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THE LONDON MONETARY AND ECONOMIC CONFERENCE OF 1933 AND THE END OF THE GREAT DEPRESSION: A "CHANGE OF REGIME" ANALYSIS

Sebastian Edwards

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ABSTRACT

In this paper I analyze the London Monetary and Economic Conference of 1933, an almost forgotten episode in U.S. monetary history. I study how the Conference shaped dollar policy during the second half of 1933 and early 1934. I use daily data to investigate the way in which the Conference and related policies associated to the gold standard affected commodity prices, bond prices, and the stock market. My results show that the Conference itself did not impact commodity prices or the stock market. However, it had a small effect on bond prices. I do find that the events associated with the abandonment of the gold standard impacted prices in a significant way, even before the actual monetary and currency channels were at work. These results are consistent with the “change in regime” hypothesis of Sargent (1983).

Sebastian Edwards
UCLA Anderson Graduate School of Management
110 Westwood Plaza, Suite C508
Box 951481
Los Angeles, CA 90095-1481
and NBER
sebastian.edwards@anderson.ucla.edu

1. Introduction

The London Monetary and Economic Conference of 1933 marks a major turning point in President Franklin D. Roosevelt's policies towards gold and exchange rates; there is a "before London" and an "after London." Until that time policy decisions on the currency were largely dictated by financial and political events that were beyond government control. In fact, during the campaign, neither Roosevelt nor his close advisers – a group known as the Brains Trust – developed a plan on what to do about the dollar.[1] During its first few months (March-June 1933), the administration appeared to be constantly behind the curve. The gold embargo decreed on March 6 was the result of a banking crisis that exploded during the last three weeks of the Hoover administration; the banking holiday of March 6 through 13 was planned by departing Treasury officials; the abandonment of the gold standard on April 19 responded to Congress's inflationist demands, including to the amendments proposed by Senators Wheeler and Thomas; and the abrogation of the gold clause on June 5 was the Administration's response to the barrage of legal cases that loomed in the horizon. Not only that, the London Conference itself was imposed on President Roosevelt. It had been proposed in mid-1932 by President Herbert Hoover to the European nations, as a follow up to the Lausanne Conference on debts, and as a way of making a concerted effort to deal with the economic problems of the day.[2]

The London Conference opened during the second week of June, and was supposed to last for twelve weeks. Although the U.S. decided not to include war debts in the agenda – these were to be treated separately, in bilateral negotiations –, the conference was to cover a broad array of issues, including international trade, credit policies, employment, protectionism, commodity prices, and the possible return of all nations to a "modified international standard."[3]

On July 3, barely three weeks after it was inaugurated by the King, the Conference was shocked by a message sent by President Roosevelt. In his communique the President said that he was dismayed by the direction the discussions had taken. He stated that there was too much emphasis on short run exchange rates stabilization and not enough on commodity prices and recovery. He added that the U.S. would not participate in any effort to stabilize the exchanges in the immediate run, and that the Conference's fixation with short term stability responded to "old fetishes of so-called international bankers."[4] He declared that the aim of the parley ought to be generating mechanisms for "controlled inflation." Following Roosevelt's message – known as the "bombshell" – the Conference stalled, and three weeks later it adjourned without achieving any of its goals, not even the most modest ones.

[1] On the economics views of the senior members of the "Brains Trust," see Edwards (2017a).
[2] For an account of these events by one of FDR's closest and most influential advisers, see Moley (1939, 1966).
[3] See Paslovsky (1933).
[4] Roosevelt (1938), Vol. 2. P. 264-265.

After the Conference, U.S. policy towards gold and the dollar became proactive and even experimental. During the last week of August the administration implemented the first phase of a "gold buying" program aimed at raising the price of gold and, in this way, increasing commodity prices. This program, which was designed by Cornell Professor George F. Warren, was expanded in late October when the government decided to buy gold internationally at prices determined daily by the President himself. This active dollar policy culminated on January 30 1934, with the signing of the Gold Act into law. One day later the dollar was officially devalued to $35 an ounce of gold, from the historical parity of $20.67. According to this legislation the U.S. committed herself to buying and selling unlimited amounts of gold at that price.[5] This system lasted until August 1971, when Richard Nixon closed the Treasury's "gold window."

Starting in February 1934, and largely as a consequence of the devaluation of the dollar, the U.S. experienced large inflows of gold. These were monetized by the Federal Reserve, with the concomitant increase in the monetary stock. Most scholars who have studied the Great Depression – including Friedman and Schwartz, Meltzer, Bernanke, and Romer – agree that this change in monetary policy played a fundamental role in the U.S. recovery. According to Romer (1992, p.781, emphasis added):[6]

> "Monetary developments were a crucial source of the recovery of the U.S. economy from the Great Depression… The money supply grew rapidly in the mid- and late 1930s because of a huge unsterilized gold inflow to the United States… [T]he largest inflow occurred *immediately following the revaluation of gold mandated by the Roosevelt administration in 1934*."

In spite of the London Conference importance, relatively little has been written about it. To be sure, historians and international relations scholars have taken an interest in the gathering, but there have been very few economic analyses on the negotiations and on the economic consequences of London.[7] To date, the work by Eichengreen and Uzan (1990) continues to be the most complete economic analysis of the Conference. In that article the authors provide a

[5] For recent analyses of the gold buying program see Sumner (2015) and Edwards (2017b).

[6] Other scholars who have emphasized the role of the devaluation include Eichengreen and Sachs (1986), Eichengreen (1992), Bernanke (2000), Bernanke and James (1991), Temin (1991), Mundell (2000), and Irwin (2012). It is not possible to do justice to the copious literature on the Great Depression; see, however, Bordo, Choudhri and Scwhartz (2002), Bordo and Kydland (1995), Meltzer (2003), De Long (1990), Wigmore (1987), Obstfeld and Taylor (1997), and Calomiris and Wheelock (1998). Friedman and Schwartz (1963) continues to be the basic study on monetary policy during this period.

[7] The Conference attracted considerable attention from contemporary analysts, including Lindley (1933) and Pasvolsky (1933). Schlesinger (1957) provides a detailed account, which draws on many of the participants recollections. Nussbaum (1957) dedicates two pages to it and Eichengreen (1992), in the most complete treatise on the gold standard, covers it in five pages. With time, however, the gathering has faded in stories on the evolution of economic policy during the first year of the Roosevelt Administration. Ahamed (2009) devotes two pages to it, as does Rauchway (2015). Eichengreen (2015) recently discusses the attempts to stabilize the exchanges in London in a comparative setting.

summary of the Conference discussions, and contend that its inability to generate results constituted a typical case of failed coordination. They argue that the main problem was that political leaders in the most important countries – the U.S., the U.K., and France – viewed the world through different conceptual lenses, and that these differences of opinion did not allow them to come to an agreement. An important question that is not addressed in detail in the literature is how markets reacted to the Conference and to the news emanating from London.

In this paper I present an analytical narrative of the events that transpired during the Conference (Section 2). This discussion centers on the informal tripartite negotiations aimed at stabilizing the exchanges in the short term, which took place in parallel to the official meeting, and which ultimately failed. The analysis sheds light on this important but almost forgotten episode in U.S. monetary history. I analyze how it affected dollar policy during the second half of 1933 and early 1934. In Section 3, I use daily data to investigate empirically how the Conference, and related events and policies associated to gold and the dollar, affected key economic and financial variables, including commodity prices, bond prices, and the stock market. Although a number of authors have investigated the behavior of prices and financial variables during 1932-37, as far as I know, there have not been formal empirical analyses that center on the Conference itself. The empirical part of the paper is in the spirit of Sargent's (1983) "change of regime" model, and expands Temin and Wigmore (1990) pioneer work in a number of directions.[8]

2. The Conference: An analytical narrative

The sixty four nations, London Monetary and Economic Conference was officially opened on June 12 by King George. His allocution was short and to the point. Next, Prime Minister Ramsay MacDonald delivered his welcoming speech. To the American delegation's dismay, mid-way through his presentation MacDonald addressed the war debts issue. He said that in addition to the subjects in the agenda there was a key problem that needed to be solved with urgency: "I refer to the question of war debts, which must be dealt with before every obstacle to general recovery has been removed, and it must be taken up with no delay by the nations concerned."[9] As Ernest Lindley (1933) pointed out a few months later, the Americans should not have been shocked. It was unthinkable that the leader of a country besieged by debt payments would not mention his country's plight in the opening speech of a conference he was hosting. Two days later the British made a $10 million partial payment on the debt. FDR issued a statement saying that he accepted it as an indication that the U.K. was willing to pay eventually the full amount owed. Officially the U.K. had avoided default.

[8] Since the publication of this important paper, a number of authors have investigated aspects of the change in regime explanation. See, for example, Eggertsson (2008), for an analysis using DSGE model, Coe (2002) for a probability switching model. See also Hausman (2013), Hausman et al (2016), and Jalil and Rua (2016).

[9] League of Nations (1933), No. 3, p. 8. See Roosevelt (1938), Vol. 2, p. 242.

During his first speech to the plenary, U.S. Secretary of State Cordell Hull stated that it was necessary that as many countries as possible would adhere to a "tariff truce." At least for the duration of the Conference no additional protectionist measures should be put in place by any nation. He then recited the virtues of free trade, and argued that it was important to go even further than the truce; it was imperative to reduce tariffs and get the wheels of international commerce moving again.[10] Towards the end of his presentation the Secretary of State addressed the question of the monetary standard. He said that the Conference had to deal officially with the "problem of a permanent monetary standard, and determine the proper function of the metals gold and silver in the operation of such standard."[11]

In Figure 1 I present the daily dollar-pound and dollar-franc exchange rates for 1932-1935. The figure captures some of the main currency events of the period. In particular, it is possible to see the depreciation of the dollar on April 19, the day the country went off gold. The duration of the Conference is indicated by a shaded area; here I consider July 3, as the de facto end of the Conference.

As Figure 1 shows, on April 19, when the U.S. went off gold, sterling fetched $3.86 dollars. That same day the French franc was valued at 3.93 cents of a dollar. On the day the Conference opened the exchange rates had moved to $4.18 per pound, and $0.0486 per franc, representing a depreciation of the dollar of 8% and 23%, with respect to sterling and the franc, respectively. These figures should be kept in mind during the discussion that follows on the negotiations to stabilize the exchanges in the short run.

