Returning to Normal

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FRBA Workshop on Economic History
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Introduction

- Monetary policy has fiscal consequences (Sims 2016).
  - ~ A complete separation (independence) is impossible.
    - Political economy issues can arise.
  - ~ Under normal circumstances fiscal consequences are small.
  - ~ When balance sheet is large and government debt ratio is high (and rising) the consequences can be large.

- Following "normalization principles."
  - ~ The Fed balance sheet will return to "normal" in several years.
  - ~ Over the same time, federal deficits will likely increase and the debt burden will likely be rising.

- Do historical precedents—WW1 and WW2—offer any lessons for what might be coming?

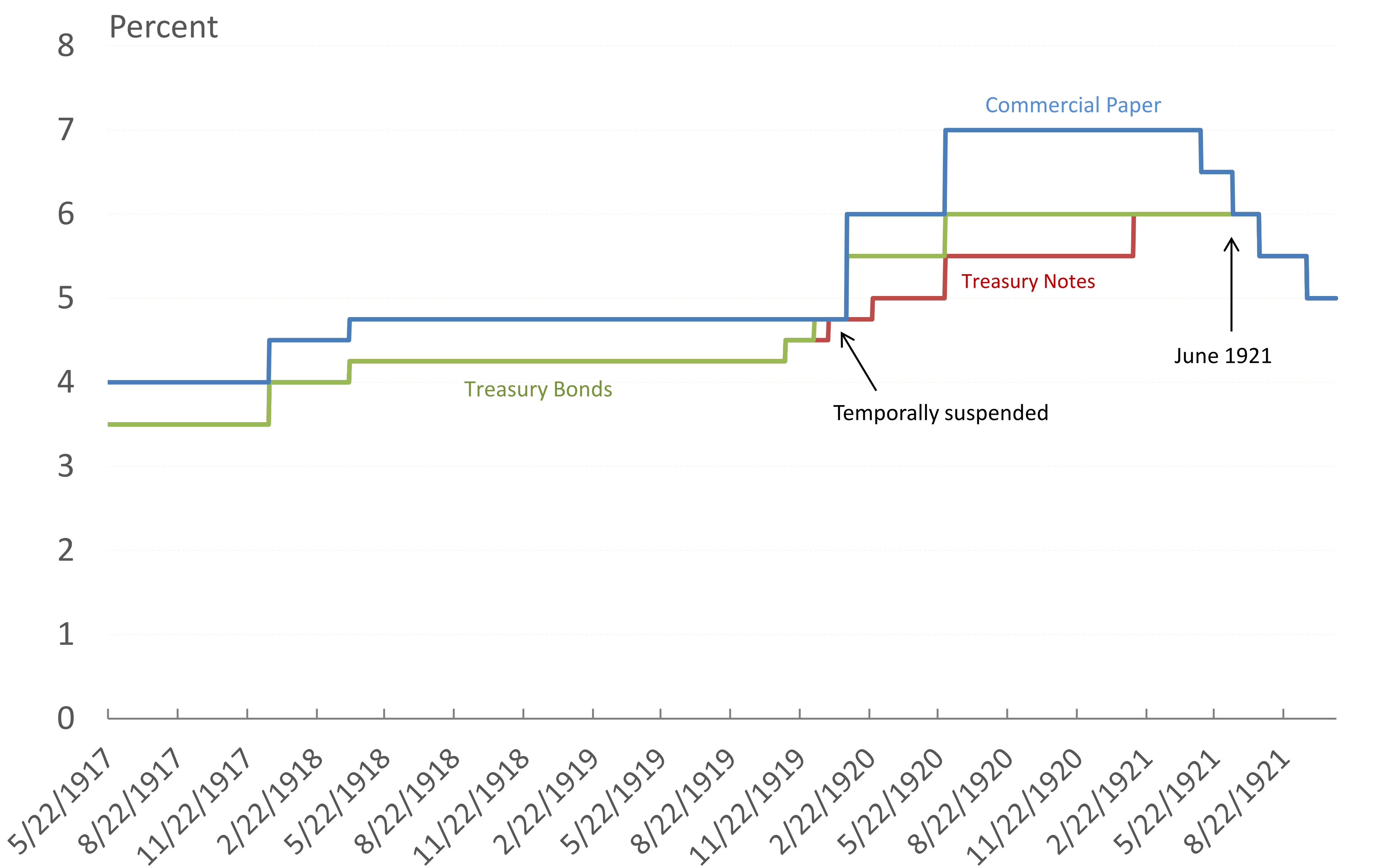
World War I

- Declaration of War in April 1917.
  - ~ Change in priorities: help Treasury fund the war.
- Governance Structure:
  - ~ Treasury Secretary McAdoo was Chairman of the Federal Reserve Board.
  - ~ Comptroller of the Currency Williams was member of the Board.
- Treasury policies drive Federal Reserve actions.
  - ~ Fed becomes fiscal agent (1915).
    - · Maintain order in financial markets.
    - · Keep cost of funding low.
  - ~ Overman Act; Treasury can take over Fed.

WWI: Balance Sheet Increases

- Discount window to support sale of Treasury debt.
  - Lending on US Treasury collateral.
  - Preferential interest rates – June 12, 1917 until mid-1921.
    - Set below discount rate on eligible collateral.
    - Set below interest rate on Treasury debt. (chart 1)
- Fed intentionally increases balance sheet.
  - A policy choice with widespread Fed support throughout the war.
  - Real bills doctrine influenced how Fed acted.
    - Fed does not hold Treasury debt on its balance sheet.
    - Distributes debt to public.

Chart 1: FRBNY Discount Rates on 16 – 90 Day Paper



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WWI: Balance Sheet Size

- Nominal Terms – a "reasonable" comparison.
  - ~ 1916 $1.2 billion; 1918 $5.3 billion; 1919 $6.3 billion.
  - ~ 1920 $6.3 billion; 1921 $5.1 billion – a sharp contraction.
- Notable increase relative to GDP. (chart 2)
  - ~ 2.7% in 1916 to 7.9% in 1918.
  - ~ Peaks at 8.3% in 1919 but then fall to 5.9% in 1924.
- Similar Patter relative to M2.
  - ~ From 5.4% in 1916 to 18% in 1918.
  - ~ Peaks at 18.7% in 1919 but then falls to 12.6% in 1924.

