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Empirical and Thematic Perspectives

Fiscal Deleveraging, Financial Repression, and Central Bank Independence—Lessons from the U.S. Experience after World War II

- In the years after World War II, the United States achieved a dramatic fiscal deleveraging. The debt of the federal government declined from a peak of nearly 110 percent of GDP in 1946 to just 45 percent of GDP in 1960. In this essay, we draw on this experience to consider some potential interactions between fiscal deleveraging and monetary exit. Specifically, could governments' efforts to manage heavy public debt burdens meaningfully constrain central banks' efforts to exit from their highly stimulative policies?
- The sharp decline in the U.S. government debt burden during the post-war period was driven by several factors. First, real GDP growth boomed in the decade after World War II, which significantly increased the economy's capacity to service the debt. Second, the price level surged immediately after the war, as wage and price controls were lifted, and this accordingly reduced the real value of the debt. Third, the government ran an exceptionally disciplined fiscal policy—even including the financing for the Korean War, the budget was typically in balance. The current generation of politicians would learn much from an examination of this episode.
- Until the Treasury-Fed "Accord" of March 1951, the Federal Reserve actively supported this deleveraging process through a policy of maintaining long-term Treasury yields at rates of 2½ percent or lower. Through this mechanism, the Federal Reserve was complicit with the government in a policy of financial repression. Specifically, the second half of the 1940s saw sharply negative real yields on government securities, which implied a significant transfer of resources from savers (the private sector) to borrowers (mainly the public sector).
- The Fed worried that inflationary forces might take hold in a sustained way but remained hesitant to raise interest rates. During the second half of the 1940s, Federal Reserve officials cited concerns that rate hikes would raise the government's debt-service burden and potentially destabilize the Treasury market. The Fed also doubted that it had sufficient support within the political process to begin hiking rates. Compounding this hesitance, the prevailing view within the Fed was that higher interest rates could only restrain activity if those rate increases were large and likely disruptive.
- This episode highlights the pressures that may be brought to bear on central banks as they contemplate an exit from exceptionally stimulative policies, especially in situations where the government's debt is elevated. Relative to the 1940s, broad understandings of the nature and importance of central bank independence—and the role that monetary policy can play in ensuring favorable economic outcomes—have evolved significantly. This stronger intellectual framework provides some protection against a replay of events after World War II. Even so, the post-war experience represents an important cautionary tale that merits careful consideration.

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Fiscal Deleveraging, Financial Repression, and Central Bank Independence—Lessons from the U.S. Experience after World War II

We focus in this essay on the U.S. experience with public debt deleveraging in the years immediately following World War II. We find this episode helpful in thinking through the challenges that governments around the world are likely to face in the years ahead, as they seek to manage the sizable debt burdens amassed since the global financial crisis erupted in mid-2007. This period is also instructive in framing the related challenges that central banks may encounter as they begin to unwind the extraordinary monetary stimulus put in place to fight the crisis. We draw on this historical experience to consider the deeper interactions between fiscal deleveraging on the one hand and monetary exit on the other. Specifically, could governments' efforts to manage heavy public debt burdens materially constrain central banks' efforts to exit from highly stimulative policies and sizable balance sheets?

Our key conclusions are that the post-war U.S. fiscal deleveraging relied crucially on three pillars—first, a burst of inflation in the years immediately after the war, which significantly reduced the real value of the debt; second, starting particularly in the early 1950s, rapid real GDP growth that increased the economy's capacity to service the debt; and third, an exceptionally disciplined fiscal policy. In a forthcoming essay, we will extrapolate these lessons to discuss the prospects for U.S. fiscal deleveraging in the current episode. But for now, suffice it to say that we are doubtful that any of these factors is likely to be in play in any significant way: The Fed remains firmly committed to keeping inflation in check; growth in the coming decade is unlikely to match that in the 1950s; and fiscal discipline is clearly a lower priority objective for the current generation of U.S. politicians than was the case for their predecessors of sixty years ago.

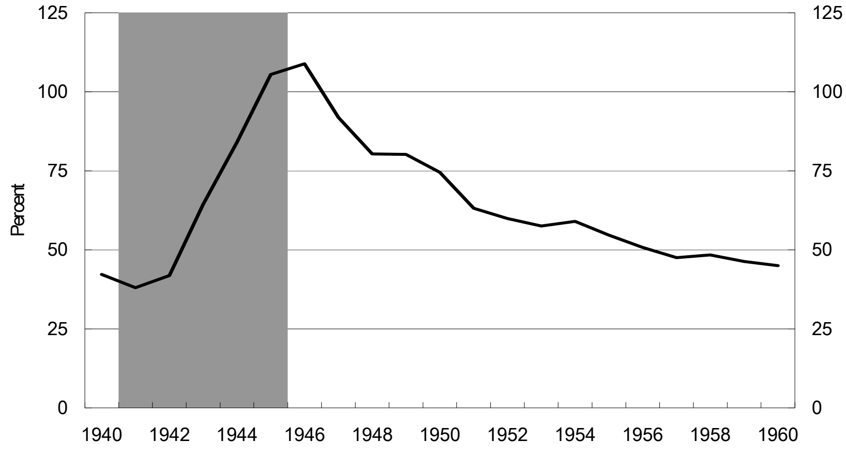
The post-war episode also sheds light on some channels through which a sizable public debt—and political pressures—may constrain and complicate a central bank's exit following a period of exceptional accommodation. After World War II, it took the Fed more than five years to normalize the stance of policy and remove its ceilings on long-term Treasury yields. The upshot was that the Fed was complicit with the Treasury in a policy of financial repression. The Fed's lagging response through this period reflected a number of factors, importantly including pressures from the Treasury to keep rates low and worries inside the Fed that higher interest rates would push up the Treasury's debt service costs and destabilize the government securities market. We fully expect that the Federal Reserve and other central banks will assert their independence more vigorously during the current period than was the case in the late 1940s. But, even so, the experience during this earlier period is an important cautionary tale.

