US Daily: Pent-Up Savings and Inflation After World War 2 (Nicolae)

- Rationing and supply restrictions during World War 2 provide the closest available analogue in modern US history to the barriers to spending during the pandemic. Then as now, restrictions caused households to build up substantial excess savings. Official statistics show a large spike in inflation after the war, which has provoked concern that inflation might increase sharply after the pandemic as consumers spend their pent-up savings.
- We estimate that households accumulated excess savings during the war totaling nearly 40% of GDP, roughly four times as large as our estimate of excess savings from the pandemic. Historical data suggest that consumers spent about 20% of their excess savings between 1946 and 1949, which resulted in the saving rate falling below its normal level for several years. Spending on durable goods, the products that were least available due to wartime restrictions, increased the most rapidly. This episode adds to our confidence that pent-up savings will contribute to a consumption boom starting in mid-2021.
- Although the official statistics show a large spike in inflation (~12pp) over 1946–47, the postwar experience is less worrisome than it might seem for two reasons. First, the rise in inflation primarily reflects the removal of wartime wage and price controls and a spike in food prices due to shortages, and a core inflation measure adjusted for price controls rose more modestly (~1.5pp). Second, at that time the Fed was largely prevented by an agreement with the Treasury Department from raising interest rates in response, and inflation expectations were less well anchored than they are today.

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Pent-Up Savings and Inflation After World War 2

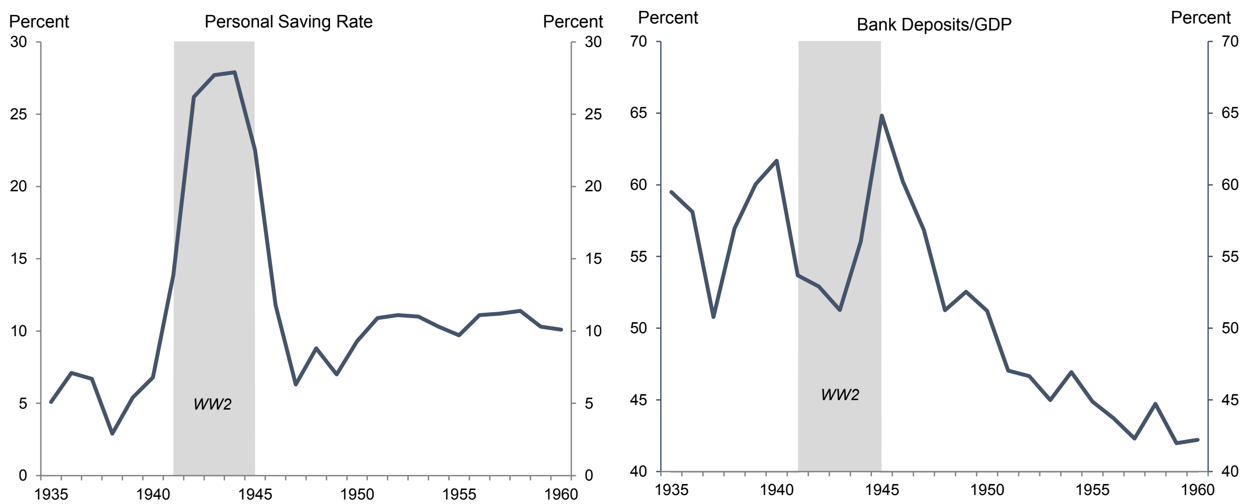
Rationing and supply restrictions during World War 2 provide the closest available analogue in modern US history to the reduced spending opportunities available during the pandemic. In today's note, we take a closer look at the consumption boom and inflation spike that followed the end of the war.

