

**Inflation Expectations and Recovery from the Depression:  
Evidence from the Narrative Record**

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February 2014

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**Abstract**

This paper uses the historical narrative record to identify whether inflation expectations shifted during the second quarter of 1933, precisely as the recovery from the Great Depression took hold. The paper has three main findings: (1) inflation expectations changed dramatically during the second quarter of 1933; (2) Roosevelt’s communications strategy, primarily his public commitment to raise prices to pre-depression levels, along with key actions such as abandoning the gold standard, caused the shift in inflation expectations; and (3) monthly output growth increased by 4 to 7 percentage points as a result of the shift in expectations.

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## 1. Introduction

Why did the recovery from the depression begin in April 1933, one month after Roosevelt took office?<sup>1</sup> The leading explanation, developed by Temin and Wigmore (1990), involves a sudden turnaround in inflation expectations. Temin and Wigmore (1990) argue that President Roosevelt established a new macroeconomic policy regime—one that generated inflationary expectations and sparked a rapid recovery. More recently, Eggertsson (2008) develops a theoretical framework to model how a shift in expectations can explain the initial recovery from the depression, effectively bolstering the work of Temin and Wigmore.

Both studies have dramatically strengthened our understanding of the recovery from the depression. However, while there now exists a strong theoretical basis and compelling historical argument for how a shift in expectations could explain the turnaround recovery from the depression, neither of the two studies provides much direct evidence—statistical or narrative—that inflation expectations did indeed change during the second quarter of 1933.<sup>2</sup>

This paper rectifies this omission in the existing literature. We examine the historical news record to identify whether inflation expectations changed during the second quarter of 1933. We read *Business Week*, a domestic news source, and the *Economist*, an international news source with correspondents reporting from the United States, to gain access to a diverse range of coverage. Both *Business Week* and the *Economist* provide detailed contemporaneous coverage of economic, financial, and political news in the United States and offer a clear sense of how contemporaries gauged prospective macroeconomic developments.<sup>3</sup> We begin our analysis in October 1932, during the election campaign, and continue until July 1933. We find that (1) inflation expectations changed dramatically during the second quarter of 1933 and (2) Roosevelt’s communications strategy, primarily his public commitment to raise prices to pre-

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<sup>1</sup> The NBER dates the trough of the depression in March of 1933.

<sup>2</sup> Hamilton (1992) and Cecchetti (1992), the only two empirical studies that estimate expected rates of inflation through 1933, arrive at conflicting results. Hamilton finds a shift in expectations during the last third of 1933 and in two of three empirical specifications, Cecchetti finds a shift during the third quarter of 1933—in both cases, months after the recovery from the depression began. These results, seemingly, are at odds with the accounts of Temin and Wigmore (1990) and Eggertsson (2008), who suggest that the change in expectations occurred during the second quarter of 1933, precisely as the recovery took hold. In only one of the three empirical specifications does Cecchetti find a switch in inflation expectations in the first half of 1933.

<sup>3</sup> Our study is similar in spirit to Nelson (1991) and Romer and Romer (2013), who use the narrative record to provide evidence on deflationary expectations in 1929 and 1930. A main difference between our study and these earlier ones, however, is that we focus on the recovery from the depression, rather than the onset.

depression levels, along with key actions such as abandoning the gold standard, caused the shift in inflation expectations.

Given that inflation expectations shifted abruptly in the spring of 1933, we then examine a related issue: whether the historical news record supports the notion—put forth by Temin and Wigmore (1990)—that Roosevelt implemented a new inflationary macroeconomic policy regime. We find strong narrative evidence that the events of the second quarter of 1933 do indeed constitute a regime shift—one that sharply altered market expectations. Moreover, we develop an empirical framework to identify the aggregate output effects of the regime shift. According to our model, during the months that coincided with the Roosevelt regime shift, output growth was higher by 4 to 7 percentage points than what would have been predicted, given the normal behavior of money and financial crisis indicators from 1919 to 1941. This suggests that the Roosevelt regime shift raised output growth substantially, effectively bolstering the work of Temin and Wigmore (1990) and Eggertsson (2008).

Lastly, we conclude our study by investigating whether other forces, beyond a pro-inflation regime shift, might have driven the recovery. For a variety of reasons, we ultimately conclude that the regime shift, as opposed to other forces or policies, accounts for the rapid recovery. Most notably, our reading of the narrative record indicates a causal link between the Roosevelt regime shift and the sudden surge in output growth during the second quarter of 1933 and suggests that the transmission mechanism was rapidly revised expectations.<sup>4</sup>

## **2. Narrative Evidence of Inflationary Expectations**

This section documents the narrative evidence we have acquired on inflation expectations. We read *Business Week* and the *Economist*, two leading economic and financial news sources, to identify whether inflation expectations changed in 1933. The section is divided into two subsections which present narrative evidence on inflation expectations before and after the abandonment of the gold standard.

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<sup>4</sup> Our findings are also complementary to a recent study by Hausman (2013). Hausman concludes that devaluation, by raising farm incomes, boosted output growth in agricultural states in the spring of 1933. However, because the positive impact of devaluation on farm incomes would be counteracted by the negative impact of higher prices for foods on urban consumers, Hausman concludes that another channel must explain the overall recovery. He posits that devaluation may have signaled higher inflation and thereby, boosted inflation expectations. We view our findings as consistent with this channel. Thus, our paper both supports and complements the work of Hausman (2013).

## 2.1 Before the Abandonment of the Gold Standard

From the election until the abandonment of the gold standard, inflation expectations remained relatively constant. However, speculation that Roosevelt might pursue an inflationary set of policies began to mount after the inauguration.

**From the election campaign until inauguration:** Though Roosevelt ran a campaign marked by optimism and a commitment to recovery, he did not present a detailed economic plan before the election. As a result, the editors of the *Economist* and *Business Week* did not expect Roosevelt's policies to be fundamentally different from those of the previous administration and were pessimistic about his ability to quickly take the country out of the Depression:

[W]e do not anticipate that any very radical experiments will be made. We doubt whether Mr Roosevelt, in any attempt which he may make to lift America from the depression 'by her own boot-jacks,' will succeed in evolving measures very different from those formulated and applied during the past two years by Mr Hoover (*Economist*, 11/12/32, "The New President," p. 865).

No well-informed man in Wall Street expects the outcome of the election to make much real difference in business prospects, the argument being that while politicians may do something to bring on a trade slump, they can do nothing to change a depression into prosperity (*Economist*, 10/29/32, "United States," p. 777).

There are importation decisions of public policy to be made, but Administration new or old can perform no more miracles for business (*Business Week*, 11/16/32, "And So to Work," p. 36).

Furthermore, during the interregnum period between Election Day and the inauguration, Roosevelt continued to keep the public in the dark about his likely policies, leaving the country in a political standstill:

The market has tacitly suspended action and judgment until the new Roosevelt administration has assumed office and declared its policy on major questions (*Economist*, 2/11/33, "Investment Notes," p. 311).

Nonetheless, amidst this backdrop, a pro-inflationary movement—designed as a means of reversing four years of deflation and depression—was steadily gaining traction among the general

public. The *Economist* described the growing influence of “Father Coughlin,” a Catholic priest from Detroit who preached the virtues of higher inflation in his Sunday radio sermons. According to the *Economist*, members of Congress were receiving letters from their constituents demanding support for Father Coughlin’s inflationist policies (3/4/33, “United States,” p. 462):

[Former U.S. Rep] Mr. Luce reminded his audience that outside Congress there was a sort of modern Peter the Hermit fomenting the present crusade for inflation by arguments which people in a million homes were eagerly absorbing by radio every Sunday afternoon. He referred to the addresses of the Rev. Father Coughlin, a Catholic priest of Canadian birth, of high standing in his church, and who is a pastor near Detroit. Every Sunday afternoon Father Coughlin discourses for an hour over a national ‘hook up’ on the issues of the day. He disclaims any sympathy with arraignment of the existing economic and financial system and, reserving his chief fury for the bankers, preaches doctrines which horrify them. He would have the Government re-mint every 20-dollar gold piece and make it a 40-dollar gold piece, thus doubling the volume of gold dollars and reducing the real value of every paper dollar outstanding to 50 cents. He claims that in this way more currency would be forced into circulation, and automatically cause a 50 per cent reduction of the burden of debt under which so many citizens of the United States, especially farmers, are being crushed. At the same time, he contends that the prices received by farmers and other producers would double overnight.

It costs Father Coughlin about \$4,000 per week for his national ‘hook-up,’ and he spends as much more in printing and distributing his addresses. But he secures practically all the money needed for these purposes in 1-dollar bills from people who listen to his speeches, feel that he is their self-appointed champion against their banker oppressors, and want the crusade to be a success. Every member of the old and the new Congress is daily receiving scores of letters from constituents demanding that he support the ‘Father Coughlin plan.’

Inflation had clearly become a general topic of discussion among the American public. Moreover, the incoming Congress was set to receive an influx of new members who had capitalized on this pro-inflation movement during the 1932 election. The *Economist* reported, “it is well known that the inflation element which has Republican as well as Democratic adherents, will receive heavy reinforcements from the personnel of the new Congress, many of whose members, particularly in the West, won large numbers of votes by their specific pledges to support a policy of currency inflation.”<sup>5</sup> Thus, the emerging political forces in 1933 were beginning to favor inflation.

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<sup>5</sup> *Economist*, 3/4/33, “United States” p. 462.

