familiar to any contemporary consumer who has seen prices of computers or wide-screen TVs fall year after year. It is another matter when prices are forced down by unnecessary monetary contraction, credit constraints, deleveraging, business failures, bankruptcies and mass unemployment. This may be considered “bad” deflation. This bad deflation was exactly what was required in order to return the most important currencies to their prewar parity with gold.

The choice was not as stark in the United States because, although the U.S. had expanded its money supply during World War I, it had also run trade surpluses and had greatly increased its gold reserves as a result. The ratio of paper currency to gold was not as badly out of line relative to the prewar parity as it was in England and France.

By 1923, France and Germany had both confronted the wartime inflation issue and devalued their currencies. Of the three major European powers, only England took the necessary steps to contract the paper money supply to restore the gold standard at the prewar level. This was done at the insistence of Winston Churchill, who was chancellor of the exchequer at the time. Churchill considered a return to the prewar gold parity to be both a point of honor and a healthy check on the condition of English finances. But the effect on England's domestic economy was devastating, with a massive decline of over 50 percent in the price level, a high rate of business failures and millions of unemployed. Churchill later wrote that his policy of returning to a prewar gold parity was one of the greatest mistakes of his life. By the time massive deflation and unemployment hit the United States in 1930, England had already been living through those conditions for most of the prior decade.

The 1920s were a time of prosperity in the United States, and both the French and German economies grew strongly through the middle part of the decade. Only England lagged. If England had

turned the corner on unemployment and deflation by 1928, the world as a whole might have achieved sustained global economic growth of a kind not seen since before World War I. Instead, global finance soon turned dramatically for the worse.

The start of the Great Depression is conventionally dated by economists from October 28, 1929, Black Monday, when the Dow Jones Industrial Average fell 12.8 percent in a single day. However, Germany had fallen into recession the year before and England had never fully recovered from the depression of 1920-1921. Black Monday represented the popping of a particularly prominent U.S. asset bubble in a world already struggling with the effects of deflation.

The years immediately following the 1929 U.S. stock market crash were disastrous in terms of unemployment, declining production, business failures and human suffering. From the perspective of the global financial system, however, the most dangerous phase occurred during the spring and summer of 1931. The financial panic that year, tantamount to a global run on the bank, began in May with the announcement of losses by the Credit-Anstalt bank of Vienna that effectively wiped out the bank's capital. In the weeks that followed, a banking panic gripped Europe, and bank holidays were declared in Austria, Germany, Poland, Czechoslovakia and Yugoslavia. Germany suspended payments on its foreign debt and imposed capital controls. This was the functional equivalent of going off the new gold exchange standard, since foreign creditors could no longer convert their claims on German banks into gold, yet officially Germany still claimed to maintain the value of the reichsmark in a fixed relationship to gold.

The panic soon spread to England, and by July 1931 massive gold outflows had begun. Leading English banks had made leveraged investments in illiquid assets funded with short-term liabilities, exactly the type of investing that destroyed Lehman Brothers in 2008. As those liabilities came due, foreign creditors converted their sterling claims into gold that soon left England headed for the United States or France or some other gold power not yet feeling the full impact of the crisis. With the outflow of gold becoming acute and the pressures of the bank run threatening to destroy major banks in

the City of London, England went off the gold standard on September 21, 1931. Almost immediately sterling fell sharply against the dollar and continued dropping, falling 30 percent in a matter of months. Many other countries, including Japan, the Scandinavian nations and members of the British Commonwealth, also left the gold standard and received the short-run benefits of devaluation. These benefits worked to the disadvantage of the French franc and the currencies of the other gold bloc nations, including Belgium, Luxembourg, the Netherlands and Italy, which remained on the gold exchange standard.

The European bank panic abated after England went off the gold standard; however, the focus turned next to the United States. While the U.S. economy had been contracting since 1929, the devaluation of sterling and other currencies against the U.S. dollar in 1931 put the burden of global deflation and depression more squarely on the United States. Indeed, 1932 was the worst year of the Great Depression in the United States. Unemployment reached 20 percent and investment, production and price levels had all plunged by double-digit amounts measured from the start of the contraction.

