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# THE GREAT DEPRESSION[i]

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## 1. Introduction

The 1930s Great Depression period is of great significance owing to its severity, length, and the changes it produced in economic theory and policy across most of the free world.

The purpose of this paper is to explain which factors led to the crisis. Even though the beginning of the crisis is identified in October of 1929, we can find its genesis in the 1920s.

## 2. The monetary regime during World War I

At the beginning of World War I (WWI), the monetary regime in place was known as the gold standard. The British pound (GBP) was the currency used in international transactions, and London was the world financial center. British banks financed a large share of international trade by advancing funds to exporters on behalf of importers. The latter were debtors of British banks. The beginning of WWI interrupted international transactions and trade.

England and France imposed a strict maritime blockade on Germany, which was understood as a violation of international law. Germany decided to declare the waters surrounding England as a war zone starting in February 1915.[1] Germans were very confident in their submarines. But, back then, they were not developed enough to clearly distinguish different types of targets. Three months later, the *Lusitania*, a civilian ship, was sunk with 1,200 people on board, 118 of which were American citizens. This situation produced a GBP shortage in international markets, which raised its price from 4.87 USD (US dollars) to 5.56 USD and put British banks under financial stress. With naval transport of gold interrupted, importers were unable to serve their debts, and, in turn, banks were unable to serve their debts. Except for the United States, the British government and several other countries declared their currencies' inconvertibility. The international monetary regime, the gold standard, ceased to operate.

The abandonment of the gold standard allowed countries to finance their war expenses through monetary expansion. Table 1 shows the percent variations of the currency in circulation of the leading countries in WWI.

Table 1. Currency in circulation (in millions)

| | England | France | Germany | Italy | Japan | United States |
|---|---|---|---|---|---|---|
| Year | £ | F | DM | £ | ¥ | $ |
| 1913 | 29.6 | 5,714 | 2,742 | 2,783 | 424 | 1,069 |
| 1918 | 393.4 | 31,055 | 32,787 | 13,874 | 1,144 | 3,693 |
| Variation | 1,229% | 443% | 1,096% | 399% | 170% | 245% |

Source: The Economists, monthly supplement, January 26, 1924, p. 5.

Germany and France abandoned the gold standard on August 4 and 5, 1914, respectively. England abandoned the convertibility of its currency gradually. There was no official declaration of inconvertibility, but the Englishman's right to convert his notes into gold was gradually restricted. Given the increased risk in gold's international shipment, insurance companies increased their premiums. The outflow of gold was severely restricted. In 1917 regulatory restrictions were put in place to limit the outflow of gold, and gold exports were finally prohibited in April 1919. The GBP was being supported by the J. P. Morgan & Co., who would finance

[1] In 1909 it was agreed that during war internationally traded goods were to be divided in three groups: (1) absolute smuggling (military equipment just as arms and ammunitions), (2) relative smuggling (goods indirectly used for military purposes such as food, fuel, and lubricants), and (3) free goods (such as cotton and medicine). The allies thought that if they observed this agreement the blockade would have no effect. For more details see Hardach (1986, pp. 19–45).

British and France imports. On March 20, 1919, J. P. Morgan decided to stop supporting the GBP. The GBP's value started to fall, and one month later, the British government officially declared its inconvertibility. The US Treasury tried to support the GBP but gave up on June 30. The depreciation of the GBP accelerated, as can be seen in Table 2.

Table 2. British Pound / US dollar parity (dollars per pound)

| Month | 1919 | 1920 | 1921 |
|---|---|---|---|
| January | 4.7658 | 3.6779 | 3.7419 |
| February | 4.7646 | 3.3810 | 3.8758 |
| March | 4.7147 | 3.7258 | 3.9111 |
| April | 4.6617 | 3.9310 | 3.9292 |
| May | 4.6676 | 3.8477 | 3.9753 |
| June | 4.6211 | 3.9497 | 3.7815 |
| July | 4.4287 | 3.8647 | 3.6321 |
| August | 4.2720 | 3.6219 | 3.6536 |
| September | 4.1790 | 3.5102 | 3.7240 |
| October | 4.1840 | 3.4751 | 3.8728 |
| November | 4.0982 | 3.4372 | 3.9702 |
| December | 3.8123 | 3.4923 | 4.1561 |

Source: Robbins (1934, p. 235)

The United States did not abandon convertibility, but in June 1917, a series of amendments to the Federal Reserve allowed for more "elasticity" in creating money. The Federal Reserve was authorized to create money backed by treasury bonds. In fact, since the Federal Reserve's creation, more than 100 amendments eroded the gold standard mechanisms (see Sennholz, 1979, Chapter IV).

The depreciation of the GBP was a problem for the gold standard. The Bank of England (BoE) wanted to return to the pre-war parity, that is, ¼ ounce of gold with a parity of 4.87 with the USD. There were two options to achieve this objective: (1) to produce deflation by removing from the market enough currency until pre-war conditions were met, or (2) to accept a depreciation of the GBP. As we will see below, none of these options were politically viable. The strategy chosen would be the main reason for the 1929 financial crash. However, besides these monetary and fiscal disequilibria, the United States further complicated the situation with its trade policy.

## 3. The Fordney-McCumber Law

Throughout WWI, the United States moved from being a debtor to a creditor in the world economy. Europe was its principal debtor. It was evident among some Republican legislators that Europe should be able to export to pay its debt. Therefore, these legislators preferred to avoid any tariff increases, even if they did not advocate for a reduction (Anderson, 1949, pp. 100–103).

However, Warren G. Harding, an advocate of higher tariffs, won the 1920 elections. A new law in 1921 increased the tariff on agricultural imports. Furthermore, in 1922 an industrial protection law had a much stronger effect. These protectionist laws are known as the *Fordney-McCumber Tariffs*.

The Fordney-McCumber tariffs are among the highest in the history of the United States.[2] Frank W. Fetter (1932, p. 83) condemned this protectionism the following way:

> Producers in those lines in which foreigners were competing with us were "taken care of" by high tariffs, promises of still higher tariffs from the Tariff Commission if "needed," and those interested in foreign trade were told how the Department of Commerce was going to open up huge foreign markets. Foreign loans were glorified by the same political leaders who wanted bigger and better trade restrictions, entirely oblivious to the problems involved in the

[2] For a detailed study of the Fordney-McCumber law see Berglund (1923). The average tariff imposed on total imports is not a precise reflection of how protectionist this law was; Berglund shows several examples and comparisons with previous periods that highlight the tariff modifications on specific products.

> payment of such loans […] A tremendous volume of foreign loans made possible exports far in excess of imports […] and Secretary Mellon and other defenders of this tariff policy pointed the finger of ridicule at those who had prophesied that the Fordney-McCumber Act would have an injurious effect upon our foreign trade.

What the protectionists could not understand is that import restrictions are at the same time export restrictions. If Europe could not sell in the foreign market, it would not have the needed reserves to import from the rest of the world, which would harm US exports. The situation was further complicated by the debt that some European countries incurred to the US during the war. The low export level made it difficult for European countries to be able to pay their debts. Loans given to allies during the war were approved by the US Congress. When the war ended, loans continued to increase, reaching a total of approximately 10,000 million USD. Obviously, the belligerent countries' economies were much deteriorated because of the war, making it difficult for them to pay back their loans. The Fordney-McCumber law made things even worse.

## 4. The Genoa Conference

After WWI, the international monetary regime was totally disorganized. Countries were trying to return to the gold standard. However, the need for a solution to the problems of banknote parity and fiscal deficits complicated the return to the pre-war arrangement.

In April and May 1922, a group of monetary experts who met in Genoa brought the gold standard's adjustment mechanism to an end. A new monetary regime was born: *the gold exchange standard*. The change from the gold standard to the gold exchange standard increased the "elasticity" of the money supply in each country. The new regime allowed central banks to hold reserves in gold and other banknotes convertible into gold and intervene in the market to "moderate" big fluctuations in the gold price. Resolutions 8, 9, and 11 (reproduced below) establish the most important points (taken from Cassel, 1936, pp. 28–30 italics added):

> Resolution 8
> The next step will be to determine and fix the gold value of the monetary unit. This step can only be taken in each country when the economic circumstances permit; for the country will then have to decide the question, whether to adopt the gold parity or a new parity approximating to the exchange value of the monetary unit at the time.
>
> Resolution 9
> These steps might by themselves suffice to establish a gold standard, but its successful maintenance would be materially promoted, not only by the proposed collaboration of central banks, but by an international Convention to be adopted at a suitable time. The purpose of the Convention *would be to centralize and co-ordinate the demand for gold, and so to avoid those wide fluctuations in the purchasing power of gold*, which might otherwise result from the simultaneous and competitive efforts of a number of countries to secure metallic reserves. The Convention *should embody some means of economizing the use of gold by maintaining reserves in the form of foreign balances, such, for example, as the gold exchange standard, or an international clearing system.*
>
> Resolution 11
> 1. The Governments of the participating countries declare that the restoration of a gold standard is their ultimate object, and they agree to carry out, as rapidly as may be in their power, the following program:
>    (a) In order to gain effective control of its own currency each government must meet its annual expenditure without resorting to the creation of fiduciary money or credits for the purpose.
>    (b) The next step will be, as soon as the economic circumstances permit, to determine and fix the gold value of the monetary unit. This will not necessarily be at the former gold par.
>    (c) The gold value so fixed must then be made effective in a free exchange market.