However, Roosevelt was initially not seen as a firm adherent of this new inflationary movement. A month before the inauguration, the *Economist* considered Roosevelt to be “amply committed, both by the party ‘platform’ and by his own campaign speeches, against any attempt to tamper with the currency”<sup>6</sup> and further noted that “very few of the prominent leaders in either political party have so far definitely committed themselves to support inflation.”<sup>7</sup> Roosevelt’s relative silence on the topic of inflation helped to moderate inflationary expectations in early 1933.<sup>8</sup>

**From inauguration until the exit from the gold standard:** President Roosevelt’s inaugural address on March 4, 1933, came in the midst of crisis. A severe banking panic had swept the country in the weeks leading up to the inauguration. Close to \$2 billion, a third of the country’s stock of currency, was withdrawn from the banks, and many states were forced to declare bank holidays. George Harrison, governor of the New York Fed, and Eugene Meyer, chairman of the Federal Reserve Board, urged President Hoover to declare a national banking holiday, but the “lame duck” president, unable to convince the president-elect to sign a joint proclamation, decided not to act.<sup>9</sup>

Though President Roosevelt’s inaugural speech did not include any immediate actions, he expressed his determination to “act, and act quickly,” signaling the beginning of a change in tone. Roosevelt’s first action in office was to order a four-day nationwide banking holiday and the suspension of exports and private hoarding of gold.<sup>10</sup> The *Economist* described the reactions to the Bank Holiday at the London Stock Exchange as reflecting “the general conviction that America’s troubles would not involve the devaluation of the dollar;”<sup>11</sup> nonetheless, the period between inauguration and the abandonment of the gold standard was characterized by growing uncertainty about the value of the dollar. *Business Week* reported some uneasiness in the markets about the future of the dollar:

Of course the country immediately began to debate whether it was off the gold standard. Secretary Woodin stoutly asserted it was not... Dealings in foreign exchange here and abroad were suspended, but various bootleg transactions, and clues to be had from

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<sup>6</sup> *Economist*, 2/4/33, “Confusion in Congress,” p. 232.

<sup>7</sup> *Economist*, 3/4/33, “United States,” p. 462.

<sup>8</sup> The US adherence to the gold standard was another topic for which no change was expected. From the days of the election campaign until inauguration, both the *Economist* and *Business Week* consistently reported an American exit from the gold standard as very unlikely (see, for example, *Economist*, 10/15/32, “The U.S. Election and the Dollar,” p. 680, and *Business Week*, 3/8/33, “The Dollar,” p. 6).

<sup>9</sup> See Ahamed (2009), p. 442–448, and the *Economist*, 3/11/33, “The U.S. Bank Problem,” p. 509–510.

<sup>10</sup> *Economist* 3/11/33, “The U.S. Bank Problem,” p. 509–510.

<sup>11</sup> *Economist*, 3/11/33, “The Week in the Markets. The London Stock Exchange,” p. 538.

movement of certain key prices, indicated that the rest of the world does not believe the dollar will soon be redeemable in gold of the old weight and fineness. Perhaps the best clue came from Canada, where the US dollar dropped to parity with the Canadian. The latter had been at about 14% discount compared with ours” (3/15/33, “New Deal, New Money, New Banks,” p. 4).

Alongside this growing uncertainty about the U.S. commitment to the gold standard, speculation that Roosevelt would pursue an inflationary course of action to fight the depression began to mount. On March 15, *Business Week* published an article discussing whether Roosevelt’s banking emergency plan might be inflationary. The article concluded that, despite containing deflationary measures, it was on the whole inflationary (3/15/33, “New Deal, New Money, New Banks,” p. 3):

Whether his program for dealing with the banking emergency is inflationary or deflationary is still being debated. The answer seems to be that on the whole it is inflationary. It proposes to close indefinitely a large number of banks which by no stretch of imagination can be classed as “strong” – perhaps 5,000 of them – and that certainly is deflation. But the issuing of emergency currency based on any “good” asset of a bank, or even on its bare note, to almost any amount needed, is inflation with a vengeance. It turns frozen loans into currency on demand.

Furthermore, in the following issue, *Business Week* reported that a large group of economists had advised Roosevelt to take actions to raise the general price level as a means of achieving recovery (3/22/33, “Inflation, Please,” p. 6):

On the plea that “recent banking developments present an unprecedented opportunity for attacking depression through restoring and stabilizing our broken down price level,” 141 economists representing 35 universities and colleges reminded President Roosevelt last week that they had counseled such an attack in a petition sent to him and to Congress on Feb 25 ... Its members say they wanted to show that “there is a very considerable conservative element, including professional economists who have spent much time in studying the matter, in favor of sound action designed to raise the general price level as a means of starting America on the road leading out of the depression.”

In April, it became widely believed that the Roosevelt Administration would shift towards an inflationary set of policies. *Business Week* reported that during a press conference at the White House, Administration officials suggested a change in the direction of policy—a signal the

magazine interpreted as evidence of a prospective shift toward an inflationary course of action (4/19/33, “Without Benefit of Greenbacks,” p. 32):

The excited rumor goes the rounds in Washington and in Wall Street that inflation is imminent... We pointed out last week that the Administration had not yet attacked the one great central problem of business recovery. We remarked that the program up to that time had been deflationary, and that constructive plans had yet to be developed. Since then, a press conference at the White House developed the fact that the Administration holds exactly that view of the situation. The Administration will not rest content with clearing up the wreckage and softening hardships; it will formulate and enact a program for business revival. That it will be bold we have no doubt; the farm bill is evidence enough that the Administration is not afraid to experiment. Certainly, any plan for recovery that has any chance of success must be bold; the timid, piecemeal efforts have all been futile. This is inflation, if you like, in the sense that it is the reverse of deflation... Business recovery we must have, and in that sense, inflation. It must be brought about by government action. There is nothing in this to be terrified about. On the contrary—let’s go!

Indeed, signals from the Roosevelt Administration generated inflation expectations. On April 19, *Business Week* predicted, “Our forecast is an inflation which will almost precisely parallel the wartime inflation.”<sup>12</sup>,<sup>13</sup> Furthermore, as the inflationary tendencies of the Roosevelt administration became more widely discussed by the news media, public interest in the topic of inflation grew (4/19/33, “Recovery: The Next Effort,” p. 1–2):

The whole subject of inflation is befuddled. The average business man is in a funk when the discussion starts. But because of the imminence of inflation and because of its extremely practice consequences, it behooves him to find out what it is all about.

The *Economist* also described inflation expectations on Wall Street (4/22/33, “Investment Notes: Wall Street and the Dollar,” p. 868):

As usual, Wall Street has interpreted the policy of the Washington Administration with uncanny accuracy. For a week or so before President Roosevelt announced his abandonment of the gold standard, Wall Street was “talking inflation.” It was generally believed that the Administration would continue to exercise a deflationary influence while banks were being closed and reorganized, insurance companies taken over,

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<sup>12</sup> *Business Week*, 4/19/33, “Recovery: The Next Effort,” p. 1.

<sup>13</sup> Though the editors of *Business Week* expected inflation, they considered devaluation of the dollar unlikely by mid-April. Their argument was that the U.S. had such large gold reserves that abandonment of the gold standard would prove unnecessary. Indeed, the *Business Week*’s issue published in the morning that Roosevelt took the U.S. off the gold standard affirmed, “In the judgment of the *Business Week*, no change in the monetary system is among the early probabilities, nor will there be any such step taken save as a final resort” (4/19/33, “Without Benefit of Greenbacks,” p. 32).

railroads placed in receivership, debts written down, and so on. It was shrewdly suspected, however, that the policy would subsequently be changed in an inflationary direction.

## 2.2 After the Abandonment of the Gold Standard

Inflation expectations increased dramatically after the abandonment of the gold standard. Market participants continued to expect inflation through July.

**The abandonment of the gold standard:** The event that sharply raised inflation expectations, however, was the abandonment of the gold standard. On April 19, the abandonment of the gold standard surprised much of the financial community and reinforced the perception that inflation was imminent. In its first edition after the U.S. departure from the gold standard, *Business Week* wrote, “Inflation has begun. The Administration is definitely committed to reducing the purchasing power of the dollar.”<sup>14</sup> The magazine also described the abandonment of the gold standard as “the first move in the Administration’s program to raise prices” and concluded, “the long debate as to whether we are or are not going to attempt inflation is over—the Administration is committed.”<sup>15</sup> The *Economist* concurred in this assessment, affirming that a key reason for the abandonment of the gold standard was “to give an impetus to a rise of prices in America.”<sup>16</sup> The *Economist* viewed the exit from the gold standard as “the culmination of a rapidly growing volume of support in Congress and in American public opinion for inflationary measures.”<sup>17</sup> Therefore, the abandonment of the gold standard was a crucial turning point in public perception about the likelihood of a rise in inflation.

**The Inflation Amendment:** However, perhaps no less important, a few weeks later, in early May, the Farm Relief Bill, containing the Thomas Inflation Amendment, passed both chambers of Congress with overwhelming majorities (64 to 21 in the Senate and 307 to 86 in the House). The Inflation Amendment included a number of provisions designed to raise prices and further reinforced the notion that inflation was on the horizon. Among other things, the Inflation Amendment required the Federal Reserve Banks to buy \$3 billion of Federal bonds, upon Presidential request, and also granted the President of the United States the powers to reduce the

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<sup>14</sup> *Business Week*, 4/26/33, “Inflation Begins,” p. 3.

<sup>15</sup> *Business Week*, 4/26/33, “We Start,” p. 32.

<sup>16</sup> *Economist*, 4/22/33, “The Fall of the Dollar,” p. 849.