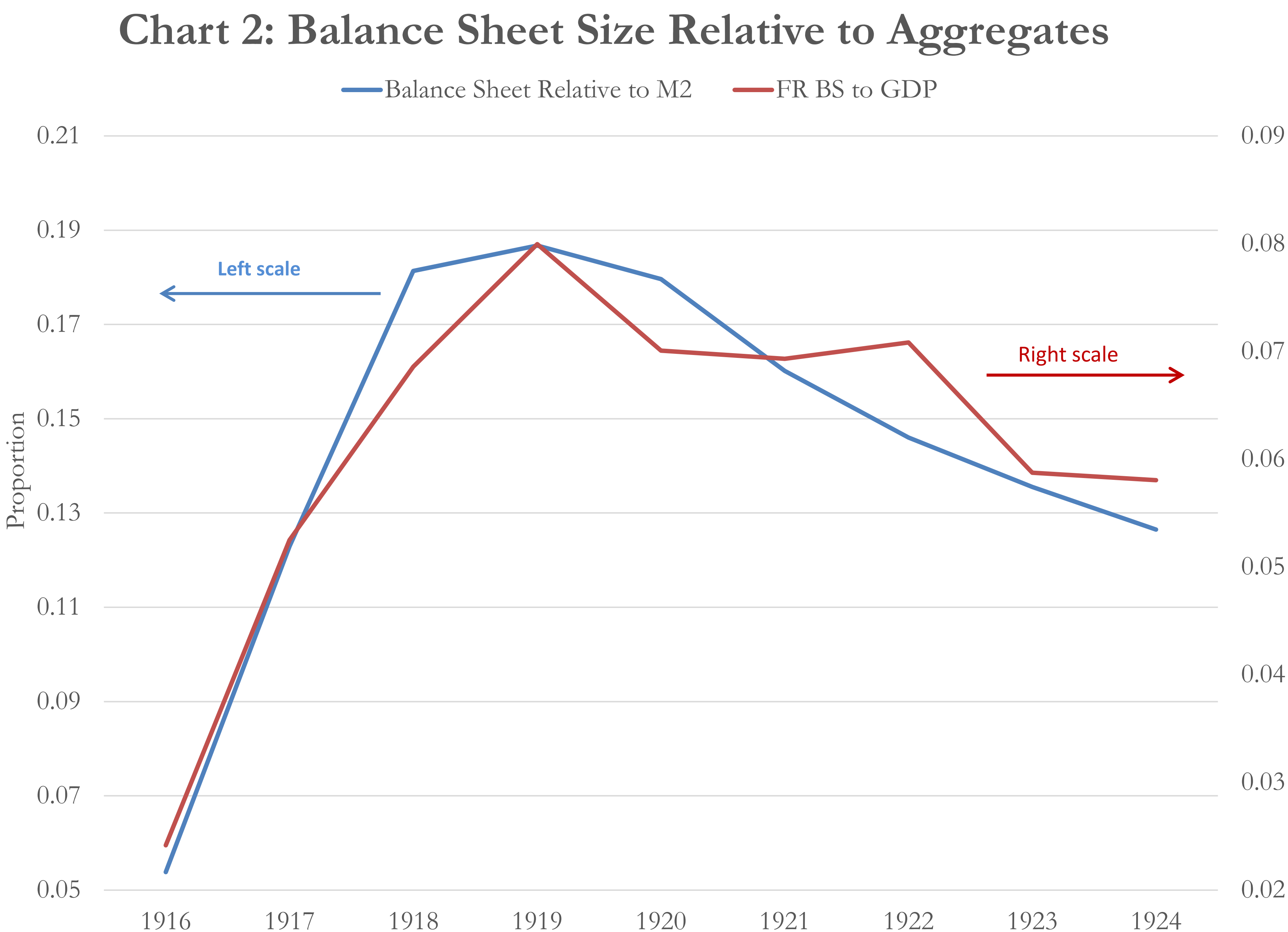
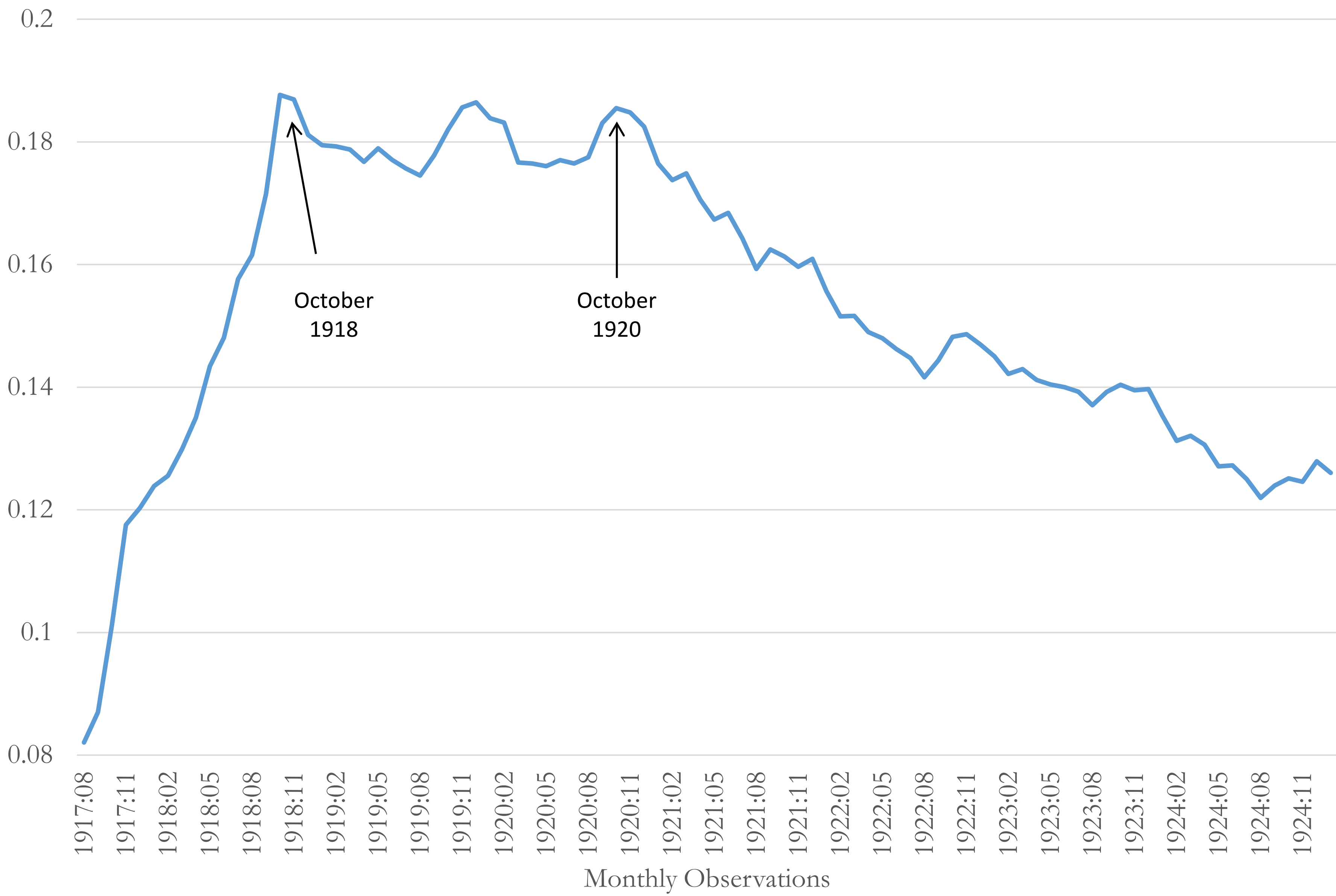


Chart 2: Balance Sheet Size Relative to Aggregates
Balance Sheet Relative to M2
FR BS to GDP
Left scale
Right scale
Proportion
0.21
0.19
0.17
0.15
0.13
0.11
0.09
0.07
0.05
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
1916
1917
1918
1919
1920
1921
1922
1923
1924

Federal Reserve Total Assets Relative to M2 (NBER)

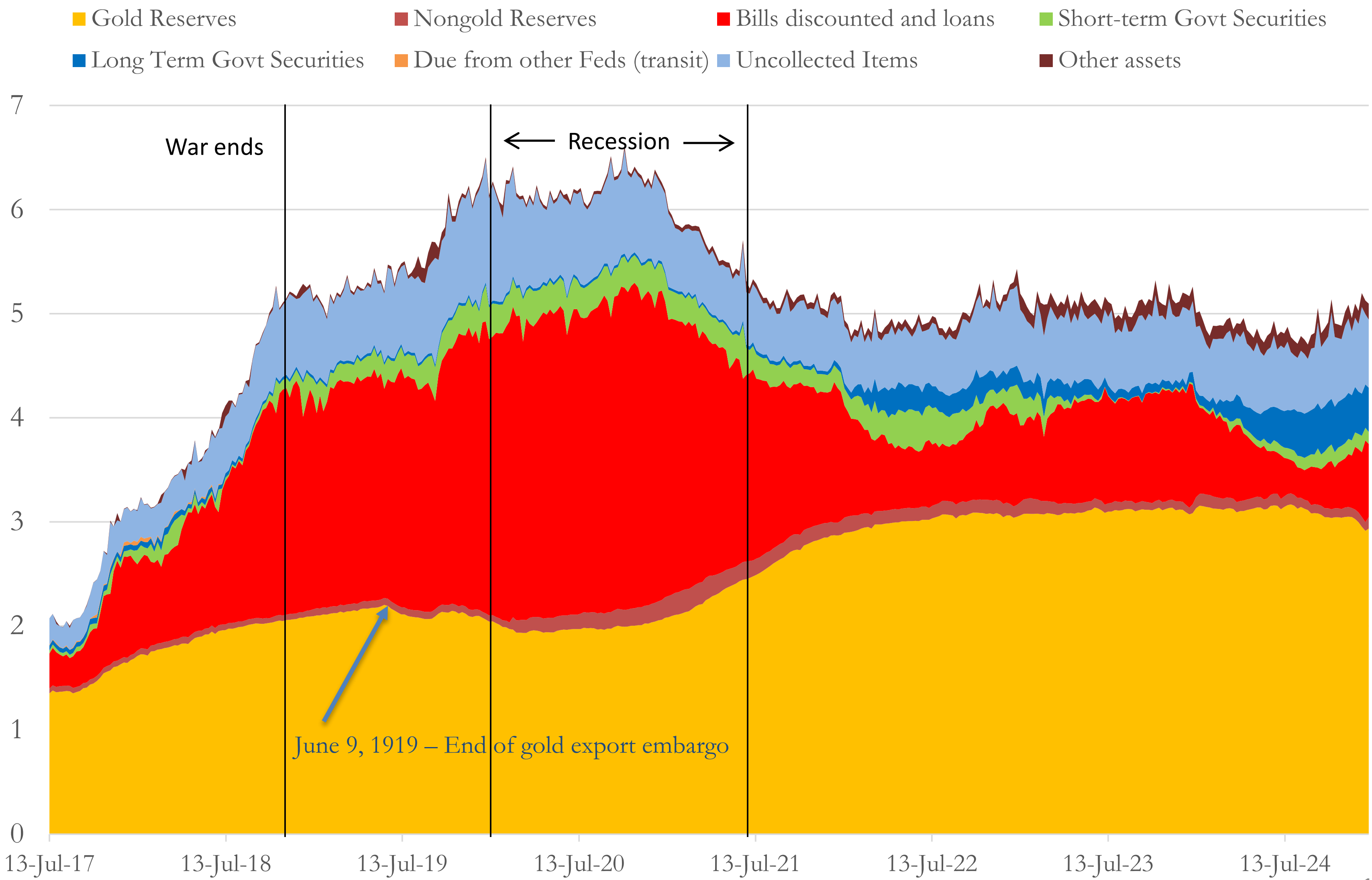


WWI: Balance Sheet Composition

- Gold inflows & embargo on outflows enable a relatively unrestrained increase in the balance sheet.
  - ~ Embargo lifted in mid-1919 leading to outflows. (chart 3)

- Sharp rise in member-bank borrowing.
  - ~ Borrowing increases from about 25% of balance sheet in early 1918 to 40% in October 1918.