U.S. Fiscal Deleveraging in the Post-War Period

Figure 1 shows the evolution of the debt of the U.S. federal government through the 1940s and 1950s. Notably, the United States entered World War II with a ratio of debt to GDP of roughly 40 percent. Through the years of the war, the debt surged upward, peaking at close to 110 percent of GDP in 1946. Following the war, the debt ratio declined sharply, falling to about 80 percent of GDP in 1948. And the debt continued to decline through the following decade, moving below 50 percent of GDP by 1957.

We now explore how this remarkably rapid fiscal deleveraging was achieved. Specifically, by definition, the debt-to-GDP ratio reflects the evolution of the nominal level of the debt, the price level, and the level of real GDP. In this section, we examine how each of these variables moved during the early post-war period and discuss their relative contributions to the deleveraging process.

Figure 1. Federal Government Debt (share of GDP)*

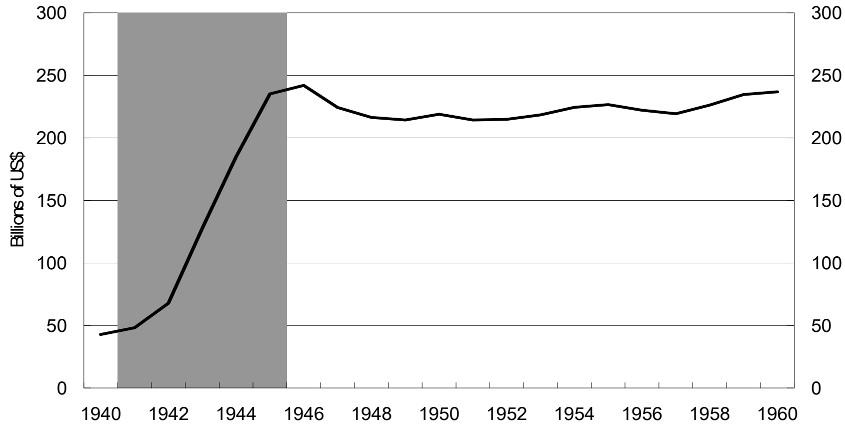


*Debt held by public. Note: Shaded region denotes World War II.
Sources: *Historical Statistics of the United States, Colonial Times to 1970*, Haver Analytics, and Citi Investment Research and Analysis.

Nominal debt. Like the debt-to-GDP ratio, the level of the nominal debt (Figure 2) peaked in 1946, at slightly over $240 billion. This represented a more than five-fold increase relative to the level that prevailed before the war. In the years immediately after the war, the debt actually declined in nominal terms, troughing at below $220 billion in the late 1940s and early 1950s. The debt then remained essentially flat in dollar terms through the late 1950s.

The evolution of the nominal debt reflected an extraordinarily disciplined fiscal policy. During this period, a strong social and political consensus prevailed in favor of budgetary restraint and intensive efforts to reduce the debt burden. As shown in Figure 3, the overall federal budget registered a meaningful surplus in 1947 and 1948 and, thereafter, cycled near balance. With the interest burden running at around 1½ percent of GDP on average through this period, the primary balance was in sustained surplus. However, as we will discuss below, the budget also benefited significantly from the Fed's willingness to maintain interest rates at very low levels.

Figure 2. Federal Government Nominal Debt



Sources: *Historical Statistics of the United States, Colonial Times to 1970* and Haver Analytics.

Figure 3(a). Federal Government Deficit

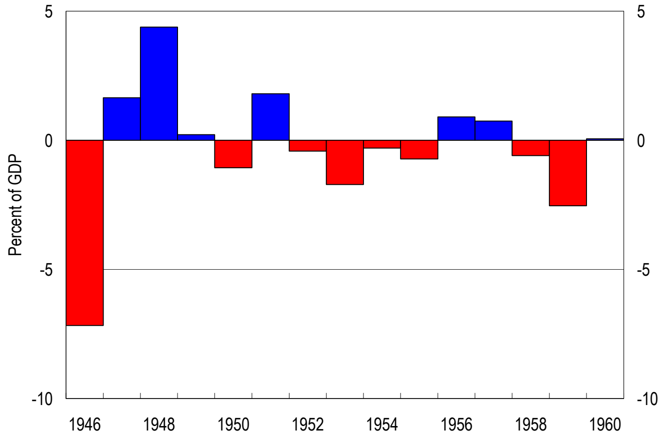
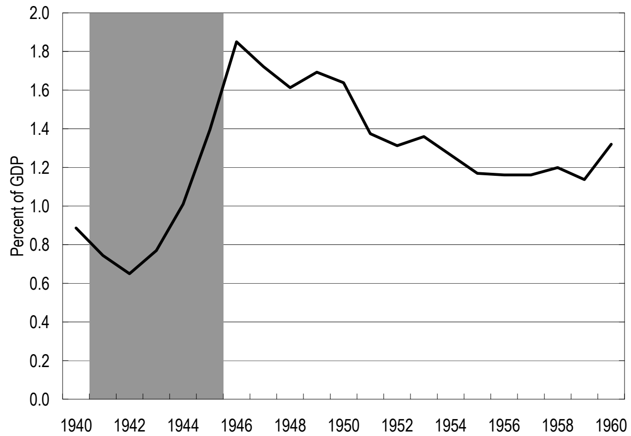