(d) The maintenance of the currency at its gold value must be assured by the provision of an adequate reserve of approved assets, *not necessarily gold*.

2. When progress permits, certain of the participating countries will establish a free market in gold and this become gold centres.
3. A participating country, in addition to any gold reserves held at home, may maintain in any other participating country reserves of approved assets in the form of bank balances, bills, short term securities or other suitable liquid resource.
4. The ordinary practice of a participating country will be to buy and sell exchange on other participating countries within a prescribed fraction of parity, in exchange for its own currency on demand.
5. *The Convention will thus be based on a gold exchange standard*. The condition of continuing membership will be the maintenance of the national currency unit at the prescribed value. Failure in this respect will entail suspension of the right to hold the reserve balances of other participating countries.
6. Each country will be responsible for the necessary legislative and other measures required to maintain the international value of its currency at par, and will be left entirely free to devise and apply the means, whether through regulation of credit by central banks or otherwise.
7. *Credit will be regulated, not only with a view to maintaining the currencies at par with one another, but also with a view to preventing undue fluctuations in the purchasing power of gold*. It is not contemplated, however, that the discretion of the central banks should be fettered by any definite rules framed for this purpose, but that their collaboration will have been assured in matters outside the province of the participating countries.

These resolutions show some conceptual errors regarding the gold standard: (1) in a gold standard regime, banknotes are mere obligations (debt) by the issuer to pay gold to the bearer on demand; therefore, to talk about a "new parity" is equivalent to talking about how much of their debts are issuers willing to pay. Returning to the pre-war parity means recognizing the totality of the debt; on the contrary, depreciation is a repudiation of part of the debt. All banknote holders would receive less gold than they have credit for. (2) The resolution talks about the banknotes as if they were money and gold as a good that needs its price to be fixed (parity). In reality, what serves as money and unit of account is gold, and banknotes are simple claims on gold. Without noticing, the experts in Genoa fall into the illusion of thinking that banknotes, rather than gold, were the money and unit of account.

In the end, the Genoa Pact suggested adopting a monetary system that would allow governments to regulate the quantity of money to keep stable its purchasing power by avoiding big fluctuations in the price of gold. The new monetary regime would also allow governments to regulate interest rates through open market operations because central banks would be able to issue banknotes against gold and other banknotes redeemable into gold, treasury bonds, and private securities (Resolution 11.3).

Economists of excellent reputation endorsed the adoption of the new monetary regime: the gold exchange standard. The idea that monetary policy's objective should be to stabilize the price level started to become the predominant position in the profession. Professor Irving Fisher stated, for instance, that the Genoa Conference was a strong shield for the advocates of stable money around the world (I. Fisher, 1935, p. 282).[3] However, as we will see, the gold *exchange* standard led to a spectacular rise in stock prices that ultimately ends with the crash of October 24, 1929.

## 5. The Origins of the Financial Bubble

We saw that the GBP, the most important currency before WWI, was very weakened after the war. The pre-war parity, which was 4.87 USD per BGP, fell to a minimum of 3.38 USD/GBP in February 1920. After this minimum, the GBP starts to recover, reaching a maximum of 4.69 USD/GBP in February 1923, to begin falling

[3] By late 1920 and early 1921, Fisher had organized the *Stable Money League*. In Europe, Arthur C. Pigou, Ralph G. Hawtrey, Knut Wicksell, Gustav Cassel, and John M. Keynes were among the economists who supported the idea of a stabilizing policy. For a detailed critique of this position see Mises (Mises, 1978, pp. 1–44, 51–98).

again to 4.30 USD/GBP. Because England wanted to return to the pre-war convertibility, it still needed to increase the GBP value with respect to gold and the USD by approximately 13-percent.

With the Fordney-McCumber law, the United States closed its imports and put its exports at risk. A devaluation of the USD would fulfill two purposes: (1) help England return to its pre-war convertibility and (2) promote US exports.

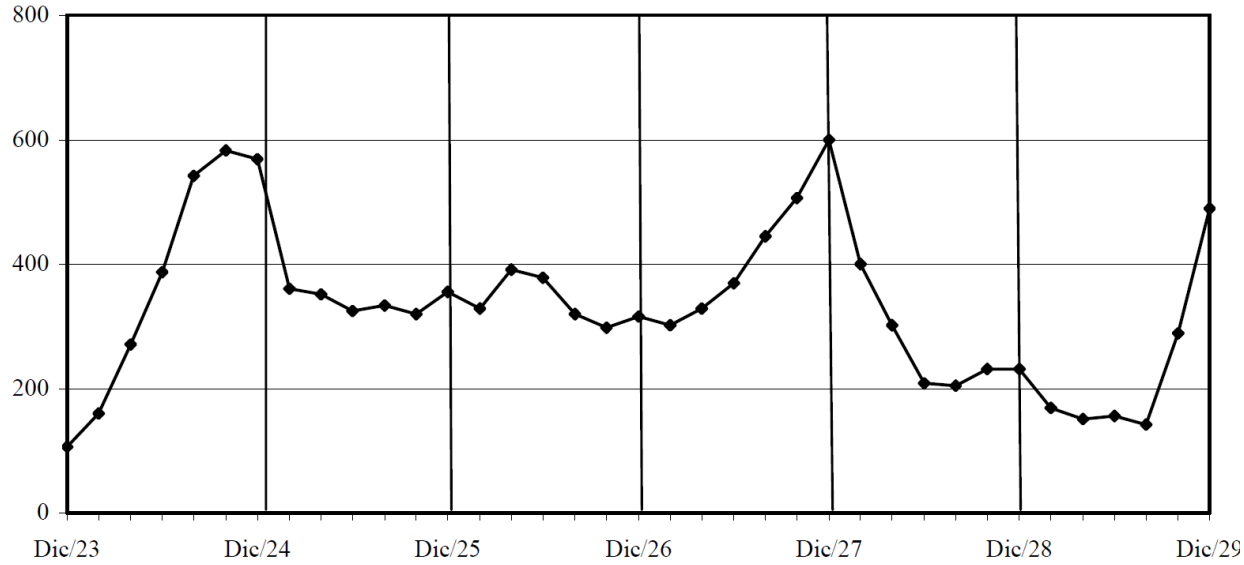
The Federal Reserve's amendments and the monetary pact of Genoa gave the monetary authorities enough flexibility to manage the quantity of money and reduce the USD value.

Warren G. Hardin, the United States president, had appointed Daniel R. Crissinger as Chairman of the Federal Reserve. The latter had no aptitude to preside over this institution other than being a personal friend of the president (Anderson, 1949, p. 129). To him, the Federal Reserve was a political tool. Because of his ignorance, he fell under the influence of Benjamin Strong.[4] It was Strong who promoted an expansionary policy reducing the United States' interest rate. This was intended to produce an outflow of dollars to Europe and reduce the USD value. This policy would help England get the GBP parity close to its pre-war value and to help the United States increase its exports.

During the 1920s, the Federal Reserve put into practice a series of policies intended to reduce the interest rate. In 1924 and then in 1927, it conducted large open market operations buying treasury bonds (Figure 1). It also purchased private securities (Figure 2). Finally, it carried out an expansionary policy in 1925 and 1927 through discount loans (Figure 3). In November 1929, the magazine *The Economist* (November 2, 1929) would comment on the Wall Street collapse in the following way:

> The history of the rise and fall in stock prices can be told briefly through the index numbers prepared by Standard Statistics Co. The beginning of the rise of prices can be found in the Federal Reserve authorities' "easy money" policy starting in 1924, but the period of highest increase was 1926.[ii]

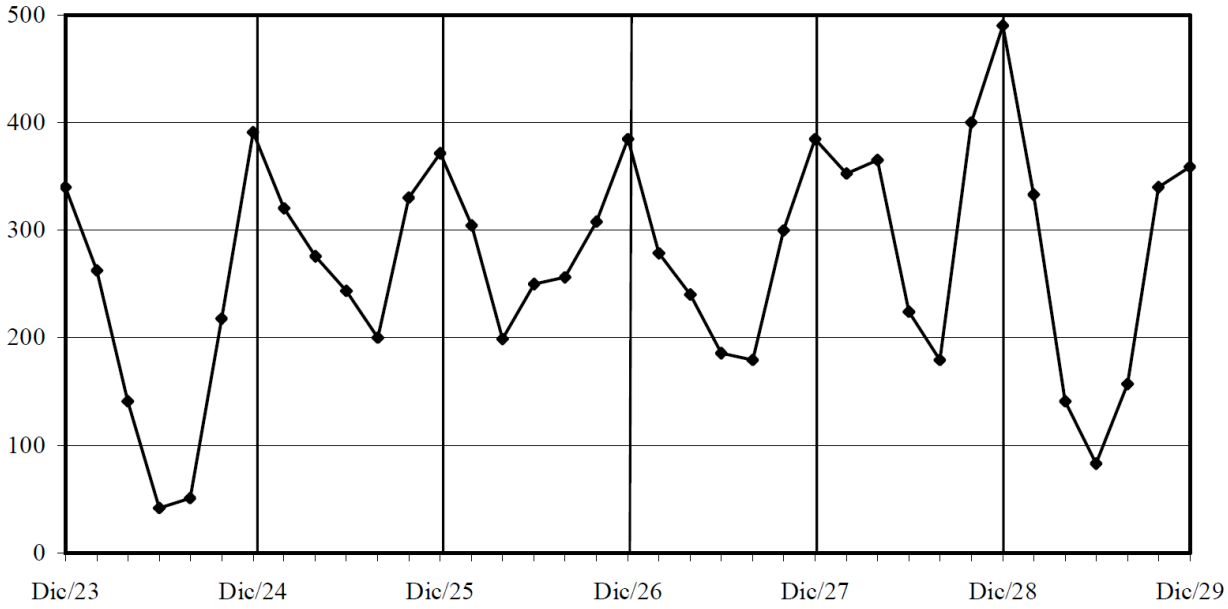
Figure 1. Treasury bonds at the Federal Reserve (millions of USD, end of month)