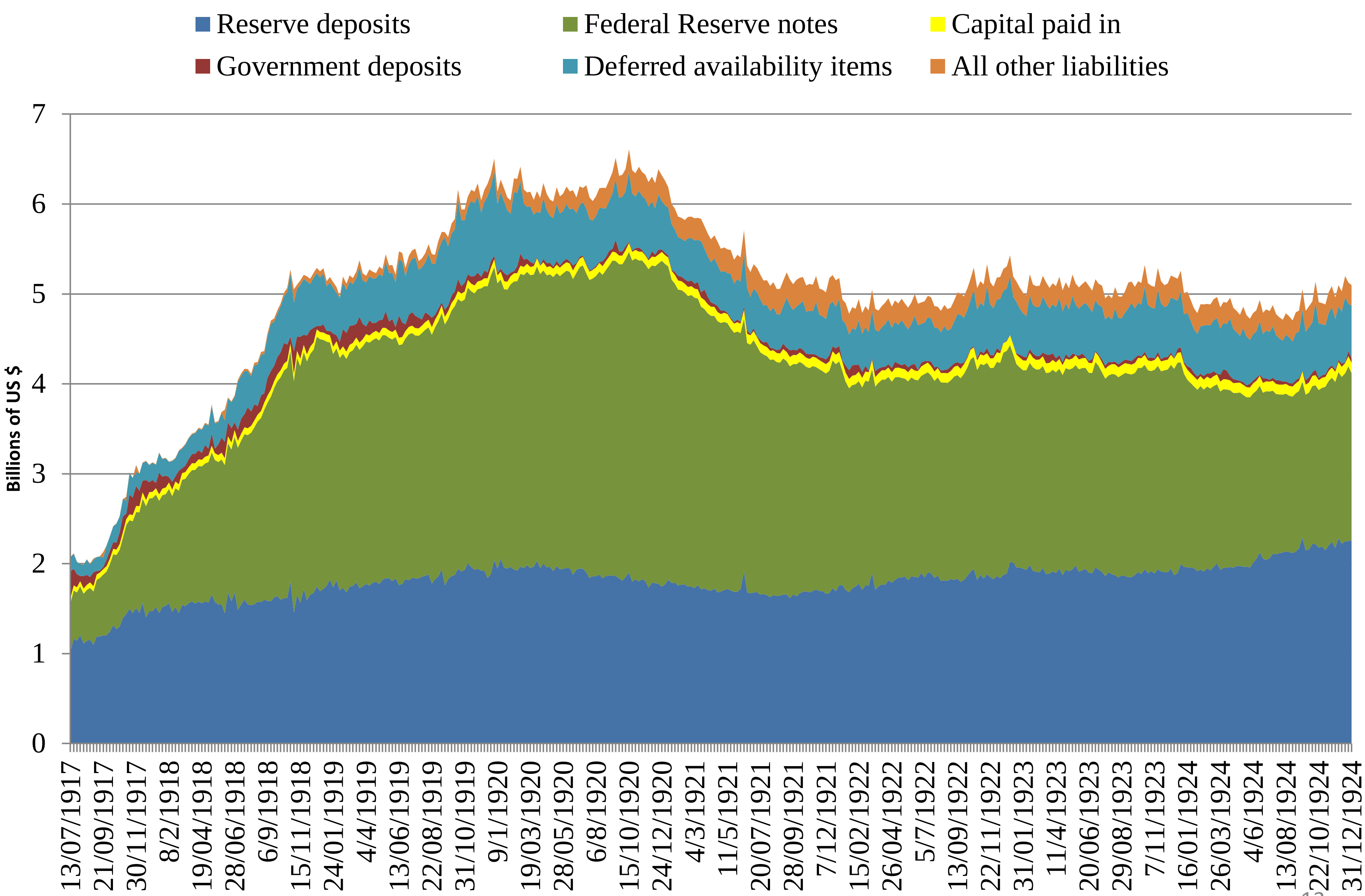
Chart 3: Federal Reserve System Assets: July 1917 to January 1925



WWI: Balance Sheet Liabilities

- Federal Reserve Notes increase. (Chart 4)
  - ~ Main liability to increase as balance sheet expanded.
  - ~ Relatively minor increase in bank reserves.
    - Limited bank credit contraction when Fed increased rates.

Chart 4: Federal Reserve System Liabilities: July 1917 to December 1924



Post War Financial Stability

- 1919 “unlimited demand for credit,” “speculation in commodities,” “no incentive … to produce cheaply.”

- Treasury Secretary Carter Glass:
  - ~ Preferred “moral suasion” or “direct pressure” to limit credit to “speculative” enterprises.
  - ~ Preferred to avoid discount-rate increase.

- FRBNY Governor Benjamin Strong:
  - ~ Raising interest rates only way to slow credit accumulation.
  - ~ Discount rate *vs*. Stock Index. (chart 5)

- Preferential rates remain in force –heavy borrowing. (chart 1)

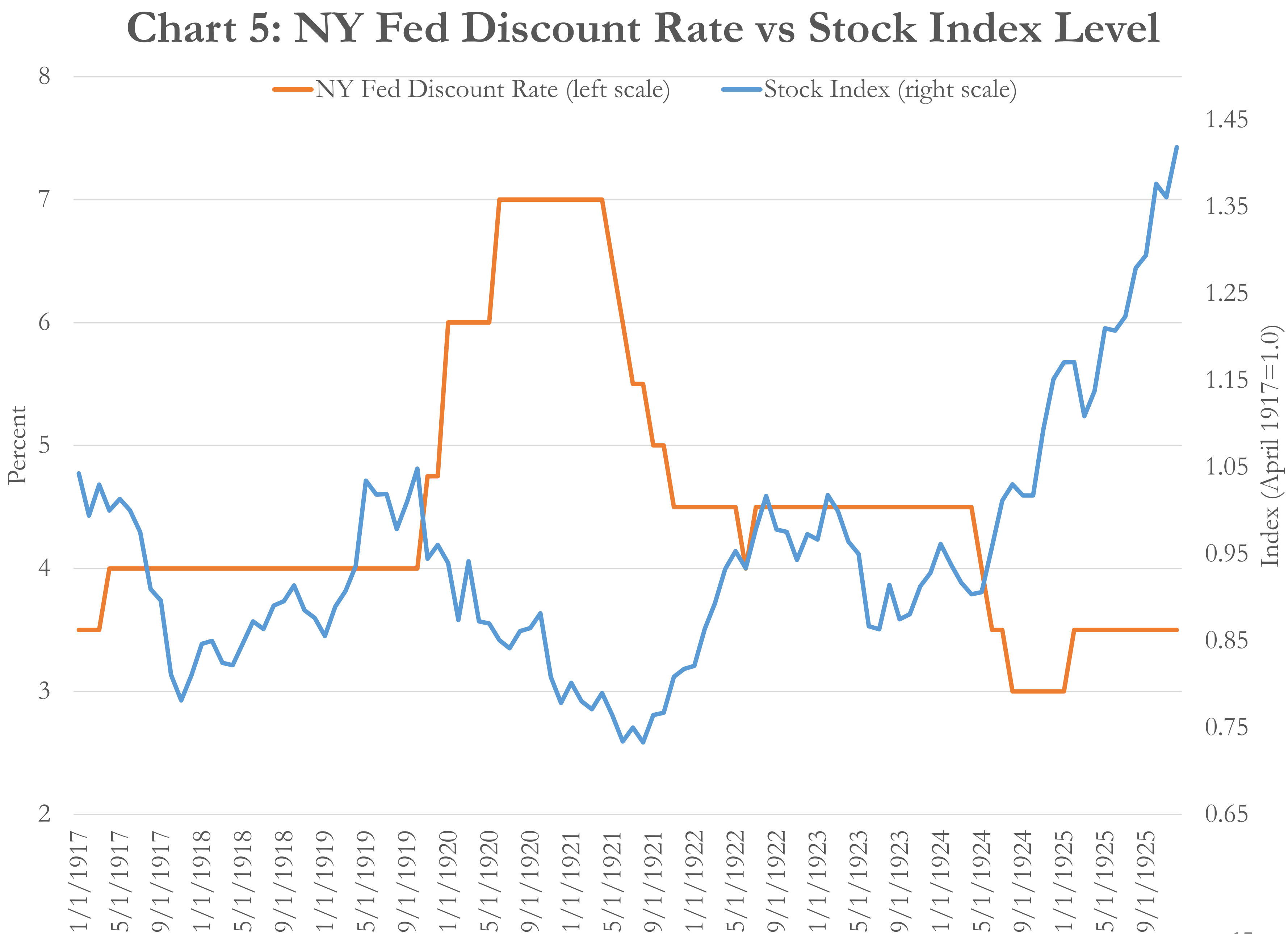


Chart 5: NY Fed Discount Rate vs Stock Index Level
NY Fed Discount Rate (left scale)
Stock Index (right scale)
Percent
Index (April 1917=1.0)
8
7
6
5
4
3
2
1.45
1.35
1.25
1.15
1.05
0.95
0.85
0.75
0.65
1/1/1917
5/1/1917
9/1/1917
1/1/1918
5/1/1918
9/1/1918
1/1/1919
5/1/1919
9/1/1919
1/1/1920
5/1/1920
9/1/1920
1/1/1921
5/1/1921
9/1/1921
1/1/1922
5/1/1922
9/1/1922
1/1/1923
5/1/1923
9/1/1923
1/1/1924
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5/1/1925
9/1/1925

