



The great depression as a global currency crisis: An Argentine perspective

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Accepted: 2 September 2020 / Published online: 9 September 2020
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Abstract

Many of the works that have tried to understand the proximate causes of the Great Depression have emphasized the consequences of maintaining the Gold Standard during the interwar period, as its innate inflexibility prevented the use of expansive monetary policies and generated recessionary deflationary processes. Another perspective, both complementary and different, is that offered by new works that consider the Great Depression as to some extent a consequence not so much of a Gold Standard per se, but of the return to redemability at an overvalued parity after the Great War. The novelty of this new approach is to stress the negative effect of maintaining an unbalanced price for the metal over time. The models that have analyzed the currency crises suffered in recent decades by many Latin American countries help to understand the path that led the world to the Great Depression, with the convertibility regime applied in Argentina between 1991 and 2001 being particularly relevant.

Keywords Great depression · Gold standard · Exchange rate

1 Introduction

In economic history, it has been common to attribute a strong responsibility to the gold standard in generating the Great Depression, as in Temin (1989); Eichengreen (1992), and Bernanke (1995). Temin (1989) pointed out that the monetary system imposed a deflationary necessity on the world economy, with negative effects on economic activity. He concluded: ‘In fact it was the attempt to preserve the gold standard that produced the Great Depression’ (Temin 1989, p. 38). The situation would have been different, Eichengreen (1992) argued, if countries had coordinated their actions to allow

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for expansive monetary policies, which were, however, impossible according to the gold standard's rules. For Bernanke (1995, p. 4), the fate of a country during the crisis depended on its abandoning, or not, the system: 'To an overwhelming degree', he writes, 'the evidence shows that countries that left the gold standard recovered from the Depression more quickly than countries that remained on gold. Indeed, no country exhibited significant economic recovery while remaining on the gold standard'. The gold standard is thus seen to have been an initial cause of the crisis, which was then, according to these authors, aggravated by the lack of adequate public policies, bank runs, or increased protectionism. With the exception of Yeager (1976), who emphasizes the exchange rate cause like pre-Keynesian authors such as Gustav Cassel, other modern takes on the Great Depression either are built on Keynes explanation (Eichengreen and Mitchener 2003; Laidler 2003), or on the Rothbard explanation (Garrison 1999; White 2012;), or in modern syntheses of the monetarist and Austrian views (Horwitz 2012; Selgin 2013). With more or less emphasis, all of them attribute to the general features of the gold standard system of the interwar years some rigidities and weaknesses that would lead to the Great Depression.

Gradually, however, an alternative vision has emerged that, rather than accusing the gold standard itself, points towards the Depression as a consequence of the disequilibrium created by the price of gold set by governments, especially the United Kingdom and the United States. This new perspective was developed in Johnson's (1998) early study, highlighted by Mundell (2000), more recently expanded upon by Mazumder and Wood (2013), and then supplemented by Sumner (2015) and addressed in a blog post by McCulloch (2018). If the chain of causality presented by these authors is correct, the global crisis should not be attributed primarily to issues such as excessive credit expansion, a structural mismatch in economic relations as a result of the Great War, a disruptive transfer of the world financial center from London to New York, aggressive devaluations, or to the gold standard system as a whole, but rather to only one of its constituent elements: the parities of the precious metal determined and sustained by those governments. In general, the case that mismanaged monetary policy story, per the monetarists and the Austrians, argues Mark Toma (2013: 114) may be falsified if it is assumed that the model of central banking in the United States, a central player in these events, was not one "centralized, and discretionary," but one "competitive" among the different regional reserve banks reacting to broad economic incentives, a line of reasoning that reinforces the need to find a more tight explanation.

This paper argues that the convertibility regime applied in Argentina between 1991 and 2001, and its dramatic outcome, had some notable similarities to the gold standard experience in the interwar period. The consideration of the more recent South American process can therefore shed some light on the origins of the global crisis of the 1930s. In illustrating the new hypothesis about one of the causes of the Great Depression, the paper will focus on data of an aggregated group of nations: Britain, the United States, France, Sweden, Italy, Norway, Canada, Holland, Spain, Japan, and Argentina. Among this group, the two countries that played a central role at the time, United Kingdom and the United States, will be given prominence. Other countries could be added to the analysis, but it would be unlikely that the overall picture would vary substantially, since the states included were crucial actors in determining the price of gold and economic activity at the time.