In November 1932, Franklin D. Roosevelt was elected president to replace Herbert Hoover, whose entire term had been consumed by a stock bubble, a crash and then the Great Depression itself. However, Roosevelt would not be sworn in as president until March 1933, and in the four months between election and inauguration the situation deteriorated precipitously, with widespread U.S. bank failures and bank runs. Millions of Americans withdrew cash from the banks and stuffed it in drawers or mattresses, while others lost their entire life savings because they did not act in time. By Roosevelt's inauguration, Americans had lost faith in so many institutions that what little hope remained seemed embodied in Roosevelt himself.

On March 6, 1933, two days after his inauguration, Roosevelt used emergency powers to announce a bank holiday that would close all banks in the United States. The initial order ran until March 9 but was later extended for an indefinite period. FDR let it be known that the banks would be examined during the holiday and

only sound banks would be allowed to resume business. The holiday ended on March 13, at which time some banks reopened while others remained shut. The entire episode was more about confidence building than sound banking practice, since the government had not in fact examined the books of every bank in the country during the eight days they were closed.

The passage of the Emergency Banking Act on March 9, 1933, was of far greater significance than the bank inspections in terms of rebuilding confidence in the banks. The act allowed the Fed to make loans to banks equal to 100 percent of the par value of any government securities and 90 percent of the face value of any checks or other liquid short-term paper they held. The Fed could also make unsecured loans to any bank that was a member of the Federal Reserve System. In practice, this meant that banks could obtain all the cash they needed to deal with bank runs. It was not quite deposit insurance, which would come later that year, but it was the functional equivalent because now depositors did not have to worry that banks would literally run out of cash.

Interestingly, Roosevelt's initial statutory authority for the bank closure in March was the 1917 Trading with the Enemy Act, which had become law during World War I and granted any president plenary emergency economic powers to protect national security. In case the courts might later express any doubt about the president's authority to declare the bank holiday under this 1917 wartime statute, the Emergency Banking Act of 1933 ratified the original bank holiday after the fact and gave the president explicit rather than merely implicit authority to close the banks.

When the banks did reopen on March 13, 1933, depositors lined up in many instances not to withdraw money but to redeposit it from their coffee cans and mattresses, where it had been hoarded during the panic of the preceding months. Although very little had changed on bank balance sheets, the mere appearance of a housecleaning during the holiday combined with the Fed's new emergency lending powers had restored confidence in the banks. With that behind him, FDR now confronted an even more pernicious problem than a bank run. This was the problem of deflation now being imported into the

United States from around the world through exchange rate channels. CWI had now arrived at the White House doorstep.

When England and others went off the gold standard in 1931, the costs of their exports went down compared to costs in other competing nations. This meant that competing nations had to find ways to lower their costs to also remain competitive in world markets. Sometimes this cost cutting took the form of wage reductions or layoffs, which made the unemployment problem worse. In effect, the nations that had devalued by abandoning gold were now exporting deflation around the world, exacerbating global deflationary trends.

Inflation was the obvious antidote to deflation, but the question was how to achieve inflation when a vicious cycle of declining spending, higher debt burdens, higher unemployment, money hoarding and further spending declines had taken hold. Inflation and currency devaluation are substantially the same thing in terms of their economic effects: both decrease the domestic cost structure and make imports more expensive and exports less expensive to other countries, thus helping to create domestic jobs. England, the Commonwealth and Japan had gone this route in 1931 with some success. The United States could, if it so chose, simply devalue against sterling and other currencies, but this might have prompted further devaluations against the dollar with no net gain. Continuation of paper currency wars on a tit-for-tat basis did not seem to offer a permanent solution. Rather than devalue against other paper currencies, FDR chose to devalue against the ultimate currency—gold.