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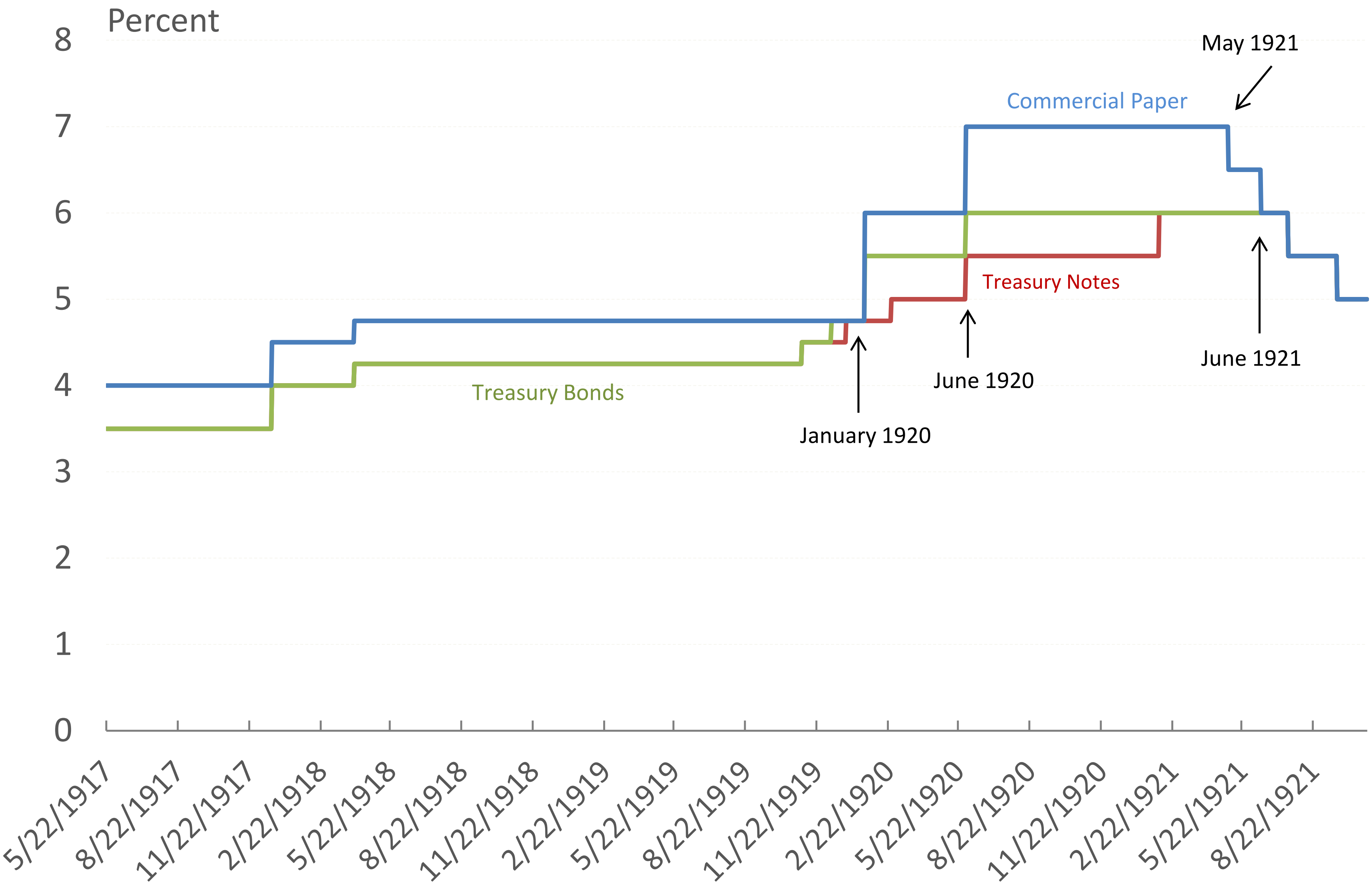

Post War Financial Stability

- Gold outflows when embargo ends in June 1919.
  ~ Reserve ratio (notes & deposits) falls to 40.6%.
  ~ Fear about leaving the gold standard.

- Sharp hike in discount rate: (chart 1)
  ~ Up 1.25% to 6% in January 1920 and to 7% in June 1920.
  ~ Preferred rates remain in force.
  ~ Discount window borrowing expands until early 1921.
  ~ Balance sheet contracts (chart 3).
  ~ Composition of discount window changes in 1919

- Recession begins in January 1920; ends in July 1920.

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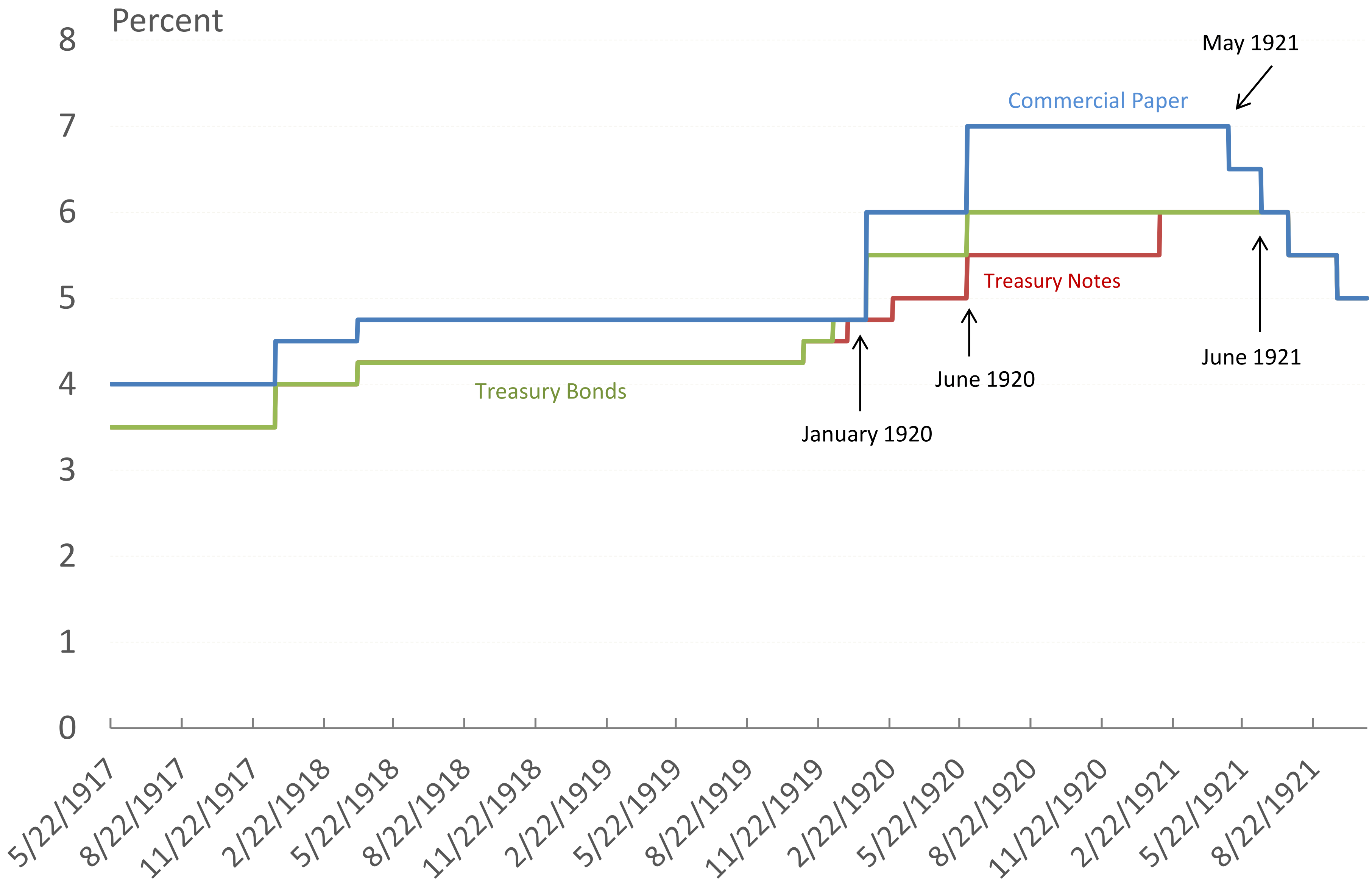