<sup>17</sup> *Ibid.*

legal gold content of the dollar, to make silver equally acceptable with gold at any ratio, and to issue up to \$3 billion in legal tender notes to meet maturing obligations or to buy Government bonds.<sup>18</sup>

Contemporaries were stunned by the magnitude of these new powers. The *Economist* noted that the first provision—the purchasing of \$3 billion of bonds by the Federal Reserve Banks—would alone “more than double the resources of the money market.”<sup>19,20</sup> The Amendment was widely viewed as giving President Roosevelt “dictatorial powers” to control inflation: “the country has exchanged a President with little effective power for a ‘currency dictator.’”<sup>21</sup> The *Economist* concluded that the net effect of these new powers would be “to vest in the Executive discretionary control over the volume, character and metallic content of the currency.”<sup>22</sup>

Also in early May, Roosevelt gave the second of a series of fireside chats to the nation.<sup>23</sup> In his radio address to the American public, Roosevelt pledged to raise prices to their pre-depression levels and vowed to use his new powers—if necessary—to achieve this goal:

The administration has the definite objective of raising commodity prices to such an extent that those who borrowed will on the average be able to repay money with the same kind of dollar which they borrowed... These powers will be used when and if necessary to accomplish this purpose.<sup>24</sup>

Thus, in the three weeks following the abandonment of the gold standard, Roosevelt promised to raise prices and Congress endowed the President with enormous powers to achieve this goal.<sup>25</sup>

These dramatic developments caused market participants to expect inflation. *Business Week* reported, “the passage of the Thomas amendment by both houses of Congress has answered the

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<sup>18</sup> *Economist*, 5/6/33, “Notes of the Week: Inflation in the U.S.,” p. 856.

<sup>19</sup> *Ibid.*

<sup>20</sup> It is interesting to note the familiar resemblance of this provision to the recent commitment of the Bank of Japan to double its monetary base in two years, also as part of a bold effort to restart its economy.

<sup>21</sup> *Economist*, 5/13/33, “Foreign Stock Exchanges – New York,” p. 1035.

<sup>22</sup> *Economist*, 5/13/33, “United States – ‘Inflation Bill’ – Business Recovery – Gold Clause,” p. 1020.

<sup>23</sup> Roosevelt’s first fireside chat as President of the United States was on March 12, about the banking crisis.

<sup>24</sup> Franklin D. Roosevelt: “Second Fireside Chat,” May 7, 1933. Online by Gerhard Peters and John T. Woolley, The American Presidency Project: <http://www.presidency.ucsb.edu/ws/?pid=14636>

<sup>25</sup> The new powers in the Inflation Amendment were discretionary and there was substantial speculation about how Roosevelt intended to use them. Nonetheless, it was widely believed that Roosevelt would not allow these new powers to go to waste. For example, the *Economist* (5/13/33, “Foreign Stock Exchanges – New York,” p. 1035) reported, “Opinion is divided as to the use President Roosevelt will make of his powers, but no one expects that he will allow them to rust.”

question of whether we are going to have inflation.”<sup>26</sup> The *Economist* wrote, “the only topic of conversation in New York during the past week has been ‘inflation,’”<sup>27</sup> and observed, “it is evident that the tide of inflationary sentiment is running at full flood.”<sup>28</sup> Indeed, the consensus view—described in both *Business Week* and the *Economist*—was that the Roosevelt Administration was embarking on a set of policies designed to generate a “controlled inflation”—one that would not runaway. *Business Week* described its assessment as follows: “This inflation is different. It contains controls that can be used to prevent a runaway...” (5/17/33, “Controlled Inflation,” p. 18)<sup>29</sup>

**The National Industrial Recovery Act:** The passage of the National Industrial Recovery Act occurred in June. The Act contained various provisions designed to regulate industry, but two particular features of the Act—codes designed to raise wage rates and the authorization of a large public works program, to be financed through borrowing—were widely perceived as inflationary.

**The World Economic Conference:** Roosevelt reinforced his commitment to domestic objectives—namely to raise the price level in the U.S.—at the World Economic Conference in June. Representatives from 66 nations met at the Conference to discuss joint action to fight depression, promote international trade, and stabilize exchange rates. However, during the conference, Roosevelt rejected a measure to promote currency stabilization. In a message to conference participants, Roosevelt denounced exchange stabilization “as one of ‘the old fetishes of so-called international bankers’”<sup>30</sup> and declared that America would not be deterred from its program to raise prices:

The sound internal economic system of a nation is a greater factor in its well-being than the price of its currency in changing terms of the currencies of other nations... The revaluation of the dollar in terms of American commodities is an end from which the Government and the people of the United States cannot be diverted. We wish to make this perfectly clear: we are interested in American commodity prices. What is to be the value in terms of foreign currencies is not and cannot be our immediate concern.<sup>31</sup>

*The Economist* noted that the implications of Roosevelt’s message were clear:

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<sup>26</sup> *Business Week*, 5/17/33, “Controlled Inflation,” p. 18.

<sup>27</sup> *Economist*, 5/13/33, “United States – ‘Inflation Bill’ – Business Recovery – Gold Clause,” p. 1020.

<sup>28</sup> *Economist*, 5/6/33, “Notes of the Week: Inflation in the U.S.,” p. 856.

<sup>29</sup> In May, *Business Week* ran regular advertisements, publicizing books and selling investment services, specifically catered to the topic of inflation.

<sup>30</sup> *Economist*, 7/8/33, “Unfinished Symphony,” p. 57.

<sup>31</sup> *Economist*, 7/8/33, “World Conference. The Monetary Declarations,” p. 64.

The implications of his message were that America was no longer prepared to consider even an eventual return to an international gold standard, but was determined to retain *ad infinitum* a ‘managed’ dollar, whose exchange stability with other currencies would depend on the rest of the world keeping in step with the price level of the United States.<sup>32</sup>

Roosevelt’s position on currency stabilization frustrated many of the conference participants (and was cited as a reason for the breakdown of Conference talks), but his commitment to an inflationary course of action was perceived as unwavering.<sup>33, 34</sup>

Given these powerful signals, market participants continued to expect inflation in June and July. In early July, the *Economist* newspaper analyzed President Roosevelt’s commitment to raise prices to their pre-depression level as a form of price-level targeting. According to their calculations, a 41 to 54 percent cumulative rate of inflation would be necessary to achieve the Administration’s goals (7/1/33, “Investment Notes. Wall Street Prospects,” p. 26):

Let us assume that President Roosevelt would be content with the 1928 dollar which he mentioned in a broadcast about two months ago. To restore the 1928 situation it would be necessary for American wholesale prices (Bureau of Labor index) to rise 54 per cent and retail prices 41 per cent.

While it is unclear whether the *Economist* believed that Roosevelt would be able to engineer such a dramatic increase in prices, it is nonetheless evident that market participants were expecting inflation during the second quarter of 1933.<sup>35</sup>

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<sup>32</sup> *Economist*, 7/8/33, “Unfinished Symphony.” p. 57-58.

<sup>33</sup> Even abroad, it was clear that the U.S. was embarking on an inflationary program. Roosevelt’s inflationary policies were frequently described as the “American experiment.” (*Economist*, 7/1/33 “Unfinished Symphony,” P. 57-58.

<sup>34</sup> The U.S. departure from the gold standard signaled Roosevelt’s intention to focus on the domestic economy. This is in sharp contrast with the U.S. response to Britain’s departure from the gold standard in 1931, which signaled the U.S. commitment to address external considerations over internal balance.

<sup>35</sup> To the best of our knowledge, there is no record of the Federal Reserve’s opinion about Roosevelt’s pro-inflationary policies. We have read the minutes of the meetings of the Open Market Policy Committee (OMPC)—which became the Federal Open Market Committee (FOMC) with the passage of the Banking Act of 1933—and the monthly issues of the Federal Reserve Bulletin from November 1932, to July 1933, and found little evidence on the Federal Reserve’s view on this matter. There is, nonetheless, some mention in the minutes of the OPMC meeting in January 4, 1933, of concerns among members of the executive committee about “agitations, especially in Congress, for the adoption of inflationary measures” (Open Market Policy Conference files, box 1438, folder 1, January 4, 1933). For example, Governor Black of Atlanta stated in that meeting that “he was greatly impressed by the dangers of unsound inflationary proposals.” In fact, according to Alan Meltzer, during Roosevelt’s administration “the Federal Reserve played a subsidiary role—the backseat” (Meltzer, 2007, p. 415). The Federal Reserve took few policy actions in the spring of 1933, and changes in the system’s portfolio of government securities were essentially a response to decisions by President Roosevelt and the Treasury. Among other things, the president and the Treasury decided upon the plan to reopen banks after the panic, the country’s gold policy, and the dollar exchange rate (Meltzer, 2007, p. 421–422).

In sum, the narrative record provides solid evidence that inflation expectations changed dramatically during the second quarter of 1933. Roosevelt's statements, along with key actions, such as the abandonment of the gold standard and the passage of the Inflation Amendment, caused the shift in market expectations.

### **3. Was the Second Quarter of 1933 a Regime Shift?**

The narrative evidence indicates that inflation expectations changed rapidly during the second quarter of 1933. But was this a regime shift? Temin and Wigmore (1990), in their seminal contribution, argue that a pro-inflation regime shift explains why the recovery from the depression began in April 1933. Yet, they make little use of contemporaneous narrative sources to document that a regime shift did indeed occur. As a consequence, a logical question to ask is whether the narrative accounts are consistent with this interpretation. According to the narrative evidence, did a regime shift occur during the second quarter of 1933?

Temin and Wigmore rely on the framework used by Sargent (1983) to characterize the events of the second quarter of 1933 as a regime shift. According to Sargent, a regime shift requires an abrupt change in government policy—in the rule or strategy for taking actions.<sup>36</sup> Sargent also clarifies the distinction between isolated actions, which exist within the context of a given strategy, and a change in the general strategy; only the latter constitutes a regime shift.<sup>37</sup> Temin and Wigmore (1990) apply this framework to analyze the end of the depression, arguing that Roosevelt implemented a dramatic change in the policy regime.<sup>38</sup> Moreover, both Sargent (1983)

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<sup>36</sup> “It would require a change in the policy regime: there must be an abrupt change in the continuing government policy, or strategy” Sargent (1983, p. 42).