2.1 The French position and the currency war

In the morning of June 14, during the second plenary session, French Premier Edouard Daladier stated that the first step to be taken, even before addressing trade, prices, credit, production, or recovery issues, was to "put an end to the currency war."[12] For the French there was an urgent need to stabilize currency values for at least the duration of the Conference. In their view, if that didn't happen it was not possible to make progress in solving the world economic crisis. A few days before the Conference was inaugurated the dominant sentiment in France was one of skepticism. Frederic Jenny, the financial editor of *Les Temps*, summarized his countrymen's views as follows: [13]

> "We are unhappily forced to admit the conference is going to open its labors under conditions just as deceptive as possible. The fall of the dollar and the

[10] Hull knew, however, that these were empty words. At the last minute the President had informed him that he would not request from Congress authority to negotiate lower tariffs. *The Times of London*, "Sweeping U.S. measures," June 5, 1933, p. 15.
[11] League of Nations (1933), No. 5, p. 26.
[12] League of Nations (1933), No. 4, p. 12.
[13] *The New York Times*, "Paris doubts help at London parley," June 12, 1933, p. 2.

> American repudiation of the gold clause has already singularly complicated its task."

With respect to trade negotiations, the influential French Deputy Paul Reynaud said that any "attempt to revive trade between the nations will be in vain as long as it is possible to nullify any customs agreement by manipulating their currencies. Two of the greatest currencies in the world [the dollar and the pound] are not being stabilized, this necessary condition is not fulfilled."[14] French sentiments were aptly summarized in a *New York Times* article published the day the Conference was inaugurated: "The formal opinion of France, which will be upheld by its delegates at the conference, is that there can be no question of talking about lowering tariff walls until an agreement is reached concerning [currency] stabilization."[15]

In June 1933, France was one of the few countries still on the gold standard. The franc had been re-pegged to gold in 1926, at a significantly depreciated rate. As a consequence, France had been running substantial trade surpluses, and large amounts of gold had found their way to the vaults of the *Banque de France*. The Daladier government was concerned with exchange rate stability for two main reasons: First, with depreciated currencies, American and British exports were more competitive, and were beginning to crowd out French exports in the global marketplace. Second, in the absence of an "international standard" of some sort, there was a possibility of a series of competitive devaluations that would force France to devalue the franc once again. Premiere Daladier and his associates were perfectly aware of the traumatizing experience of a major devaluation, and the last thing they wanted was to repeat the 1919-1926 experience. For them it was essential that the Conference returned things to "normality," and this meant fixed exchange rates.

The French position, "stabilization first," presented a major diplomatic and logistical problem. It was very difficult, if not utterly impossible, to negotiate the immediate stabilization of exchange rates in a meeting with sixty four very different nations, such as Nicaragua, Haiti, the USSR, Switzerland, and the Netherlands. The only way to deal with France's demands was to have informal parallel talks, involving only the major players – the U.K., the U.S., and France. While the official gathering dealt with longer term issues through two formal working commissions, short term stabilization questions were discussed in an unofficial and restricted conclave. The American negotiators in these shadow meetings were George Harrison, the Chairman of the Federal Reserve Bank of New York, James P. Warburg for the White House, and Professor Oliver A. W. Sprague in representation of the Treasury; Sprague had been FDR's instructor at Harvard, and an adviser to the Bank of England. The British team was led by the Governor of the Bank of England, Montagu Norman, and by Sir Frederic Leith-Ross for the Treasury, while the

[14] The New York Times, "Paris doubts help at London parley," June 12, 1933, p. 2.
[15] The New York Times, "France insistent on stable money," June 12, 1933, p. 25.

French contingent was directed by Minister George Bonnet and senior officials Jacques Rueff and Jean-Jacques Bizot.

The parallel tripartite negotiations were launched on June 9, before the official opening of the Conference, and dealt exclusively with two questions: Was it possible to stabilize the exchanges immediately and, at least, for the duration of the Conference? And, if the exchanges were indeed stabilized temporarily, at what level should that happen? On June 10, two days before the Conference was officially launched, the British intimated that they would like to stabilize at \$3.75, while the Americans mentioned \$4.25 "with the expectation of striking a bargain around \$4.00 to \$4.10." [16] The gap between the two positions was non trivial, but according to the U.S. negotiators it was possible to find a middle ground.

In the weeks prior to the Conference, FDR had said that he favored stabilization, but did not state at what rate. In his Second Fireside Chat, on May 7, the President declared that one of the goals of the Conference was "the setting up of the stabilization of currencies, in order that trade can make contracts ahead."[17] On May 29, two weeks before the opening of the Conference, Roosevelt had some concrete ideas on what he considered to be an appropriate level for the dollar. He told Henry Morgenthau Jr. and banker Bernard Baruch that he would like to see the dollar-pound exchange rate go to \$4.25; on that day it was \$3.99, implying a further devaluation of the dollar of 6%. He then said that "he would like to see the price of commodities be based on a 75¢ dollar." At the same time he wanted to make sure that speculative forces were kept under check: "I do not want the stock market go up too fast."[18] In his memoirs Herbert Feis, the only professional economist who participated in the negotiations that eventually led to the official devaluation of the dollar in January 1934, said that "it was hard to tell what the President wanted [regarding exchange rates]. His ideas veered and waffled. Even now, with my records open, it is not easy to trace their gyrations."[19]

For the British, stabilization was important, but not as much as for the French. A serious question was at which rate to steady sterling. In his memoirs, Leith-Ross (1968, p 168) said the following about the preparatory meetings held during May in Washington D.C.: "While we did not question the desirability of the eventual return to a stabilized exchange rate, we felt that more experience was needed before we could decide what precise rate we would be able to maintain." In early June, just before the Conference opened, he remarked that recent fluctuation in the currency market made the decision very difficult. "Sterling which not long ago had been worth less than \$3.20 was now fetching over \$4.20."[20]

[16] Lindley (1933), p. 198.
[17] Roosevelt (1938), Vol 2. P. 166-167.
[18] Morgenthau Diaries, Volume 1, May 29, 1933. P. 37.
[19] Feis (1966), p. 144.
[20] Leith-Ross (1968), p. 168.

The question of at what level to stabilize the exchanges is directly related to whether the currency is in line with its "fundamentals," or if, on the contrary, it is misaligned (overvalued or undervalued). Nowadays this type of analysis has become routine, and is periodically performed by the multilateral institutions, central banks, and investment banks.[21] Most of these analyses are based on models of current account sustainability, and/or models that distinguish transitory and permanent changes in fundamentals such as the terms of trade, global interest rates, and openness. In the late 1920s and early 1930s, however, analyses on the appropriateness of currency values were mostly confined to simple purchasing power parity calculations. Indeed, this method was used by Cassel and Keynes when looking at the interwar situation in Europe.[22] In the period surrounding the London Conference the economics profession did not discuss in detail the extent to which certain currencies – including the dollar, the franc, and sterling – were misaligned, and if so by how much. It was only in the years that followed that economists embarked on detailed investigations of whether different currencies were close to their long-run "equilibrium." In early 1935 Harry Dexter White wrote a memorandum at the Treasury where he argued that at that time the dollar was 3% undervalued; according to his calculations the pound was undervalued by 19%, while the German mark was overvalued by 27%.[23] In 1936, and after a long and detailed study, Harris (1936, p. 20) concluded that "[i]t is clear from the large inflow of gold into the United States in the years 1934-1935 that the dollar is undervalued."

2.2 Rumors and more rumors

Starting on June 10, rumors and counter rumors flooded London regarding the parallel negotiations on exchange rates. Some reporters said that an agreement on short term stabilization was imminent, while others believed that it would only happen once Raymond Moley, FDR's closest adviser and the former head of the Brains Trust, arrived with fresh instructions from the President. On June 13 the dollar strengthened and agricultural prices dipped. The U.S. stock market, which appeared to have found its footing during the previous weeks, faltered. While this happened, the members of the official U.S. delegation were busy trying to deflect the growing uproar about war debts. The next day the dollar strengthened further as a result of rumors indicating that the parallel tripartite conference had reached an agreement and that the dollar would be stabilized at approximately $4.00 per pound.[24]

On June 14 Secretary of the Treasury Will Woodin decided to put an end to the rumors, and he released a statement in Washington stating that "any proposal concerning stabilization would have to be submitted to the President and to the Treasury and no suggestion of such a proposal

[21] For a discussion on exchange rate misalignment see Edwards (2011) and the literature cited therein.
[22] Cassel (1922), Keynes (1924).
[23] White (1935).
[24] The rumor was started after James Cox, the former Governor of Ohio, and newly appointed chair of the Monetary Committee of the Conference, uttered that a $4.00 per pound rate was appropriate.

has been received here."[25] His communique, however, had little effect on market sentiments. The next day, June 15, the dollar strengthened further to $4.02 per pound.

Finally, on June 16, there seemed to be some light at the end of the tunnel. After long and tortuous negotiations that went into the wee hours of the morning, the Americans reached a tentative agreement with their British and French counterparts. James P. Warburg, who was acting as a de facto head of the parallel U.S. delegation, immediately drafted a report which he cabled to FDR for his comments and approval. The plan, he explained, was simple: the exchanges of France, the U.K. and the U.S. would be pegged for at least six weeks at the level where they stood the day the agreement was signed; that meant an exchange rate with respect to the pound in the vicinity of $4.10, and of approximately 4.68 cents with respect to the franc; in comparison to April 18 (the last day the U.S. was under the gold standard), this meant a dollar devaluation of 17% relative to sterling, and 21% relative to the franc. The New York Federal Reserve Bank and the British Exchange Equalization Account would commit themselves to make sure that the exchanges would indeed remain at those levels. That implied, Warburg declared, that the Treasury would have to backstop the Federal Reserve in case any losses resulted from the stabilization effort.

The President's reply was short and precise, and came on June 17. He would not approve any plan that implied the possibility of gold shipments or Treasury losses. Negotiations should continue until a better deal was obtained. Warburg took the rejection in stride; they had to go back to the negotiating table and try something else. George Harrison, the President of the New York Fed, was not pleased. He would not be part of a proposal that exposed the Federal Reserve Bank of New York to losses. If the Treasury was unwilling to provide full cover for the Bank, he had no role to play in London. The next day (June 19) he sailed back on the *SS Bremen* to New York. The press and the financial markets took his departure as a bad sign. It meant that the negotiations had gone poorly; all there was to do now was waiting for presidential envoy Raymond Moley's arrival. He, for sure, would come with authority to strike a deal that would allow the Conference to proceed with its official business. On June 21, however, *The Times of London* cautioned that not much should be expected of Moley's trip. It was unlikely, the reporter wrote, that Moley would lead the American delegation "into greater cooperation. His personal isolationist views are too well known to require elaboration."[26]

On June 20, and according to schedule, Key Pittman, U.S. Senator from Nevada, officially introduced a U.S. draft resolution on a modified international monetary standard to the Monetary Committee of the Conference. This was a proposal referred to the long run and was, in principle, unrelated to the tripartite negotiations on short term stabilization that were being conducted in parallel. The delegates took particular note of three aspects of the American longer term plan:

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[25] Roosevelt (1938), Vol. 2. P. 245.

[26] Times of London, "America's Two Paths." June 21, 1933; pg. 14.