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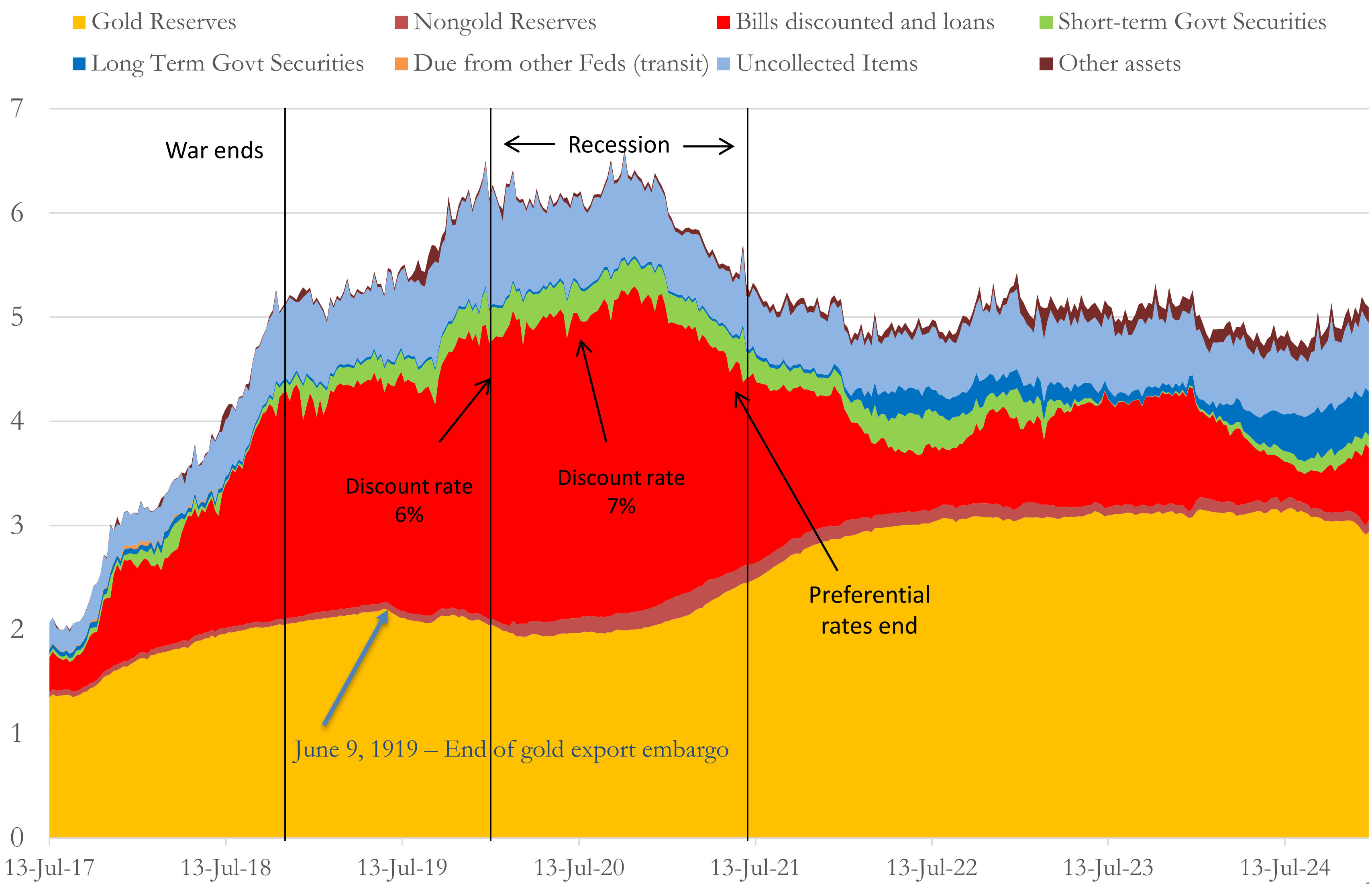
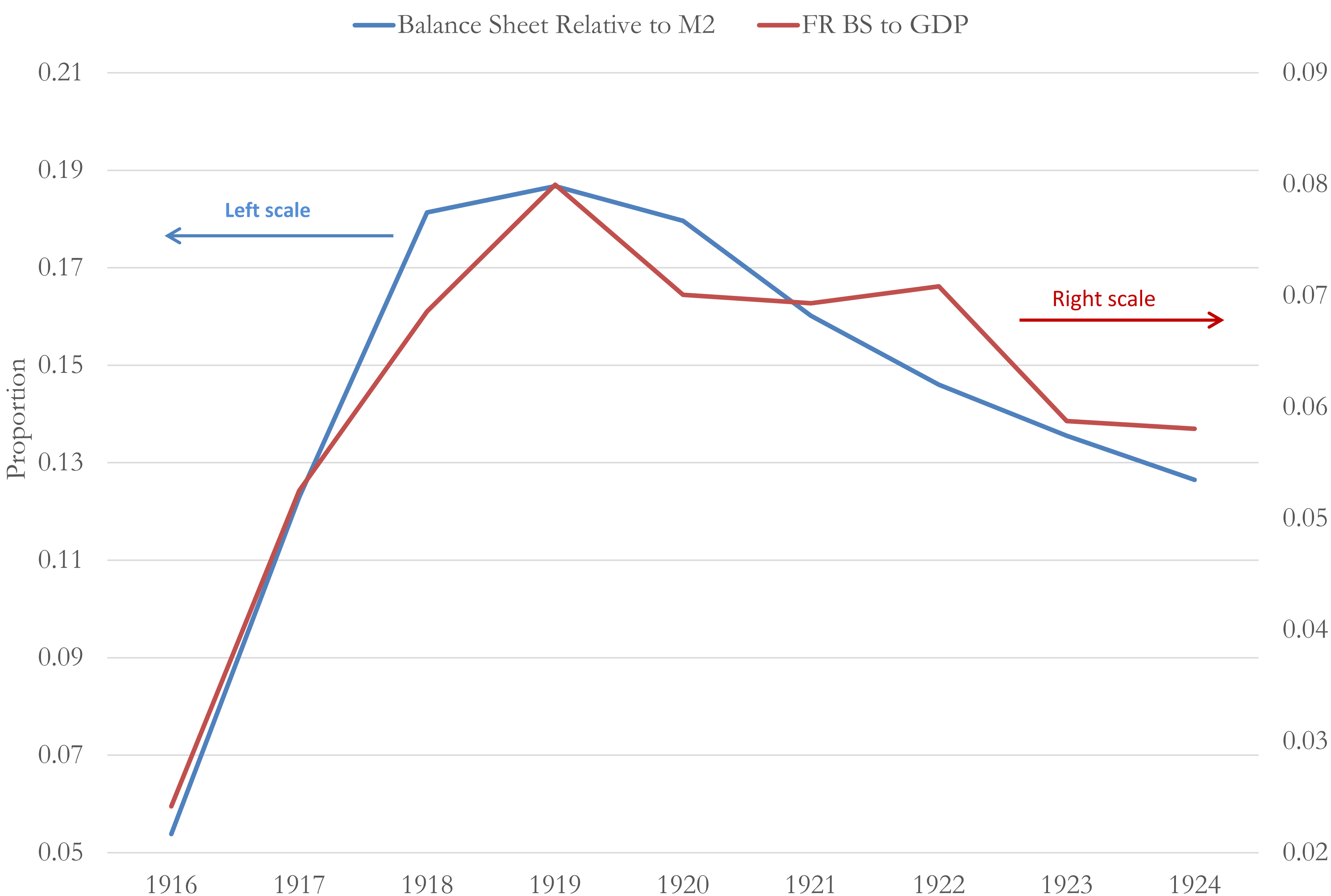


Chart 1: Balance Sheet Size Relative to Aggregates



Post War Fiscal Policy

- Reduction in balance sheet after 1919.
  - ~ Beginning in FY1920, federal government primary surplus until 1930.
  - ~ Federal debt fall peaks at 32% of GDP in 1921 and 1922, then falls until 1930.

- Fed balance sheet policy as part of "independence".
  - ~ Initiatives by Strong get monetary policy to be driven by Fed and not Treasury.
  - ~ Balance sheet reduction – part fiscal (Treasury debt reductions) and response to Fed interest rate policies.