<sup>37</sup> “It will be useful first to expand a little more generally on the distinction between the effects of isolated *actions* taken within the context of a given general strategy, on the one hand, and the effects of choosing among alternative general strategies or rules for repeatedly taking actions, on the other. The latter choice I refer to as a choice of regime. The values of government expenditures and tax rates for one particular quarter are examples of actions, while the rules, implicit or explicit, for repeatedly selecting government expenditures and tax rates as functions of the state of the economy are examples of regimes” Sargent (1983, p. 47).

<sup>38</sup> “[Arresting the Great Contraction] required a change in the policy regime, that is, in the rule for taking actions. There had to be an abrupt change in the continuing government policy, or strategy, for determining the money supply, government expenditure, and the exchange rate that was sufficiently binding to be widely believed” Temin and Wigmore (1990, p. 486).

and Temin and Wigmore (1990) emphasize that the immediate effects operate through altered market expectations.<sup>39</sup>

The above framework defines a regime shift as an abrupt change in the continuing government policy, strategy, or rule for taking actions. Moreover, because the immediate effects of the regime shift occur through rapidly revised expectations, market participants must be aware of the regime shift and expectations must adjust accordingly. Thus, there are two necessary conditions for a regime shift: (1) there must be a widespread perception among contemporary observers of a dramatic change in the rule or strategy for taking policy actions and (2) market expectations must change dramatically.

According to the narrative record, were these two conditions met? A reading of the historical news accounts reveals that the answer to this question is a resounding yes. During the second quarter of 1933, Roosevelt's policy statements and actions shocked market participants. Contemporary observers considered them to signal a sharp break in the government strategy or rule for taking actions. For example, the following passage from the *Economist* reflects the widespread contemporaneous perception of a dramatic and sudden break from orthodox policy:

There is no record, until the present year, of a Government which has deliberately planned an inflation of credit or currency not as a means of raising revenue but with the conscious aim of raising the price level ... The canons of orthodoxy were broken as completely as precedent was shattered. Having demonstrated his ability to balance the ordinary Budget, the President has now instituted enormous extraordinary expenses which are to be met by borrowing. The dollar has not so much been allowed to fall after a heroic struggle to maintain its value as encouraged and egged on to depreciate. The printing of paper money, the familiar symbol of Governmental insolvency, has not been rigidly forsworn, but held over the markets as an ultimate threat. The Administration has taken powers of compulsion over industry, not in order to moderate the rise in costs of production, but by raising wages and limiting the hours of work deliberately to increase them as rapidly as possible. In these ways the wind has been sown.<sup>40</sup>

The narrative accounts make it clear that market participants interpreted the events of the second quarter of 1933 as an abrupt change in the government rule or strategy for taking policy actions (condition 1).

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<sup>39</sup> For example, Temin and Wigmore (1990, p.484) write, "Actions were needed to establish the new regime and its credibility, but Sargent argued that the immediate effects were through rapidly revised expectations."

<sup>40</sup> *Economist*, 7/15/33, "Sowing the Wind." pp. 113–114.

Moreover, this perception of a sharp break with previous policy produced a dramatic change in expectations. As documented in Section 2, inflation expectations changed abruptly during the second quarter of 1933 due to Roosevelt’s statements and policy actions. Furthermore, market observers were euphoric that action was finally being taken to end the depression and raise prices to their pre-1929 level. The *Economist* described the “psychological optimism” that prevailed throughout the nation:

There is a sense, both at Washington and throughout the country, of confidence, almost amounting to elation, that action will be taken to grapple with the forces that have brought about the depression.<sup>41</sup>

In addition, because four years of deflation and depression made the two synonymous in the eyes of many contemporary observers, the notion that prices would rise was accompanied by hopes of an end to the depression and therefore, expectations of higher income and output growth. As a result, the perception of an abrupt break in the government rule or strategy was accompanied by a sudden shift in market expectations (condition 2). The narrative accounts thus indicate that a regime shift did indeed occur.<sup>42</sup>

#### **4. The Macroeconomic Effects of the Regime Shift**

Given that a regime shift occurred, what were its effects? In this section, we present an empirical framework to tease out the effects of the regime shift.

This is important for a few reasons. First, identifying the effects of a regime shift, like identifying the effects of a fiscal or monetary policy action, is a valid empirical macroeconomic question in its own right. Second, answering this question sheds light on a significant historical episode: the surge in output growth in the spring of 1933, following other contractionary developments, including a banking crisis, earlier in the year.<sup>43</sup>

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<sup>41</sup> *Economist*, 5/27/33, “The Washington Enigma,” P. 1117.

<sup>42</sup> Actions also bolstered the regime shift. Sargent (1983) and Temin and Wigmore (1990) emphasize the role of actions in establishing the credibility of a regime shift. During the second quarter of 1933, key actions—the abandonment of the gold standard, pledges by Roosevelt to raise prices to their pre-depression level, and the passage of the Inflation Amendment—clearly reinforced the regime shift.

<sup>43</sup> In recent work, Hausman (2013) emphasizes the fact that recovery in the spring of 1933 came in the direct aftermath of a major financial crisis.

Indeed, this extraordinary behavior of output in 1933 relates to the early debates in macroeconomics between Friedman and Schwartz (1963) and Romer and Romer (1989) regarding the effects of monetary disturbances. Based on a careful reading of the historical, narrative record, Friedman and Schwartz identify four relatively exogenous reductions in the supply of money and note that each of these episodes preceded large declines in output. On this basis, they conclude that changes in the money supply cause movements in output. In a subsequent study, however, Romer and Romer (1989) reevaluate the work of Friedman and Schwartz. Though they praise Friedman and Schwartz's contributions as groundbreaking, they argue that Friedman and Schwartz may have suffered from unintentional bias in their identification of monetary shocks, primarily because their definition of an exogenous shock—an unusual movement in money—lacks precision and thereby, leaves too much room for personal discretion. Romer and Romer identify two candidate episodes, 1933 and 1941, not included by Friedman and Schwartz that underscore these concerns. In both episodes, output growth surged in the aftermath of contractionary monetary developments—a finding that would seemingly be at odds with Friedman and Schwartz's central argument<sup>44</sup> As a result of these concerns, Romer and Romer (1989) conduct a new test—one that is modeled in the spirit of Friedman and Schwartz's narrative approach, but improves on their methodology by using a more precise definition to identify relatively exogenous monetary shocks from postwar U.S. history. They find that monetary shocks do indeed have substantial real output effects, which is in line with the the broad conclusions of Friedman and Schwartz.<sup>45</sup>

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<sup>44</sup>For example, regarding 1933, Romer and Romer (1989) write: “1933. A massive wave of banking failures began in the final months of 1932 and worsened in early 1933. In addition, expectations that Roosevelt might devalue or abandon the gold standard on taking office caused large gold outflows and led to an increase in the discount rate from 2.5 to 3.5% in February to defend gold. By February banking conditions had degenerated into panic, causing widespread bank failures. The failures were in turn followed by the declaration of bank holidays in many states. On his inauguration in March, Roosevelt imposed a nationwide banking holiday—a step that, in Friedman and Schwartz's view, was extraordinarily disruptive of the financial system and much more drastic than was needed. (Friedman and Schwartz 1963, pp. 324-32, 349-50, 389-91, 421-34.) The events of these months have the features of what under different circumstances Friedman and Schwartz would be willing to describe as a monetary shock, or indeed as several shocks. At other times widespread banking failures and panic conditions much milder than those of early 1933 are considered to be monetary disturbances. The gold outflow and the increase in the discount rate to defend the gold standard despite the depressed level of real activity clearly represent unusual monetary developments, similar to those of the fall of 1931. And the banking holiday shares with the episodes emphasized by Friedman and Schwartz the feature that it appears to be a major contractionary step arising from an inadequate understanding of the workings of the financial system. In sum, it seems extremely plausible that if the Depression had continued to worsen in 1933, Friedman and Schwartz would have characterized the events of January-March 1933 as a fifth “crucial experiment” (pp. 128-129).

<sup>45</sup> The literature on the contractionary effects of financial crises and declines in the money supply is voluminous. For monetary shocks, see Friedman and Schwartz (1963), Richardson and Troost (2009), Romer and Romer (1989, 2004), and Velde (2008). For financial crises, see Cerra and Saxena (2008), Chodorow-Reich (2013), Jalil (2013) and Reinhart and Rogoff (2009).

Nonetheless, a lagging question remains: if financial crises and contractionary monetary shocks reduce output, why then did output grow so strongly during the second quarter of 1933? The findings of this paper, together with those of Temin and Wigmore (1990) and Eggertsson (2008) provide a clear answer: a regime shift boosted output growth in the second quarter of 1933. This suggests then that the expansionary effects of the regime shift counteracted the contractionary effects of the financial crisis and other monetary shocks earlier in the year.

Thus, in estimating the impact of the Roosevelt regime shift on output, it is crucial to develop a framework that controls for the effects of the banking crisis and other monetary shocks. Specifically, we construct an empirical model based on the framework developed in Bernanke (1983), that captures the relationship among three variables: money, financial crisis indicators, and output. We then augment this model by including a dummy variable in the months that coincide with the Roosevelt regime shift. The dummy variable captures the effects of the regime shift, after controlling for the effects of financial crises and other monetary developments.