2 The model

Many of the economic crises experienced by Latin American countries have been characterized as currency or exchange rate crises. Several works have analyzed these processes (such as Frankel and Rose 1996; Reinhart et al. 1998; Kaminsky and Reinhart 1999). Some of the variables considered include inflation, the exchange rate, the money supply, the fiscal deficit, and the current account deficit. One of the most paradigmatic cases of exchange rate crisis was the experience and outcome of the convertibility regime applied in Argentina between 1991 and 2001 (Damill et al. 2004; Pérez Caldente and Vernengo 2007). Some authors have already pointed out the similarity of Argentina's convertibility regime to the gold-exchange standard model implemented almost globally in the interwar period (see Sumner 2015). Different from the traditional Gold Standard from before the Great War, the Gold-exchange Standard implemented in the interwars was one in which central banks of participant countries held US Dollars as their reserves and not gold bullion. That system "economized" in gold by offering greater flexibility for credit creation and, consequently, retarding the effects of the "drain mechanism" inbuilt in the traditional Gold Standard, as pointed out by Larry White (1995:115), and reason for the perceived similarity. Seen from the perspective of this Latin American case, the new explanations of the Great Depression centered on the disequilibrium of the value of gold, under a system in which the constraints on the production of money were not so stringent as generally thought, seem appropriate. A fixed parity with an increasingly overvalued local currency contains the germ of a future crisis in which the exchange rate is adjusted towards sustainable levels.¹

The cycle of a currency crisis begins by anchoring the currency to an external parameter such as the dollar. Then, at some point, there is a price increase, as a consequence of continued expansion of liquidity, that leaves in disequilibrium the exchange rate vis à vis to the parameter. If a country has high reserves of this external anchor, be that a foreign hard currency like the US Dollar or gold, and if the expectations of maintaining its nominal value are favorable, the disequilibrium can be maintained for a while. As expectations become negative and economic agents threaten to move from money substitute instruments and acquire the undervalued asset, the government can sustain the situation by applying a contractive monetary policy that increases the interest rate, thus making it attractive to hold speculative investments in the local currency. In turn, this generates an economic downturn by discouraging investment due to the increase in financial costs. At the same time, a deflationary trend is generated. At some point, the situation becomes unsustainable and the country begins to lose reserves, generating an outflow of capital. Finally, governments are forced to abruptly to move away from the fixed exchange rate and allow it to depreciate. With the new and higher exchange rate, the expectations of speculators change and capital returns to the country, thus increasing reserves. On the other hand, monetary policy is no longer restrictive, so the interest rate goes down and investment is encouraged. At the same time, prices tend to stabilize and consumption recovers.

¹ Everytime an exchange rate is referred in this paper, the currency that is being compared with the parameter is said to appreciate or to depreciate respectively when its ratio is going down or up, conversely, when it is referred that the exchange rate has been increased or decreased, it means that the currency has been devalued or overvalued in relation to the parameter as it can be seen in the chart "Currency to parameter" in the [Appendix](#).

High interest rates, deflation, and a fall in GDP are the consequences of the disequilibrium in the exchange rate between the local currency and the parameter. These variables reverse their negative tendency once the local currency is devalued, leaving the exchange rate to reveal the price of equilibrium of the external parameter. In Tables 1 and 2, it can be seen that in the cases of Argentina's convertibility crisis and the Great Depression in Britain and the United States, the economic variables (before and after the adjustments in the parameters) reflect this transition quite well. Taking the years in which the countries devalued their currencies as a pivot (1931 for Britain, 1933 for the United States, and 2002 for Argentina), there can be seen in each case the transition from a situation of falling or stagnant reserves, high interest rates, and decreasing output to a new stage of lower financial costs, increasing reserves, and economic recovery. It is noteworthy that in the case of the United States, there was not a large drop in reserves held by the government, although it did occur with the gold holdings held by private financial institutions. The gold stock followed a similar behaviour. It decreased 3,3% between 1931 and 1933 and increased 150% between 1933 and 1935. See: Bureau of the Census (1949), p. 276.

3 The phases of a currency crisis and Argentina's experience of convertibility

In the early 1990s, Argentina became a model for market-oriented economic reforms that seemed to perfectly embody the guidelines of the Washington Consensus. The high inflation – and, at times, hyperinflation – that had affected it throughout the previous decade had been overcome and the country began to show healthy growth. The main reforms applied by Carlos Menem's government were: (1) the convertibility plan, which entailed the implementation of a conversion system that gave the peso parity with the dollar, and legal tender status to both currencies; (2) deregulation of the banking system and political allocation of credit, leaving interest rates to be determined by the market; (3) the liberalization of capital movements; (4) the privatization of public utilities; (5) a sharp reduction in customs fees and the elimination of most non-tariff barriers - apart from the total liberalization of tariffs with Brazil and the other Mercosur countries; and from 1994, (6) the adoption of a mixed system of pensions by which employees could choose to move to pension funds managed by private managers.