Source: The Economist

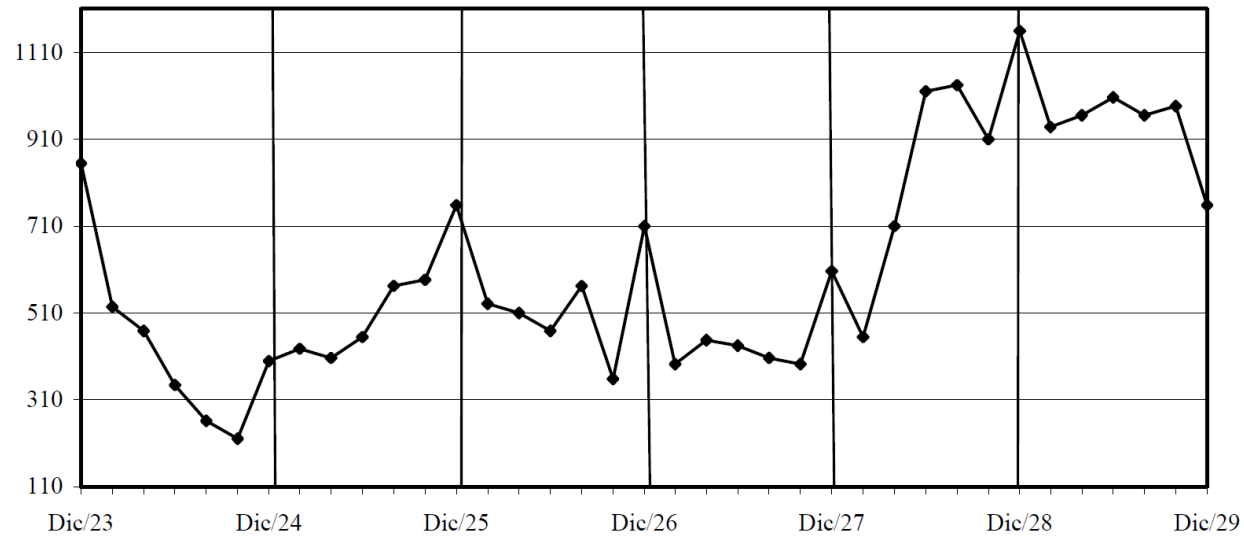
[4] Benjamin Strong was the New York Fed president and was characterized by his dominant personality.

Figure 2. Private securities at the Federal Reserve (millions of USD, end of month)




Source: The Economist

Figure 3. Discount loans (millions of USD, end of month)




Source: The Economist

A significant part of the liquidity produced by the Federal Reserve was channeled through *broker's loans*, which were loans to be used in stock exchange operations. Table 3 shows the evolution of the *broker's loans*.

Table 3. Broker's loan in New York City (millions of USD)

| Date | Total | Date | Total |
|---|---|---|---|
| 31-Dec-1920 | 1,080 | 29-Aug-1928 | 4,235 |
| 31-dec-1921 | 1,190 | 26-Dec-1928 | 5,091 |
| 31-Dec-1922 | 1,860 | 20-Mar-1929 | 5,791 |
| 31-Dec-1923 | 1,580 | 21-Aug-1929 | 6,085 |
| 31-Dec-1924 | 2,230 | 9-Oct-1929 | 6,713 |
| 31-Dec-1925 | 3,550 | 23-Oct-1929 | 6,634 |
| 1-Jun-1926 | 3,141 | 30-Oct-1929 | 5,538 |
| 31-Aug-1926 | 3,184 | 27-Nov-1929 | 3,450 |
| 28-Dec-1926 | 3,718 | 31-Dec-1929 | 3,424 |

Source: *Historical Statistics of the United States, Colonial Times to 1970*, US Department of Commerce, p. 1009, and Anderson (1949, p. 200).

These Federal Reserve open market operations reduced interest rates; the discount rate was below market rates for most of the 1920s. That Federal Reserve's interest rate movements were not fully justified is reflected by how surprising they were to the market. When the Federal Reserve reduced the discount rate from 4.5-percent to 4-percent in early March, *The Economist* (March 17, 1924, p. 1007) said that "the reduction came as a surprise. Most bankers thought that the rate would be reduced later, probably in mid-summer, but only a few expected this policy now."[iii] When the Federal Reserve increased the discount rate from 3-percent to 3.5-percent, the magazine said (March 14, 1925, p. 499) again: "The increase in the discount rate by the Federal Reserve announced yesterday was sort of a surprise for the financial district."[iv] Figure 4 shows the behavior of the interest rates of commercial paper ("Document. comerce.") and the discount rate ("Redescuentos R. F. ) of the Federal Reserve.

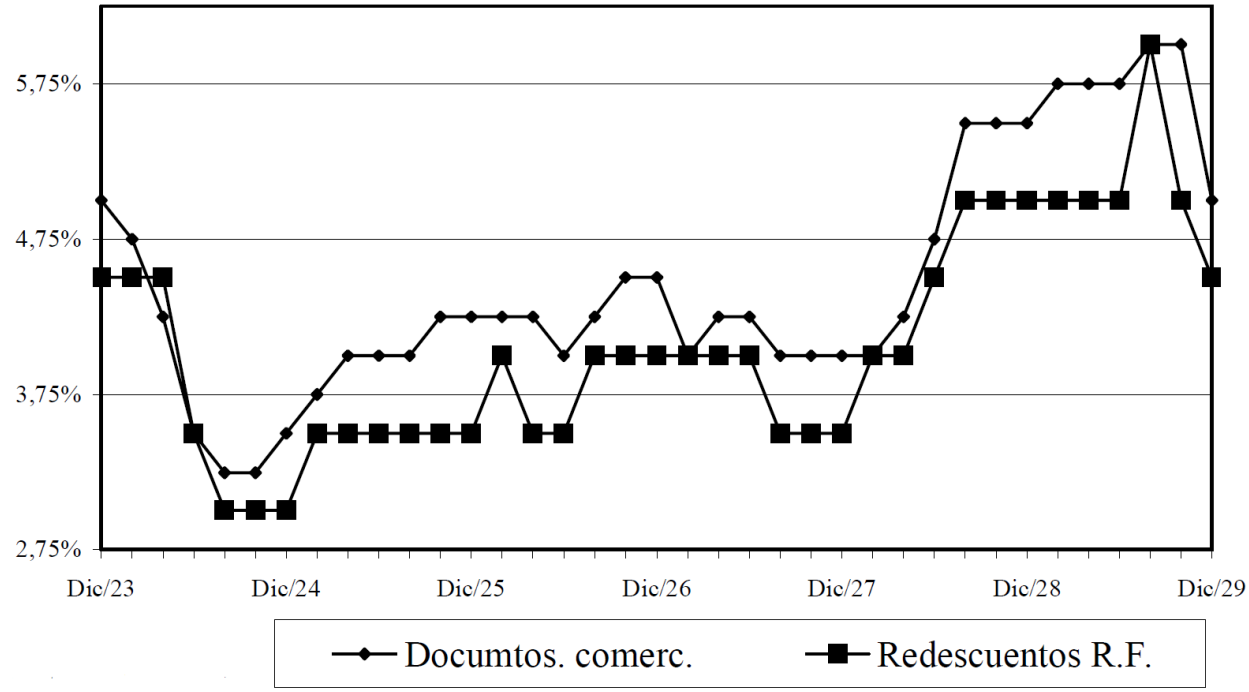
This expansionary policy carried out by the Federal Reserve produced, as was to be expected, a surge in stock prices above what e to be consistent given the growth of the US economy. Table 4 and Figure 5 show the spectacular increase in stock prices on Wall Street.