Indeed, the model that we construct mirrors the framework used by Bernanke (1983), in his seminal study on the causes of the Great Depression.<sup>46</sup> To tease out the nonmonetary effects of the financial crisis from the effects of changes in the supply of money, Bernanke estimates the following equation:

$$Y_t = \sum_{i=1}^2 \beta_i Y_{t-i} + \sum_{i=0}^2 \alpha_i M_{t-i} + \sum_{i=0}^1 \delta_i DBANKS_{t-i} + \sum_{i=0}^1 \phi_i DFAILS_{t-i} + \varepsilon_t \quad (1)$$

where  $Y$  denotes the growth rate of industrial output (relative to its exponential trend),  $M$  represent monetary shocks (“M1 shocks” or “price shocks”), and  $DBanks$  and  $DFails$  are financial crisis proxies that measure the first difference of deposits of failing banks and the first difference of liabilities of failing businesses, respectively.<sup>47</sup> The regressions are estimated at a monthly frequency from January 1919 to December 1941. The monetary shock variables are designed to measure the effects of nominal disturbances, while the financial crisis proxies are designed to tease out the nonmonetary effects of the financial crises, after controlling for the effects of

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<sup>46</sup> In his 1983 study, Bernanke argues that the financial crises of the Great Depression raised the costs of credit intermediation and thereby, reduced output through a nonmonetary channel. His work remains one of the leading studies on the causes of the Great Depression.

<sup>47</sup> M1 shocks are the residuals from a regression of the rate of growth of M1 on four lags of the growth rates of industrial production, wholesale prices and M1 itself. Price shocks are defined symmetrically, using wholesale prices. See Bernanke (1983, p. 268) for more details.

monetary shocks. Because the financial crisis proxies and the monetary shock variables are large and statistically significant, Bernanke concludes that the financial crises had substantial nonmonetary effects on output, apart from the monetary effects identified by Friedman and Schwartz. Based on the findings from his model, Bernanke argues that the nonmonetary effects of the financial crises played a crucial role—alongside monetary forces—in causing the Great Depression.<sup>48</sup>

To identify the effects of the Roosevelt regime shift, apart from the other developments of 1933, we augment Bernanke’s original model to include a regime shift dummy. We estimate the following regression:

$$Y_t = \sum_{i=1}^2 \beta_i Y_{t-i} + \sum_{i=0}^2 \alpha_i M_{t-i} + \sum_{i=0}^1 \delta_i DBANKS_{t-i} + \sum_{i=0}^1 \phi_i DFAILS_{t-i} + \lambda R_t + \varepsilon_t \quad (2)$$

where  $R_t$  represents a Regime Shift Dummy that equals one in the months that coincide with the Roosevelt regime shift. We construct the Regime Shift Dummy based on the narrative evidence presented in Section 2. The narrative record is clear in assigning the regime shift to the period between April and July 1933—that is, when there was a widespread perception of an imminent rise in inflation among market participants.

Our empirical strategy contains several advantages. First, by augmenting Bernanke’s specification with a regime shift dummy, we are able to tease out the effects of the Roosevelt regime shift, while controlling for the monetary and financial crisis effects highlighted by Friedman and Schwartz (1963) and Bernanke (1983) as crucial causes of the Depression.

Second, adding a regime shift dummy further clarifies the empirical relationships identified in Bernanke (1983). If Temin and Wigmore (1990), Eggertsson (2008), and Sargent (1983) are correct in arguing that regime shifts have substantial real output effects, then failing to incorporate the effects of the Roosevelt regime shift could raise concerns of omitted variable bias in Bernanke’s original empirical specification. Are Bernanke’s results sensitive to the dramatic developments of 1933? Do the original relationships hold after controlling for the effects of the regime shift? Adding a regime shift dummy addresses these potential concerns.

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<sup>48</sup> Though Bernanke’s analysis focuses on a different channel to account for the output losses of 1929-1933, his work ultimately builds on the Friedman-Schwartz monetary analysis of the Depression.

Third, Bernanke (1983) explicitly notes that his model does not provide a complete explanation of the Great Depression and directly calls for future research to make progress in identifying other causes of output movements between 1929 and 1933.<sup>49</sup> The narrative evidence indicates that a regime shift played a critical role in ending the Depression. Thus, the inclusion of a regime shift dummy enriches Bernanke's original specification by incorporating an additional channel to explain the turnaround recovery during the second quarter of 1933.<sup>50</sup>

Table 1 displays the results. Columns 1-3 use M1 shocks while columns 4-6 use price shocks. Also, columns 1 and 4 report the original Bernanke (1983) specifications, without the regime shift dummy, whereas columns 2, 3, 5, and 6 include the dummy.<sup>51</sup> Though there are subtle changes with the inclusion of the regime shift dummy, Bernanke's main results still hold. Contemporaneous monetary shocks (M1 shocks and price shocks) and one of the financial crisis proxies, DBanks, are strongly significant in all regressions. This suggests that the financial crises of the Great Depression had nonmonetary effects, apart from the purely monetary forces highlighted by Friedman and Schwartz. Thus, these results support Bernanke's original interpretation.<sup>52, 53</sup>

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<sup>49</sup> Specifically, Bernanke writes "It should be stated at the outset that my theory does not offer a complete explanation of the Great Depression" (p. 258) and later clarifies, "comparison of financial to totally nonfinancial sources of the Great Depression, such as those suggested by Temin, is left to future research" (p. 268).

<sup>50</sup> Though our empirical strategy has many strengths, one might wonder whether endogeneity concerns are an issue with our specification. Indeed, the issue of whether money or financial crises affects output, rather than vice versa, has been extensively debated. See, for example, Friedman and Schwartz (1963) and Romer and Romer (1989, 2004). Bernanke directly addresses endogeneity concerns in his paper. He argues that the historical evidence indicates that failures of banks are generally not caused by anticipations about future output, thereby alleviating concerns about endogeneity, at least in the case of financial crises (see pages 271-272). Nonetheless, even setting these issues aside, what is most relevant for our purposes is the question: how did output growth differ from normal during the months that coincided with the Roosevelt regime shift? Our empirical specification allows us to identify the extent to which output growth differed from normal, given the behavior of money and financial crisis indicators. Most importantly, the narrative evidence that is documented in section 4 of this paper indicates a causal link between the regime shift and output growth during the second quarter of 1933. Thus, regardless of concerns about the relative endogeneity of financial crises and changes in the money supply, the coefficient on the regime shift dummy provides a plausible estimate of the impact of the Roosevelt regime shift on output growth.

<sup>51</sup> Columns 3 and 6 also include the dollar exchange rate, in addition to the dummy, which we discuss in detail in the next section.

<sup>52</sup> The coefficient estimates for regressions 1 and 4 in Table 1 differ slightly from those in Bernanke (1983). The data series used by Bernanke on industrial production and wholesale prices have undergone revisions since the publication of Bernanke's study. For accuracy, the coefficient estimates that we report in Table 1 reflect the most recent set of revisions and thus differ slightly from the coefficients reported in Bernanke (1983). Nonetheless, the basic findings remain intact.

<sup>53</sup> The subtle changes with the inclusion of the regime shift dummy, nonetheless, merit attention. Though DBanks is still statistically significant in all regressions, the lag on DBanks is no longer significant at the  $p < 0.05$  level with the inclusion of the regime shift variable, as it was in regressions 1 and 4, nor is the lag

The key result, however, is regressions 2 and 5, which add the regime shift dummy. In both regressions, the coefficients of the regime shift dummy are large, positive, and strongly significant. The coefficients of the regime shift dummy are 0.0697 (t-stat = 5.17) in regression 2 and 0.0385 (t-stat = 2.73) in regression 5. This suggests that during the months that coincided with the Roosevelt regime shift, output growth was higher by 4 to 7 percentage points than what would have been predicted, given the normal behavior of money and financial crisis indicators from 1919 to 1941. Moreover, adding the regime shift dummy increases the explanatory power of the regressions. The R-squared increases from 0.46 to 0.51 in the specification with M1 shocks and from 0.48 to 0.5 with price shocks—a large improvement in the fit of the model given that the regime shift covers only one quarter in a sample period of more than twenty years. Together, this suggests that the Roosevelt regime shift contributed significantly to the rise in output growth during the second quarter of 1933.

Moreover, given the results reported in Table 1, the estimated four-month cumulative impact of the regime shift on industrial production is 50.4% for regression 2 and 27.4% for regression 5.<sup>54</sup> Since industrial production grew by 57% between March and July 1933,<sup>55</sup> this indicates that the Roosevelt regime shift can account for between 48 and 88 percent of the recovery. Interestingly, these estimates are similar to those of Eggertsson (2008). In his calibration of a dynamic stochastic general equilibrium model of the U.S. economy from 1929 to 1937, Eggertsson concludes that the regime change can account for 79 percent of the recovery in output in the period 1933-1937. Thus, the results from our empirical framework complement those of Eggertsson and provide additional support to the notion that a regime shift drove the recovery during the second quarter of 1933.<sup>56</sup>

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on DFails still statistically significant, as it was in regression 1. In addition, though contemporaneous price and money shocks are still strongly significant, the lag on the “price shock” is no longer significant at the  $p < 0.05$  level with the inclusion of the regime shift dummy, as it was in regression 4.

<sup>54</sup> The cumulative impact over four months includes the direct contemporaneous effects of the regime shift in each month, along with the effects working through the behavior of lagged output. For example, the impact in month 1 is the Roosevelt regime shift dummy,  $\lambda$ . The impact in month 2 is  $\lambda + \beta_1 \lambda$ , the Roosevelt regime shift dummy,  $\lambda$ , plus the impact in month 1 times the coefficient on lagged output,  $\beta_1 \lambda$ . The impact in month 3 is  $\lambda + \beta_1(\lambda + \beta_1 \lambda) + \beta_2 \lambda$ , the Roosevelt regime shift dummy,  $\lambda$ , plus the impact in month 2 times the coefficient on lagged output,  $\beta_1(\lambda + \beta_1 \lambda)$ , plus the impact in month 1 times the coefficient on the second lag of output,  $\beta_2 \lambda$ , and so on.

<sup>55</sup> Source: FRED series INDPRO, seasonally adjusted.

<sup>56</sup> Eggertsson, however, focuses on the recovery from 1933-1937, whereas we focus on the turning point in the second quarter of 1933.