Figure 3(b). Federal Government Interest Payments

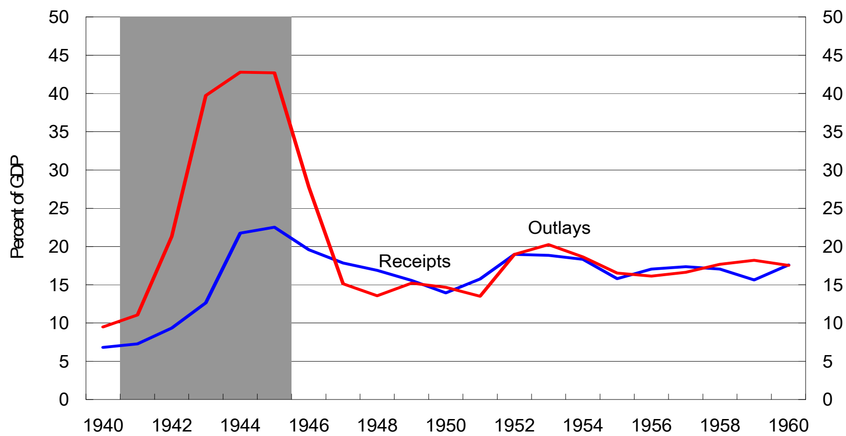


Sources: *Historical Statistics of the United States, Colonial Times to 1970*, Office of Management and Budget, Haver Analytics, and Citi Investment Research and Analysis.

Figure 4 shows government receipts and outlays. During the war, government expenditures exceeded 40 percent of GDP, but fell rapidly to 15 percent of GDP in 1947 with the winding down of military efforts. Notably, from 1952 to 1954, receipts and outlays both bumped up to near 20 percent of GDP, reflecting the fiscal costs of the Korean War. But the government funded the military action drawing on current revenues, without resorting to additional debt financing.

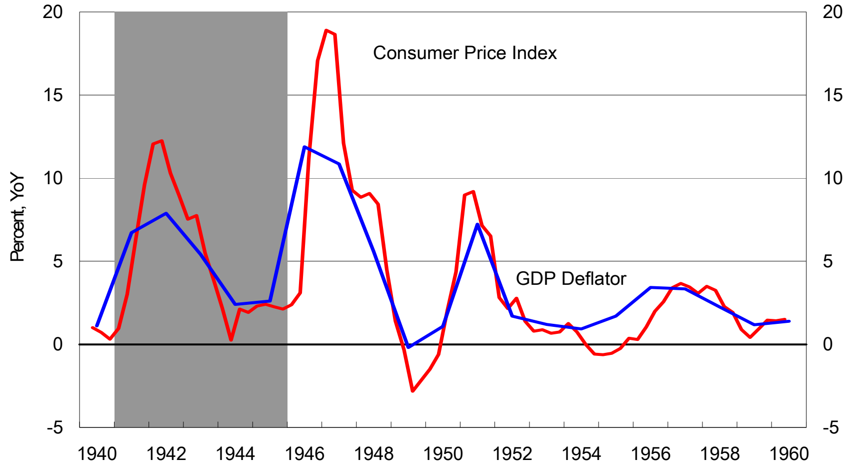
Inflation. Figure 5 highlights the remarkably volatile path of U.S. inflation during the years immediately after World War II. Notably, during the war years, the government had sought to maintain price stability through the imposition of wage and price controls. After the war, as these controls were dismantled, the price level surged upward. Notably, consumer price inflation averaged 10 percent annually from 1946 to 1948, before falling off in 1949 and 1950. Inflation jumped up again in 1951, to over 7 percent, reflecting uncertainties associated with the onset of the Korean War, but declined sharply in 1952 and remained relatively muted through the remainder of the decade. All told, CPI inflation averaged about 6½ percent annually from 1946-51; thereafter, inflation moved down to near 1½ percent on average through the rest of the 1950s.

Figure 4. Federal Government Outlays and Receipts



Sources: *Historical Statistics of the United States, Colonial Times to 1970*, Haver Analytics, and Citi Investment Research and Analysis.

Figure 5. US Inflation Rate

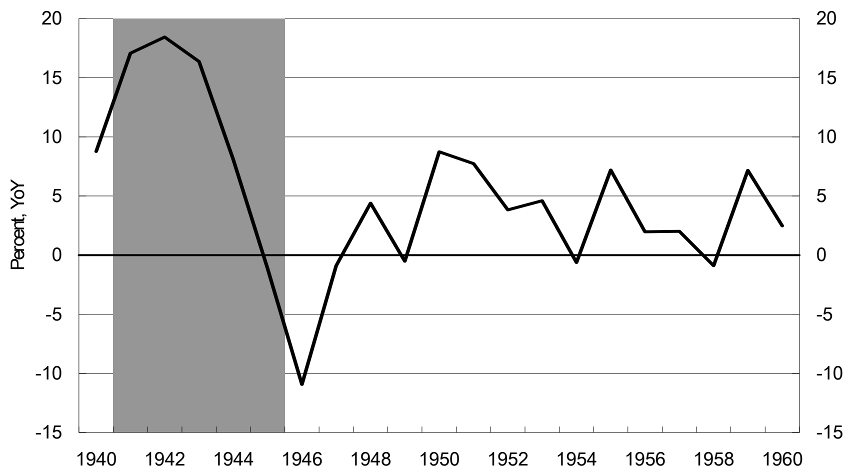


Sources: *Historical Statistics of the United States, Colonial Times to 1970*, Haver Analytics, and Citi Investment Research and Analysis.

Real GDP growth. Figure 6 shows the path of U.S. real GDP growth after World War II. As we noted above, government spending rapidly declined in the aftermath of the war, and real GDP accordingly contracted more than 10 percent in 1946 and slightly further in 1947. There was significant concern during these years that the sharp decline in federal spending and the demobilization of the military would result in recession and sharply rising unemployment. But, in the event, the economy was quickly transformed into peace-time production, with real GDP growth exceeding 4 percent in 1948 and then moving into significant expansion beginning in 1950.

