



This Is Not Your Father's Business Cycle!

December 2010

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Both Main Street and Wall Street Were Damaged by the Bursting of the Housing Bubble



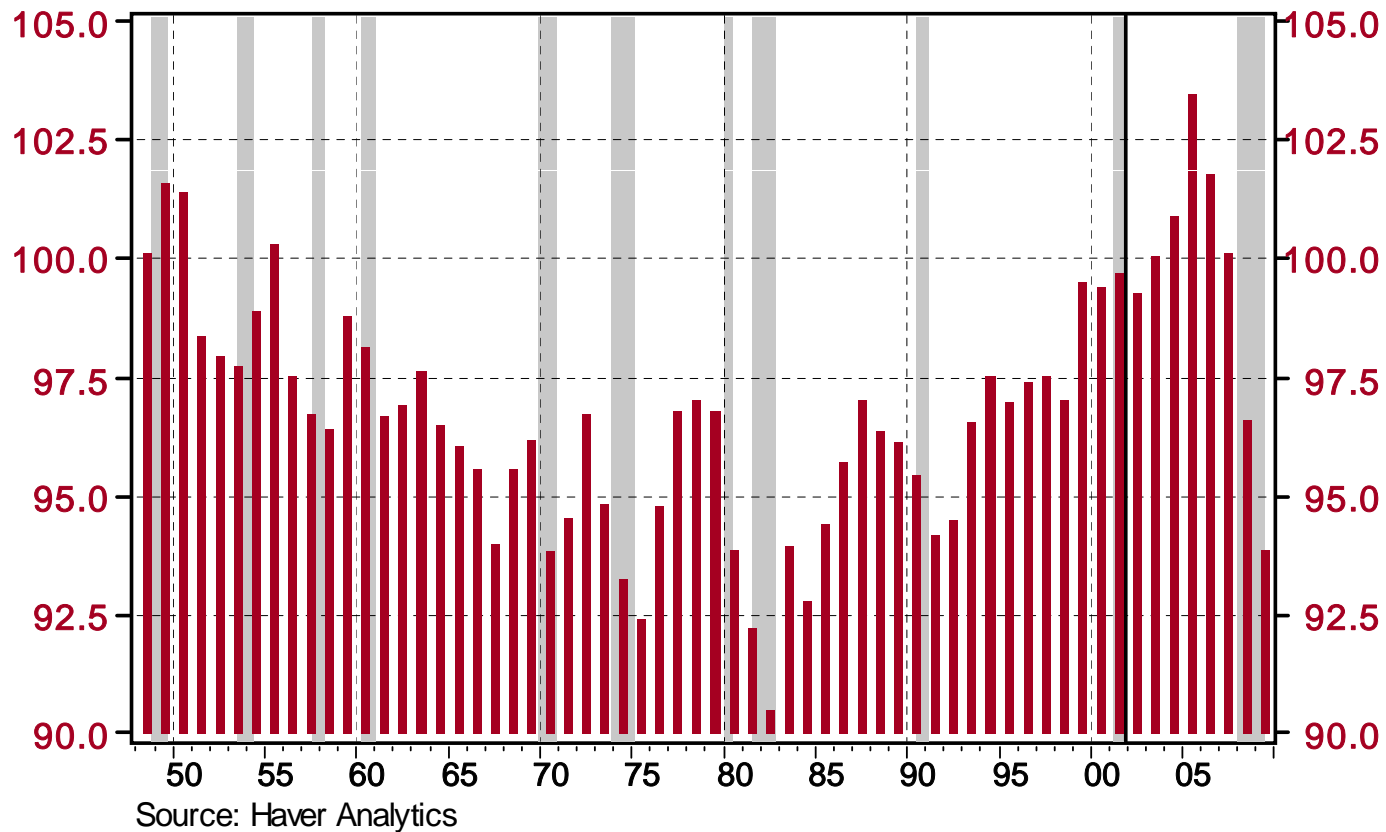
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During the last expansion, the sum of consumer and residential investment expenditures often exceeded household after-tax income, hitting a record high in 2005. How did we do it?

Sum of Consumer and Residential Inv. Expend./ HH After-Tax Income

%



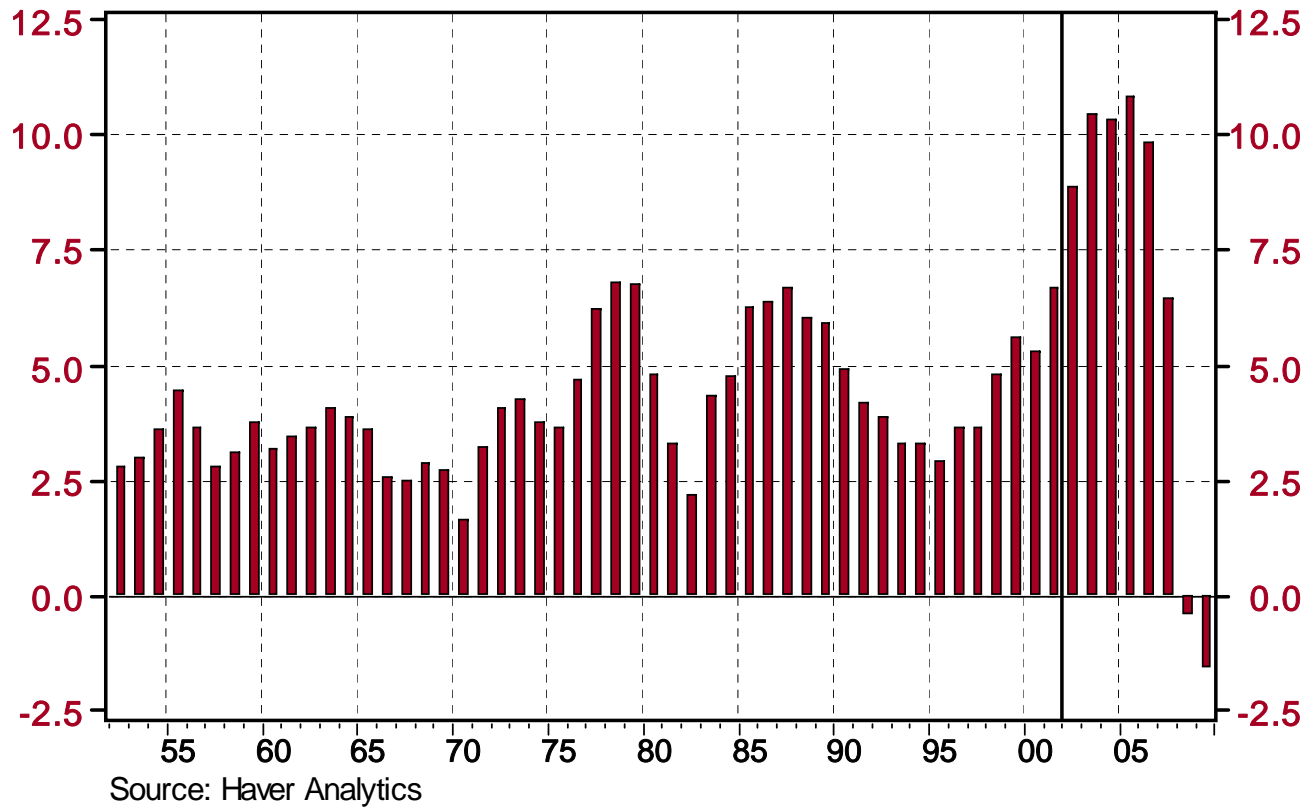
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By purchasing homes with only small downpayments and borrowing against the rapidly rising values of our homes.

Home Mortgage Borrowing / Sum of Consumer and Resid. Investment Expend.

%

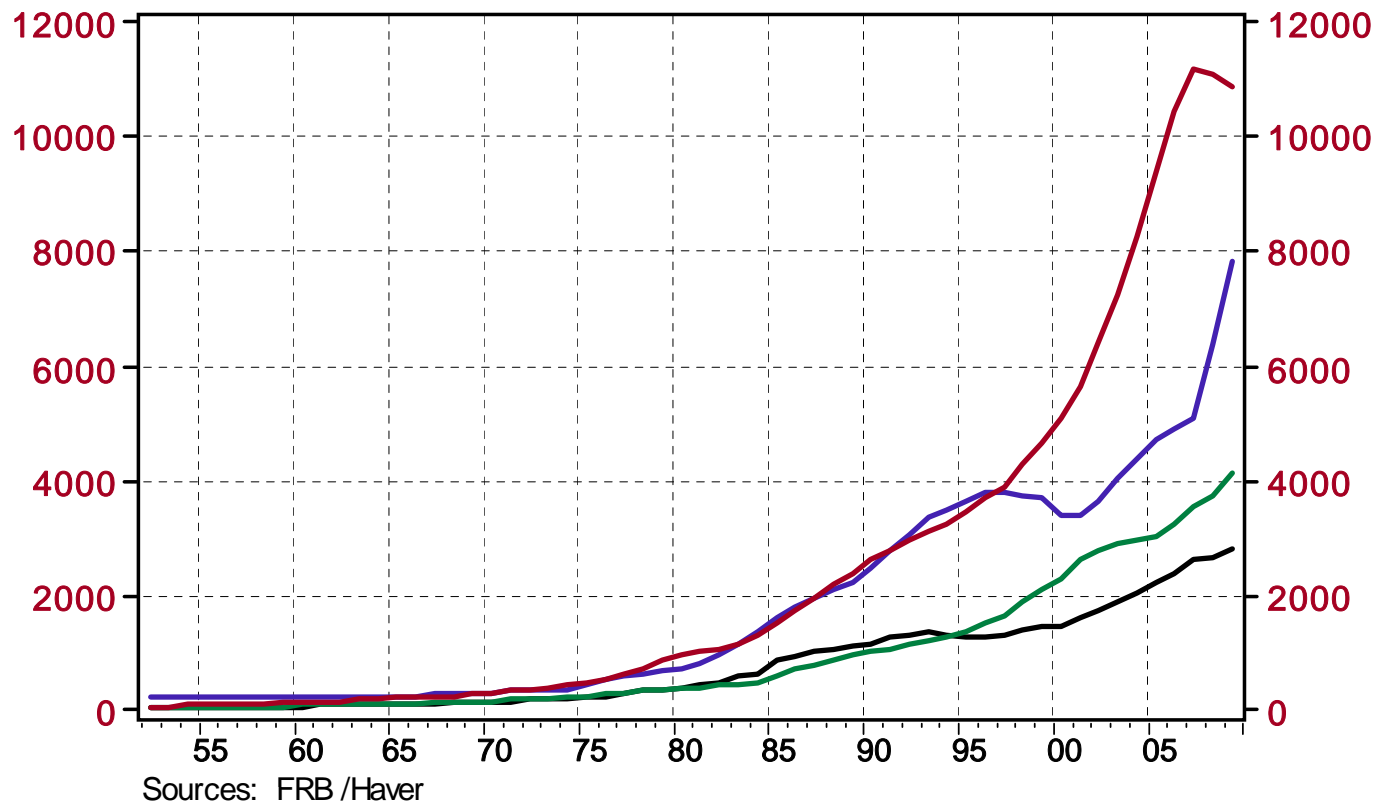


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Home mortgages have become the single largest category of debt in the economy, reaching a record high of 35.8% of nonfinancial debt in 2006.

