

Did the United States Transmit the Great Depression to the Rest of the World?

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This paper challenges the commonly held belief that the Great Depression was transmitted from the United States to the rest of the world. The well-known argument by Milton Friedman and Anna Schwartz (1963) is used as the reference point. I argue that their description, although intuitively plausible, does not correspond well with the data.

During the depression years and afterwards there was an extensive analysis of the international financial situation. A comprehensive analysis was provided by Ragnar Nurkse (1944). Earlier writings do not in particular indict the United States, but rather also blame France and several other countries for the financial crisis.¹ Recent literature that deemphasize the role of the United States include Peter Temin (1976) and Knut Borchardt (1982). Friedman and Schwartz do not get into any lengthy international analysis, yet draw far-reaching conclusions about the United States and the rest of the world.

This paper does not attempt to estimate the relative roles of French gold accumulations, the illiquidity of loans to Germany, the Austrian banking crisis, the British devaluation, etc. Rather the analysis is confined to evaluating whether the United States transmitted the depression to the rest of the world through the channels discussed by Friedman and Schwartz.

I. The Friedman-Schwartz Argument, and How It Can Be Evaluated

In their study (pp. 360–61), Friedman and Schwartz refer to several facts as evidence that, during the period August 1929 to August 1931, the United States transmitted the depression to the rest of the world. They refer to U.S. gold stocks, the flow of gold, whether the United States adhered to gold standard rules, and to the balance of payments.

The inflow of gold to the United States, the increase of U.S. gold stocks (= reserves?), and the deviation from gold standard rules are taken to imply that other countries were being forced to adapt to U.S. monetary policies. Apparently, Friedman and Schwartz believe that the United States exported the depression by lowering reserves in the rest of the world, leading to contractions of the money stock elsewhere. To evaluate this reserve argument, it is however necessary to study the data for the rest of the world, not—as Friedman and Schwartz do—merely for the United States. The test should be whether the rest of the world as a whole experienced a fall in gold reserves (alternatively, all international reserves including other foreign reserves). Gold flows to the United States, or increases in U.S. gold reserves, do not necessarily imply falling gold reserves elsewhere, since mining of gold as well as conversion of existing private gold stocks into currency can increase total world reserves.² Section II will

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¹For a sharp and thought-provoking criticism of French financial policies, see Paul Einzig (1932a, b; 1935; 1937).

²Gold flows generally do not equal changes in gold reserves, because gold flows measure movements of gold between countries not only of reserves, but also of private gold stocks. Further, changes in reserves include changes due to domestic redemption/minting, as well as international reserve flows. An outflow of gold from the rest of the world to the United States is therefore not

evaluate the correctness of the reserve argument. It will also discuss the related question of whether the United States followed gold standard rules to a smaller or greater extent than the rest of the world.³

There are two ways the U.S. balance of payments can affect the rest of the world: through reserves, and through real variables. For a surplus country, reserves are flowing in, draining reserves from other countries. The reserve question is, however, treated separately here. It is not clear whether Friedman and Schwartz are concerned solely with the influence through reserves, or also regard the direct real effect as important. Since the real effect, however, is a generally recognized mechanism, I also analyze this channel. By definition, the balance of trade, exports minus imports (which due mainly to the capital account does not equal the balance of payments), always equals the negative of the balance of trade for the rest of the world. Since it is a component of *GNP*, an increase in the U.S. trade surplus (or alternatively a decrease in the trade deficit) would have a restrictive influence. Such a scenario could occur if the depression originated in the United States. If income in the United States fell, imports would go down, and the lowered prices would stimulate exports. Notice that the issue is not whether the United States has a trade surplus, or trade deficit, or whether that surplus or deficit is large in absolute terms. A constant surplus, for instance, would fail to generate a swing in aggregate demand. Instead, the surplus or deficit must be related to surpluses or deficits in previous years. If

inconsistent with increasing reserves abroad. According to the League of Nations *Statistical Yearbook* data, the gold inflow (available yearly only) to the United States was \$120 million in 1929 and \$278 million in 1930. Friedman and Schwartz avoid applying their gold flow argument to the years 1927, 1928, and 1931, during which there were *outflows* of gold (1927, \$154 million; 1928, \$272 million; 1932, \$176 million). Had they done so, they could have concluded that Germany (whose depression started about a year earlier than in the United States) exported the depression to the United States, because it had a large gold inflow in 1928.

³Whether a country follows the rules is not by itself a criterion for evaluating whether a depression was exported or imported.

the United States did transmit the depression to the rest of the world through the balance of trade, we should see a substantial "improvement" in the balance of trade.⁴ The evidence is evaluated in Section III.