#### 4.1 Could other forces or policies have driven the recovery?

The preceding results indicate that output growth surged during the second quarter of 1933, relative to what would have been predicted, given the normal behavior of money and financial crisis indicators. We attribute this output boom to a pro-inflationary regime shift. Yet, one concern with the preceding empirical specification could be that a dummy variable that equals one in the months that coincided with the Roosevelt regime shift picks up the effects of the regime shift, along with any other concurrent forces or policies that may have played a role in stimulating the recovery. Thus, it is natural to wonder whether the surge in output growth might be the result of other forces or policies.

##### 4.1.1 Abandoning the Gold Standard

One obvious possibility is the abandonment of the gold standard, which coincided with the swing from contraction to expansion in April 1933. Could the direct effects of devaluation and abandonment of the gold standard have driven the rapid recovery? Several pieces of evidence indicate that the direct effects of devaluation are unlikely to be the main source of the rapid recovery.

First, international trade was a small share of the U.S. economy—according to the BEA, total trade (exports plus imports) was 7.3 percent of U.S. GDP in 1933.<sup>57</sup> This means that any potential terms-of-trade effects of the U.S. departure from the gold standard and consequent dollar devaluation—through an increase in exports and a decline in imports—cannot have had a significant effect on the economy. Furthermore, though the trade deficit should have shrunk in 1933, it actually widened (from 11.5 billions of dollars in 1932 to 12.8 in 1933).<sup>58</sup>

Second, the boom in output growth in the months that followed the U.S. abandonment from the gold standard was unusual, relative to other country experiences. Table 2 presents the percentage change in industrial production in the four months after abandonment of the gold standard across a range of countries. The data come from the League of Nations *Statistical Yearbook*.<sup>59</sup> The table shows that the United States is a huge outlier. According to the League of Nations,

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<sup>57</sup> Source: BEA NIPA table 1.1.6.

<sup>58</sup> *Ibid.*

<sup>59</sup> See the note to Table 2 for further details.

industrial production in the U.S. increased by 69.5%, whereas in other countries, it declined by 3.4% on average.<sup>60</sup> To put this in comparison, the country that ranks second in terms of output growth is the United Kingdom, with a percentage increase of only 9%—a more than sixty percentage point difference with the United States. This huge divergence between the United States and the rest of the world suggests that something else, beyond the direct effects of devaluation and abandonment of the gold standard, drove the U.S. recovery.

Third, contemporaries were aware of the uniqueness of the rapid recovery in the U.S., in comparison to other countries' post-devaluation experiences, and attributed the strong recovery to the expansionary regime adopted by the Roosevelt Administration. For example, in May 1933, the *Economist* reported that public opinion abroad began to shift in favor of inflation, as a result of the perceived successes of Roosevelt's policies:

It was hardly to be expected that President Roosevelt could, as if with a magician's wand, produce such impressive evidences of recovery without convincing many people that he has discovered the sovereign cure for all our ills. In his own country he is carrying all before him. Monday's debate in the House of Commons showed that there is an impressive body of opinion in this country prepared to follow in his footsteps, and it is only natural that each fresh appearance of success should attract new followers. The Dominions and the Scandinavian countries are already half-converted. Only in the nations of Continental Europe is there a total lack of enthusiasm for a policy of monetary expansion—a body of dissent rendered formidable by its recent and thorough familiarity with the subject. It is thus no exaggeration to say that opinion in at least half of the world is moving rapidly towards acceptance of deliberate inflation.<sup>61</sup>

Moreover, in April 1933, the editors of the *Economist* wrote an article that compared the British devaluation in September of 1931 with the recent U.S. devaluation. The editors described the more rapid U.S. recovery and attributed this difference in economic performance between the two countries, in part, to the elevated inflation expectations in the United States:

When the United States went off gold ... the depreciation of the dollar gave rise to fear—or hope—of inflation, which made people anxious to transfer their money into goods. The resultant increase in the demand for goods tended to raise prices and increase the

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<sup>60</sup> The industrial production data from the League of Nations differs slightly from the Federal Reserve's industrial production data for the United States. According to the *Federal Reserve's G.17 Statistical Release*, U.S. industrial production increased by 57% from March to July, whereas according to the *League of Nations Statistical Yearbook*, U.S. industrial production increased by 69.5%. Though there is some discrepancy between these two sources, what is most important is that both sources indicate dramatic increases in industrial production during the second quarter of 1933.

<sup>61</sup> *Economist*, 5/15/33, "Sowing the Wind," pp. 113–114.

volume of goods moved. On the other hand, when Great Britain went off the gold standard there was no hoarded money within the country, and the temporary rise in prices which set in immediately after the depreciation was not maintained.

Most importantly, the editors of the *Economist* attributed the heightened inflation expectations and the more robust U.S. recovery to the different set of policies pursued by the two countries in the immediate aftermath of abandoning the gold standard:

The American authorities ... maintained and intensified a policy of monetary expansion immediately after the country had left the gold standard. This difference in the policy pursued subsequent to the depreciation naturally produced a different effect on general business conditions and price relations. The relative self-sufficiency of the United States, which is much greater than that of Great Britain, gave the Federal authorities in Washington and New York a much greater freedom to launch an expansionist policy than the authorities in London could safely initiate. Conscious of this freedom, the Roosevelt Government has adopted a programme designed to promote recovery by monetary as well as by other means...It is important to remember these differences, for they are a warning against the natural tendency to expect more or less the same consequences from the depreciation of the dollar as those which followed from the depreciation of sterling. The differences in the basic conditions and in the subsequent policy are so important that the resultant position may be vastly different in the two cases.<sup>62</sup>

This narrative case study of the U.S. and British post-devaluation experience seems to corroborate the broader trends noted in Table 2—that the rapid U.S. surge in output was unusual, relative to other country experiences. Furthermore, as is clear in the above accounts, contemporaries attributed the robust U.S. recovery, at least in part, to the expansionary set of measures adopted by Roosevelt and to the heightened inflation expectations. Thus, the narrative evidence provides further support to the notion that a pro-inflation regime shift—rather than the direct effects of devaluation—drove the recovery.<sup>63</sup>

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<sup>62</sup> *Economist*, July 8, 1933. “1931 and 1933 – A Contrast.” pp. 60–61.

<sup>63</sup> One potential concern may be that suspension occurred at different timings for different countries. Because the U.S. abandoned the gold standard after a longer period of contraction, in comparison to the wave of countries that abandoned the gold standard in September 1931, one might wonder whether the U.S. recovery was more rapid because the U.S. had fallen further and for a longer period. Indeed, the *Economist* article described above that compares the U.S. and British devaluations echoes this concern. However, one piece of evidence suggests otherwise—and in particular, a piece of evidence not available to contemporary observers in 1933. Countries that suspended the gold standard after March 1933 also did not grow rapidly in the immediate aftermath of suspending. Table 1 contains four countries that suspended after the U.S.—none of which experienced a recovery even remotely comparable to the rapid U.S. boom: Belgium (3.2% increase in industrial production), France (6.1% decline), Italy (5.6% increase), and Poland (2.8% increase). This suggests that the U.S. recovery in the four months following the suspension of the gold standard was truly unusual, relative to other countries’ experiences, even after taking into account varying dates of suspension.

Fourth, adding the dollar exchange rate vis a vis the British pound as an additional explanatory variable in our empirical framework does not change any of the results presented above. Regressions 3 and 6 confirm that, after including this proxy for the direct effects of U.S. exit from the gold standard, the coefficients of the Regime Shift Dummy are still large, positive, and significant. In addition, the coefficient for the dollar exchange rate is statistically insignificant in both regressions.

Fifth, in a recent, excellent study of the U.S. recovery in the spring of 1933, Hausman (2013) concludes that, by raising farm incomes, devaluation directly stimulated demand in agricultural states, helping to boost output growth in 1933. Yet, Hausman notes that the positive impact of devaluation on farm incomes via higher prices for farm goods would likely be counteracted by the negative impact of higher prices for goods on urban consumers. As a result, Hausman concludes that another channel, beyond the direct effects of devaluation, must explain the overall recovery. He proposes that devaluation, by raising farm prices, signaled higher inflation and thereby, stimulated the economy via increased inflation expectations. This channel is consistent with the findings of our study that a sudden change in inflation expectations drove the recovery from the Depression.<sup>64</sup>

Together the evidence suggests that the direct effects of devaluation are insufficient to explain the rapid recovery during the second quarter of 1933. Instead, the findings of this paper are consistent with the argument of Temin and Wigmore (1990) that the abandonment of the gold standard played a crucial role in the recovery, perhaps in part because devaluation had direct effects, but much more importantly, because devaluation signaled a new policy regime.

#### **4.1.2 Could something else have driven the recovery?**

The preceding evidence suggests that the direct effects of devaluation cannot account for the rapid recovery. But could some other, unknown force—beyond the regime shift—have driven the recovery? To answer this question, we gather evidence from Friedman and Schwartz (1963) and the historical narrative record.

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<sup>64</sup> Hausman (2013) considers two possible channels through which devaluation could have stimulated an overall recovery: (1) by raising farm prices, devaluation signaled higher inflation and (2) devaluation eroded farm debt burdens and thereby improved rural bank health. Hausman, however, finds little evidence in support of the second channel.

In their *Monetary History of the United States*, Friedman and Schwartz (1963) claim that the “economic recovery in the half-year after the panic owed nothing to monetary expansion.”<sup>65</sup> After correcting for statistical discrepancies caused by a shift in the treatment of restricted and unrestricted deposits in unlicensed banks, they conclude that the money stock rose only slightly after March 1933.<sup>66</sup> Yet, despite small changes in the money supply, the U.S. economy experienced four months of extraordinary growth in the spring of 1933. According to the Federal Reserve, industrial production rose 57 percent from March to July.<sup>67</sup> In addition, department store sales increased nearly 20 percent in the same period.<sup>68</sup> Prices also rose, though less remarkably—wholesale prices (PPI) rose 14 percent while consumer prices increased 4 percent from March to July.<sup>69</sup> This expansion in total nominal spending without a commensurate growth in the money supply indicates that any explanation of the recovery should be consistent with an increase in the velocity of money in circulation. This can be easily confirmed using the accounting identity  $MV=PY$ . With the price level (P) little changed during this period and the money supply (M) not increasing in line with the expansion in output (Y), there must have been a corresponding increase in velocity (V). Friedman and Schwartz also validate this interpretation by pointing to the reduction in the public’s money balances relative to income (an increase in the velocity of money) as an important contributor to the recovery after the banking panic (pp. 433—464).