Private Nonfinancial: Liabilities: Home Mortgages (NSA, Bil \$)
U.S. Government: Liabilities: Credit Market Instruments (NSA, Bil \$)
Nonfarm Nonfinancial Corporate Bus: Liabilities: Corporate Bonds
Domestic Nonfinancial: Liabs: Municipal Securities (NSA, Bil.\$)

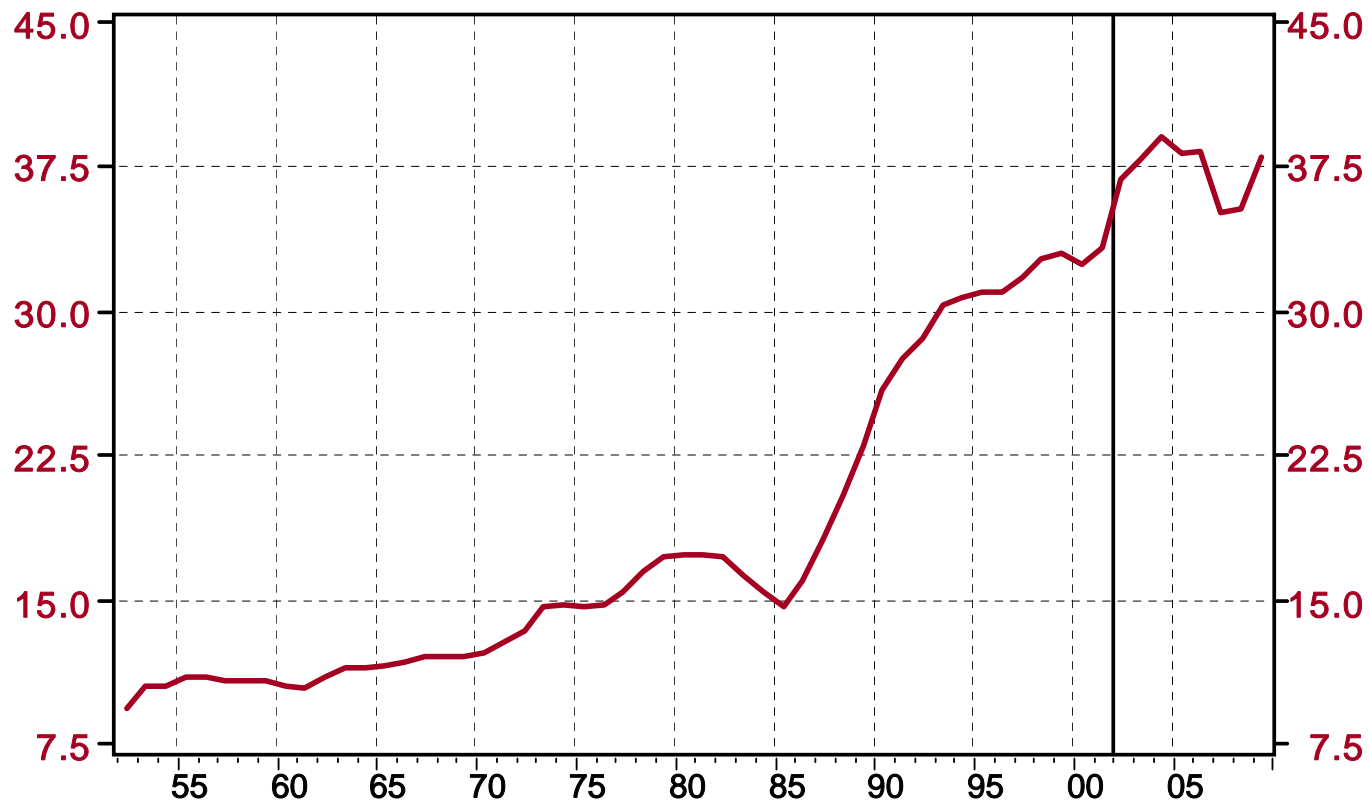




The commercial banking system continued to load up on home mortgages in one form or another.

Commercial Banks: Home Mortgage-Related Assets / Ttl. Loans & Securities

%



Source: Haver Analytics



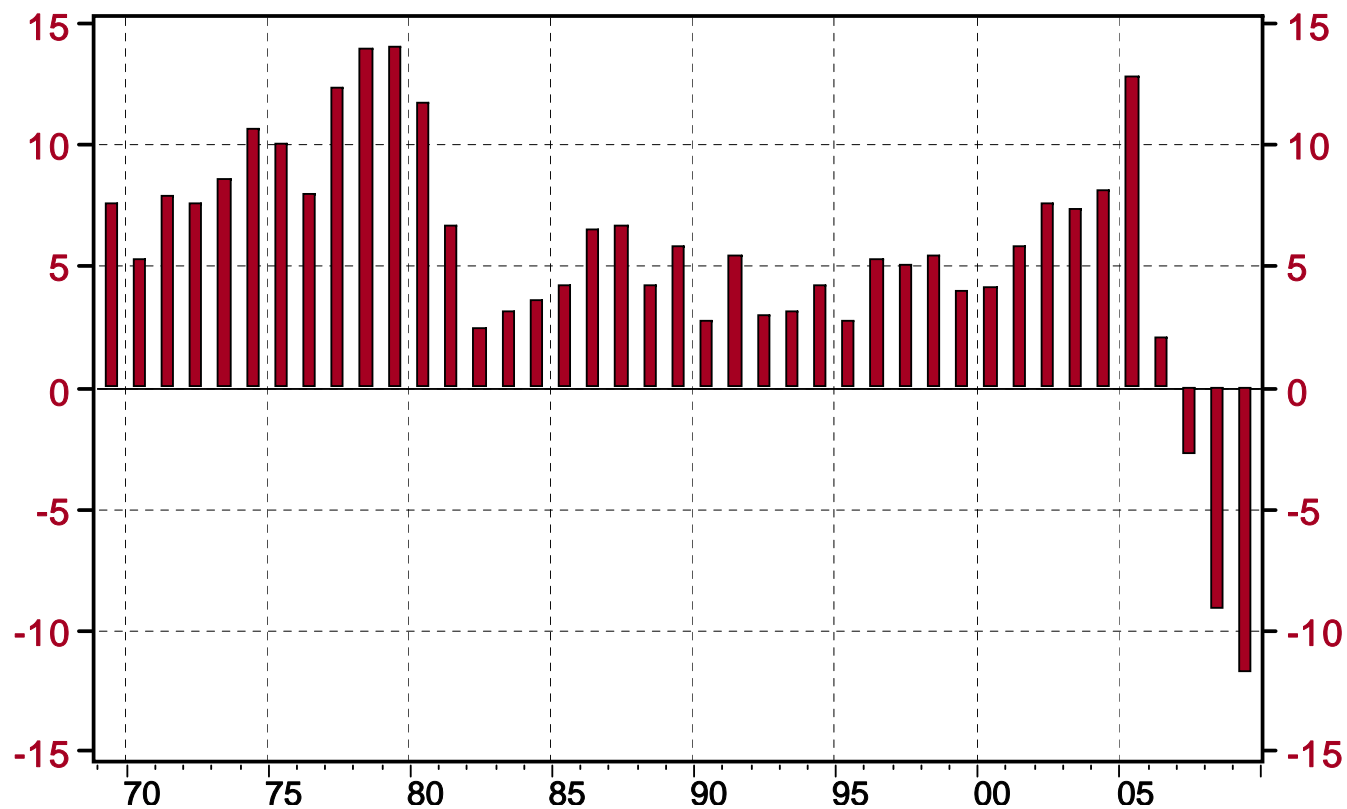
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And then the unthinkable happened – house prices fell!

NAR Median Sales Price: Existing 1-Family Homes, United States

% Change - Year to Year \$



Source: National Association of Realtors /Haver Analytics



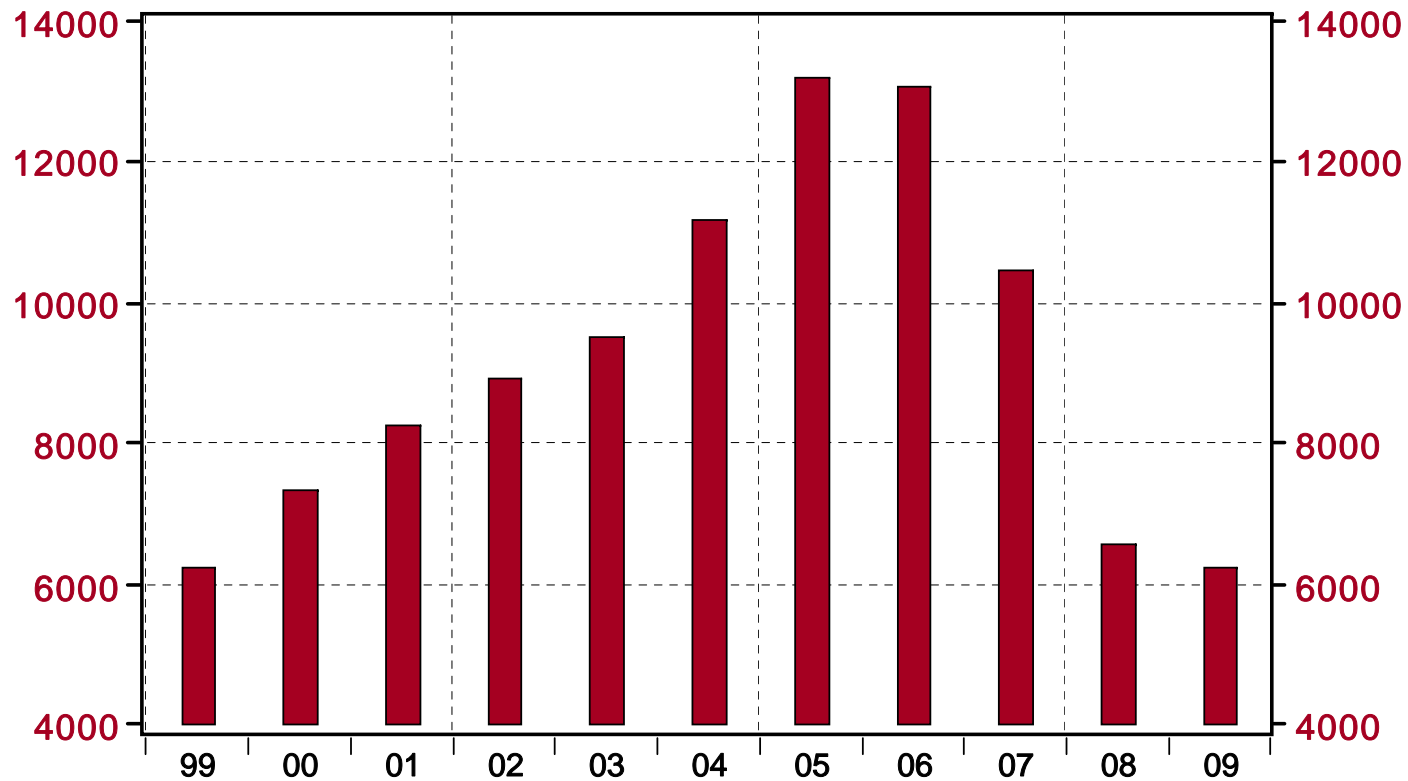
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“Homeowners” saw their equity drop by almost \$7 *trillion* from the end of 2005 to the end of 2009, putting this equity back where it was 10 years earlier.