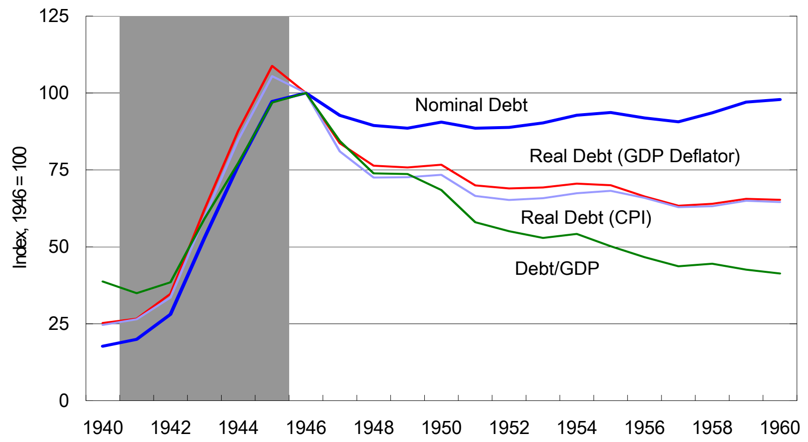
How do these pieces fit together? We now seek to integrate these developments into a common framework. Figure 7 displays three key variables—each indexed to equal 100 in 1946: (1) Nominal debt; (2) Real debt (the nominal debt divided by the price level); and (3) The debt-to-GDP ratio (the nominal debt divided by nominal GDP, which in turn is equal to the real debt divided by real GDP). As such, the difference between the nominal debt and the real debt can be interpreted as the

Figure 6. U.S. Real GDP Growth



Sources: *Historical Statistics of the United States, Colonial Times to 1970*, Haver Analytics, and Citi Investment Research and Analysis.

Figure 7. Measures of Federal Government Debt



Sources: *Historical Statistics of the United States, Colonial Times to 1970*, Haver Analytics, and Citi Investment Research and Analysis.

contribution to deleveraging coming from the rising price level, while the difference between the real debt and the overall debt-to-GDP ratio is the contribution from real GDP growth.

The figure highlights that by 1948 the debt had already fallen sharply relative to nominal GDP, reflecting both disciplined fiscal policies (which drove a decline in the nominal debt) and the surge in prices that followed the dismantling of wage and price controls. By 1950, however, U.S. real GDP growth was revving up. And the decline in the debt-to-GDP ratio thereafter largely reflected the solid expansion of real GDP.

Table 1 provides a complementary perspective on these data. Notably, from 1946 through 1948, the debt to GDP ratio dropped by a remarkable 29 percentage points. This decline reflected in roughly equal measure, the decline in the level of the nominal debt and the upward surge in the price level, with relatively little contribution from real GDP. From 1948 to 1960, the debt to GDP ratio fell by another 35 percentage points. This move down was mainly due to strong GDP growth, with the rising price level playing a secondary role and the nominal debt actually rising slightly. For the 1946-60 period as a whole, the debt to GDP ratio dropped by a stunning 64 percentage points, with rising real GDP and higher prices each contributing nearly 30 percentage points to the overall decline, and a small net decline in the nominal debt level also supporting the downward adjustment.

Table 1. Factors Affecting Federal Government Debt Burden

	1946-48	1948-60	1946-60
		(percentage points)	
(1) Change in Debt to GDP Ratio	-29	-35	-64
Contributions from Changes in:			
(2) Nominal Debt	-11	+5	-6
(3) Real GDP	-3	-26	-29
(4) GDP Deflator	-15	-14	-29

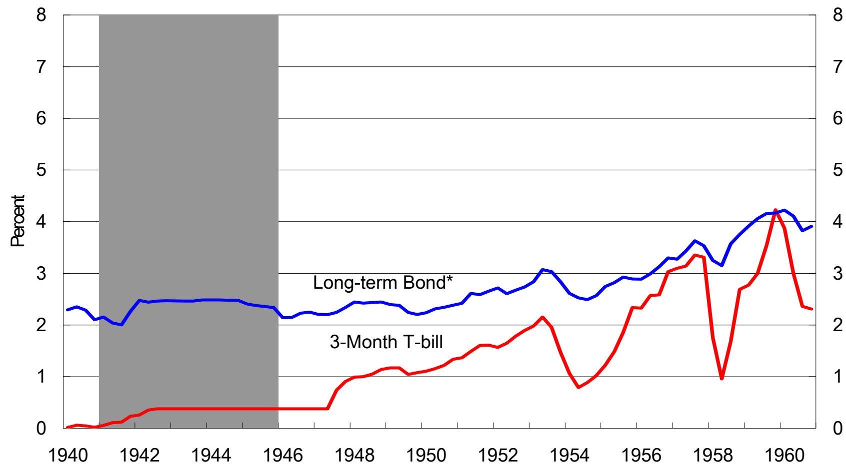
Source: Citi Investment Research and Analysis.

We note that these decompositions probably understate the crucial role that fiscal discipline played in generating the decline in the debt. From 1946 to 1960, real GDP growth and inflation (as measured by the GDP deflator) both averaged around 3 percent a year. If instead, these variables had averaged 2 percent annually, similar to what the U.S. economy might expect over the next 10 or 15 years, the debt to GDP ratio would still have fallen by more than 40 percentage points. As such, in our view, a central—and extraordinary—element of the deleveraging that occurred during this period was the tight fiscal policies that prevented the nominal level of the debt from rising. Indeed, the nominal level of the government's debt in 1960 remained below that in 1946.