Menem's program seemed to herald a new era of high economic growth and low inflation, based on disciplined macroeconomic policies and market-oriented structural reforms. The growth of real GDP, which had been negative on average during the 1980s (falling at an annual rate of 1,01%), rebounded sharply to more than 10% during 1991–1992, the first two years of the stabilization plan, and more than 5% during 1993–1994. Inflation fell to single digits from 1993 onwards. Capital inflows also began to intensify, reflecting renewed confidence in the economy. In 1995, Mexico's 'Tequila crisis' interrupted this good macroeconomic performance as it led to a reversal of capital flows and a downturn in economic activity. Shortly after the crisis, however, Argentina's monetary situation stabilized and growth was 5% in 1996 and 8% in 1997 (IMF 2003).

The logic of Menem's new monetary regime was that the high institutional and economic costs of an exit gave credibility to the adopted exchange rate anchor. Yet, it also meant that, in the case of persistent deficits in the public or external sector, the country would be trapped in a system that, by design, restricted the options available to

the authorities. An issue was that the parity chosen at the start of the plan left the peso overvalued in relation to its level throughout the 1980s. Then, as inflation took a while to fall, the peso's overvaluation became higher still, reaching an appreciation of approximately 25% in 1993 (IMF 2003). This situation was facilitated by the enormous flow of capital that entered Argentina as a result of privatizations and the repatriation of funds from abroad. The peso had, in real terms, appreciated from 30 to 40% by 1998, with the consequent loss of competitiveness of Argentina's exports and a fall in the level of activity in some sectors, especially the local manufacturing industry (Darvas 2012).

Fernando de la Rúa assumed the Argentine presidency at the end of 1999 with the conviction that it was essential to maintain convertibility, which still had strong popular support. One of his campaign slogans had been 'with me, one peso, one dollar'. The belief that it was vitally important to maintain a historical exchange rate was similar to that adopted by Winston Churchill in 1925 when, as Chancellor of the Exchequer, he reimposed Britain's pre-war parity with gold, as well as by Herbert Hoover, President of States United between 1929 and 1933, who considered the gold standard to be sacrosanct. Hoover (1952, p. 391) would write in his memoirs: 'A convertible currency is the first economic bulwark of free men. Not only is this a question of economic freedom, but more deeply is it a question of morals. The moral issue lies in the sacredness of government assurances, promises, and guarantees'. But in Argentina, as in Britain and the United States after 1930, there was a growing distrust in the market about how sustainable the parity would be, particularly in 2000, when depositors in peso accounts began withdrawing funds from banks. From the middle of 2001, something similar happened with dollar accounts, as the perception grew that financial institutions could not respond to the demands for currency. The special assistance received from the International Monetary Fund (IMF) failed to stabilize the fiscal situation or calm the market, leading to a sharp increase in the interest rate, which aggravated the economic crisis. At the same time, a deflationary process was generated, with prices falling by 1% during de la Rúa's presidency. Given the acceleration of the withdrawal of bank deposits, the government ordered that the funds be largely immobilized. Finally, after the fall of the government at the end of 2001, the dollar deposits were converted to pesos with a 40% premium, which was a compensation far lower than the devaluation of around 250%. Bank accounts in dollars were no longer allowed and foreign currency debts were converted to pesos with the previous parity. Finally, in December 2001, the interim president, Adolfo Rodríguez Saá, suspended the servicing of the foreign debt, which only began to be restructured in 2005, with a substantial deduction of capital. As the Argentine lawyers of Cristina Kirchner's government argued in the United States' courts, this outcome coincided with the measures taken by Franklin Roosevelt when exiting the gold standard in 1933 (Edwards 2018, Position 180).

After the devaluation of the peso, the production and exchange mechanisms that result in economic expansion began to be reestablished. The recovery was driven by several concomitant factors: (1) a growing external demand, which absorbed higher volumes at significantly higher international prices than in the previous decade (especially in the raw materials that the country exported); (2) improvements in the internal terms of trade due to a real exchange rate that remained at historically high values after the devaluation (see Fig. 1), and (3) a marked increase in public spending, which had been at low levels prior to the crisis. This evolution of prices and quantities significantly modified the weight of foreign trade in the macroeconomic aggregates. In 1998, exports



Fig. 1 The Real Price of Gold (1913–1935) and Argentina’s Real Exchange Rate (1986–2005). ^a The Price of Gold in 1913 Divided by the Retail Price Index (1913 = 100). ^b Argentina’s Nominal Exchange Rate 1986–2005 (1986 = 100). Source: See [Appendix](#)

of goods and services had accounted for 15% of private consumption (and in 1993 it was 10%), whereas for 2006, the ratio exceeded 40%.

4 The global evolution of the gold standard

Between 1870 and 1914, many nations established a fixed convertibility for gold, at rates that seem to have been compatible with a situation of market equilibrium. There is no doubt that the demand for gold was increasing due to the growth of the world economy, and that there was a slight global inflationary process that reduced the real value of the metal. Yet, at the same time, gold production was increasing due to the development of new deposits (particularly in South Africa) and due to technological improvements in extraction, as the evolution of the global gold supply is seen by Rockoff (1984). This situation of stability, and the expectation that it would continue, were reflected in the general lack of speculative attacks against national currencies. By 1913, metal reserves as a backup for working capital were important, although the coverage was only partial – indeed, it was even less than existed later in the 1920s.