First, gold would continue to be at the center of the modified system. Second, gold (and silver) would only be used to settle international trade. That meant that "gold either in coin or bullion" would "be withdrawn from [private] circulation." And third, all nations would simultaneously reduce the cover ratio to 25%, allowing for an immediate expansion in credit and liquidity; at the time the cover ratio in the U.S. was 40%.

One of the advantages of this plan, which was the brainchild of James P. Warburg, was that by lowering the cover ratio significantly it allowed central banks to embark on countercyclical monetary policy.[27] Although the proposal was generally well received, not everyone agreed with every detail. The Swiss, for example, argued that an appropriate standard had to rely exclusively on gold. The Uruguayan delegation also expressed some misgivings about allowing a high percentage (up to 20%) of silver to back the monetary stock. And the Central European nations were leery of committing to a regime that could result in large losses of their already low gold reserves. During the next few days the United States introduced two additional resolutions related to monetary and exchange rate issues to the Conference. One provided general principles for coordinating monetary and fiscal policies, while the other advocated the removal of exchange restrictions in all countries.[28]

2.3 A waiting mode and a bombshell

On June 22 the press noted that the Conference had entered into a "waiting mode." Speeches were still given and meetings continued to take place, but nothing of substance happened. Everyone seemed to be waiting for the arrival of presidential emissary, Raymond Moley. Writing two months after the events, Ernest Lindley described the mood in London as follows:[29]

> "[The] American delegation produces two resolutions… Nobody pays much attention. Moley is coming with instructions from Mr. Roosevelt. The Conference marks time. The French decide to wait and see if Moley is bringing authority to peg the dollar. Stories that Hull is going to be displaced or resign fill London and other capitals… [On June 26] the Dutch Guilder weakens. The French are in a panic. American commodities and stocks skyrocket… Secretary Hull's patience is exhausted… The President seldom consults him… [and] his friends feel he is at the point of resigning."

[27] In 1932 a group of economists criticized the Fed for not undertaking counter cyclical policy. See Appendix I in Wright (1932). In mid-1933 a smaller group of Chicago economists made a more specific proposal for reforming the monetary system, which they sent to the Secretary of Agriculture Henry A. Wallace. This scheme received the name of the "Chicago Plan." See Tavlas (1997) for a detailed analysis.

[28] Warburg (1934), p. 107. The Warburg plan had some similarities to the plan unveiled by Keynes in a series of articles in the Times, which he collected in the pamphlet *The means to prosperity*. Keynes (1933).

[29] Lindley (1933), p. 204-206.

Raymond Moley arrived in London late at night on June 27. He immediately sensed that Secretary of State Cordell Hull was unhappy with his mission, and during the next few days made every effort to appear as a loyal subordinate, as someone who took orders from the Secretary, as a mere messenger without any power to negotiate or make decisions. But no one believed him. The French were convinced that he had the authority to stabilize the dollar.

It was at that point when gold bloc countries led by the French decided to issue an ultimatum: "Stabilize or we quit."[30]

After conferring with James Warburg and Professor Sprague, Moley concluded that the only way to save the Conference was to issue a tripartite communiqué indicating that some agreement had been reached regarding the short run stabilization of the exchanges. He was perfectly aware that it would not be easy to satisfy the three powers. The document had to be general and specific at the same time, both vague and detailed. He met with John Maynard Keynes and U.S. journalist Walter Lippmann, who was covering the Conference for the *Herald Tribune*, to get their opinion on the wording of the text.

Just before leaving the U.S. Moley had met with FDR to get last minute instructions. It was a dramatic rendezvous in the middle of the ocean. The fact that Moley had taken a seaplane to get to the President, who was on a vacation on his sailboat the *Amberjack II*, added to the myth that the former head of the Brains Trust had plenipotentiary powers. As he would tell later in his memoirs and in numerous interviews, he got precise instructions from the President: on arriving to London he was to communicate to every delegate from every country that the U.S. would not sacrifice domestic goals in order to address international ones. With respect to the global monetary system, he was to emphasize that the aim of the Conference – and of the parallel mini conclave, for that matter – was to raise commodity prices around the world, and not to merely stabilize the exchanges. The real question, the President insisted, was how to generate "controlled inflation."[31]

During the evening of June 30 a small group met at the American Embassy in London to draft a declaration to be submitted to FDR for approval. Raymond Moley, Professor Sprague and James Warburg were in attendance for the U.S. and worked on the exact wording. The French Secretary of Finance and Sir Frederick Leith-Ross were there with their staffs. The group worked on a very general text. The draft communiqué stated that the U.S. and the U.K. (the non-gold countries) were to make every effort to control currency speculation in the immediate run. That was as far as Moley was willing to go; the French seemed to understand that they were not going to get a deeper commitment, and agreed on the wording. The word "stabilization" was not in the text, nor was there a pledge to devote resources to stop speculators.

[30] Lindley (1933), p. 206.
[31] Moley (1939), p 235.

Almost at midnight the new draft was sent to the President, who had just reached Campobello in his sailboat, for his reaction and approval. In its medullar part the draft communique said: "Each of the government signatory hereto agrees to ask its central bank to work together with the central banks of the other governments which sign this declaration in limiting speculation and, at the proper time, reinaugurating an international gold standard."[32]

To everyone's surprise the President rejected the text of what was now known as the "Moley Plan." In FDR's view there was the danger that the statement could be interpreted as a commitment and a moral obligation to stabilize the exchanges and ship gold in order to maintain stability. Moley was shocked, but after a few minutes collected himself and told the American delegates that they had to draft a new text that included the President's main concern: commodity prices should go up globally before a serious attempt was made at stabilizing currency values. It was a simple principle, the old question of the horse and the cart. The French understood that there would be no concessions by the Americans and agreed to drafting a revised version. A new statement was prepared, and on the night of July 1 it was cabled for FDR's revision and, hopefully, approval. By now the President had left Campobello and was on board *the USS Indianapolis* on his way back to Washington.

But instead of approving the new draft, as Moley and everyone else expected, the President cabled his own message to the delegates. This communication written on the *Indianapolis* was the bombshell that or all practical purposes sunk the Conference.

The President opened his message by stating that the Conference's failure to address real long term problems constituted a "catastrophe amounting to a world tragedy." [33] He continued by asserting that "a purely artificial and temporary experiment affecting the monetary exchange of a few Nations only" was a fatal diversion. He then added that "the world will not long be lulled by the spacious fallacy of achieving a temporary and probably an artificial stability on foreign exchanges on the part of a few countries only." From here he went on to state that the fixation with short term stability responded to "old fetishes of so-called international bankers." Then came the paragraph that, in Cordell Hull's words, "threw the conference into an uproar":[34]

> "[T]he United States seeks the kind of dollar which a generation hence will have the same purchasing and debt-paying power as the dollar value we hope to attain in the near future. That objective means more to the good of other nations than a fix ratio for a month or two in terms of the pound or franc….*Temporary exchange rate fixing is not the true answer*."

[32] Warburg (1934), p. 117.
[33] All the quotes in this paragraph come from Roosevelt (1938), Vol. 2. P. 264-265.
[34] Hull (1948), Vol. 1, p. 262, emphasis added.

A few hours after receiving FDR's statement, the representatives of the leading nations, with the exception of the United States, drafted a declaration that in part read: "[T]he American statement on stabilization rendered it entirely useless to continue the conference."[35]

What made the delegates of the large nations particularly unhappy was that as recently as May 16, Roosevelt had stated in letter to world leaders that a key objective of the London Conference should be to "establish order in place of the present chaos by *a stabilization of currencies*, by freeing the flow of world trade."[36] They wondered what had happened to the President. Why did he change his mind in the course of a few weeks? What prompted him to write such a harsh communique? What was his ultimate goal?

But not everyone was dismayed. In fact, in some intellectual and business quarters the bombshell was well received. John Maynard Keynes wrote in the *Daily Mirror* that the President's decision was "magnificently right," as it opened the way for a modern international system based on managed currencies. A few months later, however, Keynes would openly criticize the active exchange rate policy implemented by the U.S. after London. On December 31 1933, he wrote in *The New York Times*: "The recent gyrations of the dollar have looked to me more like a gold standard on the booze than the ideal managed currency of my dreams."[37]

In evaluating the London events it is important to keep in mind that on May 12, and as part of the Agricultural Adjustment Act (AAA), Congress passed the Thomas Amendment, which gave the President the authority to reduce the gold content of the dollar by up to 50%.[38] In early July, the official price of gold continued to be $20.67 an ounce, as established by the Gold Act of 1900; that is, the President had not made use of the power granted to him by Congress. Stabilizing the exchanges meant giving up an important prerogative, something that politicians are generally reluctant to do. As we will see in the Section that follows, in the President eyes it also meant giving up an instrument that, according to his interpretation of the facts, had effectively contributed to his goal of generating "controlled inflation," and returning commodity prices to where they had been in 1926.

3. The Conference, commodity prices, and financial markets

In this Section I use daily data to analyze the market reaction to the Conference and to other policies related to gold, implemented during the early months of the Roosevelt administration. I am particularly interested in the evolution of exchange rates, commodity prices, the stock

[35] Hull (1948), Vol. 1, p. 263.
[36] Roosevelt (1938), Vol. 2, p. 186, emphasis added.
[37] *The New York Times* (NYT), December 31, 1933, p. 2 XX. For a formal statistical analysis of dollar gyrations during that period see Edwards (2017b).
[38] The Thomas Amendment gave the President several options for generating inflation. The devaluation of the dollar was one of them. For details see, for example, Moley (1939).

market, and bond prices, in the period following the abandonment of the gold standard and during the Conference itself.

Before proceeding, it is useful to provide some background about the administration's main policy objectives during its first year. Throughout the campaign Governor Roosevelt repeatedly stated that one of the most important goals of his administration would be to raise commodity prices, which had declined precipitously since 1920. Once elected, he continued to emphasize the centrality of higher commodity prices in his plan for recovery. On April 19 1933, after announcing that the U.S. was abandoning the gold standard, the President said: [39]

> "The whole problem before us is to *raise commodity prices*. For the last year, the dollar has been shooting up [this was a reference to the depreciating pound sterling] and we decided to quit competition. The general effect probably will be an increase in commodity prices. It might well be called the next step in the general program."

In May, during his Second Fireside Chat, the President went further, and said that the goal of the administration was to move prices back to where they had been in 1926. An important question, then, is whether the evolution of commodity prices during the weeks leading to the Conference – and during the gathering itself, for that matter – affected Roosevelt's views regarding the usefulness of the Conference, and influenced his decision to deliver the bombshell message on July 3d.