Households & Nonprofit Organizations: Owners Equity in Real Estate

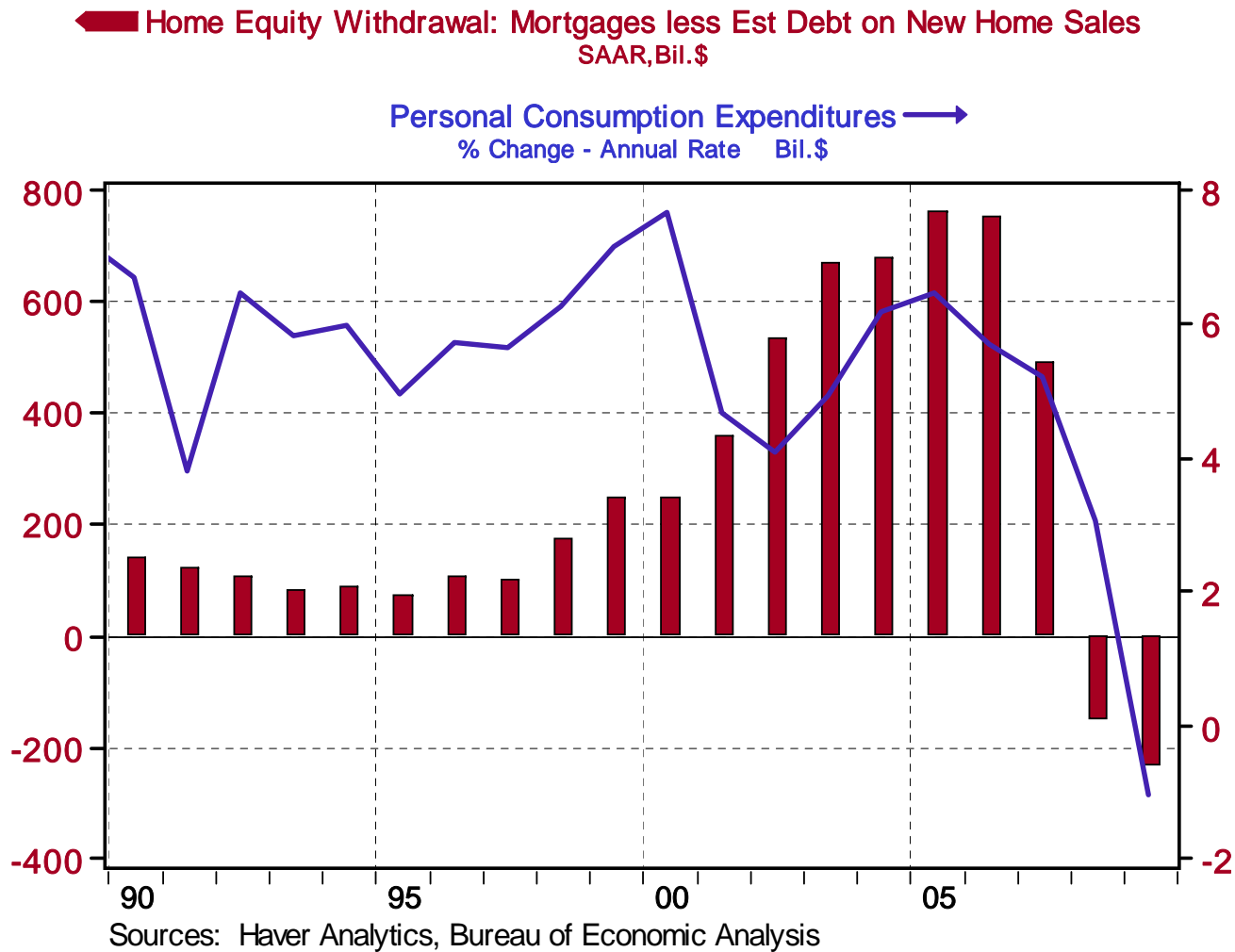
NSA, Bil \$



Source: Haver Analytics



With home equity collapsing, so has home equity borrowing, crimping household spending power.

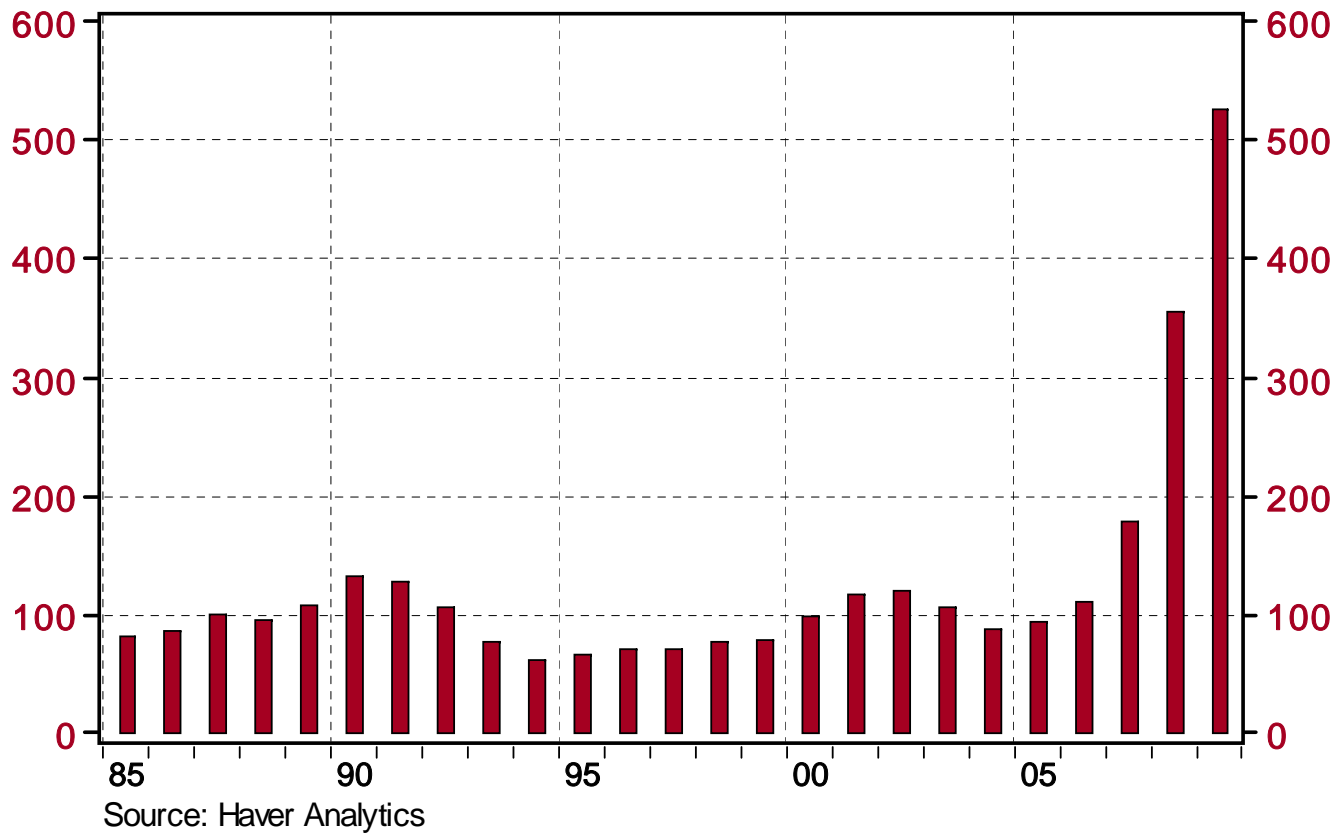




The bursting of the housing bubble and the ensuing deep recession resulted in the sum of bank loan charge-offs and delinquencies going from \$91.4 billion at the end of 2005 to \$525.3 billion at the end of 2009.

Commercial Bank Total Loans & Leases: Sum of Charge-Offs & Delinquencies

\$ Bill.