II. Evidence on Gold Reserves

According to data from the *Federal Reserve Bulletin*, June 1933, gold reserves in the rest of the world increased during the first two years of the depression, which is contradictory to the Friedman-Schwartz argument. For the period chosen by Friedman and Schwartz, the end of August 1929 to the end of August 1931, U.S. reserves increased from \$3.995 billion to \$4.632 billion; and total reserves for the world (fifty countries) increased from \$10.250 billion to \$11.297 billion. Hence, gold reserves outside the United States increased from \$6.255 billion to \$6.665 billion.

Further, this result is not sensitive to slight alterations in the time period considered. Calculations for each month between August 1929 to August 1931 reveal that there were only a few short periods during which gold reserves outside of the United States declined: March and April 1930, and January 1931. These declines were rather minor. The period August 1929 to August 1931 is actually more favorable to the Friedman-Schwartz argument than many other possible time periods. Between these dates, U.S. gold reserves were at least growing at a faster rate than gold reserves in the rest of the world, which was not the general trend. Using Federal Reserve data, Charles Hardy (1936, p. 93) calculated the shares of world gold reserves in the United States and in other countries. His table reveals that between December 1929 and December 1931, the U.S. share declined from 37.8 to 35.9 percent. A longer time span, December 1927 to Decem-

⁴Equal falls in exports and imports could possibly also have macroeconomic effects. Even though aggregate demand would not be directly affected, relative changes in the demand for different goods could conceivably affect total output in other countries.

ber 1933, shows an even greater decline: from 41.6 to 33.6 percent.

One might argue that since many central banks held foreign reserves (mostly balances with the Federal Reserve or the Bank of England), the measure should include foreign reserves in addition to gold. This is not obvious, however, since what is a foreign reserve asset for one country is an equally sized liability for another country. Under a gold standard the balances could be redeemed for gold, and the reserve countries would therefore need larger gold reserves in case of withdrawals. It turns out that for the period August 1929 to August 1931, the treatment of foreign reserves makes little difference. For twenty-eight countries (outside of the United States and the United Kingdom, which were the reserve centers),⁵ the value of foreign reserves decreased from \$2.782 billion to \$2.559 billion, or by \$.223 billion. Since this is less than the \$.410 billion increase of gold reserves outside the United States, I still reach the same conclusion, that reserves in the rest of the world were increasing.

Even though it was shown above that the reserves in the rest of the world did not fall, the United States could be criticized for its policies if it was found that the Federal Reserve did not follow the "gold standard rules." Friedman and Schwartz claim that the United States not only violated these rules, but even went beyond 100 percent sterilization of gold flows.⁶ "our money stock

moved perversely, going down as the gold stock went up" (p. 361). While their statement regarding gold reserves and *M1* is correct, they make the mistake of applying today's concept to earlier periods. The gold standard rules had no bearing on deposits in commercial banks, the main component of *M1*. The *M1* measure was not a standard concept in those days, and "currency" and "credit" were usually referred to separately. For most nations, monthly data on currency were available, but information on credit was sketchy. In an evaluation, currency or high-powered money ought to be used.^{7,8} It is true that while gold reserves increased by 15.9 percent, the currency stock only increased by 4.0 percent.⁹ This does represent substantial sterilization since the absolute increase in currency (.193 billion) was less than the absolute increase in reserves (.637 billion).¹⁰ Yet, these figures do not appear as strikingly bad when compared to the rest of the world. As an aggregate, it went beyond 100 percent sterilization: gold reserves increased by 6.6 percent, and currency stocks decreased by 4.5 percent.^{11,12,13} Hence, I conclude that the

zation by surplus countries can therefore cause prolonged drains of reserves from deficit countries.

⁷To follow the gold standard rules (often referred to as "the rules of the game"), it was required that a central bank increase its domestic assets when there was an inflow of gold, and decrease its domestic assets when there was an outflow. This would thus be the "opposite" of sterilization. A "strong" version of the rules required that the change in domestic assets be large enough to keep constant the "gold-reserve ratio" (alternatively defined as gold to currency ratio, gold to credit base ratio, or gold to liability ratio). For a discussion of the rules, see Nurkse (pp. 66-67) and Kenneth Dam (1982, pp. 17-18).

⁸Since figures for high-powered money are not available for most nations besides the United States, I report the currency stock figures.

⁹Using the figures in Friedman and Schwartz (Table A-1, col. (1), plus Table A-2, col. (1)). High-powered money increased by 3.1 percent (from Table B-3, col. (1)).