During the war, rationing and restrictions on durable goods production drove the personal saving rate to over four times its pre-war level (Exhibit 1, left).[1] Rapid

[1] Milton Friedman and Anna Schwartz (1963), A Monetary History of the United States, pg. 559; S. Morris Livingston (1943), "Wartime Savings and Post-war Markets," Survey of Current Business, Bureau

personal income growth during the war also boosted saving, and by 1945, households' cumulative excess savings—the amount by which the actual saving rate exceeded the long-run postwar level from 1941-1945—amounted to about 40% of GDP, roughly four times as large as our estimate of excess savings from the pandemic. After the end of the war, the saving rate fell quickly as spending restrictions were lifted.[2]

Exhibit 1: Both the Personal Saving Rate and Bank Deposits as a Share of GDP Declined After World War 2



Source: Department of Commerce, Federal Deposit Insurance Corporation, Goldman Sachs Global Investment Research

Consumers sharply increased their spending on durable goods, which were least available during the war due to supply restrictions (Exhibit 2).[3] The personal saving rate fell several percentage points below the level to which it eventually normalized in the postwar period and remained there for a few years, implying that households spent about 20% of their accumulated excess savings (~8% of GDP) by the end of 1949.[4] Bank deposits also declined sharply immediately after the war by about 13% of GDP over three years (Exhibit 1, right), consistent with spending of pent-up savings, although this also partly reflects increased investment in non-deposit assets such as housing, a trend that continued for many years afterward while deposits continued to decrease.[5]

of Economic Analysis, September 1943.

2 Milton Friedman and Anna Schwartz (1963), A Monetary History of the United States, pg. 581; S. Morris Livingston (1943), "Wartime Savings and Post-war Markets." During the war, most household savings were very liquid—in Treasury bonds, deposits, or currency—which likely contributed to a faster spending after the war.

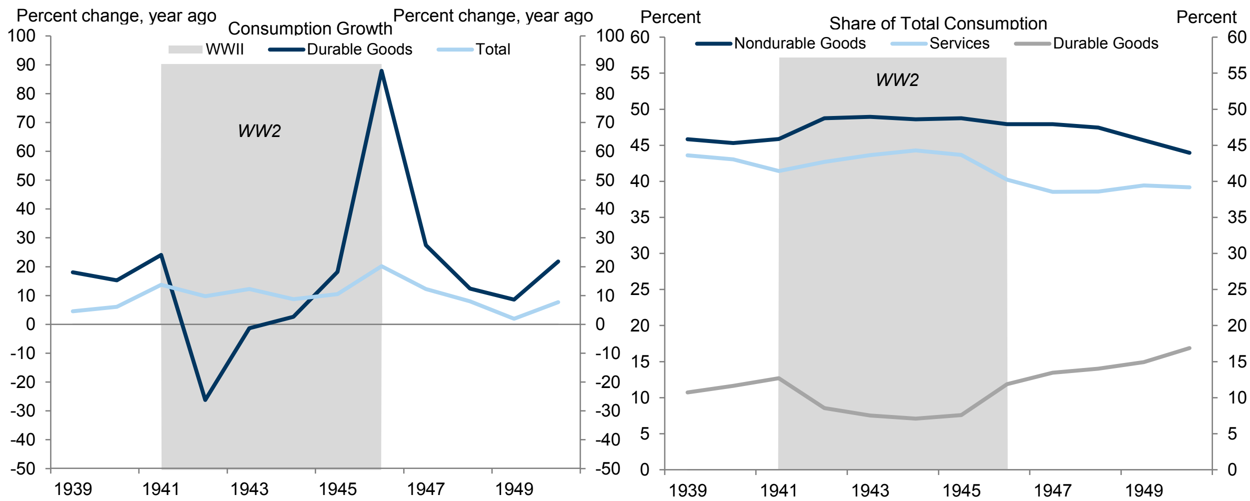
3 Morris Cohen (1952), "Postwar Consumption Functions," The Review of Economics and Statistics; Clement Winston and Mabel A. Smith (1950), "Income Sensitivity of Consumption Expenditures," Survey of Current Business, Bureau of Economic Analysis, January 1950; Office of Business Economics (1950), "The Economy in Adjustment: A Review of 1949," Survey of Current Business, Bureau of Economic Analysis, February 1950.

4 There is some disagreement between the official personal saving rate and the findings of Friedman and Schwartz (1963), who write that consumers spent half their accumulated excess savings (as measured by the ratio of money balances to 9 months' income) over 1946–1948. However, as explained above, the decline in money balances likely overstates the decline in saving, since investment in non-deposit assets increased after the war.