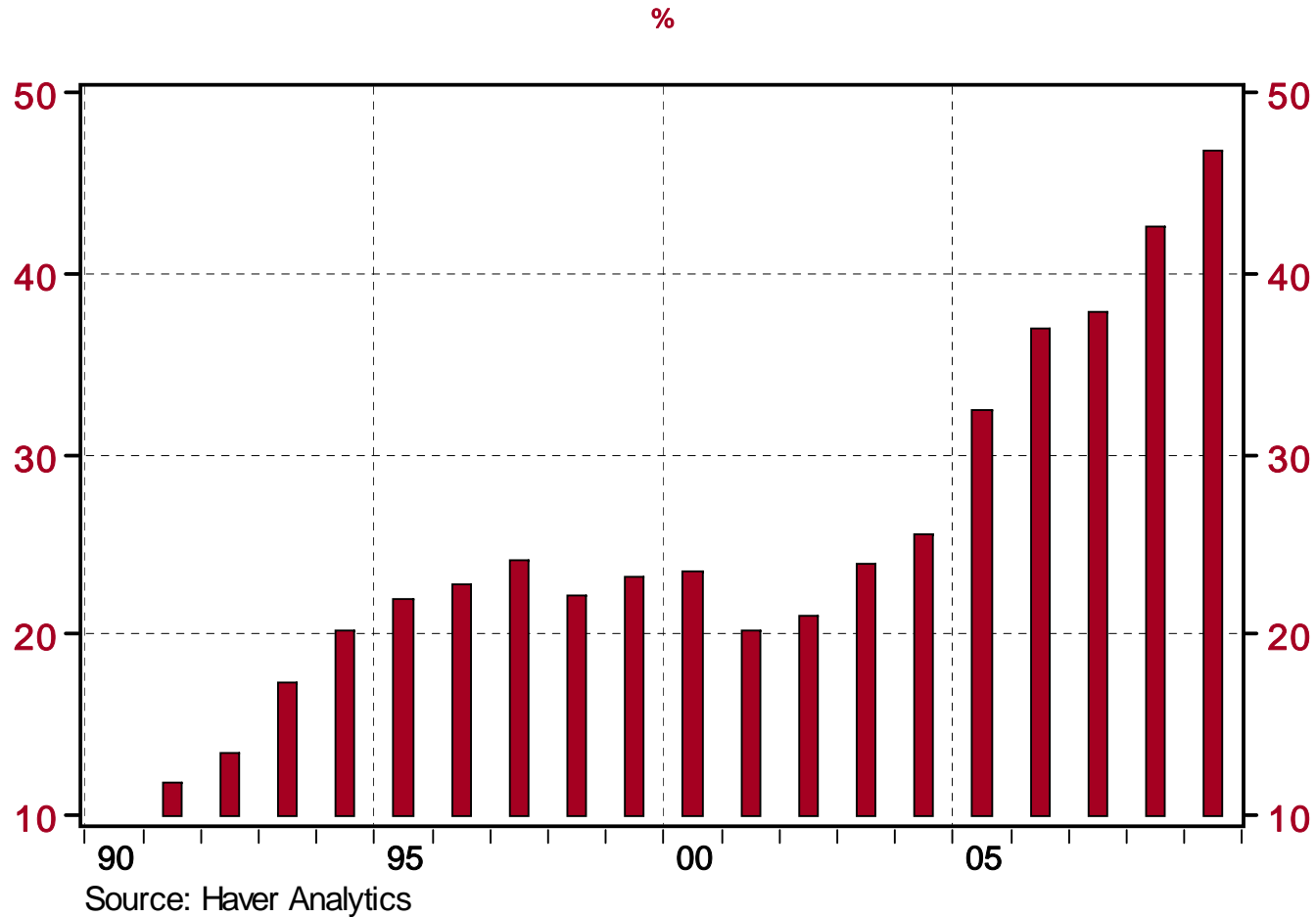


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Of the total bank charge-offs and delinquencies in 2009, residential real estate loans accounted for almost 47% of them.

Commercial Bank Charge-Offs & Delinquencies: Res. Real Estate / Total



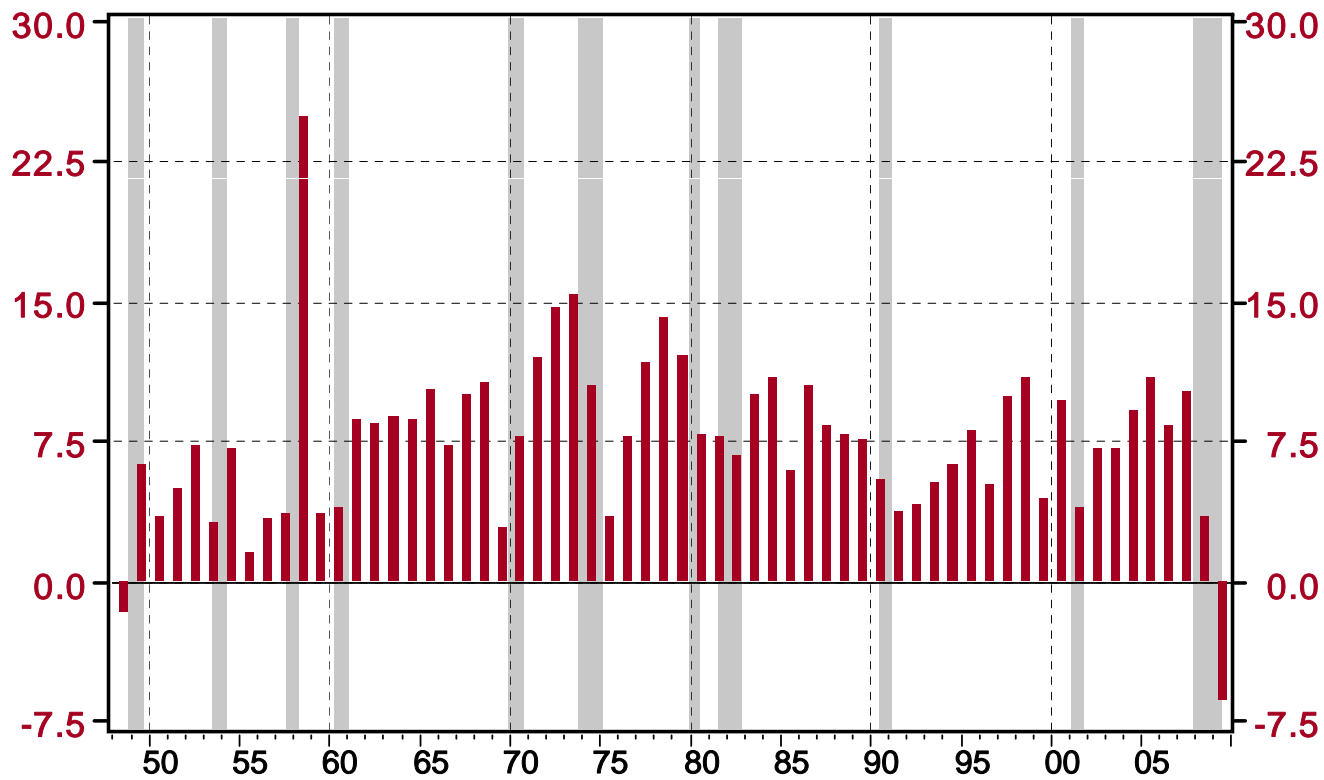
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These massive charge-offs and delinquencies strained the capital adequacy of banks and restrained their ability to lend, resulting in a *contraction* in bank credit of 6.5% in 2009, only the second annual contraction in the post-WII era.

Break-Adjusted Bank Credit: All Commercial Banks

%



Source: Federal Reserve Board /Haver Analytics



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A banking *system* unable to create credit is what makes this recovery different from any other in the post-WII era



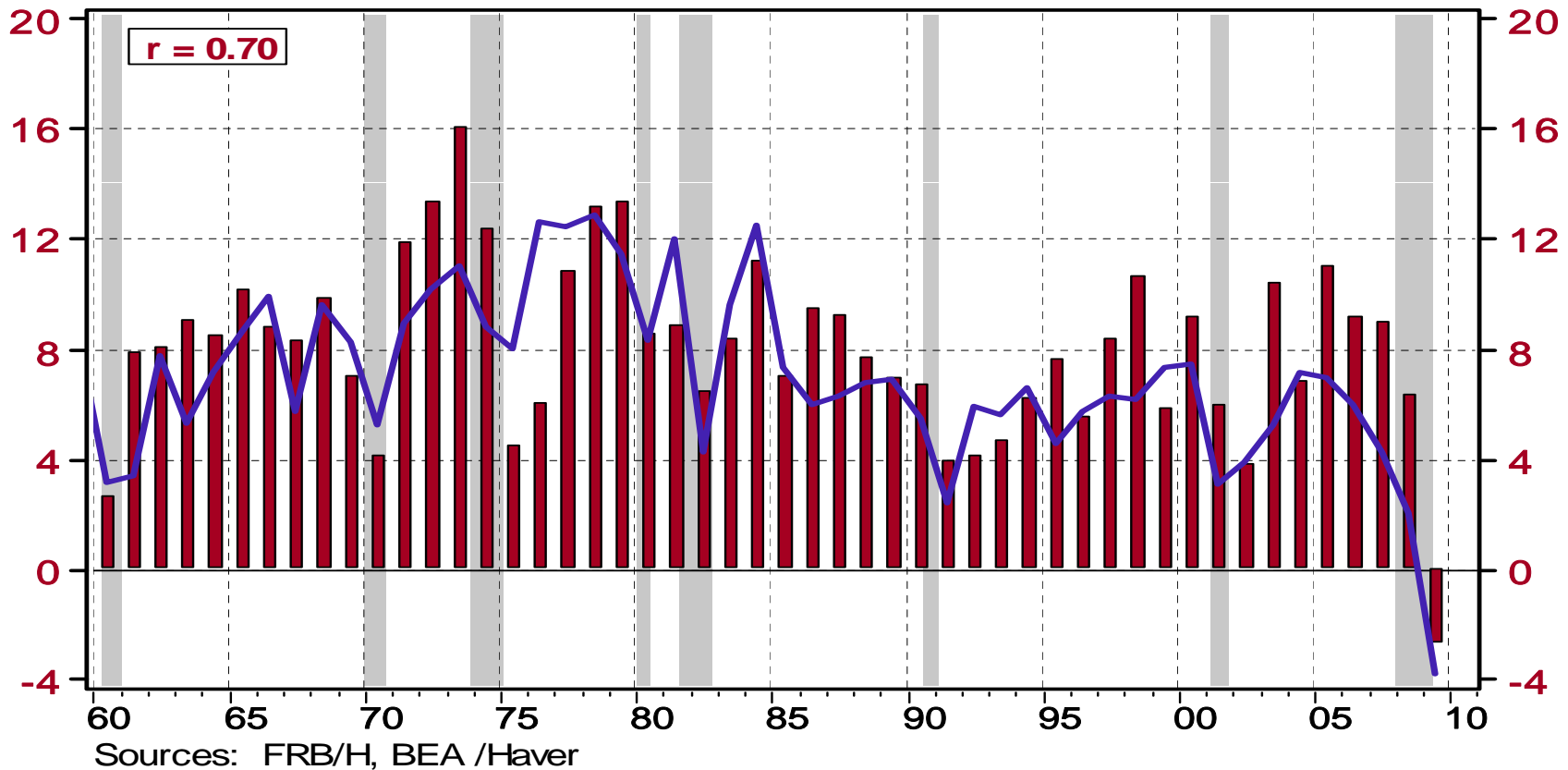
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Why the emphasis on bank credit growth? Because over the past 50 years it has been highly correlated with growth in aggregate demand for goods and services.