Table 4. Stock price index (1941-1943 = 100)

| Year | Index | Year | Index |
|---|---|---|---|
| 1920 | 79.8 | 1925 | 111.5 |
| 1921 | 68.6 | 1926 | 125.9 |
| 1922 | 84.1 | 1927 | 153.4 |
| 1923 | 85.6 | 1928 | 199.5 |
| 1924 | 90.7 | 1929 | 260.2 |

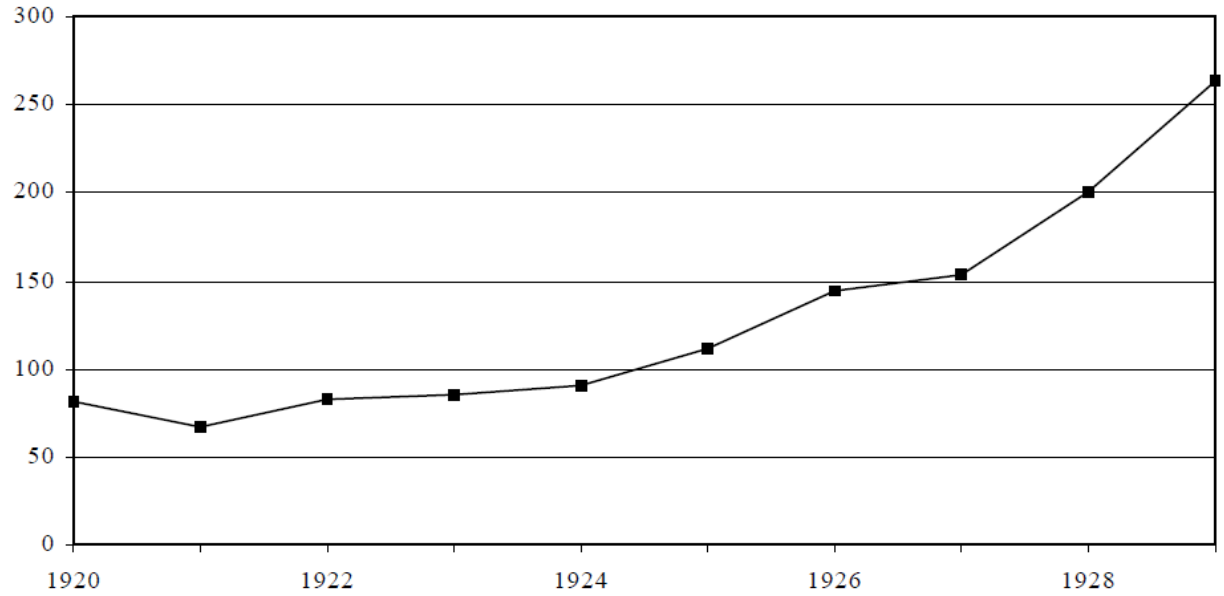
Source: *Historical Statistics of the United States, Colonial Times to 1970*, US Department of Commerce, p. 1004.

Figure 4. Interest rates in the United States




Source: The Economist

Figure 5. Stock prices in New York (Index, 1941-1943 = 100)




Source: Historical Statistics

The Federal Reserve's policy produced some controversy in the United States. On this matter, Anderson (1949, p. 146), one of the voices against the Federal Reserve's policy, said the following:

> The process did not go on without criticism. The *Chase Economic Bulletin* challenged it again and again as it went on. Again and again throughout the period the *Commercial & Financial Chronicle* of New York, in powerful editorials, attacked the Federal Reserve policy responsible

> for this great bank expansion, and gave warnings. And again and again as the process went on the late H. Parker Willis, Professor of Banking at Columbia University and formerly Secretary of the Federal Reserve Board, sounded warnings. Inside the Federal Reserve System itself there was opposition and resistance. The Chicago Federal Reserve Bank held back, especially in 1927, and was compelled to lower its rediscount rate by a vote of the Federal Reserve Board. Governor Seay, of the Federal Reserve Bank of Richmond protested. The influence of W. P. G. Hardin who, after leaving the Federal Reserve Board became Governor of the Boston Federal Reserve Bank, was strongly on the side of sound policy. Inside the New York Federal Reserve Bank Dr. W. Randolph Burgess, author of the excellent book *The Reserve Banks and the Money Market*, was definitely on the conservative side, although his influence in the bank was reduced by his comparative youth, and although he was doubtless inhibited by a great personal loyalty and affection for his chief, Benjamin Strong.
> But the system was adrift. It was hard to center responsibility, particularly after the Federal Reserve Board lost heart and courage when W. P. G. Harding was forced off the Board by President Harding, and Crissinger took his place.

Also, A. C. Miller, who, according to Lionel Robbins (1934, p. 53) was the member of the board with the most experience, would have pointed out the following:

> In the year 1927 […] you will note the pronounced increase in these holdings [Federal Reserve holdings of United States securities] in the second half of the year. Coupled with the heavy purchases of acceptances it was the greatest and boldest operation ever undertaken by the Federal Reserve System, and, in my judgment, resulted in one of the most costly errors committed by it or any other banking system in the last 75 years! […]
> What was the object of the Federal Reserve Policy in 1927? It was to bring down money rates, the call rate among them, because of the international importance the call rate had come to acquire. The purpose was to start an outflow of gold – to reverse the previous inflow of gold into this country.

The Federal Reserve was planting the seeds of a financial crisis, and this was noted, as we can see, by several money and banking experts.

## 6. The Situation in Europe

As mentioned above, England wanted to return to its pre-war parity. The Federal Reserve monetary policy facilitated a return to the GBP-USD parity. Table 5 shows the evolution of the GBP price.

Table 5. British Pound – US dollar parity (dollar per pound)

| Month | 1922 | 1923 | 1924 | 1925 | 1926 |
|---|---|---|---|---|---|
| January | 4.2247 | 4.6546 | 4.2591 | 4.7816 | 4.8578 |
| February | 4.3620 | 4.6908 | 4.3077 | 4.7724 | 4.8633 |
| March | 4.3757 | 4.6956 | 4.2906 | 4.7762 | 4.8608 |
| April | 4.4133 | 4.6554 | 4.3512 | 4.7953 | 4.8622 |
| May | 4.4461 | 4.6256 | 4.3608 | 4.8547 | 4.8615 |
| June | 4.4518 | 4.6146 | 4.3198 | 4.8604 | 4.8601 |
| July | 4.4463 | 4.5833 | 4.3703 | 4.8596 | 4.8634 |
| August | 4.4646 | 4.5603 | 4.4994 | 4.8569 | 4.8586 |
| September | 4.4307 | 4.5422 | 4.4605 | 4.8464 | 4.8541 |
| October | 4.4384 | 4.5237 | 4.4870 | 4.8428 | 4.8503 |
| November | 4.4799 | 4.3821 | 4.6096 | 4.8458 | 4.8487 |
| December | 4.6098 | 4.3601 | 4.6958 | 4.8498 | 4.8512 |

Source: Robbins (1934, p. 235).

The rise in the GBP price was not the result of an improvement of the British economy; it was due to the Federal Reserve's reduction in interest rates. In other words, the recovery of the GBP with respect to the USD rested on the Federal Reserve's continuation of its expansionary credit policy, which caused an outflow of USDs towards Europe.

The GBP value rise produced problems in England's trade balance, which promoted exports and suppressed imports.

Table 6. England's exports and imports (GBP)

| | 1924 | 1925 | 1926 | 1927 |
|---|---|---|---|---|
| Exports | 800,966.8 | 773,086.4 | 653,046.9 | 709,105.4 |
| Imports | 1,277,439.1 | 1,322,858.2 | 1,241,361.3 | 1,219,387.4 |
| Net exports | -474,472.3 | -589,314.4 | -588,314.4 | -510,282.0 |

Source: The Economist, Commercial History, 1924-1928

The GBP was overvalued approximately by 10-percent (Anderson, 1949, p. 172; Robbins, 1934, pp. 77–85; Rothbard, 1963, p. 131). Besides this over-appreciation, the British economy was losing flexibility. Increasing regulation had created rigidities that did not allow a quick adjustment of prices. The strength seized by the labor unions increased the unemployment rate to very high levels during all of the 1920s. In this way, England, which managed to put some order to its finances and monetary policy in the early 1920s, lost control of both after reinstating its currency's convertibility. On top of price and wage controls, England also had a depreciated currency. Furthermore, the BoE added a new set of problems to the British economy when, in August 1925, it decided to reduce the discount rate from 5-percent to 4.5-percent and, in October, to 4-percent. In December, it raised it again to 5-percent, and it remained at this level all 1926. But in April 1927, it reduced it again to 4.5-percent, leaving it at that level until early 1929. England's trade deficit, particularly with European countries, (and the reduction in the discount rate by the BoE) led to the accumulation of GBP by European central banks, especially by France and Germany, which, unlike England, kept their interest rates high.

After the war, and until mid-1926, France's economy and public finances fell into significant disorder. France's central bank balance sheet for the 1924-1925 period was doctored to hide the breach of monetary expansion limits.[5] Once it was publicly known that France's central bank had doctored its balance sheet, France's currency price in the international markets plunged (see Table 7).

Table 7. Franc's price in New York (dollar per Franc)

| Date | Price | Date | Price |
|---|---|---|---|
| 27-Dec-1923 | 5.1175 | 30-Dec-1926 | 3.9500 |
| 26-Jun-1924 | 5.3075 | 20-Jun-1927 | 3.9125 |
| 31-Dec-1924 | 5.4300 | 28-Dec-1927 | 3.9350 |
| 25-Jun-1925 | 4.5950 | 27-Jun-1928 | 3.9288 |
| 30-Dec-1925 | 3.7050 | 26-Dec-1928 | 3.9137 |
| 24-Jun-1926 | 2.9250 | | |

Source: The Economist, several issues.

In mid-1926, Poincare took over the administration of France's public finances. He had promised to balance the budget through less spending and more taxes, and he delivered on his promise. Table 7 shows that the Franc significantly improved with these measures. In 1926, at the same time that England over-appreciated its currency and launched a sizeable expansionary policy reducing its interest rates, France healed its public finances and strengthened its currency. England lost the (financial) capital that France gained. England, of course, blamed its disequilibrium on the over-appreciation of the Franc and on the fact that France had not officially returned to the gold standard.