How Did the Fed Support Fiscal Deleveraging?

Throughout the war, the Fed dutifully supported the government's debt issuance and fiscal management objectives by holding down the level of the yield curve.[1] From April 1942, the Fed promised the Treasury that the rate on 90-day bills would not exceed 0.375 percent and that the rate on long-term Treasuries would not exceed 2½ percent (Figure 8). At these posted rates, banks found the return on bonds much more attractive than the return on bills and, accordingly, sold bills and bought bonds on a sustained basis. The upshot was that the Fed was forced to buy huge quantities of bills to keep the short-end of the yield curve from rising. The inflationary effects of the resulting money creation were curtailed by wage and price controls.

Figure 8. Nominal Treasury Yields



*Unweighted average of all issues outstanding of bonds neither due nor callable in less than 10 years.
Sources: *Historical Statistics of the United States, Colonial Times to 1970*, Haver Analytics, and Citi Investment Research and Analysis.

Following the war, the Federal Reserve worried that inflationary forces might take hold in a sustained way but was also hesitant to back away from its ceilings on interest rates. (This hesitance reflected a number of factors that we will discuss in detail below.) Accordingly, the upward limit on bill yields remained in place until July 1947, nearly two years after the end of the war.

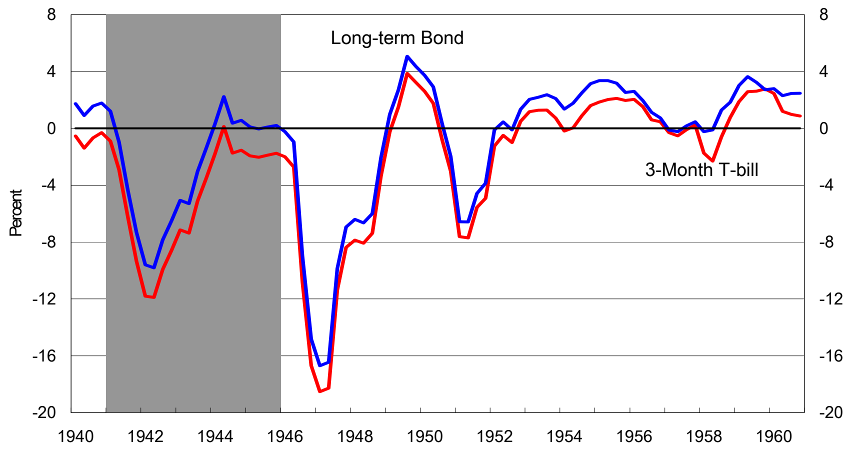
Moving away from the ceiling on long-term interest rates was seen as a much more consequential step and did not come until the Treasury-Fed "Accord" in March

[1] This section and the following section draw heavily on Allan Meltzer's authoritative discussion of this period in *A History of the Federal Reserve, Vol 1,* 2003.

1951. Notably, however, even with the surge of inflation in the years immediately after the war, maintaining the long-term rate below the ceiling did not typically require active intervention by the Federal Reserve. And after the removal of the ceiling, long-term rates moved up only gradually. This suggests that, following the deflationary travails of the Great Depression and the wage and price controls of World War II, inflation expectations were very well anchored. The public apparently looked at the surge of inflation as a one-off (and unavoidable) transition from the wartime economy to a peacetime economy. This perception was no doubt reinforced by the government's highly disciplined fiscal policies. However, a less desirable factor may have also been at work: Given the relatively limited development of financial markets at the time, investors may have seen few alternatives to continuing to hold long-term Treasuries. (We will address this issue in the next section.)

In any event, negative real interest rates were a prominent feature of the financial landscape during the 1940s (see Figure 9). From 1941-51, the average real rate on 90-day government bills was -5¼ percent, and the average rate on the government's long-term debt was -3½ percent.[2] These negative real rates resulted in a significant transfer from savers (the private sector) to borrowers (mainly the government).

Figure 9. Real Treasury Yields*



*The 3-month (long-term) real yield is the nominal 3-month (long-term) yield shown in Figure 8 minus the inflation rate, measured by the 4-quarter percent change in the Consumer Price Index, as seen in Figure 5.
Sources: *Historical Statistics of the United States, Colonial Times to 1970*, Haver Analytics, and Citi Investment Research and Analysis.

Financial Repression. Carmen Reinhart and various co-authors have termed government policies used to achieve redistribution through such channels "financial repression."[3] While financial repression may be achieved through a range of policies—including by capping interest rates, restricting competition in the financial sector, or introducing capital controls—the key underlying objective is to induce

[2] Here we consider a very simple measure of *ex post* real interest rates—the yield on a given government security at a point in time minus the lagged four-quarter percent change in consumer prices. While an array of more sophisticated measures of real interest rates could be explored, the general observation that the holders of U.S. government debt through this period took losses in price-adjusted terms strikes us as robust.

[3] See, for example, J. Kirkegaard and C. Reinhart, "Financial Repression: Then and Now," VOX, March 26, 2012; also, C. Reinhart and B. Sbrancia, "The Liquidation of Government Debt," NBER Working Paper 16893, March 2011.

financial institutions and other investors to hold government debt at yields lower than would otherwise prevail. As a practical matter, negative real interest rates—such as those observed in the United States and many other countries during the 1940s—are one defining feature of periods of financial repression.