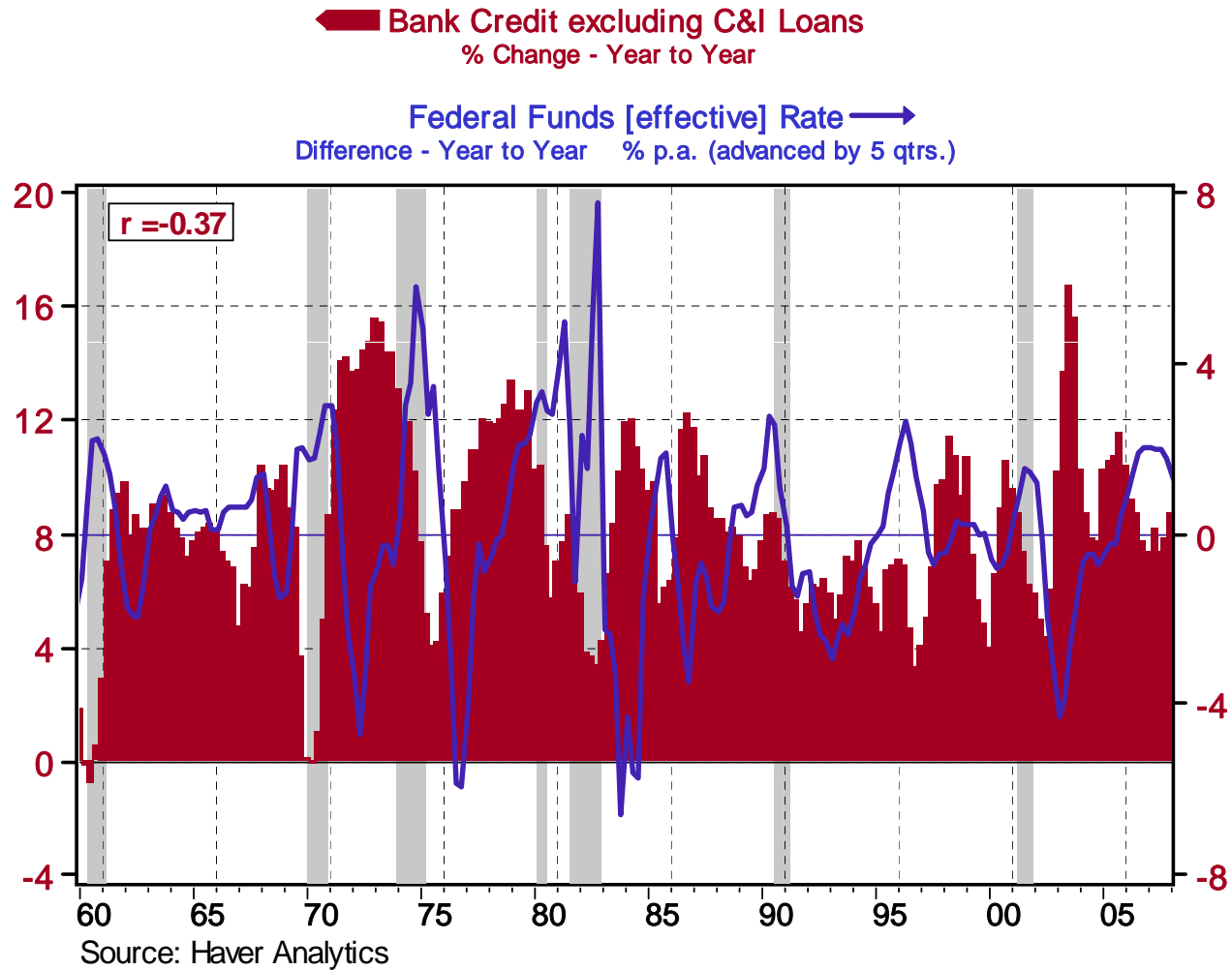
Bank Credit: All Commercial Banks
% Change - Year to Year SA, Bil.\$

Gross Domestic Purchases
% Change - Year to Year Bil.\$



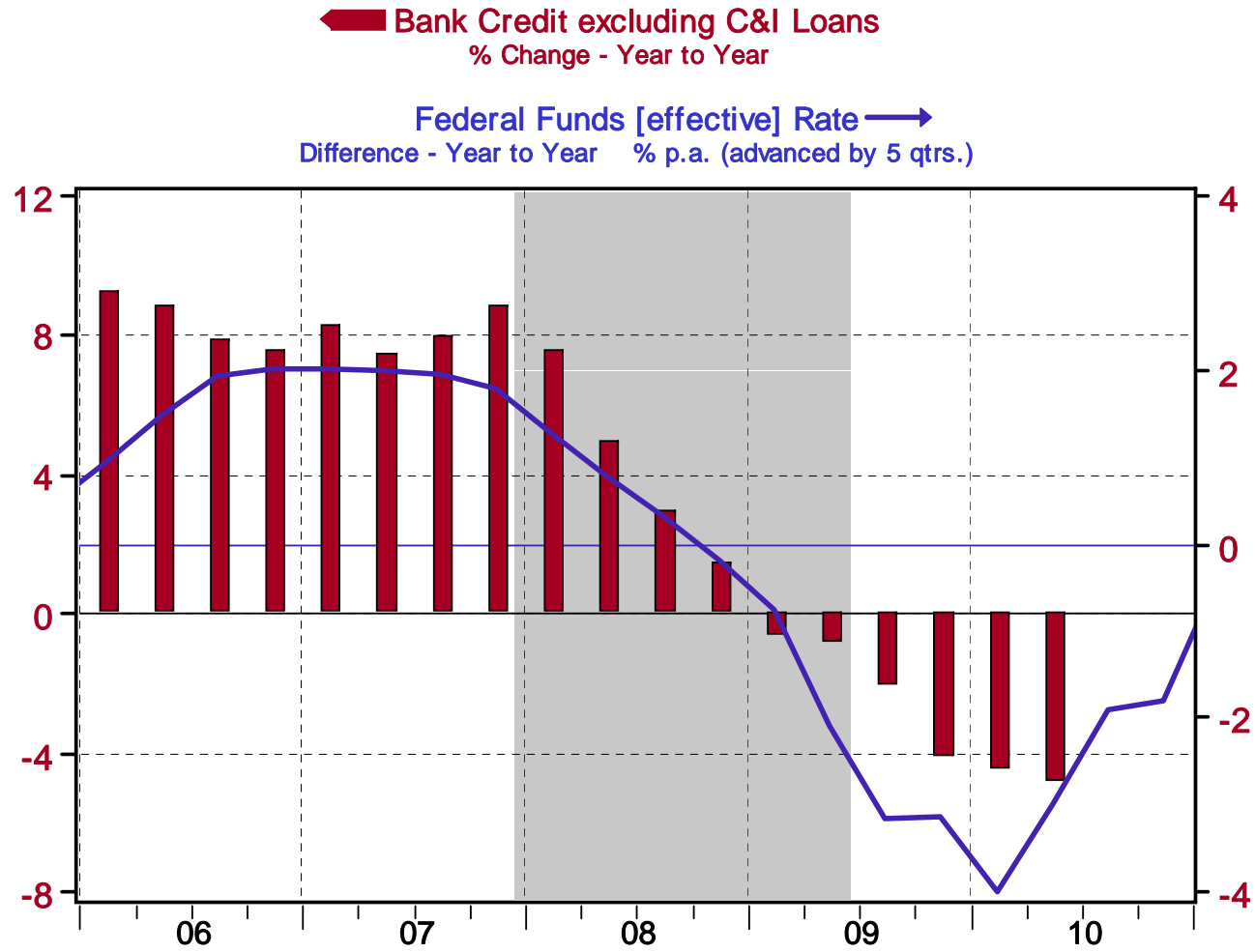


In a typical post-WII era recession, the Fed cuts its policy interest rate, then with a lag, this results in an increase in the growth of bank credit and a robust economic recovery ensues.





The Fed slashed interest rates in the recent recession, but through the first-half of 2010, bank credit had been *contracting* rather than growing faster.



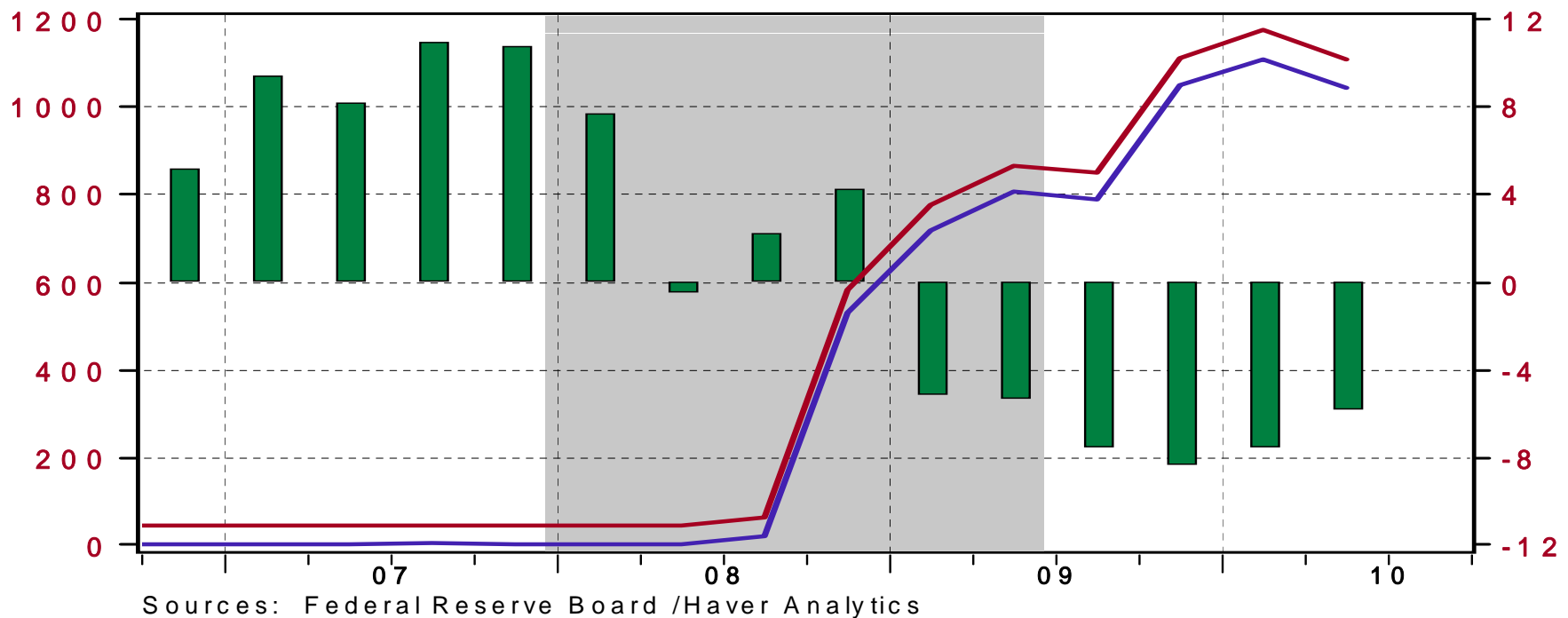
Source: Haver Analytics



The monetary transmission mechanism appears to be malfunctioning in this recovery.

- Not only has the Fed slashed the cost of funds to banks, but it also has created an unprecedented amount of reserves for banks to transform into loans and investments.
- But through the second quarter, banks had been choosing to hold an unprecedented level of reserves earning a mere 25 bps rather than lend them.

← Adjusted Reserves of Depository Institutions (NSA, Bil.\$)
← Adjusted Excess Reserves of Depository Institutions (NSA, Bil.\$)
Break-Adjusted Bank Credit: All Commercial Banks (S A R, %) →





The contraction in bank credit in recent quarters likely played a role in the anemic impact of the fiscal stimulus program on aggregate demand.