Everything would change with the Great War. Given the needs of inflationary war financing, many countries had to abandon convertibility or apply regulations that severely limited it. For the economies included here, the end of convertibility allowed for an inflation of their currencies which resulted in the weighted average increase of almost 140% in their price levels between 1914 and 1920. Even the United States, a country that joined the war only in 1917, suffered a 100% increase in its price level as it inflated its stock of money by, among other things monetizing the inflows of European gold. This would imply a decrease in the global purchasing power of gold (see Fig. 2).

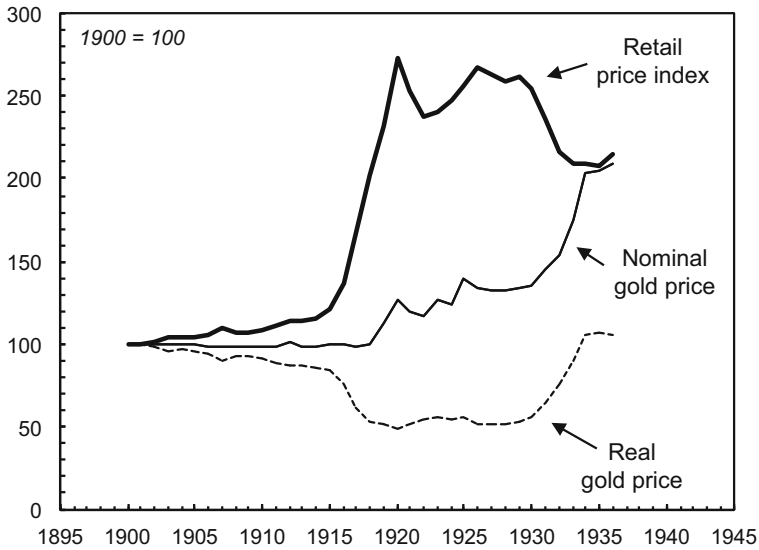


Fig. 2 Global Nominal and Real Price of Gold 1900–1935. Source: See [Appendix](#)

Nonetheless, in those troubled years, the demand for gold would be momentarily reduced due to the stagnation of world GDP between 1914 and 1918 and by the suspension of the gold standard.

According to Rothbard, one of the main reasons for the Fed to have adopted an inflationary policy during the war, which lasted with short interruptions until 1928 - the years that Benjamin Strong was the governor of the New York Fed-, was to help Britain to finance their war effort and later to aid their catastrophic decision of returning to the gold-exchange standard at the rate of 1914. In Rothbard's words:

The United States inflated its money and credit in order to prevent Britain from losing gold to the United States, a loss which would endanger the new, jerry-built 'gold standard' structure (2005: p. 271).

However, it is necessary to go to other sources in order to find precise data about money and credit expansion in the war years, and Friedman's and Schwartz (1993) show that the wholesale price index in the U.S. from 1914 to 1918 rose from 65 to 130 in a scale that the wholesale price level of 1926 equals 100; the money stock rose roughly from \$15 billion in 1914 to \$30 billion in 1918 (Friedman and Schwartz 1993: p. 197). The federal debt increased immensely during the war; from \$ 32 billion of total expenditures by the federal government from April 1917 to June 1919, no less than \$ 23 billion were funded by borrowing and money creation (1993: p. 216). The Fed could not possibly come into being in more adequate moment in face of the necessities of war financing, in the words of Friedman and Schwartz:

The Federal Reserve became to all intents and purposes the bond-selling window of the Treasury, using its monetary powers almost exclusively to that end. Although no "greenbacks" were printed, the same result was achieved by more

indirect methods using Federal Reserve notes and Federal Reserve deposits (1993: p. 216).

Summarizing the monetary impacts of the war finance, Friedman and Schwartz state that from the \$ 34 billion in expenses (\$ 32 billion in Federal deficit plus \$ 2 billion in additional Treasury cash balances), 25% was financed by taxes, 70% was borrowed and 5% was money creation. They also note that due to the fractional reserve system, the money supply increased \$ 6.4 billion or \$ 4.8 billion more than the fiduciary currency issued by the government. As one of us stated elsewhere (Zelmanovitz 2015), during the WWI, the Fed proved its utility, now came the cost, in the form of the post war inflation, and it was big: - it was roughly of the same magnitude of the variation in the money supply accumulated since the beginning of belligerence. From 1914 to 1920, the per-year change in wholesale prices in the U.S. was 15%, the annual change in the money supply was 13% and the per-year change in “high-powered money” was 12% (1993: p. 208).