5 The decline in deposits over 1941–1943 likely reflects a shift toward saving in Treasury war bonds, driven in large part by wartime bond drives. For example, J.P. Cavin (1945), "Aspects of Wartime Consumption," American Economic Review; S. Morris Livingston (1943), "Wartime Savings and Post-war Markets."

The postwar increase in consumer spending on previously restricted goods adds to our confidence that a mid-year consumption boom is coming and will likely be driven by spending in the virus-sensitive services that were least available during the pandemic. In fact, one reason to think that consumers might even spend a larger share of their pent-up savings after the end of the pandemic than they did after World War 2 is that many people feared a coming economic crash after the end of the war.[6]

Exhibit 2: Consumption Boomed After World War 2 as Restrictions Were Lifted, Especially on Durables



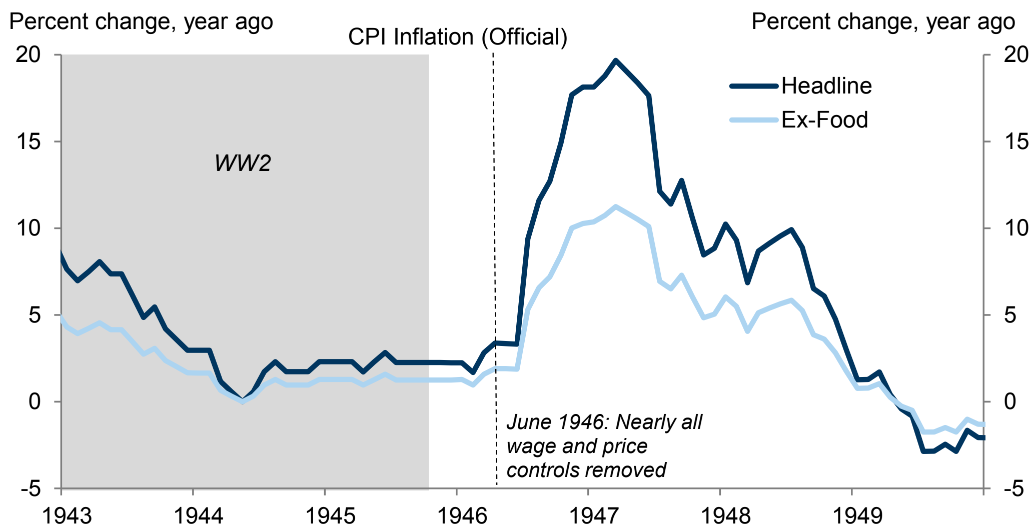
Source: Department of Commerce, Goldman Sachs Global Investment Research

Next, we take a closer look at inflation after the end of the war. Official statistics report a sharp spike in headline CPI inflation from about 1% in 1945 to a peak of nearly 20% in early 1947 (Exhibit 3), but this likely overstates the true underlying inflation rate for several reasons. First, much of the increase in inflation immediately after the end of the war reflects high food inflation due to shortages, rather than a jump in core inflation.[7] Second, the spike in the official measure of inflation in 1946–47 is likely overstated due to the lifting of wartime wage and price controls. During the war, official statistics substantially understated the prices that consumers actually paid on the black market or in informal transactions, so the removal of price controls in 1946 and 1947 overstates the true increase.

[6] Milton Friedman and Anna Schwartz (1963), A Monetary History of the United States, pg. 560; L. R. Klein (1946), "A Post-Mortem on Transition Predictions of National Product," Journal of Political Economy; Woytinsky (1947), "What Was Wrong in Forecasts of Postwar Depression?", Journal of Political Economy; S. Morris Livingston (1943), "Wartime Savings and Post-war Markets."

[7] Bureau of Labor Statistics (2014), "One Hundred Years of Price Change: The Consumer Price Index and the American Inflation Experience," April 2014; Office of Business Economics (1947), "The Economy in Reconversion: A Review of 1946," Survey of Current Business, Bureau of Economic Analysis, February 1947.