The rest of the Section is organized as follows: In Subsection 3.1 I present daily data on the evolution of exchange rates, commodity prices, bond prices, and the stock market, and I present a preliminary analysis on the relation between exchange rate instability and prices. I make an attempt to look at these variables from the vantage point of late June 1933, just before President Roosevelt decided to jettison the Conference. In Subsection 3.2 I report results from a series of "event study" type of regressions using daily data for November 1932-Decemner 1933. A key question addressed in this Section is whether the sheer expectation that the U.S. would officially devalue the dollar – something that happened only on June 31 1934 – had a positive effect on prices even before the devaluation took place and the resulting inflows of gold and expansion in the money supply were materialized. A second key question, is what was the effect, within this this context, of the Conference on prices.[40]

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[39] Roosevelt (1938), p. 137. Emphasis added.

[40] As pointed out below, these questions are conceptually related to the "change of regime" hypotheses of expectations models, such as Sargent (1983). A study along these lines was undertaken with monthly data for cotton by Temin and Wigmore (1990).

3.1 Data and preliminary analysis

In Figure 2 I present daily prices for corn, cotton, rye, and wheat for January 2 through December 31, 1933. Two vertical lines have been drawn; the first one corresponds to March 6, the day the gold embargo was declared, and the second to April 19, the day the U.S. went off gold. The duration of the London Conference is shown with a shaded area; as noted, I have assumed that for all practical purposes the meeting ended on July 3, the day the delegates received FDR's bombshell. As may be seen, between early March and late June there was a strong upward trend in commodity prices. For corn, prices went from $0.25 per bushel on January 2, to $0.52 on June 30. For cotton, prices went from $0.063 per pound to $0.101, a price that was still 20% shy of FDR's target of $0.12. The price of rye increased from 40 to 78 cents per bushel, and the price of wheat went from, $0.50 to $0.78 per bushel. These figures also show that commodity prices peaked during the third week of July, merely 14 days after FDR's delivered the bombshell to the London delegates. From then onwards, and to the President's concern and disappointment, they experienced a gradual decline. This price correction triggered Roosevelt's decision, in late August, to embark on the gold-buying program.[41]

In Figure 3 I present, for the same time period, daily data on the stock market index (Dow) and for the price of the Fourth Liberty Bond 4½s.[42] As may be seen, the Dow Index follows a pattern similar to that of commodity prices, with a change in direction starting on March 6. The stock market also peaked on July 17. Its correction, however, was less pronounced than that of commodity prices. The data on the Liberty Bond are particularly interesting, since these securities – as all government debt at the time –, included a "gold clause" and was payable in "gold coin equivalent." Price fluctuations, then, reflect, to some extent, whether the market believed that payment would be made in accordance with the original contract. The severe drop in the price just before the Conference responded to Congress's Joint Resolution of June 5, which abrogated the gold clause for all past and future contracts.[43] Once the Conference was inaugurated, however, prices recovered and hovered at around 103.4 until the bombshell was received, at which point they experienced a steep decline. From that point on they stayed at around 102.3 until late October, when the second phase of the gold-buying program was launched.

For someone sitting in late June 1933, the message summarized in Figures 1 through 3 was both powerful and simple: Exchange rate instability increased very significantly after the gold embargo and the abandonment of the gold standard, and prices also increased substantially after that time.[44] President Roosevelt, of course, was aware of these data. Henry Morgenthau Jr., who

[41] For details see Edwards (2017b).
[42] This bond was issued on May 8, 1918, and was redeemable between 1933 and 1938.
[43] For details on the abrogation see Edwards, Longstaff and Garcia-Marín (2015).
[44] See Lippmann (1936) for a collection of columns written during 1933 on agricultural prices and exchange rates.

at the time was the Governor of the Federal Farm Board, and who in late 1933 would replace ailing Will Woodin as Secretary of the Treasury, showed the President weekly charts with agricultural prices, exchange rates, financial variables, and the stocks of monetary gold from around the world. By late June FDR had become convinced that a "managed currency," a system advocated by economists such as Irving Fisher and George F. Warren, and which effectively meant that domestic economic considerations would take precedence over exchange-rate stability, had some merit and could generate a permanent increase in commodity prices. [45] From that point on the President was increasingly committed to trying it (See Moley, 1939).

3.2 Regression results

In this Section I present the results of a series of "event study" type of regressions for commodity prices, the stock market index, and bond prices. My interest is to investigate two related issues: (a) Did policies relative to gold implemented during 1933 affect prices? And (b) did the London Conference itself have an impact on prices? What makes these questions particularly interesting is that, as noted, during 1933 the dollar was still officially pegged to gold at the historical level of \$20.67. Not only that, during that year there were no significant changes in monetary policy; the large gold inflows and liquidity increases that scholars have singled out as the most important force behind the recovery, only began in February 1934.[46]

These questions are related to Sargent's (1983) "change in regime," analysis of inflation.[47] In Sargent's rational expectations model, economic agents respond to changes in expectations, and alter their habits and decisions in anticipation to what they believe will happen. The effect of expectations on prices is particularly pronounced if the public believes that there is an imminent and very significant change in policy; if there is a "change in regime." There is little doubt that for the U.S., a country that had been under some sort of metallic standard since independence, unhinging the dollar from gold was considered to be a Teutonic alteration in policy and tradition. In 1792, when Alexander Hamilton founded the Mint, the price of gold was set at \$19.39 an ounce; in 1834 it was increased by 6.7% to \$20.69 an ounce, and on January 18 1837 it was lowered slightly to \$20.67 an ounce. That price had prevailed until FDR announced that the country was off gold in April 1933. Temin and Wigmore (1990) have argued that in 1933 the public in the U.S. indeed expected a "change in regime." They tested that hypothesis by regressing monthly data for cotton (in levels) on changes in exchange rates and a lagged dependent variable.

[45] Fisher (1913, 1920), Warren and Pearson (1931).

[46] During 1933 the discount rate was increased once and reduced thrice. See Federal Reserve Board of Governors (1943). See, also, the discussion below.

[47] Temin and Wigmore (1990) proposed the "change of regime" hypothesis for explaining the recovery from the Great Depression. See, also, Eggertson (2008) and Jalil and Rua (2016) for recent work along these lines.

3.2.1 The empirical model

In order to investigate the short term dynamics of prices during the first year of the Roosevelt administration, I estimated number of error correction models of the following type:

$$(1) \qquad \Delta \log x_t = \alpha_0 + \alpha_1 \log x_{t-1} + \alpha_2 \Delta \log x_{t-1} + \alpha_3\, GOLD_t + \alpha_4 CONFERENCE_t + \\ + \alpha_5 \sum y_t + \varepsilon_t.$$

In each regression, x_t is the variable of interest: the price of corn, cotton, rye and wheat, the Dow stock market index, and the price of the 1938 Liberty Bond. $GOLD_t$ and $CONFERENCE_t$ are the "event" dummies. $GOLD_t$ takes a value of one if that day (or during the event window) a policy that affected the expectations of an (official) devaluation of the dollar and, thus, of a more expansive monetary policy and higher prices, was undertaken. $GOLD_t$ takes a value of minus one if that day a measure that signaled that a devaluation was less likely, or if it appeared that the gold standard could be reinstated. An example of a positive $GOLD_t$event is April 19, when the President announced the implementation of a strict gold embargo and that the nation was abandoning the gold standard. As will be seen, there are very few events with a negative values for $GOLD_t$. A complete list with the actual dates of the "positive" and "negative" $GOLD_t$ events is presented in Table 1. To the extent that positive $GOLD_t$ events signaled a "change of regime" and the adoption of a significantly more expansive monetary policy, the coefficient of this variable should be positive in the error correction estimates. The variable $CONFERENCE_t$ takes a value of one the day the London Conference was inaugurated and minus one on July 3. Since one of the purposes of the Conference was to stabilize the exchanges, a successful Conference would have affected negatively the expectations of further devaluation and inflation. That is, the $CONFERENCE_t$ variable would be negative if the gathering affected expectations in the direction just noted. Finally, the y_t are other covariates that may affect the dynamic of prices and financial variables during this period. They include the rate of change of the market exchange rate, a political "event" variable, as well as indicators of monetary policy; see the discussion below for details. The error term ε_t is supposed to have the standard properties. The data sources are provided in the appendix.

3.2.2 Results

The results from the estimation of several specifications of error correction equations of the type of (1) are in Tables 2 through 7. Daily data were used; the estimation period was November 1 1932 through December 31, 1933. That is, it covers the period that goes from the presidential election, which took place on November 8, through the end of 1933. The analysis, then, includes the long "interregnum" that went from November 8 to March 4, the Hundred Days – which ended on June 16 and included passing key legislation, including the AAA and the NRA –, the London Conference, and the "gold buying" program. All the series, in first differences, are stationary.

As expected in estimations in first differences with high frequency data, the R^2 reported in Tables 2 through 7 are quite low. In every case the coefficient of the lagged dependent variable is, as expected, negative and smaller than 1 in absolute terms. Point estimates of the lagged coefficients are very small in absolute terms, indicating a slow adjustment process. This, of course, is not surprising when daily data are used. The term $\Delta \log x_{t-1}$ is introduced to allow the convergence of prices to equilibrium in a nonlinear way; as may be seen, it is not significant in most equations.

For each variable of interest, the first equation in Tables 2-7 (column 1) includes the $CONFERENCE_t$ dummy only; there are no other covariates (besides the price dynamics ones). The second specification includes the "policies towards gold" $GOLD_t$ covariate only. The third specification includes both "event" variables; the fourth specification adds the daily market rate of change of the dollar-pound and dollar-franc rates, and the final column in each table adds an indicator of monetary policy. This variable captures changes in the Discount Rate by the Federal Reserve Banks of New York, Chicago and/or Boston; it takes a value equal to the change in the Discount Rate the day it becomes operational, and zero otherwise. These different specifications allow us to investigate the mechanics of price changes and, in particular, assess the (possible) role played by expectations of a "change in regime" and by market exchange rate changes in the transmission process.