¹⁰High-powered money increased by .220 billion.

¹¹Nurkse discusses the problem of worldwide sterilization during the interwar period. In his table on p. 69, which comprises 26 countries, he shows that sterilization was actually the most common behavior.

¹²The gold figures are the ones mentioned earlier in the text, based on the *Federal Reserve Bulletin*, June

⁵Data on foreign assets were taken from the *Monthly Bulletin of Statistics*, various issues. Exchange rate data came from this source as well as from *Banking and Monetary Statistics 1914-1941* by the Federal Reserve. The 28 countries are: Albania, Austria, Belgium, Bulgaria, Canada, Chile, Czechoslovakia, Denmark, Egypt, Estonia, Finland, France, Germany, Greece, Hungary, India, Italy, Latvia, Lithuania, the Netherlands, Norway, Peru, Poland, Rumania, South Africa, Spain, Sweden, and Switzerland.

⁶If a central bank sterilizes reserve flows, domestic credit is decreased when reserves go up, and the inflow of reserves is prevented from increasing high-powered money by the full amount of the inflow. Since the money stock does not increase as much as otherwise (and prices do not adjust upwards as rapidly), the inflow of reserves may continue for an extended period. Sterili-

United States did not violate the gold standard rules—as defined in those days—to any greater extent than most nations. The U.S. money stock—as defined by *M1*—moving perversely from August 1929 to August 1931 should not be blamed on abnormal sterilization policies, but rather on changes in the money multiplier.¹⁴

III. Evidence on the Balance of Trade

Did the U.S. balance of trade “improve” during 1929–31? The figures for exports minus imports are:¹⁵ 1929: +\$842 million, 1930: +\$782 million, 1931: +\$334 million. Since the U.S. balance of trade showed a surplus every year in the preceding ten-year period, with an average of +\$1,380 million per year,¹⁶ the United States cannot possibly have generated a downswing in the rest of the world through the balance of trade.

It could be argued that the quantities of exports and imports are more relevant than their values. Using quantities does however not change the results much. From 1928 to 1931, the export quantity index went down by 31 percent, and the import quantity index

went down by 15 percent.¹⁷ Taking a longer period, 1919 to 1931, gives a decline in the quantity of exports by 26 percent, and an increase in the quantity of imports by 20 percent.

IV. Conclusions

Analysis of data on countries other than the United States contradicts the hypothesis that the Great Depression was transmitted from the United States to the rest of the world during August 1929–August 1931 through the mechanism mentioned by Friedman and Schwartz. The figures also show that the United States did not deviate more from the gold standard rules than did most other countries during this period. I conclude that to the extent the Great Depression was transmitted internationally, other countries as well as the United States must have played a significant role, and/or it was transmitted from the United States through some channel not analyzed here.

Although this paper disagrees with the Friedman and Schwartz view of the international transmission, the evidence does not contradict other aspects of their description of the Great Depression. Neither does it rule out the possibility that the United States could have prevented or mitigated the worldwide depression through appropriate monetary policies.¹⁸

1933, subtracting U.S. figures from the world total. Data on currency stocks in 33 countries were taken from the League of Nations *Monthly Bulletin of Statistics*. To derive a rest-of-the-world aggregate currency stock, I multiplied each nation's currency stock with the appropriate exchange rate. Data on exchange rates for the two dates were found in the last mentioned source combined with *Banking and Monetary Statistics 1914–1941*. The 33 countries are: Australia, Argentina, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, Czechoslovakia, Denmark, Egypt, Finland, France, Germany, Greece, Hungary, India, Italy, Japan, the Netherlands, Norway, New Zealand, Peru, Poland, Portugal, Rumania, South Africa, Spain, Sweden, Switzerland, the U.K., Uruguay, and Yugoslavia.

¹³Gold plus foreign reserves increased by less, 2.1 percent.

¹⁴According to the series presented in Friedman and Schwartz (Appendix B, Table B-3), the ratio of deposits to bank reserves fell from 13.09 to 11.69, and the ratio of deposits to currency held by the public from 10.81 to 8.95.

¹⁵According to the Census Bureau, *Historical Statistics of the United States*, Series U14.

¹⁶The figures immediately preceding the depression are slightly lower: 1928: +1,037 million, 1927: +681 million.

¹⁷Census Bureau, Series U225 and U237.

¹⁸There is no doubt that the United States possessed very large gold reserves in absolute terms, which suggests that an expansionary policy could have been pursued without invoking speculation of a devaluation.

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