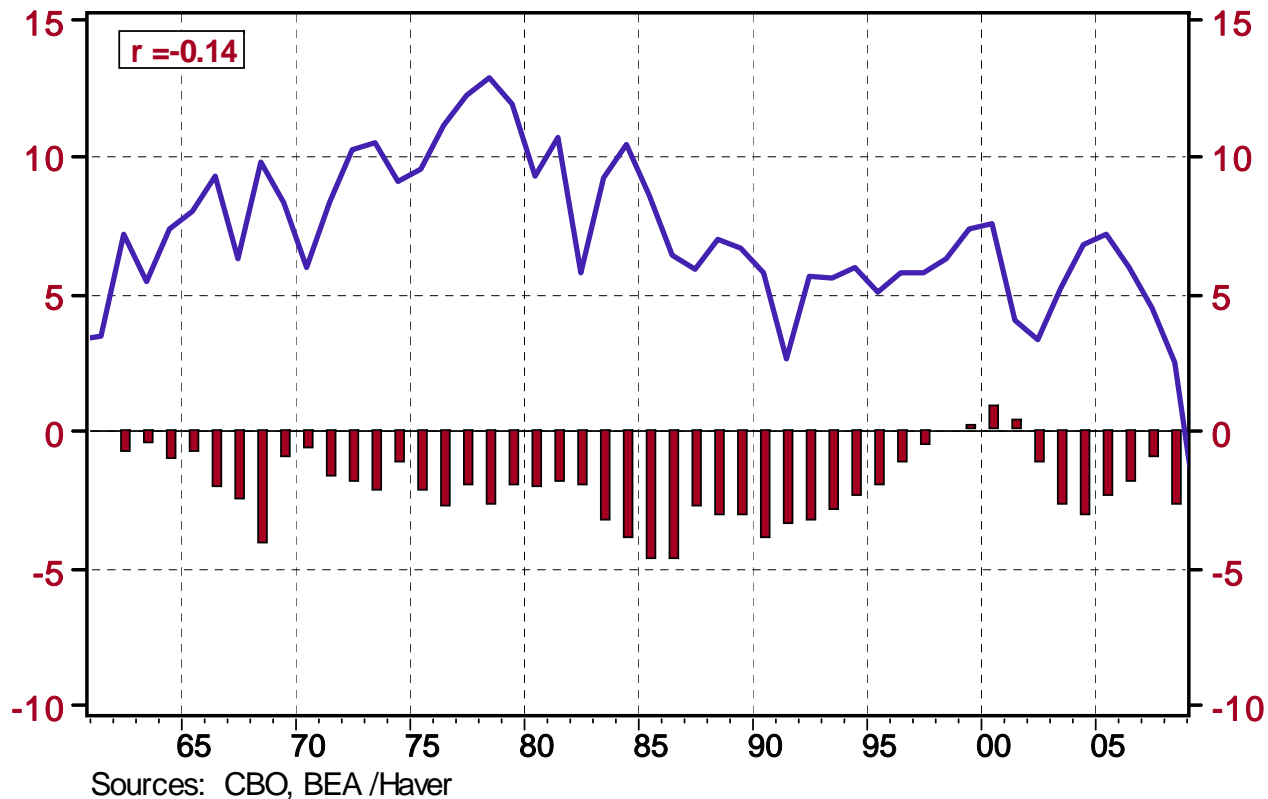
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There is only a relatively low correlation (-0.14 out of a possible -1.00) between fiscal stimulus and growth in aggregate demand.

Cyclically Adj Fed Budget Surplus/Deficit as a % of Potential GDP
Fiscal Yr, %

Final Sales to Domestic Purchasers
% Change - Year to Year Bil.\$





Without commensurate increases in bank credit, fiscal stimulus predominantly simply changes the *composition* of aggregate demand away from private spending toward government spending rather than having a significant positive effect on total spending.



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Is it lack of demand by credit-worthy borrowers or something on the supply side that is restraining bank credit creation?

Although “effective” credit demand from the private sector may be weak, this still does not explain why banks have been content to sit on over \$1 *trillion* of excess cash earning 25 basis points from the Fed.



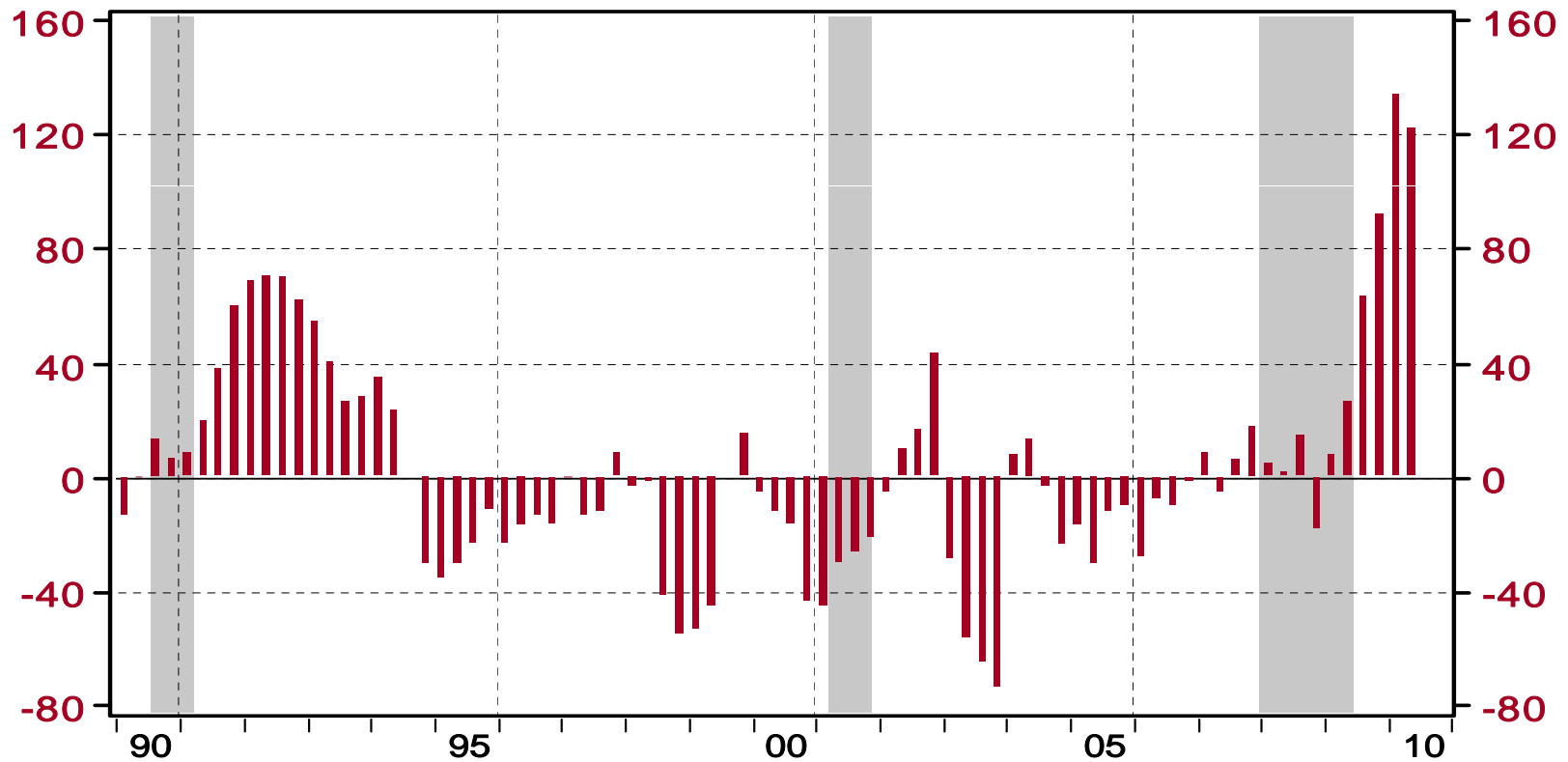
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Yes, banks have bought a lot of Treasury securities ...

Commercial Banking: Assets: Treasury Securities

Difference - Year to Year NSA, Bil \$



Source: Federal Reserve Board /Haver Analytics

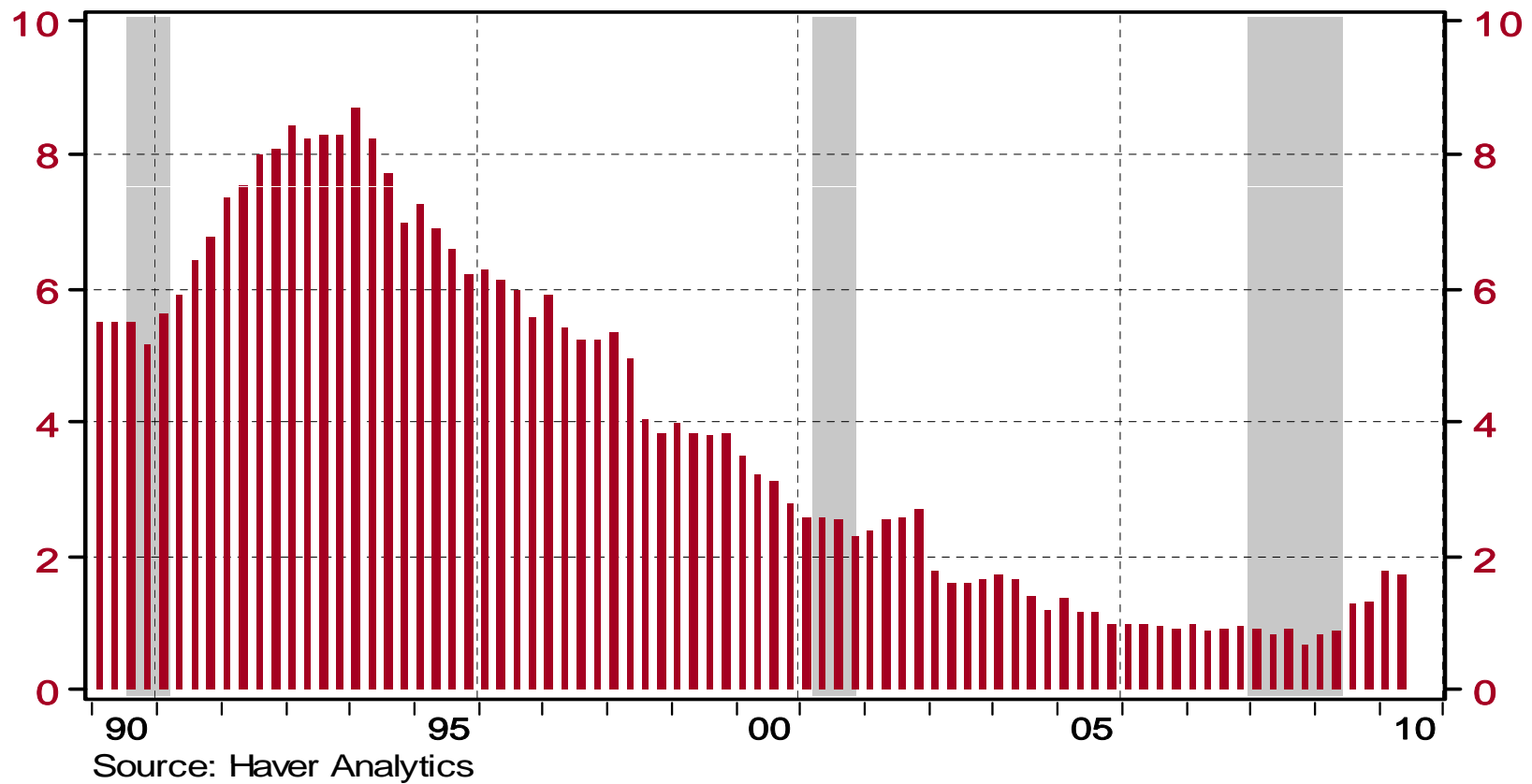


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... but why haven't they bought even more?