The main results in Tables 2-7 may be summarized as follows:

- There is no evidence that the London Conferences affected commodity prices or the stock market directly. In every equation in Tables 2-6 the coefficient of $CONFERENCE_t$ is non-significant. This is the case independently of the controls incorporated.
- There is some evidence that the Conference had a positive impact on bond prices; the coefficient is positive and significant at the 10% level in every specification in Table 7 for the Liberty Bond prices. What makes this result particularly interesting is that, as noted, these bonds included a gold clause. It is possible that the public thought that if the Conference succeeded, and the exchanges were stabilized, there was a higher probability that the bonds would be paid in "gold-equivalent." This is only a tentative explanation, since at the time the Conference opened (June 12) Congress had already passed a Joint Resolution abrogating the gold clauses in past and future contracts. It is also possible that investors thought that a successful Conference implied a return to some sort of metallic

standard, and a repudiation of the abrogation of the gold clause by the Supreme Court. As I argue in Section 4, this is a subject that merits additional research.[48]

- There is broad evidence in support of the "change of regime" hypothesis. The coefficient of $GOLD_t$ is significantly positive in every price equation, independently of the specification and/or of the controls included. This suggests that the different gold-related measures undertaken by FDR in 1933 changed expectations about the monetary regime. Commodity prices went up before the dollar was officially devalued, and before liquidity increased through massive unsterilized gold inflows (the stock of money did not increase substantially until February 1934). These results confirm the findings in Temin and Wigmore (1990), who analyzed the price of cotton (only) using monthly data and a simpler equation specification.
- Specifications (4) and (5) in Tables 2-7, control for exchange rate changes and Fed policy. That is, in these specifications I go beyond previous analyses, including Temin and Wigmore's pioneer work, and I ask whether the expectations of a change in the monetary regime had an impact on commodity prices through channels different from the depreciation of the dollar (See Figure 1) and/or changes in the Fed Discount rate. As may be seen, in each one of the Tables for commodity prices the coefficient of the $GOLD_t$ variable continues to be significantly positive; this is also the case for the Liberty bond. This, indeed, indicates that the "change of regime" effect operated in addition to any influence it could have had on market exchange rates. As expected, however, the point estimates of the $GOLD_t$ variable are smaller when we control for exchange rate changes, than when we allowed exchange rates to adjust freely. As may be seen, in three out of the four commodity price equations, the coefficients of the exchange arte variables are significantly positive, indicating that the market devaluation of the dollar relative to the pound and the franc did have a positive effect on prices. This confirms and expands the results reported by Temin and Wigmore (1990) for monthly cotton prices. The exchange rate coefficient is not significant for corn. A possible explanation for this is that during this period corn was subject to limited international trade.
- The results in Table 6 indicate that during this period (November 1932-December 1933) the stock market was not affected by the gold policies, or by any of the other covariates. (See the discussion below for further details).

3.2.3 Robustness and extensions

The results reported above were subject to a number of robustness tests. Some of the most important ones include: (a) The estimation period was expanded to start in June 1932, just before the Democratic party convention, and to end on January 30, 1934. (b) Two and three days "event windows" were introduced. (c) I defined a merged "event" variable that combined $GOLD_t$ and

[48] The U.S. issued bonds without the gold clause for the first time in 16 years in mid-June 1933. Thus, it is not possible to compare yields on gold and non-gold bonds before that time. For a thorough discussion, see Edwards, Garcia and Longstaff (2015). The Supreme Court ruled on the abrogation on February 18, 1935.

$CONFERENCE_t$ variables. And (d) I used a dummy variable for the months when the FED undertook open market operations, instead of the change in the Fed's Discount Rate variable.[49] In each of these cases the main conclusions reported above were maintained. The $CONFERENCE_t$ variable was insignificant when included, while $GOLD_t$ was always significantly positive.

I also considered and estimated a number of alternative specifications. The most important ones amounted to introducing additional covariates, as a way of making sure that the results reported above are not due to some omitted variables. In particular, the following covariates were added: (a) A dummy variable that takes the value of one when key New Deal legislation was passed by Congress (e.g. AAA, NRA, Glass-Steagall); and (b) a dummy variable that takes into account key political events, such as the presidential election, the February 15 assassination attempt on FDR, and the Inauguration of the new administration. The results obtained when these additional covariates were included are reported in Table 8. Two aspects of these estimates are worth commenting. First, these findings confirm those presented above: there is strong evidence that expectations of a "change of regime" impacted on commodity prices; this is also the case for bond prices. Second, there is no evidence that, once controlling for other factors (including gold-related policies) either political or New Deal events affected commodity or bond prices. In only one of the eight regressions is the coefficient for the political events marginally significant. Third, and more important for the purpose of this paper, there is no evidence that the London Conference itself had an effect on commodity prices or on the stock market. These estimates continue to suggest, however, that the Conference had a marginally positive effect on government bonds. Finally, I also estimated a number of error correction models with the differential between the price paid for gold during the gold-buying program and the international price of the metal (these differentials only existed after October 25). The coefficient of this variable was not significant, while the other findings reported in above were maintained.

As reported in Figure 2, commodity prices peaked on July 17 1933. Their retreat after that date has been interpreted as evidence that the increase from March through mid-July was solely the result of significant speculative forces at work. Often the words "speculators" and "speculation" have a negative connotation. In this case, however, they should be interpreted as a situation where economic agents who believed that a "change in regime" was about to take place, tried to take advantage of that fact. It is perfectly possible that these agents were disappointed when two weeks after the "bombshell," no concrete action was taken by the government. The gold buying program initiated in late August and intensified on October 24 provided additional signals that the monetary regime was, in fact going to go through a major reform, as it did with the Gold Act of 1934, the official devaluation of the dollar, and the U.S. commitment to buy and sell unlimited amounts of gold at \$35 an ounce.[50]

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[49] See Samuelson and Krooss (1969), Volume 4, p. 377.

[50] For a discussion along these lines see Sumner (2001, 2015).

4. Concluding remarks

The London Monetary and Economic Conference of 1933 was an important episode in world monetary economic history. And yet, there are only a handful of economic studies on what actually happened during those few weeks, and on the way in which the Conference affected key economic variables. What makes this paucity of work particularly surprising is that the failure of the gathering marked the beginning of a truly proactive U.S. policy towards the dollar. Seven weeks after the collapse of the Conference President Roosevelt asked Cornell Professor George F. Warren to put together a gold-buying plan aimed at accelerating the rate of depreciation of the dollar and, ultimately, raising commodity prices. This active exchange rate policy culminated in late January 1934 with the official devaluation of the dollar – from $20.67 to $35 per ounce of gold. One of the key consequences of this move was that the country received massive inflows of gold, which according to most scholars who have studied the period resulted in the monetary expansion that helped the country get out of the Depression.

In this paper I presented a detailed discussion of the development of the Conference and, in particular, of the negotiations on currency stabilization that took place in parallel to the official meeting. I presented the different country's positions, and the difficult technical questions faced by the negotiators, including at what level to attempt to stabilize the exchanges.

The Conference failed because FDR became convinced that stabilizing the dollar, even for a few weeks, would bring to an end the rise in commodity prices that had taken place since the imposition of the gold embargo on March 6. This belief was based, first and foremost, on the actual behavior of prices between March and June. As I show in Figures 1 through 3, commodity prices and the stock market had escalated rapidly after the abandonment of the gold standard.[51] That is, in the President's mind unpegging the dollar from gold – and, thus, allowing for dollar "instability" – was associated with raising commodity prices. The President thought that it was possible to eventually stabilize the exchanges at levels that were outside of the ranges considered during the discussions in London. As it turned out, he was right. Eventually, on January 31 1934 the dollar was stabilized at $5.08 per pound, a level that was even higher than the historical parity between the two currencies ($4.87 per pound). And second, the President was increasingly influenced by Professor George F. Warren's theories on the relation of the price of gold and prices (See Edwards 2017b).

In addition to these factors, during the first few days of the Conference FDR became increasingly annoyed with the French obsession with short term stabilization, and their neglect of other longer term issues. His displeasure grew significantly after the French failed to make the scheduled war debt payment on June 15. Herbert Feis, who participated in the negotiations, put it this way in his memoirs: "[T]he default washed away any remnants of Roosevelt's tolerance for the French effort to cause us to return to the international gold standard at a fixed rate to the franc, and made

[51] This statement assumes that we are sitting in late June 1933; we cannot see the data that became available after that time.

him more determined not to let the British authorities ease him into an agreement abaout the relative pound-dollar value which might be to Britain's advantage." (Feis 1966, p. 182).

The most important results from the empirical analysis in Section 3 are three: First, the Conference itself did not impact prices in a discernible or significant way. Second, there is strong and robust evidence that the different steps taken by the administration to unhinge the dollar from gold impacted prices. This happened even before the traditional transmission channels were at work. These findings support the "change of regime" hypothesis investigated by Temin and Wigmore (1990), and others, with a more restricted data set. And third, neither pure political events, nor the massive legislation passed during the Hundred Days affected prices directly.

The results presented in this paper present a puzzle of sorts to be solved by future research. As shown in Table 7, there is some evidence indicating that government bonds did respond positively to the London Conference. As noted, what makes this finding particularly interesting is that these were gold-denominated bonds, and that the gold clause had been abrogated by Congress one week before the opening of the Conference. Further analysis on the bond market during this period would throw additional light on the working of financial markets during these crucial months. Doing this, however, is not easy: until mid-June every government bond in the U.S. included the gold clause. This was also the case for the vast majority of corporate bonds. This means that until mid-June 1933 it is not possible to compare prices (or yields) of equivalent bonds with and without the gold clause.

Appendix: Data Sources

A. *Commodity Prices*

(Source: Daily New York Times)
Closing wholesale cash $ prices for commodities in the New York Market
Wheat #2 red, per bushel
Corn #2 yellow, per bushel
Rye #2 Western, per bushel
Cotton, middling upland, per pounds

B. *Bond Prices*

(Source: Daily New York Times)
Fourth Liberty Loan: Liberty bond 4^{th} $4^{1/4}$s, 1933-38, issued May 8, 1918, interest paid on April 15, October 15; Closing cash $ prices for bonds traded in on the Stock Exchange.

C. *Exchange Rates*

(Source: GFDatabase)
https://www.globalfinancialdata.com/Databases/GFDatabase.html

D. *Events related to Gold and London Conference*

The New York Times, The Wall Street Journal, The Chicago Tribune, Times of London.

E. *Gold Prices*

Taken from Warren and Pearson (1935), P. 168-169.

References

Ahamed, L. (2009). *Lords of Finance: The bankers who broke the world*. Random House.

Bernanke B. (2000). *Essays on the great depression*. Princeton University Press.

Bernanke, B., & James, H. (1991). "The gold standard, deflation, and financial crisis in the Great Depression: An international comparison." In *Financial markets and financial crises* (pp. 33-68). University of Chicago Press.

Bordo, M. D., Choudhri, E. U., & Schwartz, A. J. (2002). "Was expansionary monetary policy feasible during the great contraction?" An examination of the gold standard constraint. *Explorations in Economic history*, *39*(1), 1-28.

Bordo, M. D., & Kydland, F. E. (1995). "The gold standard as a rule: An essay in exploration." *Explorations in Economic History*, *32*(4), 423-464.

Calomiris, C., & Wheelock, D. (1998). "Was the Great Depression a watershed for American monetary policy?". In *The defining moment: The great depression and the American economy in the twentieth century* (pp. 23-66). University of Chicago Press.

Cassel, G. (1923). *Money and foreign exchange after 1914*. Constable.

Coe, P. J. (2002). Financial crisis and the great depression: a regime-switching approach. *Journal of Money, Credit, and Banking*, *34*(1), 76-93.

De Long, J. B. (1990). *" Liquidation" Cycles: Old-Fashioned Real Business Cycle Theory and the Great Depression* (No. w3546). National Bureau of Economic Research.

Edwards, S. (2011). Exchange-rate policies in emerging countries: Eleven empirical regularities from Latin America and East Asia. *Open Economies Review*, 22(4), 533.