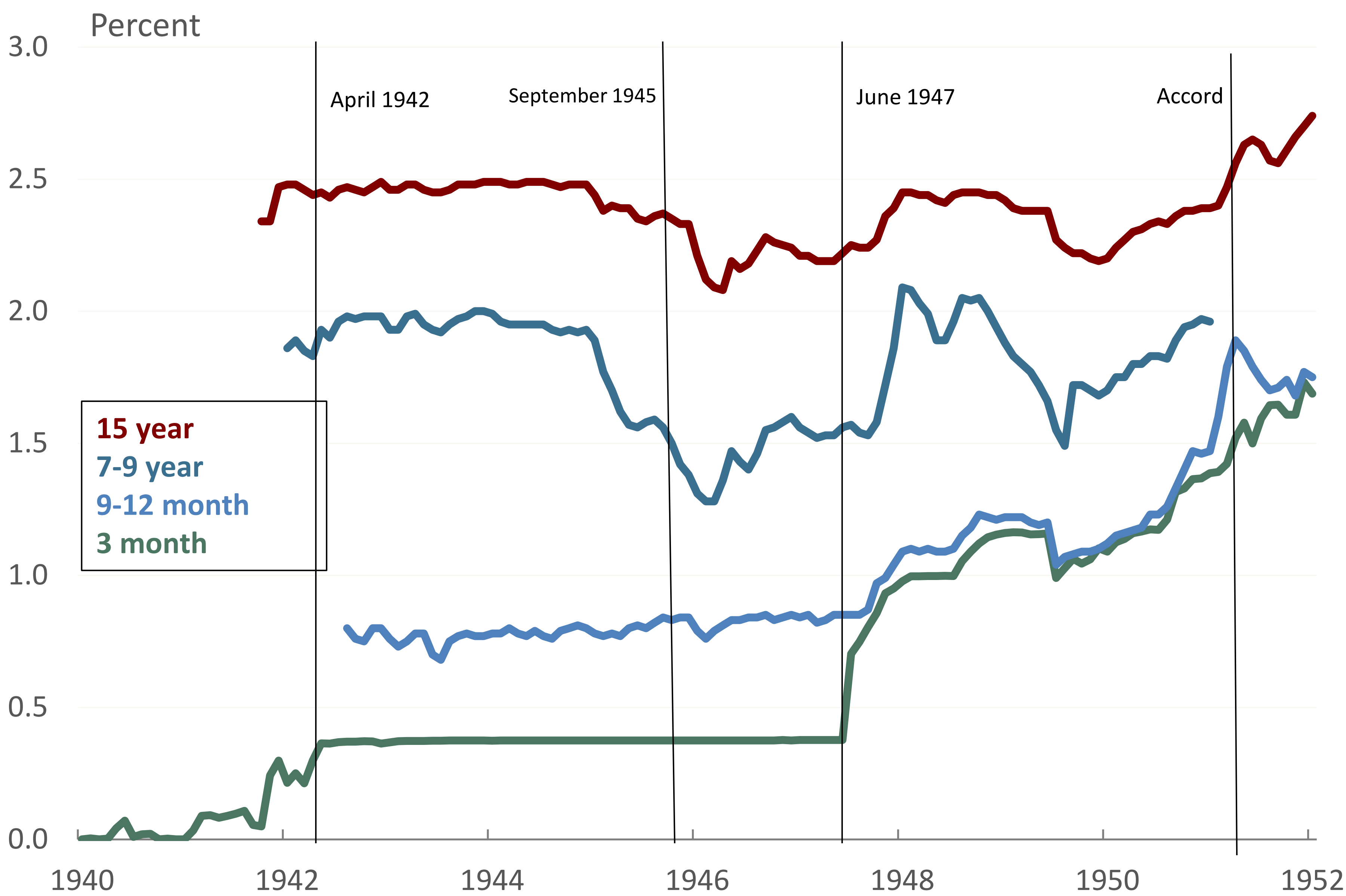
WWII: Interest Rate Control

- Federal Reserve is more independent.

- Federal Reserves agrees to help finance the War.
  - Debt-management concerns trump inflation concerns.

- Federal Reserve adopts a yield-curve policy.
  - Cap long-term Treasuryies at 2.5%.
  - Peg T-bills at 0.375%; cap certificates at 0.75%.
  - Cap other rates in a consistent manner.
  - A low and steep yield curve.

Chart 6: Select Interest Rates 1940-1952



WWII: Balance Sheet

- Federal Reserve's balance-sheet expands.
  - ~ Investors prefer now-liquid long-term rates and sell bills/ certificates to the Fed.
  - ~ Fed does not intervene in long-term market.
  - ~ Almost all short-term Treasuries.
  - ~ Balance sheet expands:
    - reaching 22 % of GDP in 1940 — Gold .
    - reaching 41 % of M2 in 1940 — Gold.

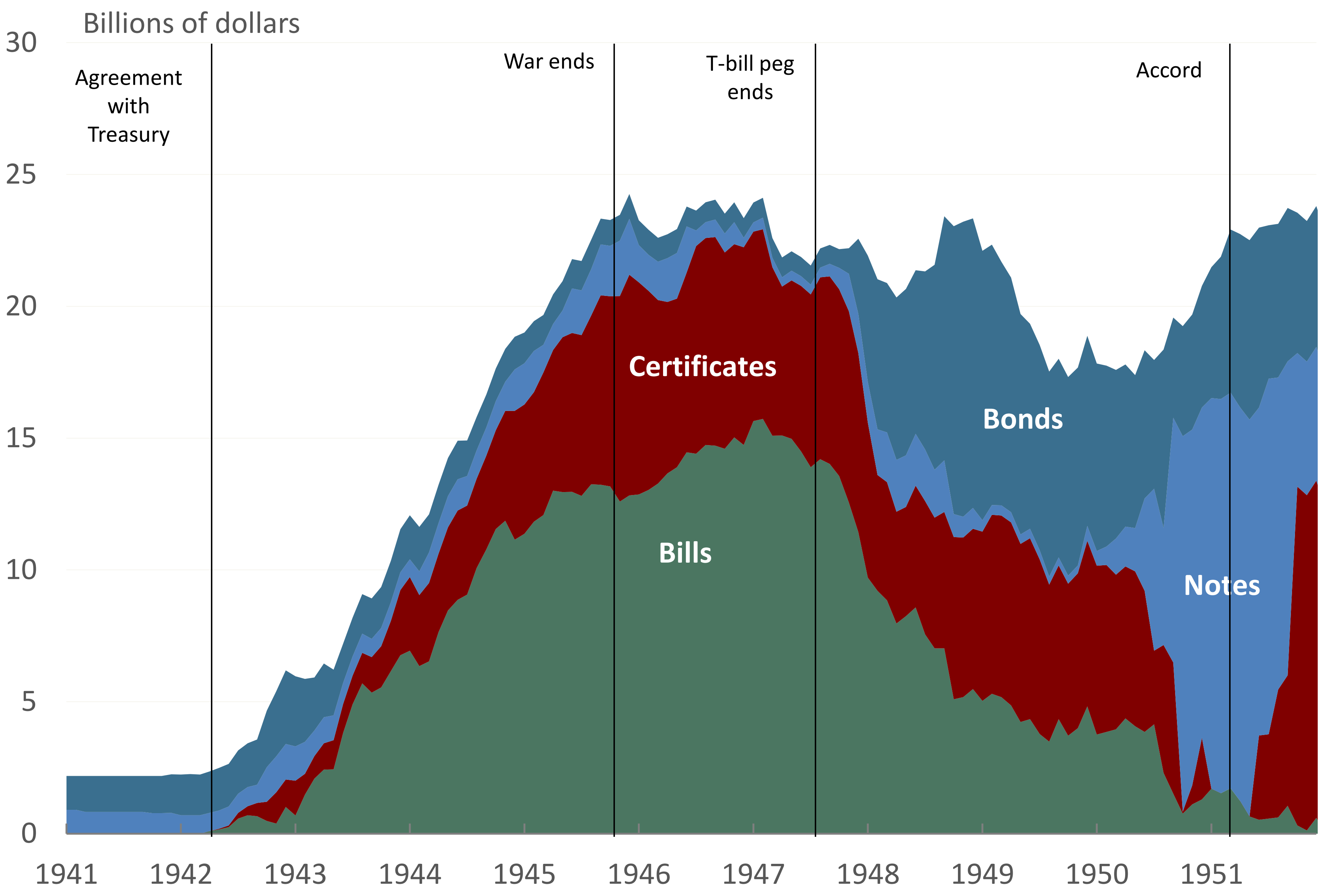
- Fed continues debt-management policies after 1945.
  - ~ Treasury refinance operations.
  - ~ Concern about bank balance sheets—capital losses on long-term Treasuries

SOMA vs. Balance Sheet

- System Open Market Committee (SOMA)
  - ~ Contains only assets shared by the Federal Reserve System.
  - ~ Contains no gold or other assets held on the balance sheet of specific reserve banks.
  - ~ These are held on the consolidated balance sheet.

- Distinction is not so important today, but was more important during WW2 and, especially during WWII.