The Dawes Plan was launched in 1924, after the German hyperinflation of 1923. The plan's intention was to solve Germany's war reparations debt, especially with England and France. France, in particular, had exercised considerable pressure to collect Germany's debt, even to the point of claiming the Rhur region.

[5] Baron Rothschild, director at the central bank, threated to make the falsification of the information public himself unless the central bank went public. For more details, see *The Economist*, "The Crisis in France" and "France", April 18, 1925, pp. 746, 756, respectively.

Germans had the same problem as the French: they had to balance their budget and stabilize their currency, and on top of this, they had to pay war reparations.[6]

To solve its problems, Germany received a loan of 200 million USD to help stabilize its currency and pay the first-year war reparations obligations. A new central bank was founded, with the mandate to keep 1/3 of its reserves in gold and immediately return to convertibility.

The return to convertibility, the ordering of the public finances, and the US support to the Dawes plan produced a significant inflow of funds to Germany due to the great increase in confidence. We can conclude then that while from 1925 and 1926, England had adopted an expansionary monetary policy and reduced its interest rates, France and Germany had behaved in the opposite way. England started to lose the funds that France and Germany received. Investment fell in England and increased in France and Germany. Things were taking place in the opposite way from that predicted by Keynesian theory: Where there were high interest rates, investment increased, and where there were low interest rates, investments were discouraged.

This situation led to an increased accumulation of GBP by European central banks. As we saw, thanks to the Genoa Pact, central banks had more flexibility to issue new money by being allowed to use other convertible banknotes rather than only gold as a source of monetary expansion. England's trade deficit was an increase in the supply of GBP in the continent. And to protect their parities, European central banks bought those GBPs. France's central bank, in particular, accumulated in a very short period a significant quantity of England's currency. In November of 1926, France's central bank had 5,300,000 GBP. By February of 1927, it rose to 20,000,000. By April to 60,000,000. And by May, it reached a total of 120,000,000 (Kindleberger, 1973, p. 75). Had England healed its currency and freed the interest rate, it could have put a stop to the outflow of capital. However, the president of the BoE, Montagu Norman, preferred an easy-money policy.

Émile Moreau, from France's central bank, considered it was risky to keep such a large number of GBP and decided to return them to the BoE, converting them into gold. This move put pressure on the BoE. Norman repeatedly tried to convince Moreau to cease his policy and to trust the GBP. He even tried to induce other continental central banks to put some pressure on Moreau. However, Moreau decided to continue the exchange of GBP for gold.

Norman asked his friend Benjamin Strong, at the New York Federal Reserve, to help organize a central bankers' meeting to dissuade France's central bank from its policy. Said meeting took place in July 1927, in New York. The participants were Norman for the BoE, Strong for the New York Federal Reserve, Charles Rist for France's central bank, and Hjalmar Schacht for the Reichsbank. Norman and Strong tried to encourage Rist and Schacht to carry on an expansionary policy and lower their interest rates. The meeting failed; Rist and Schacht returned to their respective countries. Norman and Strong designed a new credit expansion for the United States. As we saw in a previous quote, A. C. Miller, from the Federal Reserve Board, strongly opposed this policy but was defeated by Norman and Strong.

The sequence of events of Norman and Strong's policy was the following: (1) A reduction in banking rates by the New York Federal Reserve in late July and early August, (2) purchase of treasury bonds through open market operation between July 27 and August 3, (3) a reduction of the discount rate by the Federal Reserve banks of Kansas City, St. Louis, Boston, New York, and Cleveland.[7] Figure 1 shows how in 1927, the Federal Reserve significantly increased its holdings of treasury bonds. By the end of June 1927, it had a total of 369 million USD in treasury bonds. By mid-November of the same year, it reached a maximum of 704.8 million USD.[8] Figure 4 shows the fall in the discount rate from 4-percent to 3.5-percent.

For those who blame the 1929 crisis on the rigidity of the gold standard, it is important to remember that this expansionary policy, which started in mid-1927 by the Federal Reserve, took place while gold reserves were falling (see Figure 6), which implies going in the opposite direction of what the gold standard rules dictate.

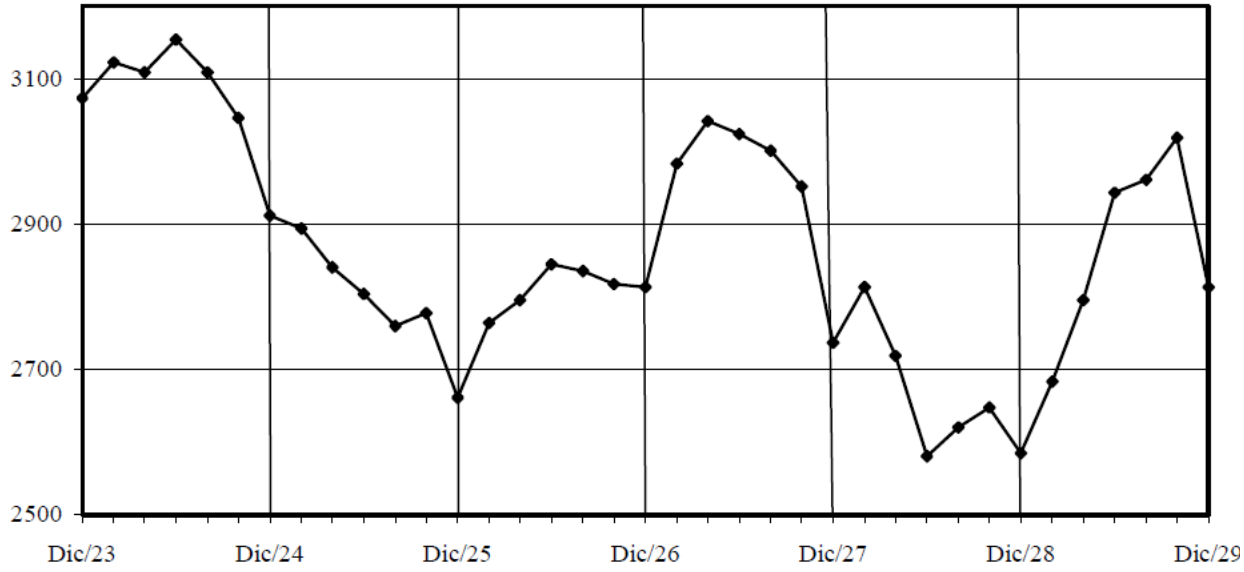
[6] For a detailed analysis of the hyperinflation episode and the recovery of Germany's currency see D'Abernon (1927), and Sennholz (1979, pp. 79–87).
[7] Data from Anderson (1949, pp. 190–191).
[8] On this matter, *The Economist* said: "[… the] credit situation in this center [New York] is easy because the Federal Reserve maintains its market influence through considerable purchases of paper and treasury bonds" (November 19, 1928, p. 878).

## 7. The Change in the Federal Reserve Policy

Strong and Norman's expansionary policy pushed up stock prices in Wall Street (see Figure 5). Strong's health deteriorated in late 1927, losing his power at the Federal Reserve Board.[9] He was eventually replaced by George L. Harrison. At the same time, Roy A. Young became a new member of the Board of Directors, who immediately started trying to stop Strong's credit expansionary policy.

Alarmed by high stock prices, between late 1927 and early 1928, Federal Reserve authorities decided to reverse their policy. They started to sell treasury bonds and raise the discount rate. The Federal Reserve gradually reduced its holdings of treasury bonds, from 704.8 million USD in mid-November 1927 to 489.3 million USD in late 1928. To 137.6 million USD in mid-October 1929 (see Figure 1). In early February 1928, the discount rate increased from 3.5-percent to 4-percent. In January 1928, the rise in stock prices slowed, and in February, they fell. However, starting in March (except June and July), stock prices rose again due to a new inflow of liquidity.

Figure 6. Gold in the Federal Reserve. Millions of USD (end of month)




Source: The Economist

Because of the illiquidity created by the sale of treasury bonds by the Federal Reserve, banks had to increase the demand for discount loans. An increase in discount loans worked against the Federal Reserve's ojective of stoping the financial *boom*. However, it decided once again in favor of credit expansion. The total value of discount loans was 479.2 million USD at the end of June 1927 and 1.000 million USD at the end of September 1929 (see Figure 3). The Federal Reserve gradually increased the discount rate trying to reduce the banks' demand for discount loans. On May 3, 1928, the discount rate was raised from 4-percent to 4.5-percent. On July 5, 1929, it was raised to 5-percent. On August 8, 1929, it was raised to 6-percent. But the demand for discount loans continued to increase through all of 1928. Only in early 1929, did the demand for discount loans turn down.

Another factor that contributed to maintaining the boom was an increase in broker's loans. In late 1927 total broker's credit was 4,430 million USD. In late 1928 it reached 6,440 million USD. In late July 2019 it reached 7.070 million USD. In early October, it reached 8,525 million USD (Kindleberger, 1973, p. 131). The sources of these funds were discount loans by the Federal Reserve and savings by individuals and firms attracted by higher interest rates. Banks were allowed to offer loans to brokers on behalf of third parties. A depositor could ask the bank to transfer deposits to a broker's loan account.