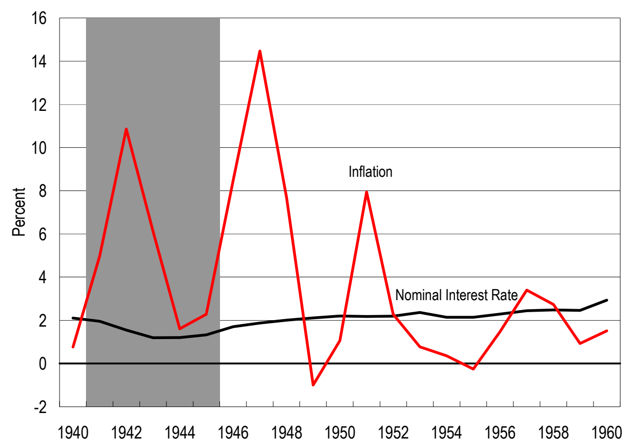
Figure 10 seeks to quantify these effects for the United States after World War II. The left panel highlights that the effective interest rate that the government paid on its debt (i.e., actual interest payments relative to the stock of debt outstanding) typically ran well below inflation through most of the 1940s.

In the right panel, we consider the following question: How would the debt-to-GDP ratio have evolved if—in the absence of financial repression—market forces had required the government to pay an interest rate on its outstanding debt that was consistently 2 percentage points higher than inflation? We find (as shown by the dashed line) that under such assumptions, the debt to GDP ratio would have declined but would have ended the period at 70 percent of GDP, a full 25 percent of GDP higher than was actually achieved.[4] Even if the effective interest rate had on average been just equal to inflation, the path of the debt to GDP ratio would have been noticeably higher (shown by the dotted line). Accordingly, this evidence suggests that financial repression should be added to the list of policies that the U.S. authorities used in the post-war period to support their deleveraging efforts, with the Fed's policies of pegging government securities yields playing a central role.

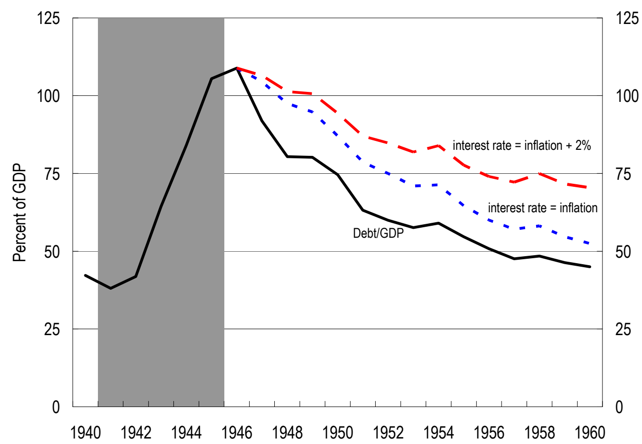
This discussion of financial repression should be qualified in one important respect, however. As highlighted in Figure 11, one characteristic of the Federal Reserve's interest rate policies through these years was that, although interest rates were

Figure 10.

Effective Interest Rate on Federal Government Debt*



Counterfactual Paths for Federal Government Debt



*Calculated as federal interest payments divided by debt outstanding; inflation is annual change in Consumer Price Index.

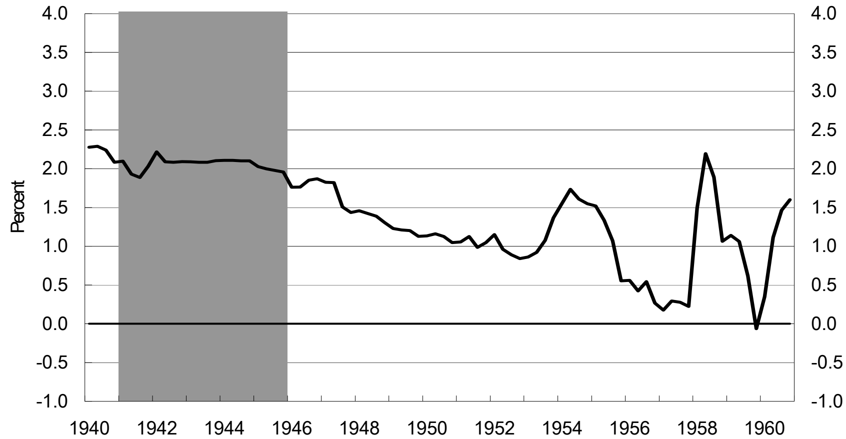
Sources: *Historical Statistics of the United States, Colonial Times to 1970*, Office of Management and Budget, Haver Analytics, and Citi Investment Research and Analysis.

[4] Specifically, this is the counterfactual path that would have prevailed if the government had paid a rate of interest on its debt stock equal to the annual inflation rate plus 2 percent. That said, this does not necessary correspond to the path of government interest costs that would have prevailed if the Fed had immediately liberalized interest rates after the war, given that only a fraction of the debt matured and needed to be re-issued at prevailing rates in any given year.

regulated, the yield curve was consistently upward sloping. The long rate exceeded the short rate by roughly 2 percentage points on average through the war years, but gradually closed to a spread of roughly 1 percentage point through the early-1950s. As such, banks faced an upward sloping yield curve as they borrowed short and lent long, which gave them ample opportunities to remain profitable. Indeed, as we note below, Marriner Eccles—Chairman of the Fed from 1934 to 1948—complained about the high level of bank profits through the 1940s. As such, the financial repression was ultimately more a repression of those that were net savers (e.g., households) than of institutions that were engaged in borrowing short and lending long.

Through the 1950s, with the eventual normalization of the Federal Reserve's policy stance and the freeing up of the government securities market, real interest rates moved into positive territory. From 1952 to 1960, the real 90-day bill rate averaged ¾ percent and the real rate on long-term Treasuries averaged 1¾ percent.

Figure 11. Slope of the Yield Curve*



*Slope of yield curve is yield on long-term bond minus yield on 3-month T-bill.
Sources: *Historical Statistics of the United States, Colonial Times to 1970*, Haver Analytics, and Citi Investment Research and Analysis.