But gold posed a unique problem in the United States. In addition to official holdings in the Federal Reserve Banks, gold was in private circulation in the form of gold coins used as legal tender and coins or bars held in safe-deposit boxes and other secure locations. This gold could properly be viewed as money, but it was money being hoarded and not spent or put into circulation. The easiest way to devalue the dollar against gold was to increase the dollar price of gold, which Roosevelt could do with his emergency economic powers. FDR could declare that gold would now be convertible at \$25 per ounce or \$30 per ounce instead of the gold standard price of \$20.67 per ounce. The problem was that the benefit of this increase

in the gold price would go in large measure to the private gold hoarders and would do nothing to free up the hoards or put them back in circulation. In fact, more people might convert paper dollars to gold bullion in anticipation of further gold price increases, and those hoarding gold might sit tight for the same reason, with their original convictions having already been confirmed. Roosevelt needed to ensure that any gains from the revaluation of gold would go to the government and not the hoarders, while citizens would be left with no forms of money except paper. If gold could be removed from private hands and if citizens could be made to expect further devaluations in their paper money, they might be inclined to start spending it rather than hold on to a depreciating asset.

A prohibition on the hoarding or possession of gold was integral to the plan to devalue the dollar against gold and get people spending again. Against this background, FDR issued Executive Order 6102 on April 5, 1933, one of the most extraordinary executive orders in U.S. history. The blunt language over the signature of Franklin Delano Roosevelt speaks for itself:

I, Franklin D. Roosevelt . . . declare that [a] national emergency still continues to exist and . . . do hereby prohibit the hoarding of gold coin, gold bullion, and gold certificates within the . . . United States by individuals, partnerships, associations and corporations. . . . All persons are hereby required to deliver, on or before May 1, 1933, to a Federal reserve bank . . . or to any member of the Federal Reserve System all gold coin, gold bullion and gold certificates now owned by them. . . . Whoever willfully violates any provision of this Executive Order . . . may be fined not more than \$10,000 or . . . may be imprisoned for not more than ten years.

The people of the United States were being ordered to surrender their gold to the government and were offered paper money at the exchange rate of \$20.67 per ounce. Some relatively minor exceptions were made for dentists, jewelers and others who made "legitimate and customary" use of gold in their industry or art. Citizens were

allowed to keep \$100 worth of gold, about five ounces at 1933 prices, and gold in the form of rare coins. The \$10,000 fine proposed in 1933 for those who continued to hoard gold in violation of the president's order is equivalent to over \$165,000 in today's money, an extraordinarily large statutory fine.

Roosevelt followed up with a series of additional orders, including Executive Order 6111 on April 20, 1933, which banned the export of gold from the United States except with the approval of the secretary of the Treasury. Executive Order 6261 on August 29, 1933, ordered U.S. gold mines to sell their production to the U.S. Treasury at a price to be set by the Treasury, in effect nationalizing the gold mines.

In a rapid sequence of moves, FDR had deftly confiscated private gold, banned its export abroad and captured the gold mining industry. As a result, Roosevelt greatly increased the U.S. hoard of official gold. Contemporary estimates were that citizens surrendered over five hundred metric tons of gold to the Treasury in 1933. The gold depository at Fort Knox was constructed in 1937 for the specific purpose of holding the gold that had been confiscated from U.S. citizens. There was no longer enough room in the basement of the Treasury.

It is difficult to imagine such a scenario playing out today, although the legal authority of the president to seize gold still exists. The difficulty in imagining this happening lies not in the impossibility of a similar crisis but rather in the political backlash that would ensue in an age of pervasive talk radio, social media, outspoken cable channel anchors and greatly diminished trust by U.S. citizens in their government. Of these factors, the loss of trust is the most powerful. FDR had his talk radio opponents after all, most famously Father Charles Coughlin, with an audience in the 1930s estimated to be larger than Rush Limbaugh's audience today. While it was not quite Twitter or Facebook, there was no shortage of social media, including newspapers and especially word of mouth readily constructed from a dense web of families, churches, social clubs and ethnic bonds. A powerful rebuke to FDR's gold confiscations could easily have emerged, yet it did not. People were desperate and trusted

FDR to do the right things to fix the economy, and if an end to gold hoarding seemed necessary, then people were willing to turn in their coins and bars and gold certificates when ordered to do so.