Edwards, S. (2107a), "Gold, the Brains Trust and Roosevelt," *History of Political Economy*, Winter.

Edwards, S. (2107b), "Keynes and the dollar in 1933," *National Bureau of Economic Research*, Working Paper.

Edwards, S., Longstaff, F. A., & Marin, A. G. (2015). *"The US Debt Restructuring of 1933: Consequences and Lessons"* (No. w21694). National Bureau of Economic Research.

Eggertsson, G. B. (2008). Great Expectations and the End of the Depression. *The American Economic Review*, *98*(4), 1476-1516.

Eichengreen, B. (1992). *Golden fetters: the gold standard and the Great Depression, 1919-1939*. Oxford University Press.

Eichengreen, B. (2015). Before the Plaza: The Exchange Rate Stabilization Attempts of 1925, 1933, 1936 and 1971.

Eichengreen, B., & Sachs, J. (1985). "Exchange rates and economic recovery in the 1930s." *The Journal of Economic History*, *45*(04), 925-946.

Eichengreen, B., & Uzan, M. (1990). "The 1933 World Economic Conference as an Instance of Failed International Cooperation." *Department of Economics, UCB*.

Federal Reserve Board. (1943). Banking and Monetary Statistics. *Board of Governors of the Federal Reserve System, Washington DC*.

Feis, H. (1966). *Characters in Crisis*. *Boston, Toronto: Little1, Brown, and Company*.

Fisher, I. (1913). "A Compensated Dollar." *Quarterly Journal of Economics*, *27*, 385-397.

Fisher, I. (1920). *Stabilizing the dollar: A plan to stabilize the general price level without fixing individual prices*. Macmillan.

Friedman, M., & Schwartz, A. J. (1963). *A monetary history of the United States, 1867-1960*. Princeton University Press.

Hausman, J. K. (2013). New Deal Policies and Recovery from the Great Depression.

Hausman, J., P. Rhode, and J. Wieland (2016). Recovery from the Great Depression: The farm channel in Spring 1933," University of Michigan.

Harris, S. E. (1936). *Exchange Depreciation: Its Theory and Its History, 1931-35, with Some Consideration of Related Domestic Policies* (Vol. 53). Cambridge: Harvard University Press.

Hull, C., (1948). *The Memoirs of Cordell Hull* (Two volumes). Macmillan.

Irwin, D. A. (2012). "Gold sterilization and the recession of 1937–1938." *Financial History Review*, *19*(03), 249-267.

Jalil, A., & Rua, G. (2016). "Inflation expectations and recovery from the depression in 1933: Evidence from the narrative record." *Explorations in Economic History, 62, 26-50*

Keynes, J. M. (1924). *A Tract on monetary reform*. McMillan.

Keynes, J. M. (1933). *The means to prosperity*. McMillan.

Lippman, W. (1936). *Interpretations*, MacMillan

Lindley, E. K. (1933). *Roosevelt's revolution, first phase*. Viking.

Leith-Ross, F. (1968). *Money talks: fifty years of international finance: the autobiography of Sir Frederick Leith-Ross*. Hutchinson.

League of Nations (1933), "Journal of the Monetary and Economic Conference," Various issues London, 1933

Meltzer, A. H. (2003). *A History of the Federal Reserve, Vol. 1* Chicago.

Moley, R. (1939). *After seven years*. Harper & Bros.

Moley, R. (1966). *The First New Deal*. Harcourt.

Morgenthau Jr., H. "Farm Credit Diary." The Morgenthau Papers at the Roosevelt Presidential Library.

Mundell, R. A. (2000). "A reconsideration of the twentieth century." *American Economic Review*, 327-340.

New York Times, The. (1932-1934), Several issues.

Nussbaum, A. (1957). *A History of the Dollar*. New York: Columbia University Press.

Obstfeld, M., & Taylor, A. M. (1997). "The great depression as a watershed: international capital mobility over the long run" (No. w5960). National Bureau of Economic Research.

Pasvolsky, L. (1933). *Current monetary issues*. Brookings Institution

Rauchway, E. (2015), *The Money Makers*, Basic Books

Romer, C. D. (1992). "What ended the great depression?" *The Journal of Economic History*, *52*(04), 757-784.

Roosevelt, F.D. (1938) *The Public Papers and Addresses of Franklin Delano Roosevelt*, Vols. 1 and 2. Random House

Samuelson, P. and Kross, H. E. (Ed.). (1969). *Documentary history of banking and currency in the United States* (Vol. 4). Chelsea House Publishers.

Sargent, T. J. (1983). Stopping moderate inflations: The methods of Poincare and Thatcher. *Inflation, debt and indexation, MIT Press, Cambridge, MA*, 54-96.

Schlesinger, A. M. (1957). *The age of Roosevelt* (Vol. 1). 3 vols. Boston: Houghton Mifflin.

Sumner, S. (2001). Roosevelt, Warren, and the Gold-buying Program of 1933. *Research in Economic History*, *20*, 135-172.

Sumner, S. (2015). The Midas Paradox. Independent Institute

Tavlas, G. S. (1997). “Chicago, Harvard, and the doctrinal foundations of monetary economics.” *Journal of Political Economy*, 153-177.

Times of London, The, Several Issues

Temin, P. (1991). Lessons from the great depression. *MIT Press Books*, *1*.

Temin, P., & Wigmore, B. A. (1990). The end of one big deflation. *Explorations in Economic history*, *27*(4), 483-502.

Warburg, J. P. (1934). *The money muddle*. Knopf.

Warren, G. F., & Pearson, F. A. (1931). *Prices*. Wiley.

Warren, G. F., & Pearson, F. A. (1935). *Gold and Prices*. Wiley.

White, H.D. (1935), “Recovery Program: The International Monetary Aspect,” The Harry Dexter White Papers (MC 104), Box 13, Folder 13. Princeton University Library Archives.

Wigmore, B. A. (1987). Was the Bank Holiday of 1933 Caused by a Run on the Dollar?. *The Journal of Economic History*, *47*(03), 739-755.

Wright, Q. (1932). *Gold and monetary stabilization*. University of Chicago Press.