Thus, the evidence suggests that the force driving the increase in the velocity of money also explains the rapid recovery. What then spurred this rapid increase in velocity? The narrative record provides a clear answer: a sudden change in expectations. The editors of *The Economist* attributed the rapid recovery to the “enhanced velocity of monetary circulation” and identified a sudden shift in market expectations—or in their words, “a change in national psychology”—as the source of this increase in velocity:

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<sup>65</sup> Friedman and Schwartz (1963), p. 433.

<sup>66</sup> Friedman and Schwartz argue that the drastic decline in the recorded money stock in March 1933 and the consequent apparent rise throughout the rest of the year are “statistical fiction”: restricted and unrestricted deposits in unlicensed banks were counted in the recorded money stock before the bank holiday and excluded thereafter. They claim that correcting for this statistical discrepancy would yield “a milder decline (in the money stock) before March and a milder rise thereafter” (p. 428).

<sup>67</sup> Source: FRED series INDPRO, seasonally adjusted.

<sup>68</sup> Source: NBER macrohistory series m06002a, seasonally adjusted.

<sup>69</sup> Sources: FRED series PPIACO (Producer Price Index: All Commodities) and CPIAUCNS (Consumer Price Index for All Urban Consumers: All Items).

Though much has been heard of America's 'inflationary' intentions, of actual inflation, so far, there has been none. The entire increase in America's economic activity is due to enhanced velocity of monetary circulation, reflecting a change in national psychology.<sup>70</sup>

Not only does the above passage from the *Economist* corroborate the quantity theory interpretation of events outlined above, but it also reveals that contemporaries attributed the rapid increase in velocity to a dramatic change in market expectations.

Moreover, the narrative record provides perhaps even stronger evidence that the Roosevelt regime shift, by inducing a change in market expectations toward higher inflation, drove this rapid increase in velocity. The narrative accounts directly discuss the transmission mechanism from higher inflationary expectations to real recovery during the second quarter of 1933. According to the *Economist*, consumers, acting in anticipation of price increases, increased their spending, helping to boost aggregate demand:

The depreciation of the dollar gave rise to fear—or hope—of inflation, which made people anxious to transfer their money into goods. The resultant increase in the demand for goods tended to raise prices and increase the volume of goods moved.<sup>71</sup>

Wholesalers, also acting in anticipation of price increases, increased their spending to build up their inventory holdings:

It appears that active buying has come from jobbers and wholesalers who are replenishing or accumulating stocks in anticipation of further advances in price. It is hardly too much to say that the rise in price has been more the cause than the result of demand...It may be difficult for European readers of the *Economist* to understand the mental processes of the average American confronted by a programme frankly described as inflation and devaluation...when an American shopkeeper acts in expectation of 'inflation,' he does not turn to a foreign currency, but increases his inventory or purchases common shares. Indeed, he does not visualize 'inflation' as a depreciation of the dollar but as a rise in other forms of value.<sup>72</sup>

In another passage, the *Economist* suggests that expectations of higher future input costs and growing consumer demand induced producers to increase production:

It is already being appreciated that the remarkable expansion in industrial activity is partly in anticipation of a rise in working costs and partly a gamble on a sustained increase in consumption.<sup>73</sup>

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<sup>70</sup> *Economist*, 7/1/33, "Investment Notes. Wall Street Prospects," p. 26.

<sup>71</sup> *Economist*, 7/8/33, "1931 and 1933—A Contrast." P. 60-61.

<sup>72</sup> *Economist*, 5/27/33, "United States. Rising Prices – Farm Bill – Bank Statement." P. 1130.

<sup>73</sup> *Economist*, 7/15/33, "The Stock Exchange. The Wall Street Roundabout." P. 133.

Thus, the narrative accounts clearly show that a shift in inflationary expectations changed consumer and producer behavior during the second quarter of 1933, helping to stimulate the recovery from the depression. This suggests that the regime shift, by changing market expectations, played a causal role in spurring the recovery. It also reinforces the notion that a regime shift, as opposed to other forces or policies, drove the recovery.<sup>74</sup>

#### 4.2 Why Were the Effects So Rapid?

The preceding evidence suggests that a pro-inflation regime shift—by raising inflation expectations—explains the rapid recovery during the second quarter of 1933. Why were the effects so rapid? The perception that Roosevelt had adopted a set of inflationary policies to raise prices coincided with an almost immediate surge in economic activity. Most empirical studies indicate that monetary policy, via a standard real interest rate channel, affects the real economy only with a lag.<sup>75</sup> Why then were the effects of the sudden surge in inflation expectations so rapid during the second quarter of 1933?

Our reading of the historical, narrative record indicates that the spurt in inflationary expectations was connected with a general perception that prices would quickly rise to their pre-1929 levels. Roosevelt's policy statements communicated a commitment to price level targeting, rather than inflation targeting. In other words, Roosevelt pledged to raise prices to the levels that had prevailed before the depression; he did not pledge to permanently raise the rate of inflation.

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<sup>74</sup> Two important caveats merit attention. First, expectations of higher inflation accompanied expectations of higher growth. Four years of deflation and depression made deflation synonymous with depression in the minds of many Americans. As a consequence, expectations of higher inflation—the reverse of deflation—were often linked with expectations of future growth. In a recent paper, Werning (2011) argues that such expectations for higher growth may have their own direct stimulative effects on consumer and producer behavior, independent of the effects of higher inflationary expectations. Yet, in the context of the Great Depression, higher inflation expectations—widely viewed as a corrective strategy for reversing four years of deflation—led to expectations of higher growth. Therefore, a persuasive argument could be made that expectations of higher growth in 1933 were themselves a byproduct of higher inflation expectations. Second, Friedman and Schwartz explain the expansion in velocity as the result of the revival of the banking system after the panic of 1933. While rehabilitation of the financial sector no doubt improved confidence and restored trust in the banking system, our reading of the narrative record nonetheless indicates that a shift in inflation expectations accounts for the bulk of the increase in velocity. Thus, our findings for the second quarter of 1933 are more consistent with the account of Temin and Wigmore (1990) that a regime shift caused the recovery.

<sup>75</sup> For example, see Romer and Romer (1989, 2004).

The literature on price level targeting has shown that, relative to inflation targeting, this policy choice has the advantage of removing more uncertainty in terms of the future level of prices.<sup>76</sup> Under price-level targeting, inflation depends on the relationship between the current price level and its target. Inflation expectations will be higher the lower is the current price level. Thus, Roosevelt’s commitment to a price-level target caused market participants to expect inflation until prices were back at that higher set target. As mentioned earlier in the paper, both the *Economist* and *Business Week* described Roosevelt’s policies as designed to generate “controlled inflation.”<sup>77</sup> This reflects the perception that prices would rise to their pre-1929 levels, but then once there, remain at that level.

Most importantly, there was a general perception that prices would rise rapidly to the new target. Accordingly, consumers and producers needed to act quickly to stay ahead of inflation. This interpretation is borne out by the narrative record. For example, consider Figure 1, which appeared in *Business Week* on May 10, 1933. The Headline reads, “Inflation Will Catch You IF YOU DON’T WATCH OUT,” suggesting the need for consumers and businesses to act quickly to avoid being overcome by inflation. The advertisement contains the following warning about “the imminence of inflation”:

Inflation means distribution of buying power, credit expansion, rising prices, restoration of markets, increased business turnover. But its benefits will not be distributed equally. Inflation will mean most to the business man who meets it half way, who increases his business pace to keep up with the accelerated dollar, who unleashes his jealously guarded cash reserves and credit, who first woos anew the markets he has neglected in the years just past...Inflation is already under way, will gather speed daily.<sup>78</sup>

The narrative accounts reveal that market participants were receiving messages to act quickly—to stay ahead of inflation. This is consistent with the rapid increase in velocity, documented earlier. It also indicates that the pro-inflationary regime shift had such immediate effects because Roosevelt’s pledge to raise the price level to its 1929 level induced market participants to believe that inflation was imminent and thus, that they needed to alter their behavior quickly.

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<sup>76</sup> The benefits from price level targeting in a rational expectations framework were first highlighted by Svensson (1999). For more recent work on the merits of price-level targeting in alleviating the effects of the zero lower bounds for nominal interest rates see Eggertsson and Woodford (2003) and Gaspar, Smets, and Vestin (2003).

<sup>77</sup> *Business Week*, 5/17/33, “Controlled Inflation,” p. 18.

<sup>78</sup> *Business Week*, 5/10/33, back of cover page.

## 5. Conclusions

This paper builds on our understanding of the recovery from the depression in several ways. First, this study indicates that a shift in inflationary expectations set the recovery in motion. By carefully examining the historical narrative record, we show that inflation expectations shifted abruptly during the second quarter of 1933 and identify the source of this shift. Signals from the Roosevelt Administration caused market participants to expect inflation. Moreover, the narrative evidence supports the notion that the second quarter of 1933 represents a regime shift—one that reversed market expectations and triggered a sudden boom in economic activity. Our empirical estimates suggest that the Roosevelt regime shift raised monthly output growth by 4 to 7 percentage points, depending on the specification. Most notably, the narrative evidence indicates a causal link between the Roosevelt regime shift and the recovery from the depression during the second quarter of 1933.