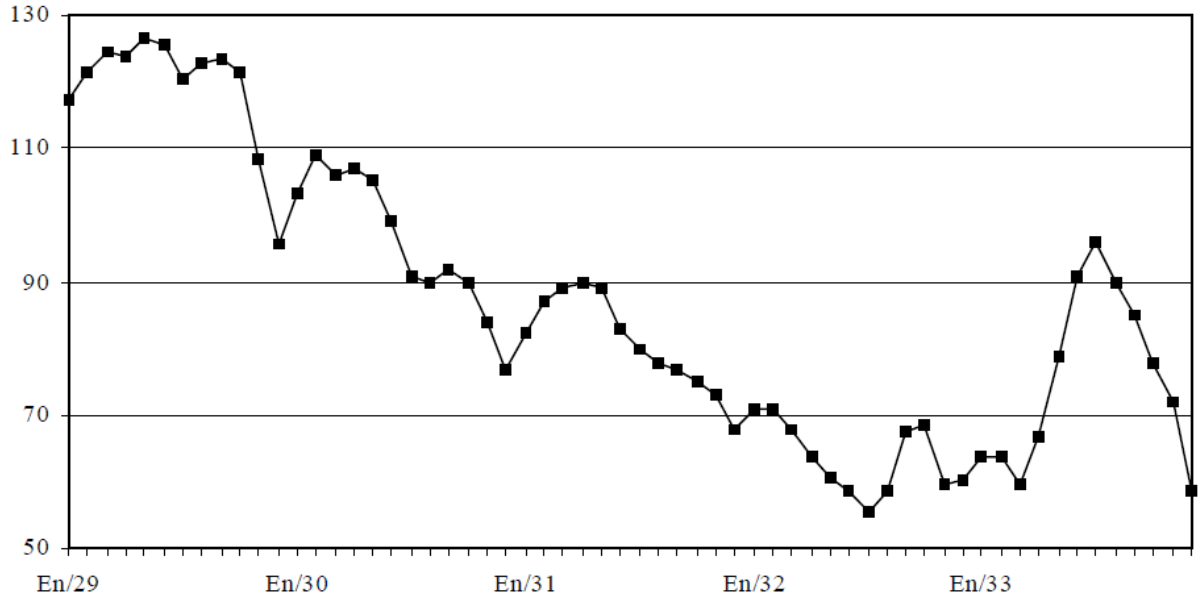
[9] Strong passed away on October 16, 1928.

Another factor contributing to maintaining the rise in stock prices was a change in the international flow of funds. The increase of interest rates in the United States reversed the flow of capital from the United States to Europe. European financial markets were pressured to raise their interest rates. Italy increased its rates in January 1929. England in February, Holland and Italy (for the second time) in March, increased their interest rates. Belgium raised its interest rate in July. The outflow of capital provided an additional motivation for France to get rid of its stock of GBP, creating new problems for the BoE.

Because of these factors, stock prices continued to rise. In August 1929, the Federal Reserve increased the discount rate from 5-percent to 6-percent; however, interest rates had been rising since April 1928. In that month, the rate on commercial paper increased from 4-percent to 4.25-percent. In early May, it rose to 4.5-percent. In late July, it rose to 4.75-percent. In late May, it rose to 4.88-percent, reaching a peak of 5.88-percent in August before falling to 5.5-percent. The commercial paper rate rose again to 6-percent in February 1929. In early June, the inter-banking loan reached 12-percent.

This sequence of interest rate spikes started to have some constraining effects on the economy. Output began to fall in May in Germany, in July in the United States, and in August in England. Only French output kept on growing. Figure 7 shows the index of industrial production in the United States.

Figure 7. Industrial production in the United States (1923-1925 = 100)




Source: The Great Depression

The stock exchange market index started to fall on October 3, and continued to fall the week of October 14 ending in a financial panic on Thursday, October 24. Those who had lent funds to brokers quickly withdrew them (Table 8), accelerating the fall in stock prices (Table 9). Some of the most important banks got together to try to stop the fall.

Table 8. Total credit to brokers (in million USD)

| Date | Amount |
|---|---|
| August 12, 1929 | 6,085 |
| October 9, 1929 | 6,713 |
| October 23, 1929 | 6,634 |
| October 30, 1929 | 5,534 |
| November 27, 1929 | 3,450 |
| December 31, 1929 | 3,424 |

Source: Anderson (1949, p. 221)

Table 9. Stock prices in New York

| Month | 1929 | 1930 | 1931 | 1932 | 1933 |
|---|---|---|---|---|---|
| January | 193 | 149 | 103 | 54 | 46 |
| February | 192 | 156 | 110 | 53 | 43 |
| March | 196 | 163 | 112 | 54 | 42 |
| April | 193 | 171 | 100 | 42 | 49 |
| May | 193 | 160 | 89 | 38 | 65 |
| June | 191 | 143 | 87 | 34 | 77 |
| July | 203 | 140 | 90 | 36 | 84 |
| August | 210 | 139 | 89 | 52 | 79 |
| September | 216 | 139 | 76 | 56 | 81 |
| October | 196 | 118 | 65 | 48 | 76 |
| November | 145 | 109 | 68 | 45 | 77 |
| December | 147 | 102 | 54 | 45 | 79 |

Source: Robbins (1934, p. 204)

Even though the October fall in the New York stock exchange was significant, it cannot be said that it was the cause of the economic recession in the 1930s, nor that it was a fall the likes of which had never been seen before. As shown in Table 9, recovery was taking place already in December 1929, which continued until April 1930. It is then that a continuous fall in prices set in until mid-1933.

The economic recession and the increase in unemployment in the 1930s are not a consequence of the fall in stock prices. On the contrary, the fall in stock prices is a consequence of the economic recession. We can see in Figure 7 that, even without reaching mid-1929 levels, there was a recovery in industrial production starting in early 1930. Typically, October 1929 is presented as the starting day of the great depression. However, all that happened then was a moderate recession due to monetary and credit manipulation by the Federal Reserve that started in 1924. The worsening of the crisis and unemployment, especially beginning in 1931, was due to Herbert Hoover's policies first and Franklin D. Roosevelt after.

## 8. The 1930s

Before the Great Depression, governments typically reacted to crises with reduced spending and taxes and let markets readjust. With Hoover, there was a change of strategy. Now the government felt it must "collaborate" in the solution of the crisis. This way, the Hoover administration introduced a policy of more government intervention. During his presidential campaign, he summarized his economic administration the following way (cited by Rothbard, 1963, p. 187):

> we might have done nothing. That would have been utter ruin. Instead we met the situation with proposals to private business and to Congress of the most gigantic program of economic defense and counterattack ever evolved in the history of the Republic. We put it into action […] No government in Washington has hitherto considered that it held too broad a responsibility for leadership in such times […] For the first time in the history of depression, dividends, profits, and the cost of living have been reduced before wages have suffered […] They were maintained until the cost of living had decreased and the profits had practically vanished. They are now the highest real wages in the world.
> Creating new Jobs and giving to the whole system a new breath of life; nothing has ever been devised in our history which has done more for […] 'the common run of men and women.' Some of the reactionary economists urged that we should allow the liquidation to take its course until we had found bottom […] We determined that we would not follow the advice of the bitter end liquidationists and see the whole body of debtors of the United States brought to bankruptcy and the savings of our people brought to destruction.

In November 1929, Hoover held a series of meetings with the most important industry leaders and encouraged them to not let go of employees and expand their investments. The Federal Reserve immediately

returned to its expansionary policy of the 1920s. Within a week, it had significantly increased Treasury bonds' holdings from 135,000 million USD to 292.690 million USD. On October 31, it reduced the discount rate from 6-percent to 5-percent, and on November 14, it lowered it again to 4.5-percent.

On November 23, Hoover sent a telegram to the state governors asking them to collaborate with the expansion of the federal government's public investment plan as a measure of economic reactivation. By mid-1929, the Federal Farm Board was operating, and received funds from the Treasury with the objective of buying agricultural products to raise their prices. In Jun 1920 the Congress approved a new increase in tariffs, the Hawley-Smoot Tariff Act, which was followed by a wave of protectionism worldwide.

On March 21, Germany and Austria (allies in WW I) announced a market union (*Zollverein*). France considered that this pact was primarily a political move by Germany and that it implied a breach of the Versailles Treaty. There were rising concerns in the international financial markets that France would start to withdraw its funds from Austria, which had large amounts of gold and foreign currency. Banks in Austria began to face rising withdrawals of funds. The BoE and other banks tried to help by offering credit lines, but in the end, they were afraid as well. In June 1931, Austria abandoned the gold standard.

Austria's abandonment of the gold standard produced panic in Germany. On June 20, Hoover announced a one-year moratorum on European countries' debt obligations to the United States and on Germany's war reparation. The announcement was supposed to be supported by Congress. Of course, the first moratorium was conditional on the second one. All European countries almost immediately accepted the offer. But France, the most important country at that moment, delayed its reply. German banks continued to be under pressure, and withdrawal restrictions were imposed on July 15. As we previously saw, different European central banks, especially the French, accumulated a large amount of GBP because of its appreciation. The fall of Austrian and Germany raised doubts about the GBP. The bank run now reached the BoE, which lost a considerable amount of gold in a short period. The BoE raised the discount rate from 2.5-percent to 3.5-percent, trying to stop the outflow of gold, but it was not enough. The BoE reached out to the Federal Reserve and France for help; each one offered 125 million USD. However, as long as England did not correct the GBP over-appreciation and balanced its budget, the GBP distrust would continue. Federal Reserve and French central bank credits helped only to postpone the fall of the GBP.