Today's electronic social media have a powerful amplifying effect on popular sentiment, but it is still the sentiment that counts. The residue of trust in leadership and economic policy in the early twenty-first century has worn thin. It is not difficult to imagine some future dollar collapse necessitating gold seizures by the government. It is difficult to imagine that U.S. citizens would willingly go along as they did in 1933.

Roosevelt's gold confiscation left unanswered the question of what new value the dollar would have relative to gold for purposes of international trade and settlements. Having confiscated Americans' gold at the official price of \$20.67 per ounce, FDR proceeded to buy more gold in the open market beginning in October 1933, driving up its price slowly and thereby devaluing the dollar against it. Economist and historian Alan Meltzer describes how FDR would occasionally choose the price of gold while lying in bed in his pajamas, in one instance instructing the Treasury to bid up the price by twenty-one cents because it was three times his lucky number, seven. The story would be humorous if it did not describe an act of theft from the American people; profits from the increased value of gold now accrued to the Treasury and not the citizens who had formerly owned it. Over the next three months, FDR gradually moved the price of gold up to \$35 per ounce, at which point he decided to stabilize the price. From start to finish, the dollar was devalued about 70 percent when measured against gold.

As the coup de grace, Congress passed the Gold Reserve Act of 1934, which ratified the new \$35 per ounce price of gold and voided so-called gold clauses in contracts. A gold clause was a covenant designed to protect both parties from the uncertainties of inflation or deflation. A typical provision said that in the event of a change in the dollar price of gold, any dollar payments under the contract would be adjusted so that the new dollar obligation equaled the former dollar obligation when measured against a constant weight of gold. FDR's attack on gold clauses was highly controversial and

was litigated to the Supreme Court in the 1935 case of *Norman v. Baltimore & Ohio Railroad Co.*, which finally upheld the elimination of gold clauses in a narrow 5–4 decision, with the majority opinion written by Chief Justice Charles Evans Hughes. It was only in 1977 that Congress once again permitted the use of gold clauses in contracts.

Finally the Gold Reserve Act of 1934 also established the Treasury's exchange stabilization fund, to be financed with the profits from gold confiscation, which the Treasury could use on a discretionary basis for currency market exchange intervention and other open market operations. The exchange stabilization fund is sometimes referred to as the Treasury's slush fund, because the money does not have to be appropriated by Congress as part of the budget process. The fund was famously used by Treasury Secretary Robert Rubin in 1994 to stabilize Mexican money markets after the collapse of the peso in December of that year. The exchange stabilization fund had been little used and was mostly unknown even inside Washington policy circles from 1934 to 1994. Members of Congress voting for the Gold Reserve Act in 1934 could hardly have conceived that they might be facilitating a Mexican bailout sixty years later.

The English break with gold in 1931 and the U.S. devaluation against gold in 1933 had the intended effects. Both the English and U.S. economies showed immediate benefits from their devaluations as prices stopped falling, money supplies grew, credit expansion began, industrial production increased and unemployment declined. The Great Depression was far from over, and these signs of progress were from such depressed levels that the burden on businesses and individuals remained enormous. A corner had been turned, however, at least for those countries that had devalued against gold and against other countries.

Now the gold bloc countries, which had benefited from the first wave of devaluations in the 1920s, began to absorb the deflation that had been deflected by the United States and England. This led finally to the Tripartite Agreement of 1936, another in that seemingly endless string of international monetary conferences and understandings that had begun with Versailles in 1919. The Tripartite

Agreement was an informal agreement reached among England, the United States and France, which acted for itself and on behalf of the gold bloc. The official U.S. version released by Treasury Secretary Henry Morgenthau on September 25, 1936, said that the goal was “to foster those conditions which safeguard peace and will best contribute to the restoration of order in international economic relations.” The heart of the agreement was that France was allowed to devalue slightly. The United States said, with reference to the French devaluation, “The United States Government . . . declares its intention to continue to use appropriate available resources so as to avoid . . . any disturbance of the basis of international exchange resulting from the proposed readjustment.” This was a “no retaliation” pledge from the United States—another sign that the currency wars were ending for now.