Second, this paper bolsters the work of two influential studies on the turning point from the depression. Temin and Wigmore (1990) argue that a shift to a pro-inflationary macroeconomic policy regime triggered recovery and Eggertsson (2008) develops a theoretical framework to explain how an abrupt shift in expectations could have generated a recovery. Yet, neither study incorporates narrative evidence to document that (1) inflation expectations did indeed shift and (2) there was a widespread perception, among contemporary observers, of a dramatic change in the macroeconomic policy regime. This paper fills in this crucial gap.

Third, this study shows that a well-targeted communications strategy can dramatically shift market expectations during a depression. A growing theoretical literature argues that a shift to higher inflationary expectations can stimulate a depressed economy under the appropriate set of conditions.<sup>79</sup> Yet, one area where this literature largely remains silent is over the question of whether macroeconomic policymakers can influence expectations substantially enough to produce a recovery.<sup>80</sup> This paper shows that—under the right set of conditions—macroeconomic

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<sup>79</sup> See, for example, Bernanke (2000), Eggertsson and Woodford (2003), Krugman (1998, 2000), Svensson (2003) and Woodford (2003).

<sup>80</sup> For example, Krugman (2000, p. 236), in discussing the theoretical basis for raising inflationary expectations in a liquidity trap, notes that, “it is not enough to get central bankers to change their spots; one must also convince the market that the spots have changed, that is, actually change expectations. The truth is that economic theory does not offer a clear answer to how to make this happen.”

policymakers can engineer a change in expectations that can set a recovery in motion.<sup>81</sup> Indeed, during the second quarter of 1933, Roosevelt established a bold new macroeconomic policy regime—one that shifted inflation expectations and sparked growth, effectively ending the depression.

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<sup>81</sup> It is important to note, however, that Roosevelt benefited from a constellation of forces—growing political and public support for inflation and overwhelming one-party control of the executive and legislative branches of government—that may not always be within the reach of policymakers.

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Table 1. Estimated output equations

	Shocks to M1			Shocks to Prices		
	(1)	(2)	(3)	(4)	(5)	(6)
Monthly IP growth (t-1)	0.611* (9.77)	0.519* (8.37)	0.519* (8.35)	0.601* (9.56)	0.569* (9.00)	0.569* (8.97)
Monthly IP growth (t-2)	-0.123* (-2.03)	-0.125* (-2.17)	-0.125* (-2.17)	-0.0846 (-1.39)	-0.0825 (-1.37)	-0.0829 (-1.38)
Monetary Shock	0.350* (3.10)	0.400* (3.71)	0.399* (3.70)	0.600* (4.47)	0.480* (3.44)	0.479* (3.41)
Monetary Shock (t-1)	0.0668 (0.59)	0.156 (1.42)	0.156 (1.42)	0.343* (2.47)	0.259+ (1.84)	0.258+ (1.83)
Monetary Shock (t-2)	0.119 (1.04)	0.205+ (1.86)	0.205+ (1.85)	0.0964 (0.70)	0.0156 (0.11)	0.0147 (0.11)
Monetary Shock (t-3)	0.161 (1.45)	0.277* (2.55)	0.275* (2.54)	-0.0460 (-0.35)	-0.0828 (-0.63)	-0.0835 (-0.63)
DBanks	-0.0000552* (-5.16)	-0.0000366* (-3.39)	-0.0000367* (-3.40)	-0.0000495* (-4.80)	-0.0000402* (-3.74)	-0.0000403* (-3.75)
D.Banks (t-1)	-0.0000273* (-2.47)	-0.0000208+ (-1.97)	-0.0000209* (-1.97)	-0.0000236* (-2.24)	-0.0000206+ (-1.96)	-0.0000207+ (-1.97)
DFails	-0.0000854 (-1.31)	-0.0000460 (-0.74)	-0.0000461 (-0.74)	-0.0000508 (-0.78)	-0.0000415 (-0.65)	-0.0000417 (-0.65)
DFails (t-1)	-0.000147* (-2.26)	-0.0000810 (-1.28)	-0.0000815 (-1.29)	-0.0000983 (-1.52)	-0.0000740 (-1.15)	-0.0000745 (-1.15)
Roosevelt dummy		0.0697* (5.17)	0.0690* (5.07)		0.0385* (2.73)	0.0381* (2.68)
ER: pounds per dollar			0.00230 (0.35)			0.00193 (0.29)
Observations	250	250	250	250	250	250
R-squared	0.455	0.510	0.510	0.479	0.495	0.495
DW Stat	2.032	1.950	1.951	1.987	1.925	1.925

Note: Data are monthly; t-statistics in parenthesis; + p<0.10, \* p<0.05. Sources: The industrial production index is from the *Federal Reserve's G.17 Statistical Release* (revision 2013); M1 is from Friedman and Schwartz (1963), Table A-1; the wholesale price index is from NBER macrohistory series m04048; deposits of failing banks are from *Survey of Current Business, Biennial Supplement*; and liabilities of failing banks and exchange rates are from the *Federal Reserve Bulletin*. See text for detail on construction of variables.

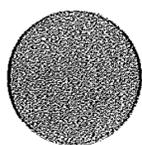
Table 2. Percentage change in industrial production in the four months after suspension of the gold standard

Country	Date	% Change in Industrial Production
Austria	Sep 1931	-5.5
Belgium	Mar 1935	3.2
Canada	Sep 1931	-12.1
Chile	Apr 1932	6.0
Czechoslovakia	Sep 1931	-20.8
France	Oct 1936	-6.1
Germany	Jul 1931	-15.4
Hungary	Q3 1931	-8.6
Italy	May 1934	5.6
Japan	Dec 1931	-5.2
Poland	Apr 1936	2.8
Sweden	Sep 1931	3.2
United Kingdom	Q3 1931	9.0
United States	Mar 1933	69.5
Average, Excluding U.S.		-3.4

Source: All data are from various issues of *The League of Nations Statistical Yearbook*, which may be downloaded at <http://digital.library.northwestern.edu/league/stat.html#1932>

Note: The data reflect the percentage change in industrial output in the four months following suspension of the gold standard, with one main exception. The League of Nations only reports quarterly indices of industrial production for Hungary and the U.K. As a result, the table reports the percentage change in industrial production from the quarter of suspension to the following quarter for those two countries. In addition, dates of suspension come from Bernanke and James (1991), which also originate with the League of Nations. Bernanke and James list three dates: suspension of gold standard, foreign exchange control, and devaluation. Occasionally, these three dates differ. In cases where dates differ, we use the earliest date. For example, Bernanke and James list the U.S. as suspending the gold standard and imposing foreign exchange controls in March 1933, but devaluing in April 1933. Thus, the table above lists March 1933 as the date of suspension the gold standard for the U.S. However, the results—described in the paper—are not sensitive to the method used to construct these dates. Because the increase in economic activity in the U.S. was so large relative to other countries' experiences, the main findings still hold when the U.S. suspension is dated in April and when dates for other countries vary among the three categories listed by Bernanke and James. Thus, the results are robust to different methods in identifying dates of suspension.

Figure 1.



# Inflation Will Catch You IF YOU DON'T WATCH OUT » »

**U.S. Off Gold Standard, Roosevelt to Rule Currency; Dollar Drops Abroad, Stocks and Commodities Soar**

**NATION IS OFFICIALLY DECLARED OFF GOLD BASIS TO LIFT PRICES; STOCKS AND COMMODITIES SOAR**

**Grain Prices Soar at Chicago** Wheat Holds 1 1/4 to 2 1/4 of 5-Cent Advance, All Deliveries Selling High for Season, Corn Retailer 1/2 to 1 of 5-Cent Gain

**Coup Means By President To Lift Price** Decides Not to Defeat Dollar Abroad but Rely on Nation's Buying Power by Controlled Inflation

**Steel Operating Rate Up Sharply** To High for '33 With Copper Crossing 6 Cents

**Metal Prices Advance Sharply** With Copper Crossing 6 Cents

**Speedy Congress Approval in Sight**

**Roosevelt and Leaders Agree On Plan to Control Currency** Senate May Get President's Bill Today Providing for Issuance of New Currency, Reduction of Gold by Dollar and Stabilization of Prices

**Woodin Calls on Reserve Banks to Liberalize Loan Policy in 'Inflation' Program**

**STOCK, COMMODITY PRICES UP SHARPLY** Easier Credit Planned to Aid Trade Upturn

**INSPIRITED TRADING LIFT COMMODITY PRICES**

**Embargo Held Aid to U. S. in World Parley** Viewed as Offset to 30% Advantage to Britain in Disturbed Exchange

**U.S. OFFICIALLY GOES OFF GOLD STANDARD** Berlin Doubts U.S. Gold Move Imperils Mark

**Markets Have Second Day of Abrupt Rise** U.S. Gold Move Imperils Mark

**LOADINGS HIGHER ON MANY RAILROADS** Stocks Up, 7-10; Buyers' Boom Hits Markets

**Utilities Lead Gain** Rise in Total to Above 500, 000 Cars Indicated for Week of April 15

**Markets Push On**

Inflation means distribution of buying power, credit expansion, rising prices, restoration of markets, increased business turnover.

But its benefits will not be distributed equally. Inflation will mean most to the business man who meets it half way, who increases his business pace to keep up with the accelerated dollar, who unleashes his jealously guarded cash reserves and credit, who first woos anew the markets he has neglected in the years just past.

The business market will be the first to expand under inflationary influences. The market for everything that business and business men buy will develop first and fastest.

Inflation is already under way, will gather speed daily. Advertising is the only selling force that works fast enough to keep up with market expansion. Publications with fast publishing schedules and frequency of appearance can hold the necessary pace.

Don't let inflation catch your advertising napping.

**THE BUSINESS WEEK  
PRIMARY FOR BUSINESS  
1933**

Source: *Business Week*, May 10, 1933, back of cover page.