After the war, governments around the world considered the return to the gold standard, but higher price levels made it difficult to re-establish the old parities. To return to the gold standard, one possible option was to deflate the economy to bring prices closer to their prewar levels. To some extent, this would occur between 1920 and 1922, when the global price level fell by 13%, and in the case of the United States, by 16% (Friedman and Schwartz 1993:197). This decline was, however, insufficient and further falls seemed impossible to achieve due to increased inflexibility of labor costs, due to the growing power of unions, which prevented salary cuts (see Keynes 1932b: 186). There was also the danger of encouraging radical political movements that would destabilize or bring down governments, as had been the case in Russia. In 1924, the global real price of gold² represented only 63% of its value in 1913, while for the United States it was down to 57%. The value of gold was thus in disequilibrium, particularly due to the growing demand for the metal that resulted from the growth of world GDP by almost 40% between 1919 and 1929.

Despite this general situation, after 1925, some countries, notably, the United Kingdom and the United States, decided to re-establish a convertibility similar to that

² In order to understand what is meant by “real price of gold”, it is worthwhile to keep in mind the concept of “Purchasing Power Parity,” or PPP. PPP is “the estimation of imbalances in the exchange rate between different currencies assuming that the market price of similar goods in different countries tends to converge. In other words, the exchange rate adjusts so that an identical good in two different countries has the same price when expressed in the same currency. The most famous application of this theory is the “Big Mac Index” produced by *The Economist* that compares the price of the famous sandwich in different countries to estimate how much one currency is over-valued or devalued in comparison with the US Dollar” (Zelmanovitz, 2015: 406). The “real price” of gold is an exchange rate that would equilibrate the demand for cash balances of a currency redeemable in gold that is perceived to be different of the nominal parity for redeemability established by the government. When the nominal parity is overvalued, such discrepancy with the real exchange rate can only be reconciled by domestic deflation or devaluation of the currency. For example, in 1913, the exchange rate of the US Dollar was 20.67 USD, during the war, the convertibility was suspended, and inflation reduced the purchasing power of the US Dollar by half. Since the exchange rate, nominally, remained the same, the “real price of gold” in the United States was reduced to 57% of it was before the war, that is, with one ounce of gold you could only buy in 1919 about half of the goods you could buy with the same gold before the war.

existing in 1914.³ It is noteworthy that in spite of the attention given to the return to convertibility at the pre-war parity in the UK, that was also the case in the US, where, as seen, the inflation was also significant. It is a fact that both the United Kingdom and the United States returned to convertibility at their pre-war parities. However, while in the UK an extended deflationary period ensued even before the Great Depression, in the US they had the “roaring 20s.” Such disparity presents, a priori, a challenge to the thesis advanced in this article. In order to dispel such challenge a more nuanced discussion of the gold standard in the U.S. leading up to the Great Depression becomes necessary.

Given the complexity of the American monetary history in the interwar period, only the most relevant features explaining the different results will be highlighted. The general theme here is that there were in the United States political, economic, and institutional reasons explaining why, in spite of the return to full convertibility in 1919 at an exchange rate that did not reflect the actual purchasing parity of the US Dollar, there were no runs on the Dollar at least until the early 1930s. Among those features we may refer to the “safe harbor” nature of the gold deposits in the United States, which resulted in a constant inflow of gold in the country, regardless of the exchange rate, from a world dealing with political instability and economic disruption in the form of revolutions and wars in the wake of the Great War. Another element was that the commodity standard in the United States was actually a bimetallic system since gold and silver were freely coined (Selgin 2013). Yet another element is that in 1913, the Federal Reserve Act converted the U.S. from a decentralized gold system to a managed gold standard. That gave the newly created authority discretion to regulate the money supply, decoupling it from the flows of gold coming or leaving the country, as evidenced by the constant “sterilizations” of gold. The fact is that by the interwar period, the gold-exchange gold standard was increasingly centered on the US Dollar. As stated by Rothbard:

In that way, if U.S. banks inflated their credit, there would be no danger of losing gold abroad, as would happen under a genuine gold standard (2005: p. 219).

The geopolitical situations of the United States gave to the American authorities a room for maneuver that their British counterpart did not have, even if “(I)n the long run, whether the disturbances are monetary or real, the balance of payments under fixed exchange rates return to equilibrium” as noted by Bordo and Schwartz (1999:239), and also in Bordo et al. (1988). The lesson from those events was not that the results from the same causes were different, but that the different context of the American case made it take longer for the entire process to play out.