All three parties pledged to maintain currency values at the newly agreed levels against gold, and therefore one another, except as needed to promote domestic growth. The exception made for internal growth was highly significant politically and further evidence that, while currency wars may play out on an international stage, they are driven by domestic political considerations. In this regard, Morgenthau's statement read, “The Government of the United States must, of course, in its policy toward international monetary relations take into full account the requirements of internal prosperity.” The UK and French versions of the agreement, issued as a series of three separate communiqués rather than a single treaty document, contained substantially similar language. This “internal prosperity” language was not gratuitous, since all three countries were still struggling with the effects of the Great Depression. They could be expected to abandon the agreement readily if deflation or high unemployment were to return in such a way as to require further inflationary medicine through the exchange rate mechanism or devaluation against gold. Ultimately the Tripartite Agreement was toothless, because growth at home would always trump international considerations, yet it did mark an armistice in the currency wars.

Switzerland, the Netherlands and Belgium also subscribed to the

agreement after France had led the way. This completed the cycle of competitive devaluations that had begun with Germany, France and the rest of the gold bloc in the 1920s, continued with the UK in 1931, culminated with the United States in 1933 and now came full circle back to the gold bloc again in 1936. The temporary elixir of currency devaluation had been passed from country to country like a single canteen among thirsty soldiers. The more durable fix of cheapening currencies against gold in order to encourage commodity price inflation and to escape deflation had also now been shared by all.

One positive consequence of the currency devaluations by France and the new pledge of exchange rate stability in the Tripartite Agreement was the resumption of international gold shipments among trading nations. The era of suspension of gold exports and central bank hoarding of gold was beginning to thaw. The U.S. Treasury, in a separate announcement less than three weeks after the Tripartite Agreement, said, "The Secretary of the Treasury states that . . . the United States will also sell gold for immediate export to, or earmark for the account of, the exchange equalization or stabilization funds of those countries whose funds likewise are offering to sell gold to the United States." The United States was willing to lift its ban on gold exports to those countries that would reciprocate. The new price of gold in international transactions was set at \$35 per ounce, where it would remain until 1971.

The combination of a final round of devaluations, pledges to maintain new parities and resumption of gold sales might have worked to launch a new era of monetary stability based on gold. But it was a case of too little, too late. The economic destruction wrought by Versailles reparations and Weimar hyperinflation had given rise in Germany to the corporatist, racist Nazi party, which came to power in early 1933. In Japan, a military clique adhering to a twentieth-century version of the feudal code of Bushido had taken control of the Japanese government and launched a series of military invasions and conquests throughout East Asia. By 1942, large parts of the world were at war in an existential struggle between the Allied and Axis powers. Devaluations and struggles over war debts

and reparations left over from World War I were forgotten. The next time international monetary issues were revisited, in 1944, the world would be a far different place.

In the end, the flaws of both the 1925 gold exchange standard and U.S. monetary policy from 1928 to 1931 were too much for the global monetary system to bear. Devaluing countries such as France and Germany gained a trade advantage over those who did not devalue. Countries such as England, which had tried to return to the prewar gold standard, suffered massive unemployment and deflation, and countries such as the United States, which had massive gold inflows, failed to live up to their international responsibilities by actually tightening credit conditions during a time when they should have been loosening.

The extent to which these imbalances and misguided policies contributed to the Great Depression have been debated ever since. It is certainly the case that the failure of the gold exchange standard has led many economists today to generally discredit the use of gold in international finance. Yet it seems at least fair to ask whether the problem was gold itself or the price of gold, which stemmed from a nostalgic desire for a prewar peg, combined with undervalued currencies and misguided interest rate policies, that really doomed the system. Perhaps a more pure form of gold standard, rather than the hybrid gold exchange standard, and a more realistic gold price, equivalent to \$50 per ounce in 1925, would have proved less deflationary and more enduring. We will never know. What followed after 1936 was not a continuation of a currency war but the bloodiest real war in history.