Chart 7: SOMA 1941-1951



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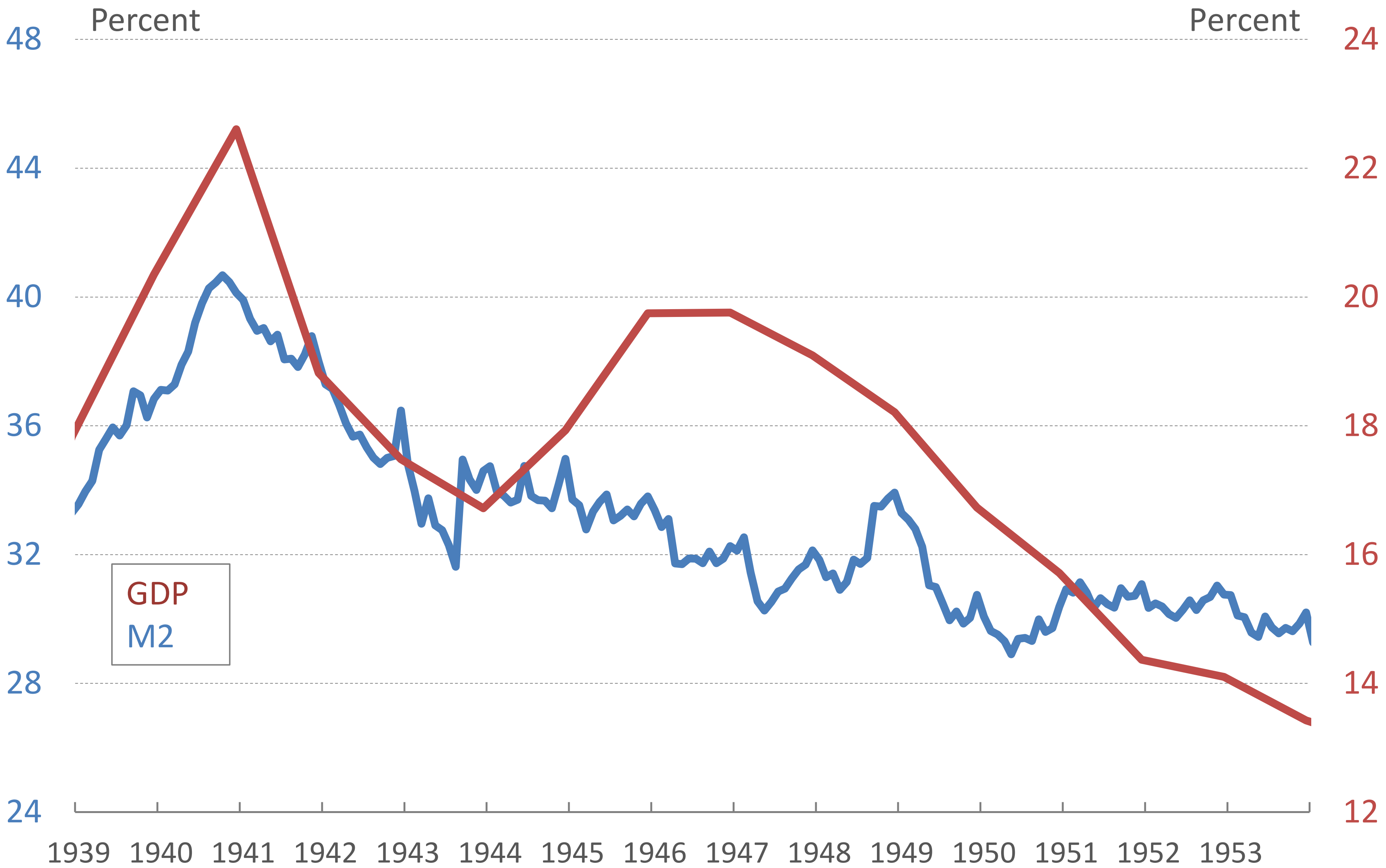
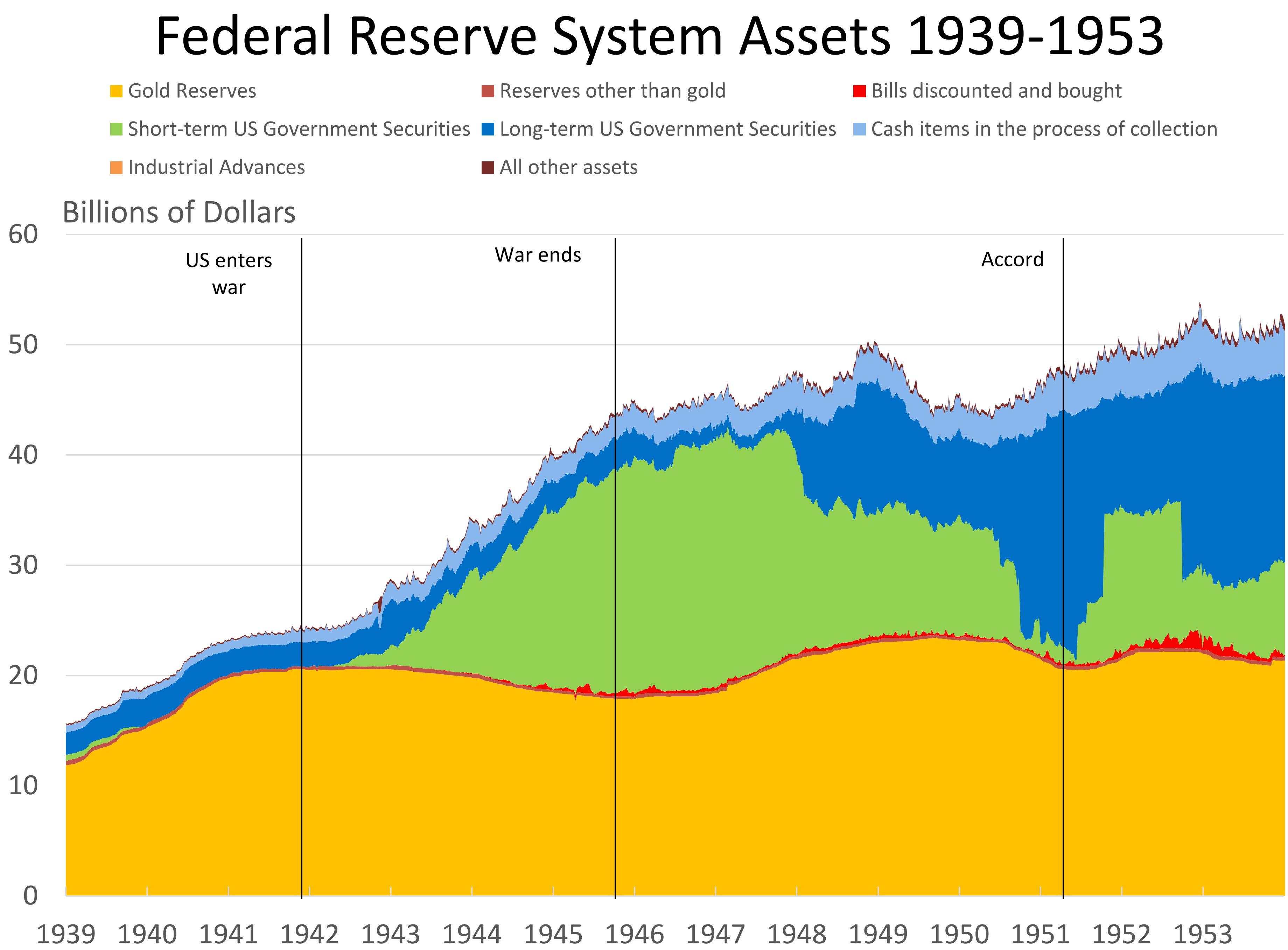
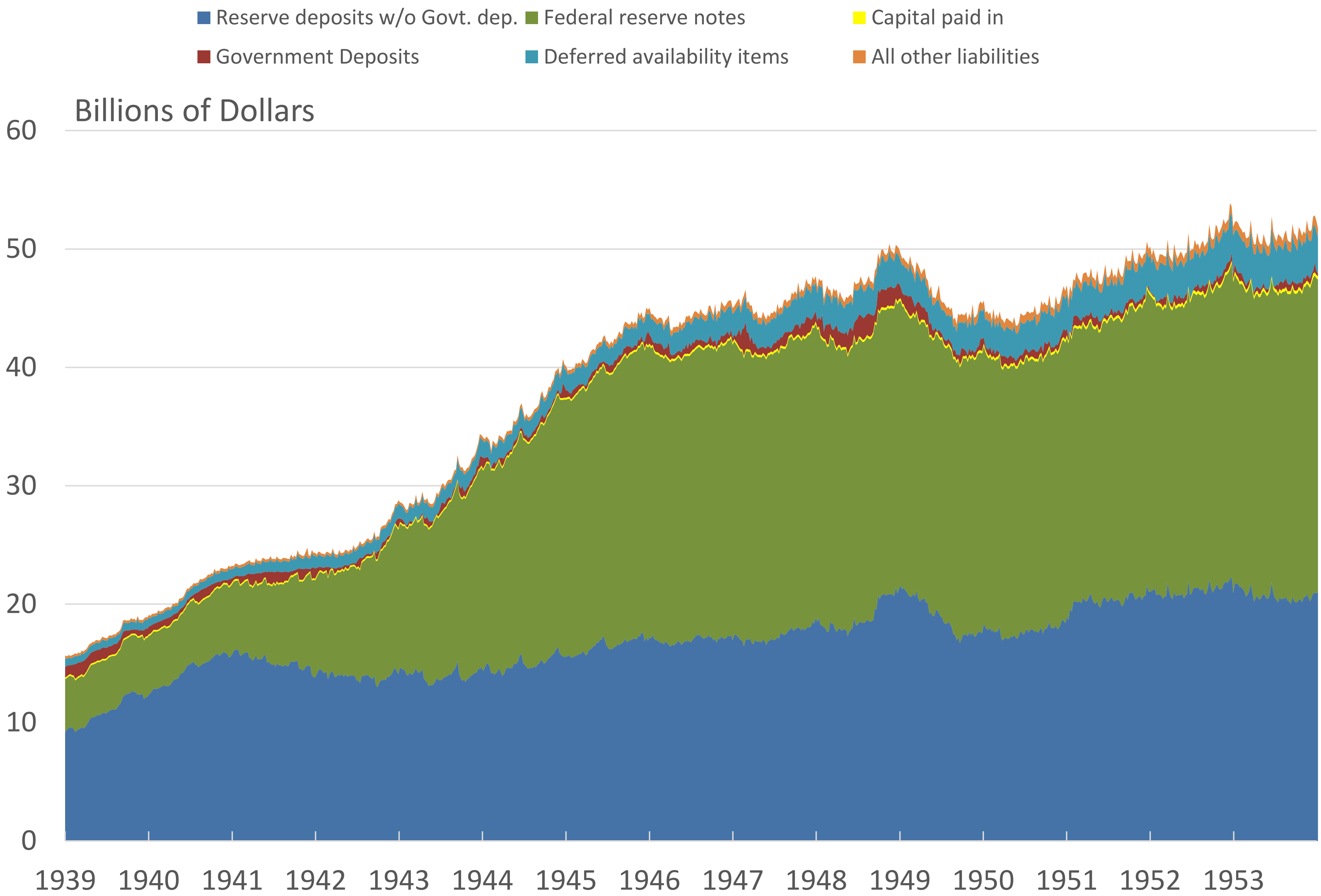
Balance Sheet Size Relative to GDP and M2