The fact that the US also returned to convertibility at an exchange rate that would not allow for monetary equilibrium, and would, ultimately, require the implementation of

³ There are many speculations about why the UK returned to the Gold Standard in 1925 at the pre-war parity, and much has been said about that. Allegedly, the entire corpus of Keynesian economics may be understood as a response to the ill consequences of that policy, as one may conclude from Keynes's 1925 *The Economic Consequences of Mr. Churchill* (Keynes, 1932a: 244). A commonly accepted view is that restoring convertibility at the pre-war exchange rate would make whole the investors in war-bonds and other long term obligations of the Crown, that, was compatible with tradition (return to convertibility after the Napoleonic wars was done at the pre-war parity), with morals (debasement, since the Middle Ages has been “accepted” in emergencies if, passed the emergency, the metal content of the coins is restored), and seen as politically expedient (it would keep the “good credit” of the government. Such discussion, however, goes beyond our purpose with this paper.

deflationary policies is usually overlooked in the literature about the causes of the Great Depression, and it is an important part of the argument presented with this paper. In fact, the global real price of gold continued to fall in the second half of the 1920s, from 56% of its per-war value in 1925 to 53% in 1929. The cases of France and Italy were different, since they would restore their monetary systems based on a parity closer to their previous real levels.⁴ The low price meant that the volume mined languished, falling by 20% from the level of the first three decades of the century. While South African production remained stagnant, the rest of the world's output showed a sharp decline. In 1929, American extraction would reach its historical minimum (Hirsh 1968, p. 486). On the other hand, the cheapness of the metal was encouraging its industrial and luxury/hoarding use, with the latter taking on significant dimensions in countries like India (Johnson 1998, p. 46–48). It seems clear that the clash between the real price of gold and the movement of the economy was becoming more and more acute, until it reached its peak during 1928–29. To this effect, the eminent Swedish economist Gustav Cassel, the only one who seems to have fully called out the dangers generated by the low price of the metal, noted in 1928: 'The great problem before us, is how to meet the growing scarcity of gold from increased demand and from diminished supply' (in Irwin 2014, p. 206). Keynes would also note something similar in January 1929, a short time before the crisis began: 'A difficult, and even dangerous, situation is developing [...]. [T] here may not be enough gold in the world to allow the central banks to be comfortable [...]' (in Irwin 2014, p. 216). The strong deflation that would be unleashed worldwide between 1929 and 1933 can be considered one of the mechanisms by which the market tried to adjust the real price of gold. Global prices fell by 23% in that period, but this was not a sufficient correction to return to equilibrium.

In those final years of the 1920s, financial operators and governments perceived this disequilibrium to be unsustainable, leading to speculative attacks on the gold reserves of some nations. Britain, which had re-established the gold standard in 1925 at its historical pre-war parity, could only defend its scarce reserves by applying high interest rates (Johnson 1998, p. 113). From 1928, the country began to lose its metal stock, although it could momentarily stay in the system thanks to loans and support from France and the United States. Despite this, between June and October of 1929, it would lose almost 23% of its gold holdings. The United States, on the other hand, after starting to lose its reserves, had to initiate a contractive monetary policy in 1928, increasing the discount rate. The rise in financial costs would eventually help to explode the speculative bubble in the stock market, which sparked a crisis that was transmitted to the rest of the economy through a fall in wealth and consumption and the consequent fall in international trade.⁵ On the other hand, between 1929 and 1931, real interest rates increased dramatically due to the sharp deflation. In mid-1931, several

⁴ France reestablished convertibility in 1926 with a price relatively close to its real level of 1913. The country did not, therefore, suffer speculative attacks, while it could lower the interest rate and significantly increase its gold reserves. While the Bank of France owned 7% of world reserves in 1926, it had 27% in 1932 (Irwin, 2012, p. 4). Part of this increase was undoubtedly caused by gold transfers to a nation that it was believed would not abandon convertibility, thus providing greater security to the funds deposited there. The Netherlands also did not suffer from speculative attacks, as it was able to maintain the gold standard until 1936 because the parity of its currency with gold was at a value closer to the equilibrium level.

⁵ Romer (1993, p. 28), in his survey of the Great Depression from a Keynesian perspective, notes that the high US interest rate policy that started the contraction (characterized by a sharp decline in consumption) was, at least in part, generated by the attempt to stop gold from leaving the country.