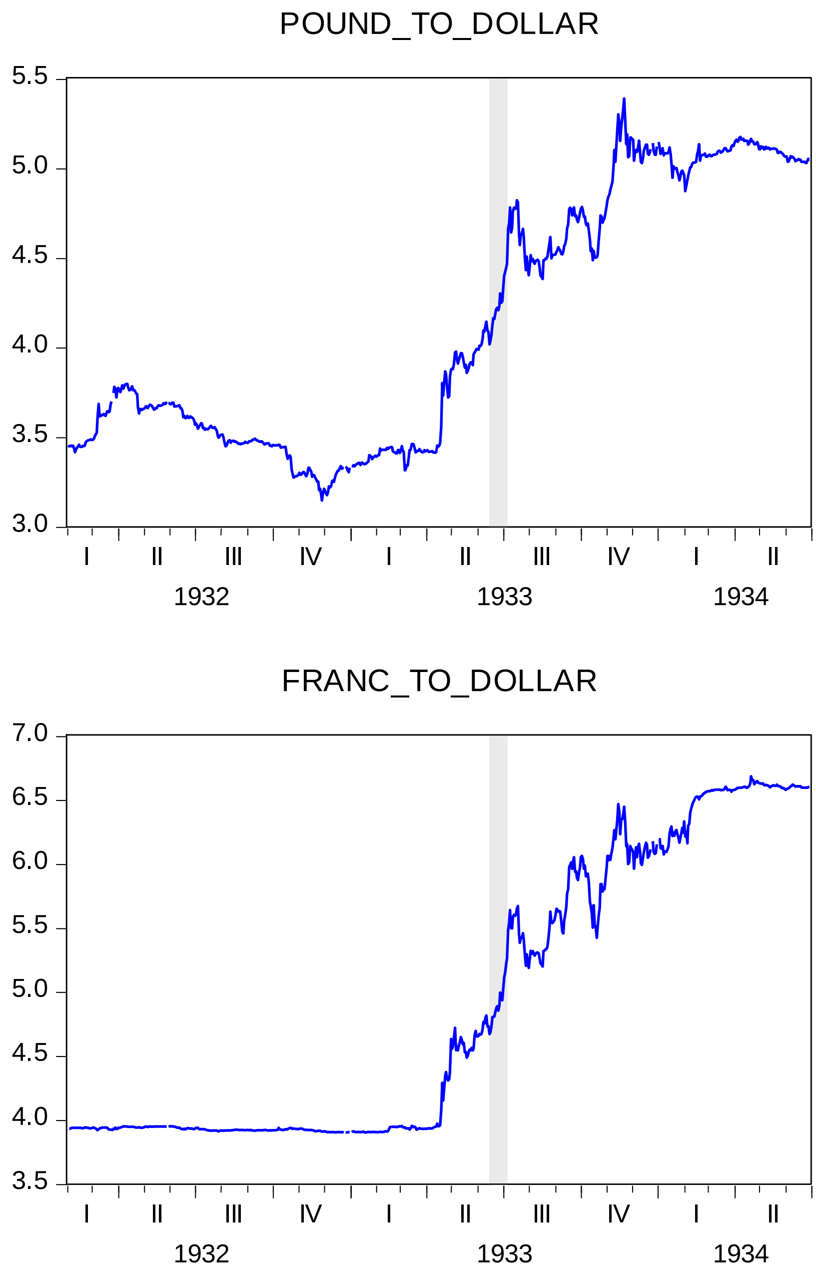

FIGURE 1: Dollar-pound and dollar-franc exchange rates: Daily data, 1932-1934

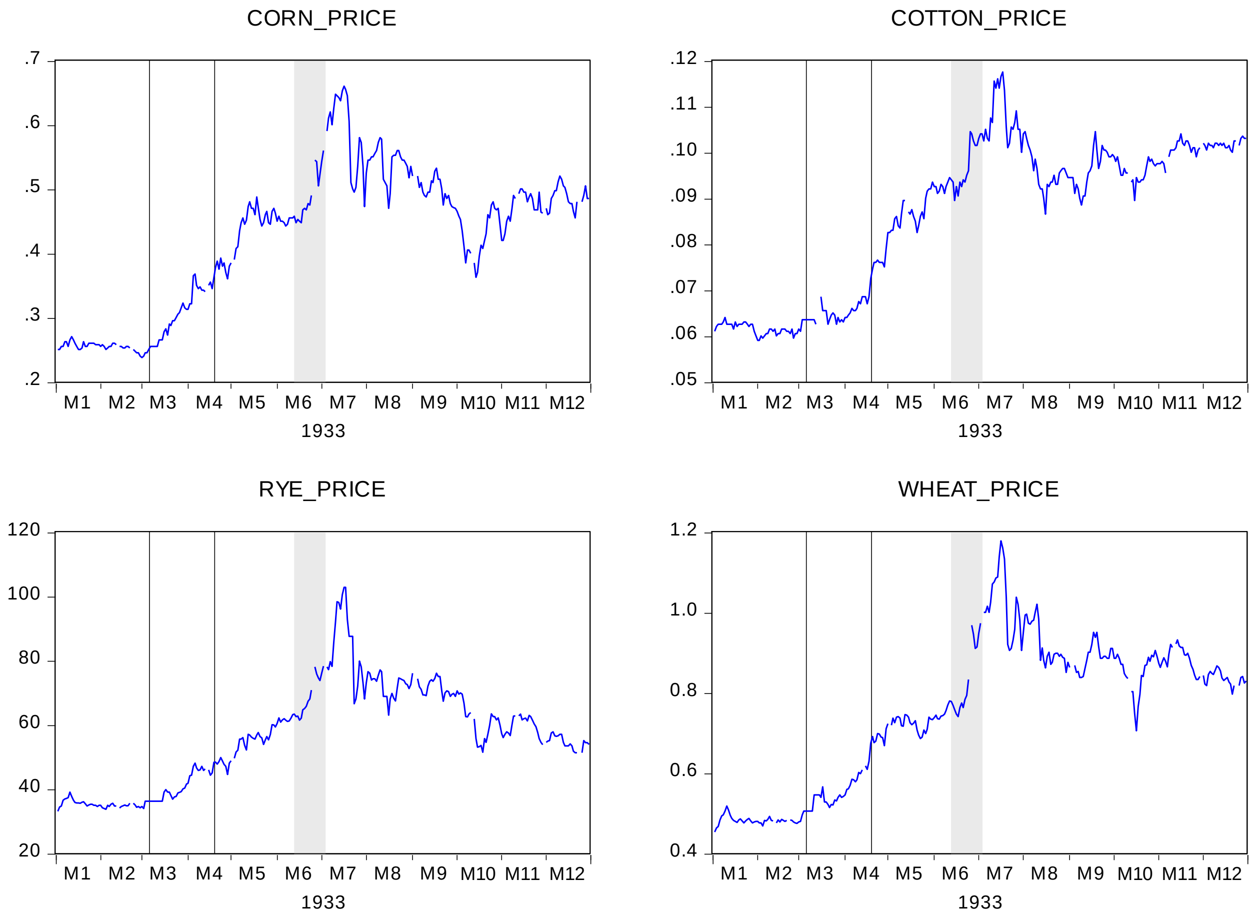

Figure 2: Daily prices of corn, cotton, rye, and wheat: Daily 1933

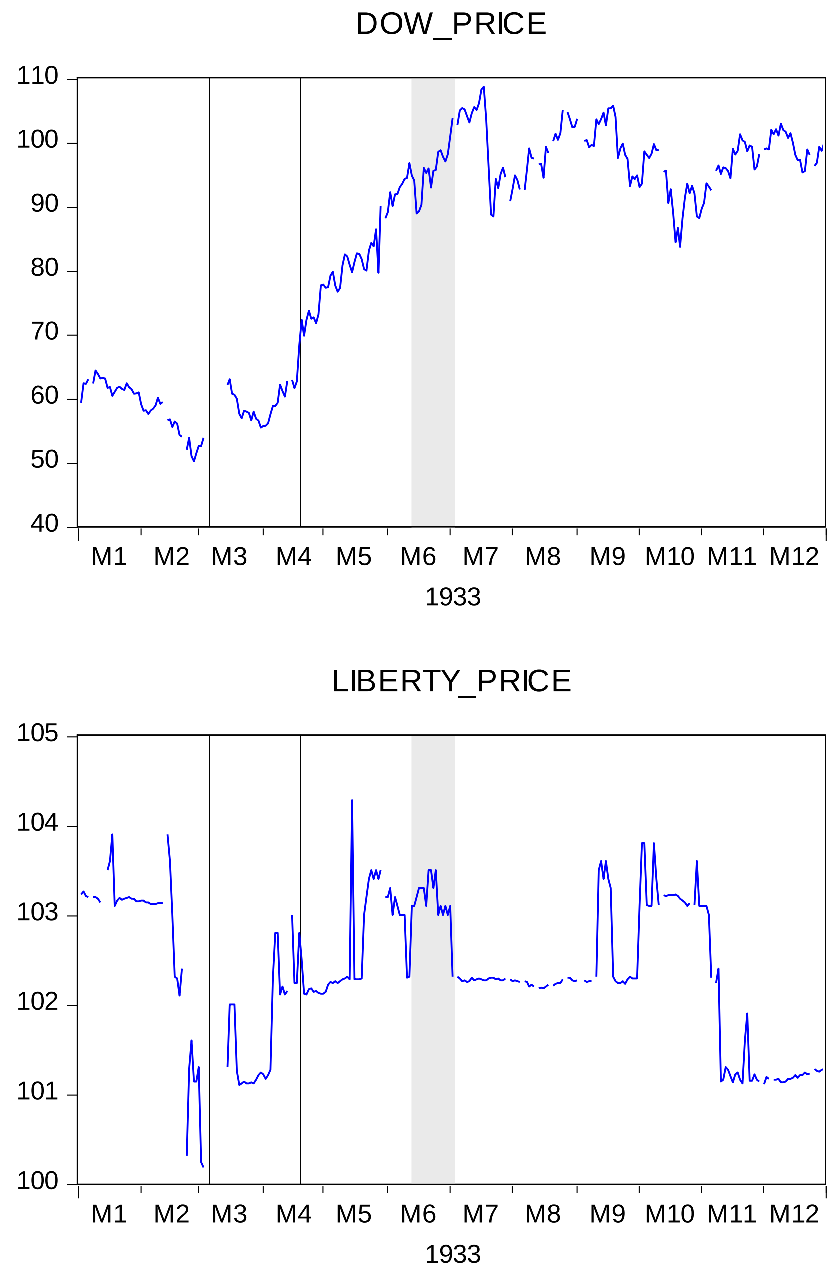

Figure 3: Stock market index and Liberty Loan bond prices: Daily, 1933

Table 1: Events in 1933 included in the Gold Variable

A. Positive Events (Value of dummy is one)

March 6:	Bank Holiday and gold embargo are declared through Presidential Proclamation No. 2039.
March 13:	Most banks reopen; gold embargo is maintained.
April 5:	Executive Order No. 6102: All gold holdings have to be sold to Federal Reserve.
April 17:	Thomas Amendment is introduced to Senate. Gives the President authority to undertake three specific policies to end deflation: reduce the gold content of the dollar by up to 50%; issue up to $3 billion in greenbacks; remonetize silver at a ratio of 16 to 1 with respect to gold.
April 19:	President Roosevelt gives 13th press conference of his Administration. Towards the end he announces that the U.S. if definitely off gold. Metal exports are forbidden.
April 20:	Executive Order No. 6111: All exports of gold are suspended indefinitely. The U.S. is effectively off the gold standard.
April 29:	Thomas Amendment passed by Senate 55-35. Several democrats, including Senator Glass vote against it.
May 12:	Agricultural Adjustment Act (AAA) is signed into law. It includes the Thomas Amendment. Newspapers refer to it as “Relief-Inflation legislation.” Federal Farm Emergency Relief Act is passed.
May 23:	New York State Supreme Court Justice Phoenix Ingraham rules that payments on gold clause debts may be made (and received) in paper dollars.
May 26:	The Government announced that there is a need to have a uniform legal standing with respect to the gold clause. The Administration asks Congress to officially void, through a Joint Resolution, the gold clause both for past and future contracts.
May 29:	The House approves Resolution abrogating gold clauses.
June 5:	Joint Resolution of Congress abrogating gold clauses is passed is signed into law.
July 27:	The London World Economic Conference comes to an official end without achieving any of the objectives discussed by world leaders during their early discussions.
August 29:	Executive Order No. 6261 authorizes the Reconstruction Finance Corporation to buy newly minted gold at “the best price obtainable in the free market of the world.” This is Phase One of the ‘gold buying” program.

October 24:	Second phase of gold buying program begins. Prices set by the Secretary of the Treasury and the President, and may deviate from world prices. In addition to buying newly minted gold in the U.S. the RFC will buy and sell gold in the world markets, if needed.

B. <u>Negative Events (Value of dummy is minus one)</u>

April 24:	Secretary Woodin announced that half a billion notes in 2.875% Treasury notes would be issued, with the gold clause. This suggests to many that the gold embargo will be lifted soon.
May 16:	President Roosevelt sends message to international governments stating that the goal of the London Conference ought to be to stabilize exchange rates.
July 21:	The House of Commons approved overwhelmingly (131 to 22) a provision that cancelled payment in gold on the World War I debts. This suggests that the dollar will strengthen relative to sterling.

<u>Sources</u>: The New York Times, The Wall Street Journal, The Chicago Tribune, Times of London.

Table 2: Error correction event studies regression: Corn
(Daily data, November 1932-December 1934)

Eq Name:	Eq (2.1)	Eq (2.2)	Eq. (2.3)	Eq. (2.4)	Eq. (2.5)
C	-0.0077 [-1.354]	-0.0084 [-1.526]	-0.0085 [-1.540]	-0.0092 [-1.684]*	-0.0092 [-1.674]*
LOG_CORN(-1)	-0.0094 [-1.655]*	-0.0089 [-1.629]*	-0.0090 [-1.643]*	-0.0093 [-1.712]*	-0.0093 [-1.703]*
D_LOG_CORN(-1)	0.0953 [1.700]*	0.0753 [1.381]	0.0734 [1.344]	0.0664 [1.222]	0.0661 [1.209]
DUMMY_LONDON	-0.0149 [-0.683]	--	-0.0153 [-0.721]	-0.0122 [-0.580]	-0.0122 [-0.579]
DUMMY_GOLD	--	0.0329 [4.466]***	0.0329 [4.466]***	0.0296 [3.985]***	0.0296 [3.978]***
DLOG_POUND	--	--	--	0.4379 [1.527]	0.4388 [1.526]
DLOG_FRANC	--	--	--	0.0180 [0.070]	0.0178 [0.069]
FED_DISCOUNT	--	--	--	--	0.0012 [0.062]
Observations:	315	315	315	315	315
R-squared:	0.019	0.077	0.079	0.099	0.099
F-statistic:	2.033	8.644	6.603	5.623	4.805
D.W.	2.025	2.012	2.014	2.014	2.020

NOTE: t-statistics in parentheses. * means significant t the 10% level; ** at 5%; and *** at 1%.