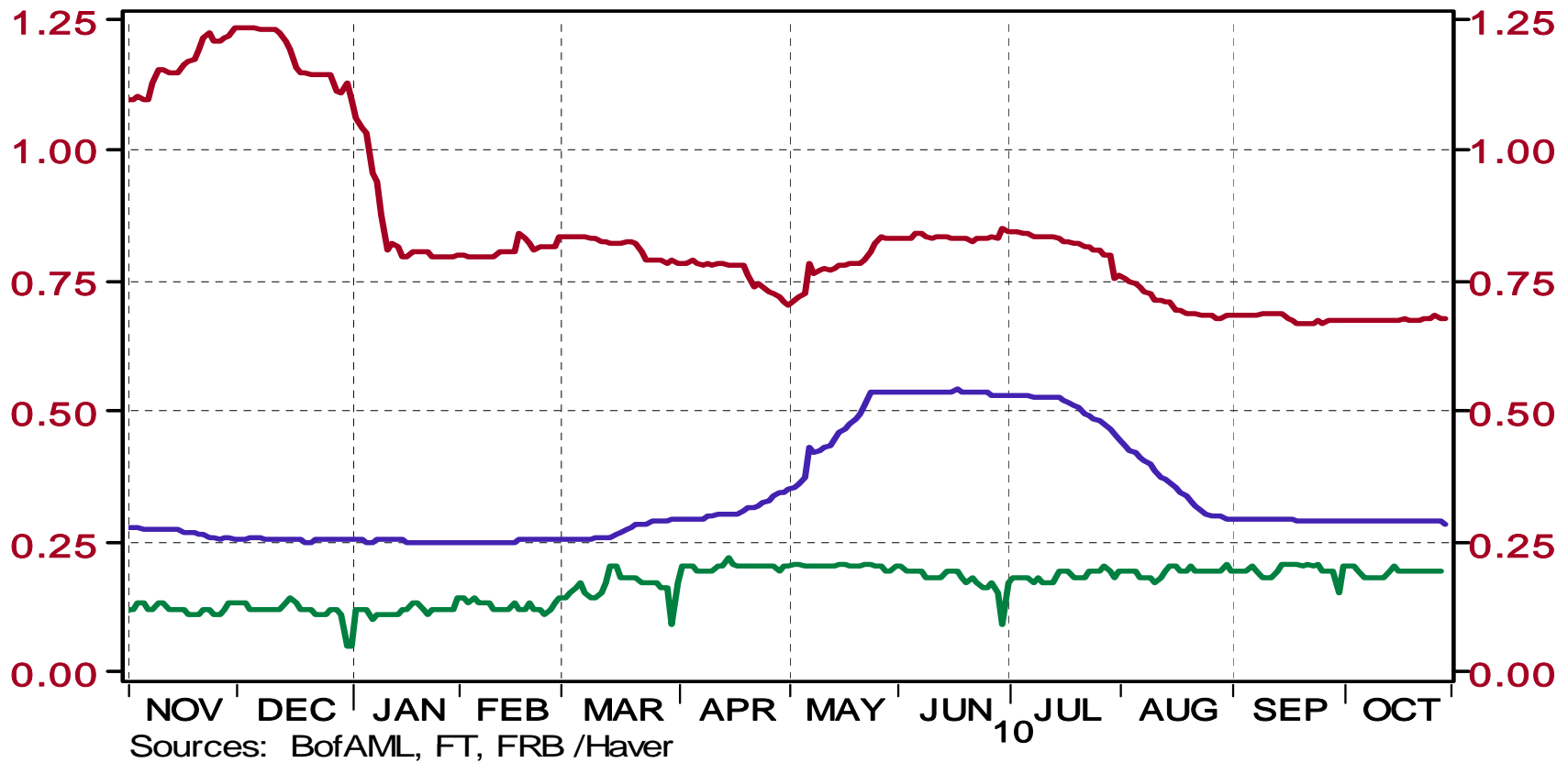
Commercial Banks: Treasury Securities as a % of Total Financial Assets





Why haven't banks been loading up on floating-rate asset-backed?

BofA Merrill Lynch Asset-Backed: Credit Cards Floating Rate: Effective Yield (%)
3-Month London Interbank Offered Rate: Based on US\$ (%)
Federal Funds [effective] Rate (% p.a.)





Currently adequately capitalized banks may be concerned that they will be *inadequately* capitalized in the not-too-distant future.

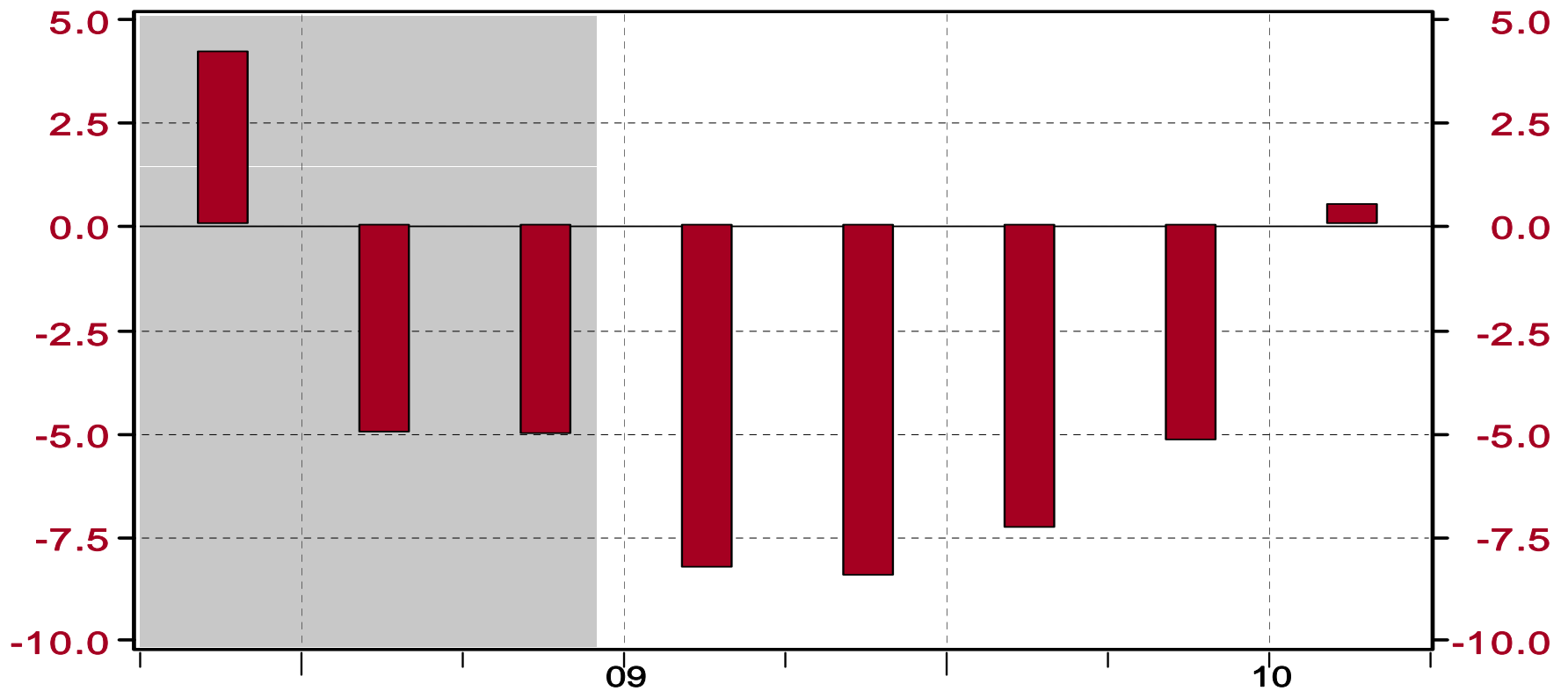
- **It is widely anticipated that there will be a significant increase in defaults on commercial real estate mortgages in the next several years.**
- **It is widely anticipated that regulatory capital ratios will be raised, but there is uncertainty as to how high these new capital ratios will be and when they will become effective.**
- **Thus, banks are hoarding capital rather than committing it for new loans and investments because of these uncertainties.**



Bank credit did rebound in the third quarter for the first time in six quarters.