Why Was the Fed Slow to Normalize Interest Rates after the War?

As outlined in Meltzer (2003), the Fed's reluctance in the years after the war to normalize its policies and deregulate interest rates appears to have reflected three key factors:

- First, the Treasury exerted intense pressures to keep these policies in place; and, as a closely related matter, the Federal Reserve worried that that rate hikes might trigger instability in the government securities markets.
- Second, the Fed was operating with fundamental intellectual misunderstandings about how rate hikes would influence the economy and about the nature of inflationary processes.
- Third, the Fed's views of central bank independence—including its relationships to other government agencies and its responsibilities within the government—were significantly weaker than is the case today, and independence was seen as less of a central priority.

We will now flesh out these three issues and consider their implications for central banks in the current episode.

Political Pressures. In congressional testimony in February 1946, Federal Reserve Chairman Marriner Eccles marshaled the following remarkable arguments to explain his reluctance to raise interest rates in the face of what he perceived were mounting inflationary pressures:

> It would be quite unsatisfactory, it seems to me, to try to meet the present problem by what was considered the usual or the orthodox way of dealing with inflationary forces, which was through increasing the discount rate, raising interest rates. Now, the reason for not following this course is that it would increase the cost of carrying the public debt, which is already very high, and it would likewise increase the earnings of the banking system which are also high. Such a policy would be a very unsatisfactory way to deal with this problem. I am sure that the Treasury would have considerable objection, as Congress and the public would, to increasing the interest burden on the Federal debt for the benefit of the banking system.[5]

To modern ears, this line of reasoning seems extraordinary indeed. The striking point is not Eccles' hesitancy to hike rates, but rather his rationale—worries that rate hikes would increase the government's debt-service burden and be opposed by the Treasury, the Congress, and the public.

Over time, the Fed's rationale for pegging interest rates evolved somewhat. In August 1948, Thomas McCable—who by then had succeeded Eccles as Fed Chairman—continued the Fed's defense of the 2½ percent ceiling on long-term Treasury yields. McCabe admitted that this ceiling at times created challenges for controlling inflation, but he argued that the ceiling was necessary to "insure orderly conditions" in the government securities market, "not primarily because of an implied commitment to wartime investors that their savings would be protected, not to aid the Treasury in refunding maturing debt, but because of the widespread repercussions that would ensue . . . if the vast holdings of public debt were felt to be of unstable value."[6]

The Federal Reserve's experience through this period serves as an important cautionary tale for central banks in the current episode, highlighting the political and other pressures that may complicate central bank exit strategies. The decision regarding the timing of the exit is unlikely to be straight-forward or obvious. Worries about the underlying strength of the economy, concerns about the implications for financial stability and fiscal sustainability, and even direct political pressures may seem to argue against tightening moves. Even so, our expectation is that the current generation of central bankers will pursue policies consistent with their core mandates. That said, the Fed's experience during the post-war period gives us pause and hints that the process of exiting from exceptional policies may be just as complicated and challenging as the process of putting these policies in place.

Intellectual Framework. The Fed's response during this period was also hobbled by an incomplete and—in certain respects—inaccurate view of the monetary policy

[5] House Committee on Banking and Currency, 1946, Extension of the Emergency Price Control and Stabilization Acts of 1942, as amended. This quote, as well as the quotes referenced in footnotes 6 through 10 below, is taken from Allan Meltzer's, *A History of the Federal Reserve, Vol 1,* 2003.

[6] House Committee on Banking and Currency, 1948, Inflation Control.

transmission mechanism and the factors that drive inflation. In short, the Fed was convinced that interest rate hikes could only restrain economic activity if those hikes were large and disruptive. Chairman Eccles argued that “a moderate rise in yields on government securities would not prevent and would only slightly restrain banks from selling securities in order to make loans.” In contrast, an “attempt to force up rates to levels that would be effectively restrictive on private borrowing” would have “disastrous consequences,” including sizable losses to banks and other holders of government debt.[7]

The prevailing view at the Fed was that shifts in the stance of fiscal policy would have a much more powerful effect on spending than rate hikes and, as such, that further fiscal tightening was the key for restraining the strengthening economy. On this point, Eccles observed that “it was not possible by any practicable means, except higher taxes, to contract either current income or accumulated buying power.” The Federal Reserve thus resisted pressures to lift interest rates and instead espoused a set of other measures, including raising reserve requirements, compelling banks to hold a secondary reserve of Treasury bills, and establishing temporary credit controls. The Fed also encouraged the government to raise taxes.

Central banks today are supported by a better understanding of the drivers of inflation and the linkages between interest rates and real activity. This gives us some confidence that the mistakes of the 1940s will not be repeated. In particular, central banks around the world realize the importance of hiking rates as recoveries take hold. But a whole range of other conceptual issues cannot be so easily dismissed. For example, when is the right time for central banks to begin their exits from highly stimulative policies? What liquidity tools are necessary for central banks to successfully manage their bulging balance sheets through the exit process? How can communications strategies best support the winding up of balance sheets? And will there be any persistent unintended consequences from unconventional policies? Such questions are of vital importance and, again, push central banks—and the economics profession—to the intellectual frontier. We are hopeful that central banks will get the answers to these questions right—and gear their policies accordingly—but in a very real sense monetary policy is in uncharted territory.

Views of Central Bank Independence. The notions of central bank independence that prevailed in the period immediately after World War II were incomplete and murky. As a result, the Federal Reserve was vulnerable to domination from the Treasury and the government more generally.