governments, led by France, requested that Britain send them gold in exchange for the pounds sterling included in their reserves (see Yeager, 1976:330). Although Britain tried to curb the situation by raising the interest rate, as well as accepting US financial help, the pressure was unsustainable, and its currency had to be devalued in September by 30% – an action that was then imitated by other countries.⁶ The United States also suffered similar drainage in 1931 due to the demand of European banks and investors, as well as the American public (Friedman and Schwartz 1993, p. 316). But this country had high reserves and could momentarily cope with the crisis, although only by applying the largest interest rate increase in its history, which intensified the banking crisis (Friedman and Schwartz 1993, p. 317). A good part of the reserves that various countries had in the United States in financial assets were converted to gold in 1932, in response to the risk of a possible devaluation of the dollar. Said gold was earmarked in the Federal Reserve, waiting to be transferred to the owner countries (see Puxley 1933). At the end of that year and the beginning of 1933,⁷ the speculative demand for gold revived and again the Federal Reserve had to increase the cost of money to try to contain it (Friedman and Schwartz 1993, p. 326).⁸ After losing reserves dramatically in the first months of 1933, the newly assumed President Roosevelt suspended convertibility in early March. Transactions and payments in gold were prohibited and all entities and individuals were obliged to hand over their gold holdings to the Federal Reserve at the previous parity. The adjustment of payments by “gold clauses” of public securities and debts was suspended, and bonds and debts started to be re-paid in Dollars at the old parity, which soon was no longer in force. In January 1934, the US Dollar was officially devalued by 59% with respect to gold – a substantial change that brought the price of metal closer to its real value of 1910. By 1935, most countries had dramatically altered the parity value of their currencies: 31 had done so by more than 40% and 5 by more than 30%, while only 12 kept their prices stable (although many of those had already devalued their currency by 1929) (Bank 1935, pp. 8–9). The global real price of gold was at its 1900 levels by 1934, which had been achieved by both increasing the nominal gold price by 31% from 1929 to 1933 and through generalized deflation, which was around 25%. The value of gold seemed to have reached a new equilibrium point, which had as a concomitant lower interest rates, the reversal of deflation, some recovery in the level of economic activity, and an increase in official

⁶ Arguably, it is possible to interpret the monetary policy followed by the Fed under the leadership of Benjamin Strong at the helm of the New York Fed from 1914 until his death in 1928 as one that tried to conciliate the needs of war finance during the Great War, the goal of price stability at home and support for the return of the international gold standard, then reframed as the gold-exchange standard centered in the US Dollar. That implied support for the return of redemability in the United Kingdom, which sometimes conflicted with other policy goals. After Strong’s death, the importance given to support the British pound convertibility lost some of its importance in the conduction of American monetary policy, what may be perceived in the movements of gold reserves and in the bank rate.

⁷ A possible objection to this model is why the United States was able to maintain the low value of gold after the British devaluation of 1931. It would have been normal for the United States to lose its reserves in gold and for capital to leave it for countries where the value of the metal was closer to its equilibrium level, as it was the case in several European countries. The answer is that in Europe there was increasing political risk, which reduced its appeal to foreign investors. In 1932, the French president was killed, in Britain there was a weak coalition government, in Germany the Nazi party had practically acceded to government, and in Spain a coalition government composed of socialists had initiated an agrarian reform and nationalized private companies, while social conflict grew.

⁸ On capital movements motivated by expectations of a devaluation, see James (1992).

gold reserves. The latter is not entirely surprising, since the increase in the value of gold would soon result in a notable increase in its global production. The increase was notable for both the US and South African mines (Mazumder and Wood 2013, pp. 163–64).

5 Conclusion

As we have seen in this paper, one of the causes of the Great Depression was the monetary disequilibrium brought about by the return to convertibility after the Great war at an undervalued price of gold set by some central governments such as the UK and the US. The tension between the official price at which the metal would be redeemed, and its equilibrium level would become unsustainable towards the end of the 1920s, as evidenced by the disparity between the exchange rate and the purchasing power parity, and pointed out by Yeager (1976:319). This disequilibrium was one of the initial triggers of the crisis, as it led to increases in interest rates to combat speculative attacks on gold, sharp deflation, declining activity, and the beginning of a global tariff war. When you open a window to exchange gold for paper money at about half the real exchange rate, it is no surprise that whoever has access to such window will ask for gold. On the flip side of that, it should be no surprise that if you give paper money with only half of the real value than before the war for any gold that gold producers brought to your window, that gold production will lag. It was the undervalued price given to gold by the UK and US governments, and not the gold standard itself, that bore a strong responsibility for the Great Depression. If, in the early years of the 1920s, if the UK and the US had accepted that the real value of gold should be higher (as France did) and had altered the convertibility rate by absorbing, at least in part, the inflation generated during the Great War, the Great Depression could possibly have been avoided.⁹ Robert Mundell in his Nobel Prize Lecture stressed that world history would have changed if President Hoover had decided to devalue the dollar in time:

After a great war, in which inflation has occurred [...] a return to the gold standard is only consistent with price stability if the price of gold is increased. Failing that possibility, countries would have fared better had they heeded Keynes' advice to sacrifice the benefits of fixed exchange rates under the gold standard and instead stabilize commodity prices rather than the price of gold [...]. Had the price of gold been raised in the late 1920s, or, alternatively, had the major central banks pursued policies of price stability instead of adhering to the gold standard, there would have been no Great Depression, no Nazi revolution, and no World War II. (Mundell 2000 p. 331)

Some similar counterfactual could be projected for Argentina. If, upon assuming the presidency in 1999, de la Rúa had devalued the currency by perhaps 30%, he may have