Federal Reserve System Assets 1939-1953
Gold Reserves
Reserves other than gold
Bills discounted and bought
Short-term US Government Securities
Long-term US Government Securities
Cash items in the process of collection
Industrial Advances
All other assets
Billions of Dollars
60
50
40
30
20
10
0
US enters war
War ends
Accord
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953

Federal Reserve System Liabilities 1939-1953



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WWII: Post War Strategy

- Fed seeks to flatten yield curve.
  - ~ Treasury permits increase in short-term rates beginning in 1947.
  - ~ Investors (banks) liquidate holding of long-term debt.
  - ~ Fed buys long-term Treasuries; sells short-term Treasuries.
  - ~ Portfolio composition changes.

- Fed-Treasury Accord in March 1951.
  - ~ 1949 Congressional support for a Fed focus on monetary policy.
  - ~ Korean War inflation fears.
- Fed does not

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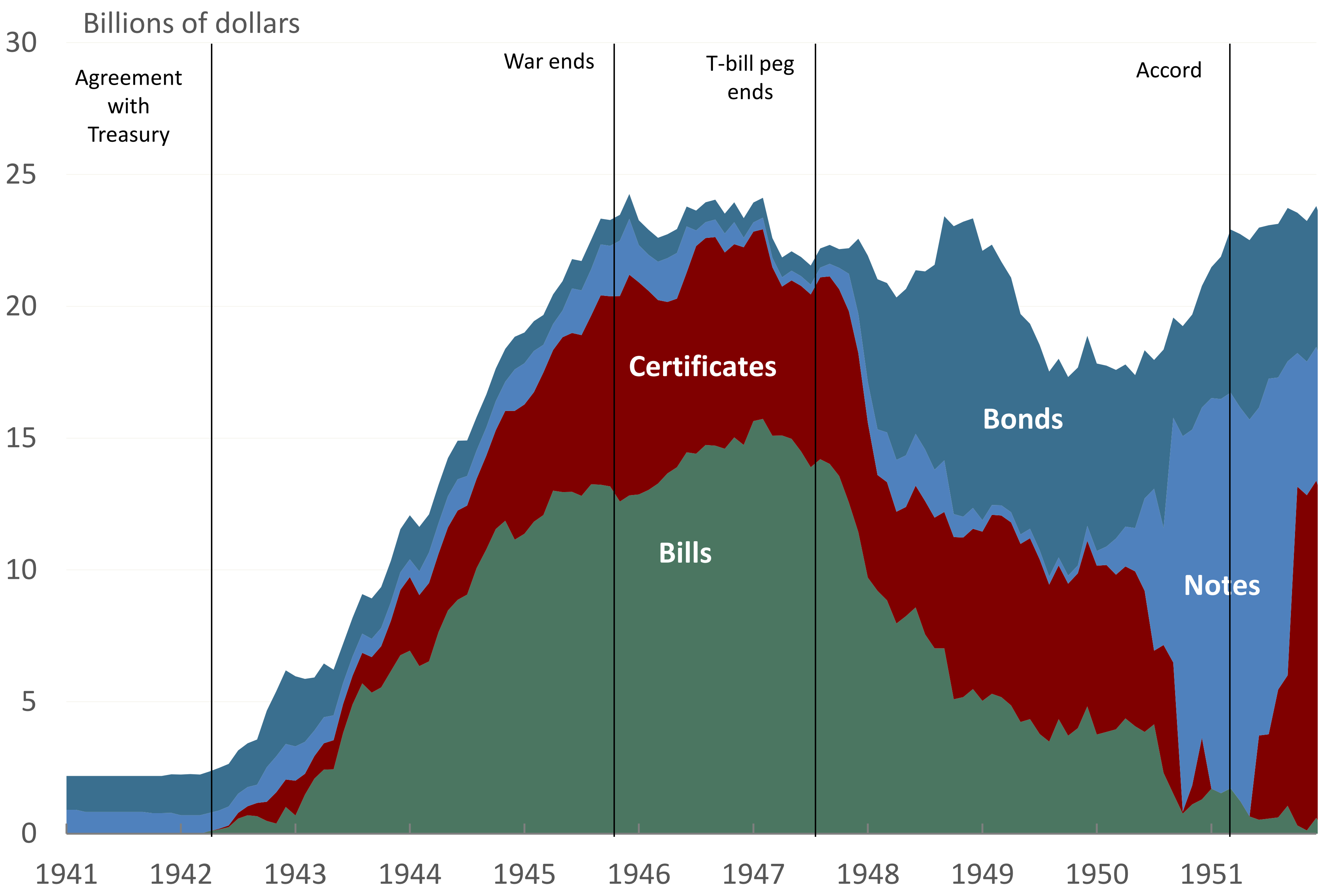

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Post-Accord Policy

- Fed does not entirely withdraw for debt management.
  - ~ Supports Treasury plan minimize bondholder loss.
  - ~ Supports Treasury offerings in 1951 – 1952.

- Fed adopts "bills only" for credibility.
  - ~ controversial with Fed and among economists.
  - ~ ends with Operation Twist in 1960.

- Fed adopts "even keel"
  - ~ No change in monetary policy during Treasury financing operations.
  - ~ Ends in mid-1975, when Treasury adopts auction techniques.

Fiscal Policy

- Beginning in FY 1947, federal government runs a primary fiscal surplus (except in 1953) until late 1960s.
- Federal debt burden falls until 1975.
- Benign economic outcomes and more moderate reduction in balance sheet than for WW I.
- Fiscal debt contraction and more monetary-policy "independence" with Fed Treasury accord

Current Issues and Lessons from Past

- Likely outcome for near term: Fed will contract the balance sheet as federal debt expands – interest rates may rise.

- Lessons? During the wars, the Fed balance sheet and federal debt moved together.
  - ~ As they expanded, Fed kept the costs cost of issuing and servicing the Treasury's debt low.
  - ~ As they contracted, Treasury surpluses reduced debt outstanding, facilitating Fed balance-sheet reduction.

Current Issues and Lessons from Past

- Not comparable to current outlook – fiscal dominance?
  - ~ Fed LSAPs and other policies verged on fiscal policy.
  - ~ No direct fiscal dominance of monetary policy in contrast to world wars.
  - ~ Balance-sheet reduction during fiscal-debt expansion may have fiscal consequences that challenges to monetary policy independence from fiscal sources.
  - ~ Fiscal expansion during a balance-sheet contraction makes challenges the credibility of monetary action (see Sims 2016).

Current Issues and Lessons from Past

- **WW II – Treasury views excess reserves as close substitute for Treasuries.**
  - ~ Treasury – minimizing its debt cost – favored financial repression
  - ~ Not an option today with interest on excess reserves paid by Fed.
  - ~ Does paying interest of excess reserves create an unacceptable fiscal challenge?

Current Issues and Lessons from Past

- Another lessons? Speed of return to normal matters. om WW1
  - ~ WW1 discount window supported balance sheet growth
    - Steep increase in discount rate.
    - Rapid reduction of balance sheet.
    - Severe recession followed.
  - ~ WW2 gradual balance sheet reduction.
    - More benign economic outcomes.

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