On August 28, the BoE received another credit of 400 million USD from a group of private banks. However, England continued to ignore the required economic changes and further expanded its money supply by purchasing treasury bonds producing reserve losses. On June 24, 1931, the BoE held 30.4 million GBP in treasury bonds. According to the balance sheet of September 2, treasury bonds' value increased to 53.7 million GBP. The central banks of France and Holland helped the BoE by not converting their large amounts of GBP into gold. On September 18, the President of Holland's central bank called Norman of the BoE to ask him if the GBP was safe. The answer he received was that the GBP would unconditionally stay on the gold standard. On September 19, France's central bank, after seeing no improvements in England, decided to convert 1 million GBP. On September 20, England abandoned the gold standard. The central banks of France and Holland suffered significant losses due to the depreciation of the GBP. The official USD per GBP parity was 4.86, the average parity in December was 3.37.

After the fall of the GBP, there was a run against the USD. The large among of gold at the Federal Reserve allowed the institution to face the rise in withdrawals without significant problems. However, Hoover's interventionist policies increased the unemployment rate in the United States from 3 million in 1930 to 10.5 million in 1932 and produced an abrupt fall in industrial production (Figure 7). Hoover was one of the few US presidents not reelected for a second period.

Rumors about the gold standard abandonment immediately started to circulate after Roosevelt won the 1932 presidential election. Roosevelt refused to deny the rumors and, therefore, depositors began to withdraw their gold.

Two days after becoming president, Roosevelt declared a two-day banking holiday to study the situation. On Sunday, March 12, he delivered a message through radio, ensuring people could trust the banks and make deposits. His message had the desired effect. On April 5, making use of Congress' authorization of extraordinary powers, Roosevelt "temporarily" declared illegal to hold gold coins in the United States. He also restricted the export of gold and foreign currency.

On May 12, the Agricultural Adjustment Act (AAA) was approved, becoming effective on June 9. According to this law, agricultural producers received a subsidy to decrease production. The objective was to increase the

price of grains relative to the prices of industrial products. Agricultural prices rose in July, but the difference in prices between agricultural and industrial goods returned to pre-AAA levels by the end of the year.

The New Deal was born on June 16 when Roosevelt signed the National Industry Recovery Act (NIRA) approved by Congress. This law included a large number of industry regulations and codes. Working hours were reduced, it imposed minimum wages, and it fixed the price and conditions of selling goods. The law's idea was to put an end to the recession by increasing "aggregate demand." The National Recovery Administration (NRA) was created to observe the compliance of the regulations and codes.

Late January 1934, the Gold Reserve Act was sanctioned. This law expropriated the gold of the Federal Reserve banks which became the property of the US Treasury. In exchange for the gold, the Federal Reserve banks received "gold certificates." "Gold certificate" was a minnomer since it was not exchangable for gold. It was a certificate of expropriation. On January 31the USD depreciated against gold, going from 20.67 USD per ounce of gold to 35. In December 1933, a growing public spending program started, as can be seen in Table 10.

Table 10. U. S. Federal Government Spending (in millions of USD)

| Year | Spending |
|---|---|
| 1929 | 3,127 |
| 1930 | 3,320 |
| 1931 | 3,577 |
| 1932 | 4,659 |
| A | 4,598 |
| 1934 | 6,645 |
| 1935 | 6,497 |
| 1936 | 8,421 |
| 1937 | 7,733 |
| 1938 | 6,765 |
| 1939 | 8,841 |

Source: *Historical Statistics of the United States, Colonial Times to 1970*. US Department of Commerce, p. 1104.

It can be seen that spending increased starting in 1934. The objective was to stimulate output and reduce unemployment by increasing "aggregate demand." Tax policy focused on income redistributions. Taxes on high income significantly increased. A 5-percent tax was levied on undistributed firm utilities, and there was an attempt to have Congress approve a hereditary tax. This tax did not pass, but there was a significant increase in real estate taxes.

Roosevelt's policies failed to improve the economic recession. In 1933, the unemployment rate was slightly higher than in 1932, going from 12,060,000 to 12,830,000. In 1934 unemployment fell to 11,340,00, in 1935 to 10,610,000, in 1936 to 9,030,000, and in 1937 to 7,700,000. However, in 1938 and 1939 it increased again to 10,390,000 and to 9,480,000 respectively.[10] The Federal Reserve's index of industrial production, which had a value of 60 in March 1933, increased to 100 by July. After passage of the NIRA it fell to 72 in November, rose to 86 in May 1934, and fell again to 71 in September. As we can see, Roosevelt's policies did not improve the economy in a definitive way. On the contrary, it went up and down owing to the regulatory changes.

A series of inconveniences for Roosevelt's interventionist policies started to take place in 1935. Early that year, four claims regarding the unconstitutionality of the inconvertibility of USD and gold-denominated debt reached the US Supreme Court. With a vote of 5 to 4, the US Supreme Court kept the elimination of the requirement to pay private debt with gold. However, the law that exempted the government from paying its debts with gold was unanimously declared unconstitutional. In mid-1935, thanks to senator Glass, a legislative initiative was successfully revised. Having been approved in its original form, it would have granted the Federal Reserve significant power to regulate banks' deposits and reserves.

On May 27, the US Supreme Court declares the NRA unconstitutional. The NRA was created to monitor and ensure that the NIRA's codes and regulations were being adhered to by producers. Because it could change the rules, the NRA was practically making legislation. Entrepreneurs faced serious challenges with the NRA because

[10] *Historical Statistics of the United States, Colonial Times to 1970*, U.S. Department of Commerce, p. 135.

they did not know which regulations to follow or when these would be changed. The US Supreme Court Judges understood that Congress had delegated attributes that rightfully belong to Congress. Therefore, the NRA was unconstitutional.

The court's decision helped to alleviate, for some time, the regulatory pressure and the NRA's controls over industrial producers. Industrial output and investment increased, not thanks to the New Deal, but thanks to its partial abolition. In 1936, the US Supreme Court also declared the AAA unconstitutional. In early 1937, Roosevelt tried to have Congress approve a law that would modify the number of US Supreme Judges to have it turn in its favor. This produced indignation being seen as excessively dictatorial. If the US Supreme Court were on his side, Rosseveld would have been able to secure new legislation in a Congress controlled by the Democrats and receive a favorable interpretation by the judges.

Roosevelt's move produced fear in the market because of the potential for unchecked increases in interventionist policies in the event that the Executive controlled the US Supreme Court. Stock prices and industrial production reacted to the fear; both fell. The index of industrial production, which was 120 in 1937, fell to 84 and 81 in March and June. Unemployment rose from 7,700,00 in 1937 to 10,390,000 in 1938. Unemployment worsened once again because of the Wagner Act (July 1935). This law started to have effects, especially in strikes in the automobile industry, after the 1936 elections. The last New Deal's law, the Wage and Hours Act, reinforced the Wagner Act. This law restricted the amount of work to 44 hours a week during the first year, to 42 in the second year, and to 40 in the third year. Extra hours had to be paid 1.5 times the normal wage. Minimum wages were established at 25 cents an hour for the first year, at 30 cents for the following 6 years, and 40 cents after the seventh year.

## 9. Conclusions

The Great Depression does not have a single cause. The fall of the stock exchange in October 1929 was a direct consequence of the Federal Reserve's monetary policy starting in 1924. The artificial boom in stock prices originated in the lowered interest rate and higher liquidity produced by the Federal Reserve's purchase of treasury bonds in open market operations. Europe's monetary disorder, especially in England, added to the Federal Reserve's monetary disequilibria. The fall in stock prices came when the Federal Reserve authorities reversed their expansionary policy selling treasury bonds and raising the discount rate.

It can be said that the output recession started with the illiquidity created by the Federal Reserve. Still, the recessionary effects at the beginning of the crisis were no worse than those on past occasions. The profound significance and length that characterize the Great Depression were owing to the increasing interventionist policies by Hoover and Roosevelt and the increase in tariffs around the world (led by the United States with the Fordney-McCumber law).

The Great Depression was not a result of the gold standard nor of free trade. It was a consequence, as in previous cases, to state intervention in money and markets. In particular, the New Deal was not the solution to the crisis but a cause that, when eliminated by the US Supreme Court, flexibility and capacity to recover were returned to the market.

## 10. Appendix: Alternative explanations of the Great Depression

The preceding analysis closely followed Anderson's (1949) and Robbins's (1934) explanations on the causes and development of the Great Depression. However, we can also briefly cover the two more popular alternative explanations of the crisis. The most popular in the academic world seems to be the one by Keynes. Secondly, we can consider Milton Friedman's explanation.

According to Keynes, unemployment is due to an aggregate demand insufficient to create a level of production able to absorb the totality of available labor. This insufficiency in aggregate demand can be due to a fall in consumers' propensity to consume or to a too high interest rate. Therefore, Keynes' proposed solution is to increment aggregate demand by increasing government spending or to increase investment by reducing the interest rate.