Exhibit 3: The Postwar Spike in the Official Inflation Numbers Largely Reflects Food Inflation and the Removal of Wartime Wage and Price Controls

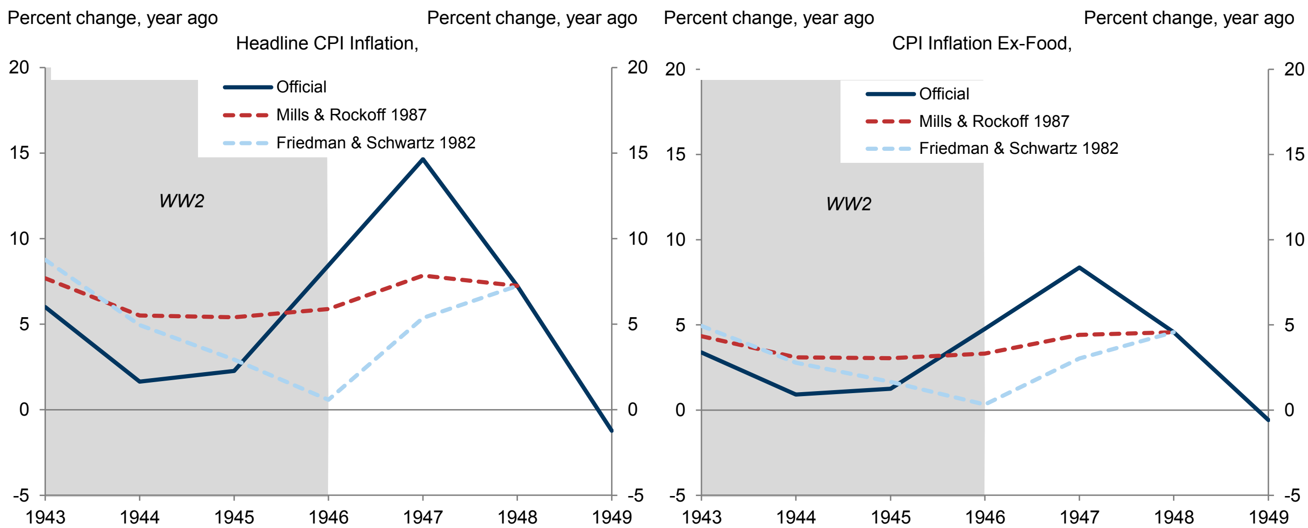


Source: Department of Labor, Goldman Sachs Global Investment Research

Analyses by Friedman and Schwartz and by Mills and Rockoff use two different methods to adjust the official inflation statistics for wartime price controls and more accurately measure the prices actually paid by consumers.[8] Both methods find that the true inflation rate was higher than the official rate during the war and substantially lower than the official rate over 1946–47, when the wage and price controls were lifted. Over 1945–1947, while the official headline CPI inflation rate rose by about 12pp, the price-control-adjusted annual CPI inflation rate excluding food rose by only about 1.5pp (Exhibit 4).

[8] Milton Friedman and Anna Schwartz (1982), "Monetary Trends in the United States and United Kingdom: Their Relation to Income, Prices, and Interest Rates, 1867–1975," p. 107; Geofrey Mills and Hugh Rockoff (1987), "Compliance with Price Controls in the United States and the United Kingdom During World War II," The Journal of Economic History 47(1), March 1987. Mills and Rockoff (1987) use wages to project the true level of prices, since most evasion of wage controls occurred through employers promoting their employees to higher job classifications rather than misreporting their wages. Friedman and Schwartz project the price index using nominal income, since it abstracts from prices of specific goods and services. Mills and Rockoff find that in the U.K., where wages were not controlled during the war, the wage index generally outperformed nominal income in predicting prices.

Exhibit 4: The Postwar Increase in Core Inflation Looks More Moderate After Adjusting for the Removal of Wartime Price Controls



Source: Department of Labor, Mills & Rockoff (1987), Friedman & Schwartz (1982), Goldman Sachs Global Investment Research

The adjusted inflation data suggest that the postwar inflation experience is less worrisome than it might initially seem. Moreover, other reassuring differences suggest that the effect of a consumer spending boom on inflation is likely to be more muted today: after World War 2, the Fed was largely prevented by an agreement with the Treasury from raising interest rates in response to high inflation, and inflation expectations were less well-anchored than they are today.

Laura Nicolae

Disclosure Appendix

Reg AC

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