Consistent with this observation, Marriner Eccles in 1942 put forward a working definition of central bank independence that might apply with equal relevance to any agency of the government: “The kind of independence a central bank should have was an opportunity to express its views in connection with the determination of policy, and that after it had been heard it should not try to make its will prevail but should cooperate in carrying out the program agreed upon by the Government.”[8]

Later in the 1940s, Allan Sproul, who was then the President of the Federal Reserve Bank of New York, articulated the following somewhat richer perspective:

> I don’t suppose that anyone would still argue that the central banking system should be independent of the Government of the country. The control which such a system exercises, over the volume and value of

[7] Quotations in this paragraph and the next paragraph come from M. Eccles, *Beckoning Frontiers: Public and Personal Reflections*, 1951; and Board Minutes, May 28, 1947.

[8] Board Minutes, February 3, 1942.

> money is a right of Government, and is exercised on behalf of Government, with powers delegated by the Government. But there is a distinction between independence from Government and independence from political influence in a narrower sense. The powers of the central banking system should not be the pawn of any group or faction or party, or even any particular administration, subject to political pressures and its own passing fiscal necessities.[9]

The idea that the central bank should be independent of narrow political pressures is indeed a pillar of current notions of central bank independence. But what is lacking from this discussion is the concept of a core mandate for price stability, and the need for operational latitude to achieve that mandate. The lack of an anchoring mandate left the Federal Reserve in the 1940s vulnerable to being pushed and prodded toward achieving a range of other objectives, including minimizing the government's debt service burden and ensuring the stability of the Treasury market.

The Fed's vulnerability as it sought to achieve these multiple objectives was starkly exposed in congressional testimony in 1948. In a House hearing, Chairman McCabe affirmed the Federal Reserve's intention to continue to support the Treasury market for the "foreseeable future." The chairman of the House Committee then pinned McCabe by asking, "Are you saying that it is necessary to continue inflation to carry the national debt?" McCabe responded weakly, "I would not like to put it that way, sir."

Later in the hearing, in an even more remarkable exchange, McCabe almost encouraged Congress to take responsibility for formulating the direction of monetary policy: "If it is the wisdom of this Congress that the Federal Reserve should not support the Government bond market, then I think Congress should so direct the Federal Reserve." The chairman of the Committee aptly placed this responsibility back squarely on the shoulders of the Fed Chairman, responding, "I do not think that we are going to direct you not to support the government bond market. [But] I do not think that we are going to direct you to support the Government bond market at a particular figure."[10]

This discussion highlights some important lessons for central banks. First, a simple and clear core mandate is a crucial feature of central bank independence. If the central bank stretches to achieve too many objectives—to be all things to all people—it becomes hamstrung and politically vulnerable. The Fed of the 1940s was clearly trying to achieve too many objectives at once. Second, central bank communications should continue to emphasize how the current stance of monetary policy is being shaped by core mandates and objectives. By framing communications in this way, the decision to exit will be a natural outgrowth of previous actions and thinking. Such continuity in communications may also limit any disruptions in financial markets at the time of exit. Third, and as a corollary, this discussion highlights the value of transparency in explaining monetary policy decisions. It becomes difficult for the government to pressure the decisions of a transparent central bank, since the government's fingerprints will be readily seen.

A final caveat from this period is that the Fed's subjugated role largely grew out of the warm relationship between the Fed and the Treasury that had prevailed during World War II as the two agencies worked together to help finance the government under exigent circumstances. These close relationships actually worked against the Fed's efforts to pursue an independent policy after the war. Similarly, central banks

[9] Sproul Papers, September 1948.

[10] House Committee on Banking and Currency, 1948, Inflation Control.

and finance ministries have worked closely in fighting the financial crisis in recent years. Central banks must take pains to ensure that these warm working relationships do not—however subtly—impede their scope for tough and independent action when the time to exit comes.

Some Concluding Thoughts

The experience of the United States in the period after World War II holds a number of rich lessons for policymakers in the current episode. On the one hand, the U.S. authorities during this period achieved a remarkably rapid deleveraging of the public debt. Federal debt plunged from just under 110 percent of GDP in 1946 to 45 percent of GDP in 1960. This decline in the debt ratio reflected the rapid real growth of the economy through this period, a surge of inflation in the years immediately after the war as wage and price controls were lifted, and a highly disciplined fiscal policy (even including the financing for the Korean War, the budget was typically in balance). In a forthcoming essay, we will draw on these lessons to think through the prospects for U.S. fiscal deleveraging in the current episode.

The Federal Reserve's experience during this period, however, represents a clear cautionary tale for central bankers today. Stated bluntly, the Fed during the years after the war became an instrument of the government's deleveraging efforts and complicit in a policy of financial repression. It took more than five years—and a new Fed Chairman—for the Federal Reserve to fully liberalize the government securities market. In retrospect, the lagging pace of the Fed's response after the war posed a significant downside risk to economic and financial stability. That such risks did not materialize largely reflects a confluence of other favorable factors—an economy poised to boom, the government's fiscal rectitude, and inflation expectations that were very well anchored (with the experience of the Great Depression only ten-years distant). In addition, it could be argued that had economic events been less favorable, the Federal Reserve might very well have asserted its independence more quickly and aggressively. Nevertheless, given the government's dominance of the central bank, economic performance through this period could have evolved much less favorably.

The post-war episode also highlights the intensive pressures that may be brought to bear on central banks as they contemplate an exit from exceptionally stimulative policies, especially in an environment in which the government's debt is elevated. Central banks will need to remain intensively focused on their core mandates and not become distracted by other objectives or political pressures. Over the past sixty years, broad understandings of the nature and importance of central bank independence—and the role that monetary policy can play in ensuring favorable economic performance—have evolved significantly. This stronger intellectual framework provides meaningful protection against a replay of events after World War II. Even so, with monetary policy now in largely uncharted territory, we believe that the lessons from this period merit careful and ongoing consideration.

Notes

Notes

Appendix A-1

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