Table 3: Error correction event studies regression: Cotton
(Daily data, November 1932-December 1934)

Eq Name:	Eq. (3.1)	Eq. (3.2)	Eq. (3.3)	Eq. (3.4)	Eq. (3.5)
C	0.0004 [0.112]	-0.0001 [-0.031]	-0.0001 [-0.030]	-0.0017 [-0.491]	-0.0017 [-0.484]
LOG_COTTON(-1)	-0.0016 [-0.439]	-0.0015 [-0.416]	-0.0015 [-0.415]	-0.0024 [-0.717]	-0.0024 [-0.710]
DLOGCOTTON(-1)	-0.0658 [-1.176]	-0.0908 [-1.635]*	-0.0908 [-1.632]*	-0.1459 [-2.685]***	-0.1461 [-2.682]***
DUMMY_LONDON	0.0002 [0.016]	--	0.0002 [0.013]	0.0048 [0.356]	0.0048 [0.356]
DUMMY_GOLD	--	0.0162 [3.302]***	0.0162 [3.297]***	0.0130 [2.746]***	0.0130 [2.741]***
D_LOG_POUND	--	--	--	0.3398 [1.865]*	0.3407 [1.864]*
D_LOG_FRANC	--	--	--	0.2851 [1.776]*	0.2848 [1.771]*
FED_DISCOUNT	--	--	--	--	0.0011 [0.091]
Observations:	326	326	326	326	326
R-squared:	0.005	0.038	0.038	0.126	0.126
F-statistic:	0.530	4.184	3.128	7.640	6.529
D.W.	2.015	2.022	2.016	2.044	2.031

NOTE: t-statistics in parentheses. * means significant t the 10% level; ** at 5%; and *** at 1%.

Table 4: Error correction event studies regression: Rye
(Daily data, November 1932-December 1934)

Eq Name:	Eq. (4.1)	Eq. (4.2)	Eq. (4.3)	Eq. (4.4)	Eq. (4.5)
C	0.0286	0.0268	0.0269	0.0273	0.0271
	[1.307]	[1.242]	[1.246]	[1.266]	[1.255]
LOG_RYE(-1)	-0.0069	-0.0067	-0.0067	-0.0069	-0.0068
	[-1.244]	[-1.216]	[-1.220]	[-1.259]	[-1.247]
D_LOG_RYE(-1)	0.0958	0.0854	0.0852	0.0726	0.0716
	[1.748]*	[1.579]*	[1.572]*	[1.331]	[1.307]
DUMMY_LONDON	-0.0055	--	-0.0056	-0.0027	-0.0027
	[-0.236]		[-0.242]	[-0.118]	[-0.118]
DUMMY_GOLD	--	0.0243	0.0243	0.0210	0.0209
		[3.022]***	[3.018]***	[2.579]**	[2.572]**
D_LOG_POUND	--	--	--	0.5004	0.5038
				[1.693]*	[1.799]*
D_LOG_FRANC	--	--	--	-0.0638	-0.0645
				[-0.226]	[-0.227]
FED_DISCOUNT	--	--	--	--	0.0049
					[0.239]
Observations:	315	315	315	315	315
R-squared:	0.015	0.043	0.043	0.060	0.060
F-statistic:	1.536	4.606	3.458	3.248	2.784
D.W.	2.015	2.032	2.049	2.072	2.035

NOTE: t-statistics in parentheses. * means significant t the 10% level; ** at 5%; and *** at 1%.

Table 5: Error correction event studies regression: Wheat
(Daily data, November 1932-December 1934)

Eq Name:	Eq. (5.1)	Eq. (5.2)	Eq. (5.3)	Eq. (5.4)	Eq. (5.5)
C	-0.0013	-0.0020	-0.0020	-0.0024	-0.0024
	[-0.609]	[-0.908]	[-0.915]	[-1.137]	[-1.101]
LOG_WHEAT(-1)	-0.0066	-0.0064	-0.0064	-0.0065	-0.0064
	[-1.439]	[-1.412]	[-1.420]	[-1.465]	[-1.438]
DLOG_WHEAT(-1)	0.1625	0.1260	0.1253	0.1098	0.1088
	[2.904]***	[2.264]**	[2.248]**	[1.991]**	[1.971]**
DUMMY_LONDON	-0.0058	--	-0.0061	-0.0032	-0.0032
	[-0.342]		[-0.368]	[-0.199]	[-0.196]
DUMMY_GOLD	--	0.0216	0.0216	0.0176	0.0176
		[3.704]***	[3.701]***	[3.047]***	[3.036]***
D_LOG_POUND	--	--	--	0.7544	0.7622
				[3.419]***	[3.448]***
D_LOG_FRANC	--	--	--	-0.2754	-0.2777
				[-1.386]	[-1.396]
FED_DISCOUNT	--	--	--	--	0.0111
					[0.765]
Observations:	315	315	315	315	315
R-squared:	0.033	0.074	0.074	0.121	0.123
F-statistic:	3.575	8.264	6.214	7.094	6.156
D.W.	2.033	2.038	2.089	2.101	2.056

NOTE: t-statistics in parentheses. * means significant t the 10% level; ** at 5%; and *** at 1%.

Table 6: Error correction event studies regression: Dow Stock Market Index
(Daily data, November 1932-December 1934)

Eq Name:	Eq. (6.1)	Eq. (6.2)	Eq. (6.3)	Eq. (6.4)	Eq. (6.5)
C	-0.0231 [-2.030]**	-0.0236 [-2.073]**	-0.0234 [-2.056]**	-0.0227 [-1.998]**	-0.0230 [-2.019]**
LOG_DOW(-1)	0.0050 [1.915]*	0.0051 [1.949]*	0.0050 [1.932]*	0.0049 [1.866]*	0.0049 [1.888]*
D_LOG_DOW(-1)	0.0221 [0.398]	0.0193 [0.350]	0.0225 [0.406]	0.0182 [0.328]	0.0159 [0.287]
DUMMY_LONDON	-0.0085 [-1.075]	--	-0.0085 [-1.076]	-0.0079 [-0.996]	-0.0078 [-0.991]
DUMMY_GOLD-	--	0.0034 [1.217]	0.0034 [1.218]	0.0031 [1.092]	0.0031 [1.079]
D_LOG_POUND-	--	--	--	-0.0360 [-0.320]	-0.0318 [-0.283]
D_LOG_FRANC-	--	--	--	0.1011 [1.042]	0.0998 [1.028]
FED_DISCOUNT	--	--	--	--	0.0056 [0.798]
Observations:	329	329	329	329	329
R-squared:	0.016	0.017	0.020	0.026	0.028
F-statistic:	1.717	1.827	1.661	1.422	1.308
D.W.	2.025	2.012	2.013	2.024	2.031

NOTE: t-statistics in parentheses. * means significant t the 10% level; ** at 5%; and *** at 1%.

Table 7: Error correction event studies regression: Liberty Loan Bond Prices
(Daily data, November 1932-December 1934)

Eq Name:	Eq. (7.1)	Eq. (7.2)	Eq. (7.3)	Eq. (7.4)	Eq. (7.5)
C	0.2639 [2.550]**	0.2728 [2.655]**	0.2686 [2.621]***	0.2660 [2.588]**	0.2674 [2.594]**
LOG_LIBERTY(-1)	-0.0570 [-2.552]**	-0.0590 [-2.658]***	-0.0581 [-2.623]***	-0.0575 [-2.590]**	-0.0578 [-2.596]***
D_LOG_LIBERTY(-1)	-0.0795 [-1.385]	-0.0763 [-1.342]	-0.0667 [-1.171]	-0.0662 [-1.156]	-0.0673 [-1.171]
DUMMY_LONDON	0.0034 [1.618]*	--	0.0034 [1.657]*	0.0033 [1.619]*	0.0033 [1.613]*
DUMMY_GOLD	--	0.0020 [2.581]**	0.0020 [2.604]***	0.0022 [2.710]***	0.0022 [2.708]***
D_LOG_POUND	--	--	--	-0.0264 [-0.864]	-0.0266 [-0.867]
D_LOG_FRANC	--	--	--	0.0140 [0.519]	0.0140 [0.519]
FED_DISCOUNT	--	--	--	--	-0.0006 [-0.262]
Observations:	280	280	280	280	280
R-squared:	0.046	0.060	0.069	0.072	0.072
F-statistic:	4.434	5.834	5.090	3.521	3.017
D.W.	2.095	2.072	2.093	2.074	2.061

NOTE: t-statistics in parentheses. * means significant t the 10% level; ** at 5%; and *** at 1%.

Table 8: Error correction event studies regression: Prices, Stocks, and Bonds
(Daily data, November 1932-December 1934)

Eq Name: *Dep. Var:*	Eq. (8.1) Corn	Eq. (8.2) Cotton	Eq. (8.3) Rye	Eq. (8.4) Wheat	Eq. (8.5) Dow	Eq. (8.6) Liberty
C	-0.0093	-0.0013	0.0242	-0.0024	-0.0231	0.2793
	[-1.683]*	[-0.375]	[1.123]	[-1.105]	[-2.008]**	[2.668]***
LOG_DEP(-1)	-0.0091	-0.0019	-0.0062	-0.0060	0.0050	-0.0604
	[-1.658]	[-0.546]	[-1.136]	[-1.353]	[1.884]	[-2.671]***
D_LOG_DEP(-1)	0.0682	-0.1404	0.0757	0.1111	0.0103	-0.0756
	[1.246]	[-2.571]**	[1.388]	[1.999]**	[0.183]	[-1.287]
DUMMY_LONDON	-0.0121	0.0048	-0.0026	-0.0031	-0.0078	0.0033
	[-0.573]	[0.359]	[-0.113]	[-0.192]	[-0.987]	[1.690]*
DUMMY_GOLD	0.0288	0.0129	0.0202	0.0174	0.0034	0.0021
	[3.838]***	[2.719]***	[2.482]**	[2.981]***	[1.169]	[2.655]***
D_LOG_POUND	0.4449	0.3321	0.4775	0.7487	-0.0378	-0.0246
	[1.540]	[1.814]*	[1.517]	[3.371]***	[-0.334]	[-0.797]
D_LOG_FRANC	0.0210	0.2899	-0.0385	-0.2665	0.1020	0.0128
	[0.081]	[1.803]	[-0.136]	[-1.336]	[1.048]	[0.472]
FED_DISCOUNT	0.0011	0.0011	0.0047	0.0110	0.0057	-0.0007
	[0.058]	[0.088]	[0.228]	[0.760]	[0.801]	[-0.275]
DUMMYPOLITICS	0.0125	0.0193	0.0594	0.0250	0.0014	-0.0023
	[0.415]	[1.427]	[1.819]*	[1.084]	[0.177]	[-0.769]
NEW_DEAL	0.0163	0.0022	0.0177	0.0048	-0.0046	-0.0000
	[1.203]	[0.262]	[1.206]	[0.460]	[-0.899]	[-0.018]
Observations:	315	326	315	315	329	280
R-squared:	0.103	0.131	0.074	0.127	0.030	0.074
F-statistic:	3.912	5.313	2.712	4.932	1.107	2.400
D.W.	2.091	2.045	2.099	2.069	2.061	2.019

NOTE: t-statistics in parentheses. * means significant t the 10% level; ** at 5%; and *** at 1%.