Neither Keynes' explanation nor the solution to the crisis is new; the mercantilists gave similar explanations. Keynes' explanation of the crisis was already refuted in the early 19th century by the French economist Jean-Baptiste Say, whose argument was adopted and developed by David Ricardo and John Stuart Mill. According to Say's Law, it is impossible to think that there can be an excess aggregate supply over

aggregate demand or vice versa. Aggregate supply and demand form an identity; they are like two sides of the same coin. Every supply necessarily implies a demand, and every demand necessarily implies a supply. Who demands something must offer something in exchange, and who offers something is demanding something in return. Therefore, there cannot be any difference between aggregate demand and supply. What can happen is an excess of supply in some markets, which implies there must be an excess of demand in other markets. It cannot be the case that all markets are depressed at the same time.

One of Keynes' recognized achievements is to have refuted Say's Law. The economist Paul M. Sweezy stated that (cited by Hazlitt, 1959, p. 32)

> Historians fifty years from now may record that Keynes' greatest achievement was the liberation of Anglo-American economics from a tyrannical dogma, and they may even conclude that this was essentially a work of negation unmatched by comparable positive achievements. Even, however, if Keynes were to receive credit for nothing else […] his title to fame would be secure […] [Yet] the Keynesian attacks, though they appear to be directed against a variety of specific theories, all fall to the ground if the validity of Say's Law is assumed.

Sweezy's conclusion is entirely true: All of the Keynesian economics falls to the ground if Say's Law is true. However, from the number of economics topics that Keynes did not understand, Say's Law is at the top, and this is relatively easy to show. To refute Say's Law, Keynes (1936) uses the following passage by John S. Mill

> What constitutes the means of payment for commodities is simply commodities. Each person's means of paying for the productions of other people consist of those which he himself possesses. All sellers are inevitably, and by the meaning of the word, buyers. Could we suddenly double the productive powers of the country, we should double the supply of commodities in every market; but we should, by the same stroke, double the purchasing power. Everybody would bring a double demand as well as a supply; everybody would be able to buy twice as much, because every one would have twice as much to offer in exchange.

According to Keynes (p. 36), the "doctrine is expressly set forth" in this passage, which he uses to refute Say's Law. However, this passage is cut in half, very likely because he did not understand what Mill was saying. Mill's (1848, p. 558) passage continues, and what it says next is as important as what Keynes cited:

> It is probable, indeed, that there would now be a superfluity of certain things. Although the community would willingly double its aggregate consumption, it may already have as much as it desires of some commodities, and it may prefer to do more than double its consumption of others, or to exercise its increased purchasing power on some new thing. If so, the supply will adapt itself accordingly, and the values of things will continue to conform to their cost of production. At any rate, it is sheer absurdity that all things should fall in value, and that all producers should, in consequence, be insufficiently remunerated. If values remain the same, what becomes of prices is immaterial, since the remuneration of producers does not depend on how much money, but on how much consumable articles, they obtain for their goods. Besides, money is a commodity; and if all commodities are supposed to be doubled in quantity, we must suppose money to be doubled too, and then prices would no more fall than values would.

As we can see, the part that Keynes forgot to cite completes Say's Law. It explains that even though demand and supply must be equal at the aggregate level, there can be disequilibria across individual markets. Besides, there is a very important point that Keynesian economics forgets: that "money is a commodity." When Keynes states that an increase in demand for liquidity reduces aggregate demand, he is right as long as money is not considered an economic good. However, money is an economic good because it is useful and scarce. An increase in the demand for money has the same effects that an increase in the demand for any other good: it makes its price (the purchasing power) increase and promotes growth in production up to the point where it ceases to be profitable to continue producing money. In a free market of money, supply rises and falls following

movements in its demand. What Keynes should have explained is why an increase in the demand for money does not produce, in a free market, the same effects as an increase in the demand for any other good: an increase in output until its marginal cost equals its marginal benefit.[11] In any case, Keynes' refutation in *The General Theory* is invalid because what he refutes is a mutilated paragraph of Say's Law. Today some economists seem to have comprehended that an increase in government spending does not increase aggregate demand; it changes its structure: an increase in government spending is offset by a lower level of household consumption or private investment.

As we saw above, during the 1920s, the Federal Reserve created a relatively substantial credit expansion. Friedman and Schwartz's (1963, p. 298) point of view is the opposite: "Far from being an inflationary decade, the twenties were the reverse. And the Reserve System, far from being an engine of inflation, very likely kept the money stock rising as much as it would have if gold movements had been allowed to exert their full influence." According to these authors, the Great Depression was caused by a strong monetary contraction by the Federal Reserve. The money supply did indeed decrease, but this was only until 1933 (Table 11). Friedman and Schwartz's explanation had already been offered by several economists during the 1920s; we can refer among others to Fisher (1935)[12], Gustav Cassel (1932), Ralph G. Hawtrey (1932), Carl Snyder (1923), and the architect of the United States' monetary policy during the 1920s: Benjamin Strong.[13]

Table 11. Money suppl yin the United States (in thousand million of US dollars)

| Year | M1 | M2 |
|---|---|---|
| 1928 | 26.38 | 46.42 |
| 1929 | 26.64 | 46.60 |
| 1930 | 25.76 | 45.73 |
| 1931 | 24.14 | 42.69 |
| 1932 | 21.11 | 36.05 |
| 1933 | 19.91 | 32.22 |
| 1934 | 21.86 | 34.36 |
| 1935 | 25.88 | 39.07 |
| 1936 | 29.55 | 43.48 |
| 1937 | 30.91 | 45.68 |
| 1938 | 30.53 | 45.51 |
| 1939 | 34.15 | 49.27 |

Source: *Historical Statistics of the United States, Colonial Times to 1970*, US Department of Commerce, p. 992.

"Stabilization" advocates seem to forget in their analysis the importance of relative prices in the functioning of the economy. They are preoccupied with keeping stable a price "level" when, in reality, the price level is totally unimportant. If we accept Say's Law as valid, then economic recessions are not because of insufficient aggregate demand but because of an erroneous allocation of resources. Certain economic activities expand (that should not), and other economic activities contract (that should not). A recession occurs when the market re-adjusts. Namely, when over-expanded sectors go bankrupt, and the over-contracted sectors expand again.

Relative prices are the guides that markets use to avoid significant disequilibria. However, the question is, why so many entrepreneurs make mistakes at the same time and in the same direction? The answer seems to be that, for some reason, relative prices were distorted, inducing the production of goods and services in different proportions than consumers want. One market indicator, in particular, affects the profit estimation of all businesses, the interest rate. Even if the price "level" were stable during the 1920s, even falling slightly

[11] For a detailed analysis of how a totally free monetary regime works in theory, and worked in history see White (1984). Also see Rueff (1988)

[12] It is worth remembering that only a few days before the stock exchange crash in October 1929, Fisher stated that the stock exchange was at a "higher plateau"; he lost between $8 and $10 million U.S. dollars. According to his son Irving N. Fisher (1956, pp. 264–267), "the 1929 stock market crash caught him unawares. Placing his faith unreservedly on the 'new economic era' he did not foresee that it was destined to collapse like a house of cards" Cited by Sennholz (1979, p. 43).

[13] Strong stated that "it was my belief, and I thought it was shared by all others in the Federal Reserve System, that our whole policy in the future, as in the past, would be directed toward the stability of prices so far as it was possible for us to influence prices" (cited by Rothbard, 1963, p. 172).

towards the end of the decade, relative prices were distorted because of the Federal Reserve's monetary policy and, mostly, the interest rate, which was managed very discretionally. In this particular event, it seems to be that stock prices were the most affected by a lowered interest rate.

The misallocation of resources owing to monetary policy manipulations can persist over time as long as the money supply increases at an increasing rate. There are two options: (1) credit expansion continues to avoid the market re-adjustment, which leads to higher inflation, and finally, hyperinflation, or (2) monetary expansion is halted, triggering market re-adjustment.

To pretend, like Friedman, that the Federal Reserve should have expanded the money supply even more implies keeping relative prices distorted, and this cannot happen indefinitely. Stopping credit expansion produces the initial illiquidity effect, reserve requirements are increased, and money supply as measured by the M1 and M2 aggregates falsl. However, this contraction is not the "cause" of the recession, as Friedman and Shwartz maintain, but its "effect." As we can see in Figure 3 and 4, the Federal Reserve expanded credit at par causing an outflow of gold. Or, put it differently, the credit expansion forced an outflow of gold that would not have occurred otherwise. The Federal Reserve was following a different path than the one indicated by the market. Therefore, it produced a disequilibrium that sooner or later would have to be corrected. In a free market, where policymakers cannot manage the supply of money and credit, the disequilibria of the 1920s would not have occurred, at least not to the same degree.

## 11. References

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[i] TN: This article was originally published in 1989, in LIBERTAS, volume 6 (May).
The translation includes some grammatical revisions for readability and clarity. The original meaning and emphasis of the text has been preserved striving to be loyal to the original text in Spanish.
I appreciate the contribution of Peter Lewin to this translation. Any misrepresentation from the original text is my own doing.
[ii] TN: My translation. Original source was unavailable.
[iii] TN: My translation. Original source was unavailable.
[iv] TN: My translation. Original source was unavailable.