⁹ An interesting counterfactual is presented by Eichengreen and Temin (2003), who suggest that if the major countries had devalued by 1931, the most catastrophic effects of the crisis would have been avoided, as this would have allowed for expansive monetary policies. Here the explanation is somewhat different: if countries had adjusted the price of gold in time, the market would not have forced them to implement deflationary monetary policies.

succeeded in completing his term.¹⁰ There would have been a macroeconomic crisis, but without a catastrophic fall in GDP and unbearable social unrest. Convertibility could have continued (at a different parity), but there would have been no speculative attacks on the currency and exporters and importers would have received earlier the appropriate price signals to adjust their behaviour. Had the government renegotiated debt payments, the dramatic default that isolated the country from global financial markets for more than a decade would not have occurred. On the other hand, there would not have been the conditions for the emergence of the Kirchners' populist governments, the gigantic increase in public spending and deficit, and, finally, the reappearance of high inflation. From 2004, probably under a more moderate Peronist government, the commodity boom would have allowed Argentina to benefit better from favorable global conditions without dramatically altering the institutional framework and the possibilities for future growth. The costs of postponing the necessary adjustments in crucial economic variables is gigantic: the world's GDP fell 16% between 1929 and 1933, while the United States' fell by 29%; for Argentina, the reduction was 20% during the unwinding of convertibility.

Why has such a simple explanation of the Great Depression not become standard or at least an alternative to be mentioned in the discussions of its origins? It is notable that neither Johnson's (1998) nor Mundell's (2000) works have been incorporated as central to the debate. Possibly, the reason is historians' and economists' consensus about the need and effectiveness of expansive monetary and fiscal policies, ignoring that the gold-exchange system of the interwar period posed not a stringent constraint on the money supply. On the other hand, although the negative impact of the gold standard has been pointed out, this has been only in its restrictive aspect and no emphasis has been placed on the low price of gold itself. Finally, an Austrian perspective would have been more compatible with this explanation, but its representatives remained trapped in the interpretation based on a supposed over-investment in the 1920s. They have not recognized that the new explanation gives them an excellent example of how an incorrect price fixed by governments could in the long term have dire consequences for the economy.

Acknowledgments We thank for comments received from Joe Francis (also translator of the paper), Daniel Oks, Javier Ortiz Batalla, and the important contributions of an anonymous reviewer for RAEC.

Appendix

Graphs and Tables

The graphs and tables in the paper use data of the following group of nations: United Kingdom, United States, France, Sweden, Italy, Norway, Canada, Holland, Spain, Japan, and Argentina. When this work refers to the world economy, it is referring exclusively to the aggregated values of these nations, weighted by their gross domestic product (GDP) of 1916–18. Source for the series of retail and gold prices, GNP, interest

¹⁰ Or if it had happened even earlier, between 1997 and 1999, during the final years of the Menem government. For a humorous counterfactual de la Rúa, see Wainfeld (2003).

rates and gold reserves: Mitchell (1975), pp. 744–745; League of Nations (1926); League of Nations (1937); Edvinsson et al. (2010); Klovland (2004) and the Maddison Project Database, version 2018. Data for Argentina from from Darvas (2012); IMF (2003) and IMF (2019).

Chart “Currency to parameter”:

| Currency to parameter Exemple: GBP/XAU (British Pound to Gold) | Currency | Exchange rate | Value |
|---|-------------|---------------|------------|
| £1100/1 oz. to £1150/1 oz | Depreciated | Increased | Devalued |
| £1100/1 oz. to £1050/1 oz | Appreciated | Decreased | Overvalued |

Table 1 Real Exchange Rate of Gold and the Interest Rate Before and After Devaluation

| | Real price of parameter ^a | Real interest rate % |
|------------------------|--------------------------------------|----------------------|
| United Kingdom 1929–30 | 51 | 7 |
| United Kingdom 1932–33 | 74 | 4.5 |
| United States 1931–32 | 59 | 12 |
| United States 1934–35 | 99 | 3 |
| Argentina 2000–01 | 61 | 12,5 |
| Argentina 2003–04 | 142 | 1,8 |

Source: See [Appendix](#)

^a For UK and US, annual average real price of gold relative to 1913–14=100. For Argentina, annual average real price of the US dollar relative to 1990–91=100

^b Average business discount rate

Table 2 Change in reserves and GDP before and after devaluation

| | Change in reserves, % ^a | Change in GDP, % |
|------------------------|------------------------------------|------------------|
| United Kingdom 1929–31 | –17 | –6 |
| United Kingdom 1931–33 | 58 | 4 |
| United States 1931–33 | – | –17 |
| United States 1933–35 | 49 | 23 |
| Argentina 2000–02 | –68 | –15,5 |
| Argentina 2003–05 | 168 | 29,2 |

Source: See [Appendix](#)

^a For UK and US, in gold. For Argentina, US dollars

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