Break-Adjusted Bank Credit: All Commercial Banks

SAAR, %



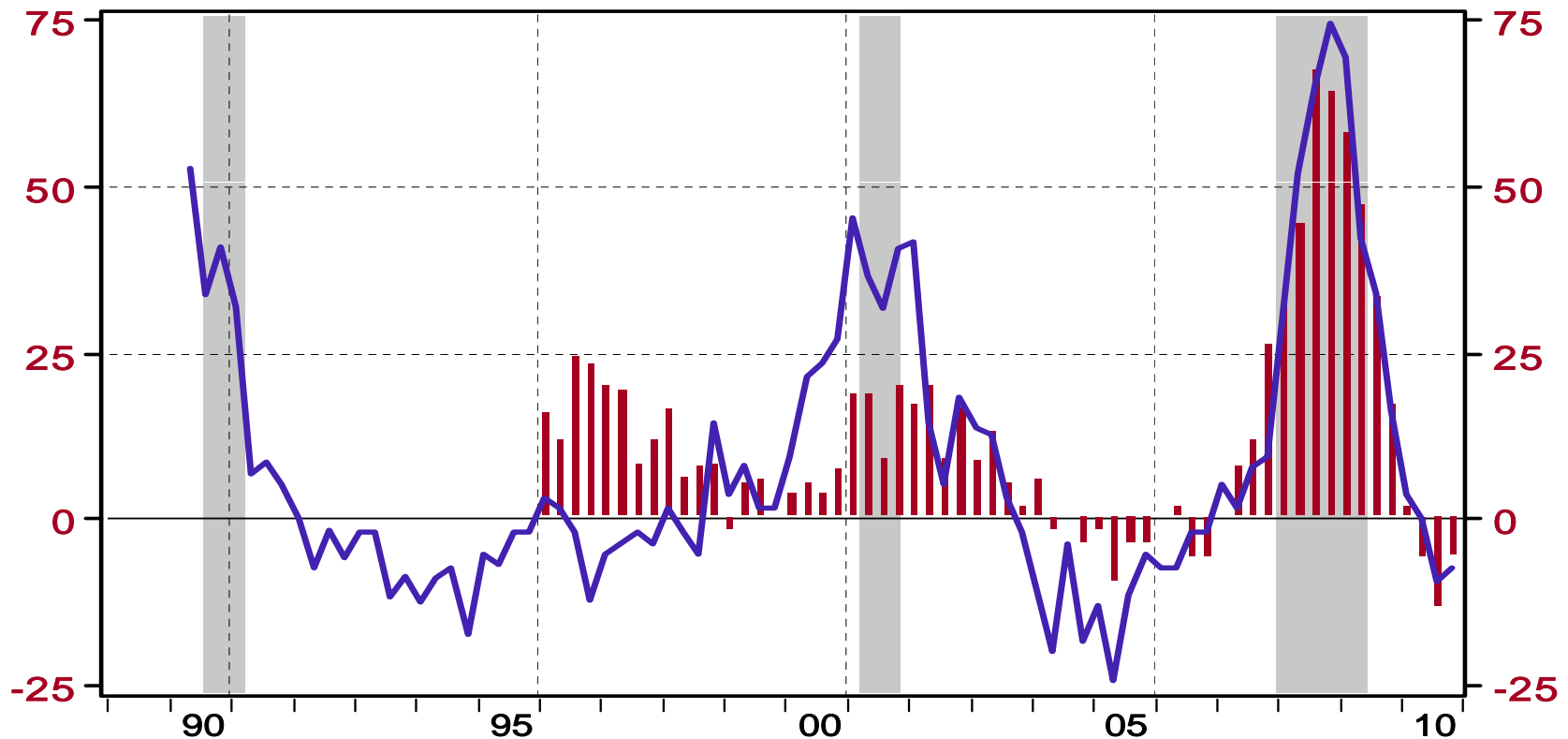
Source: Federal Reserve Board /Haver Analytics



And the Fed's latest survey of bank lending terms showed some meaningful easing of lending standards.

FRB Sr Off Survey: Banks Tightening Standards: Other Consumer Loans
%

FRB Sr Officers Survey: Banks Tightening C&I Loans to Small Firms
%



Sources: Federal Reserve Board /Haver Analytics



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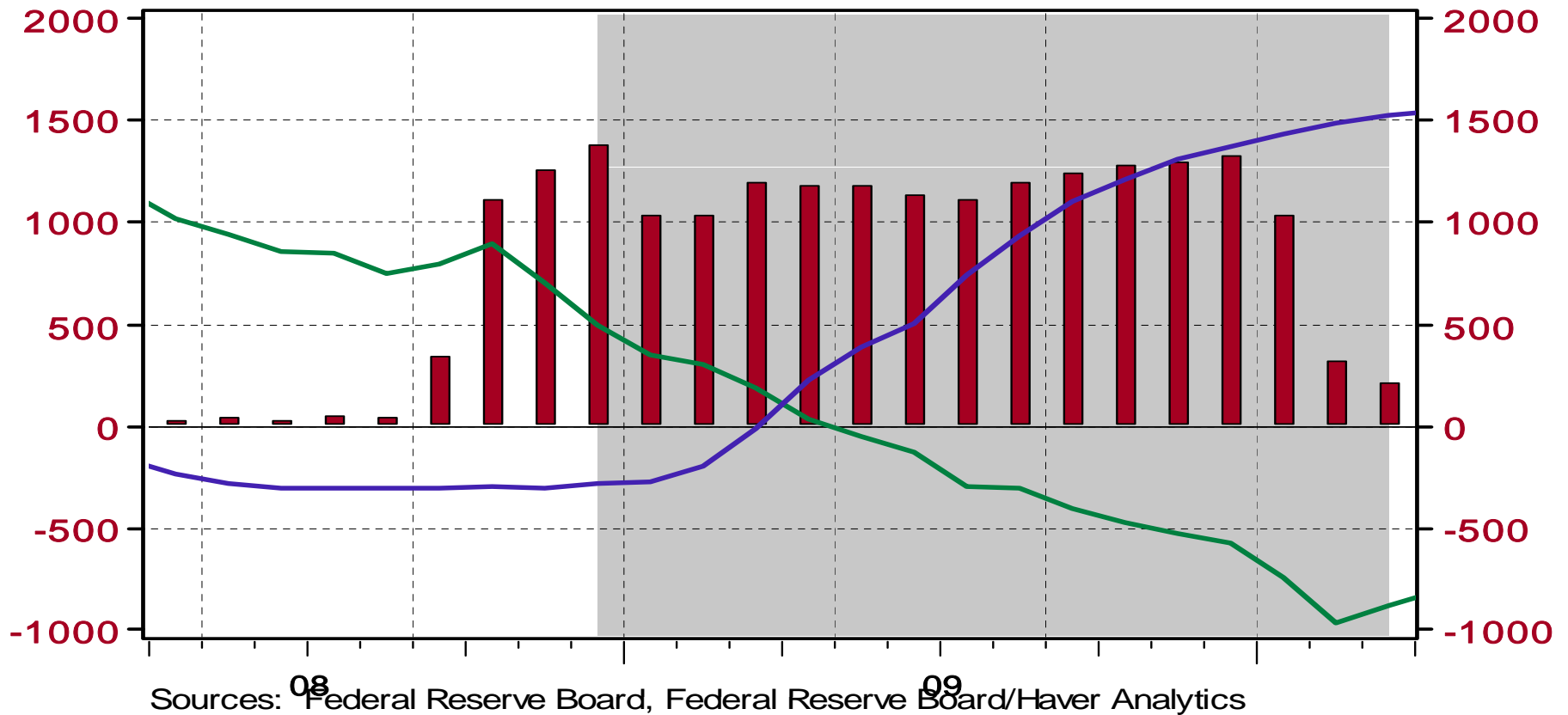


Will QE2 be more successful than QE1?

Total Federal Reserve Credit: 16-Month Change \$Bil.

Federal Reserve Credit: Securities Owned Outright: 16-Mo. Chg. \$Bil.

U.S. Commercial Banking System Credit: 16-Month Change \$Bil.





In addition to bank credit contraction, the U.S. economy faces other significant headwinds.

- **Excess supply of housing**
- **State & local government budget austerity**



There still is an historically high relative supply of housing.

Ratio: Number of Housing Units / Number of Households

avg. = 1.125; Q3:2010 = 1.168



Source: Haver Analytics



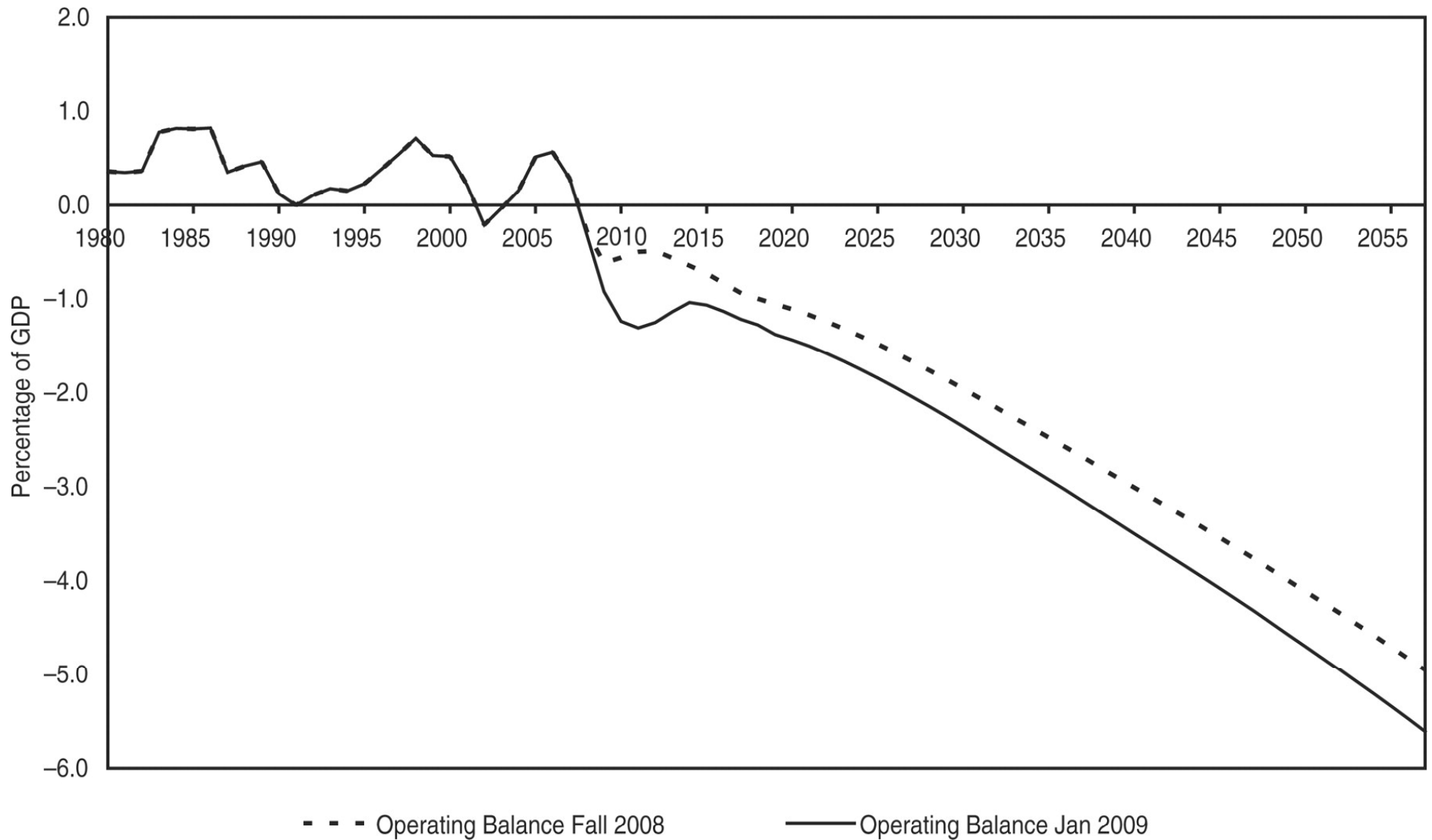
State & local governments face serious budgetary challenges



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Actual / estimated operating balance measure for state and local governments as a percent of GDP





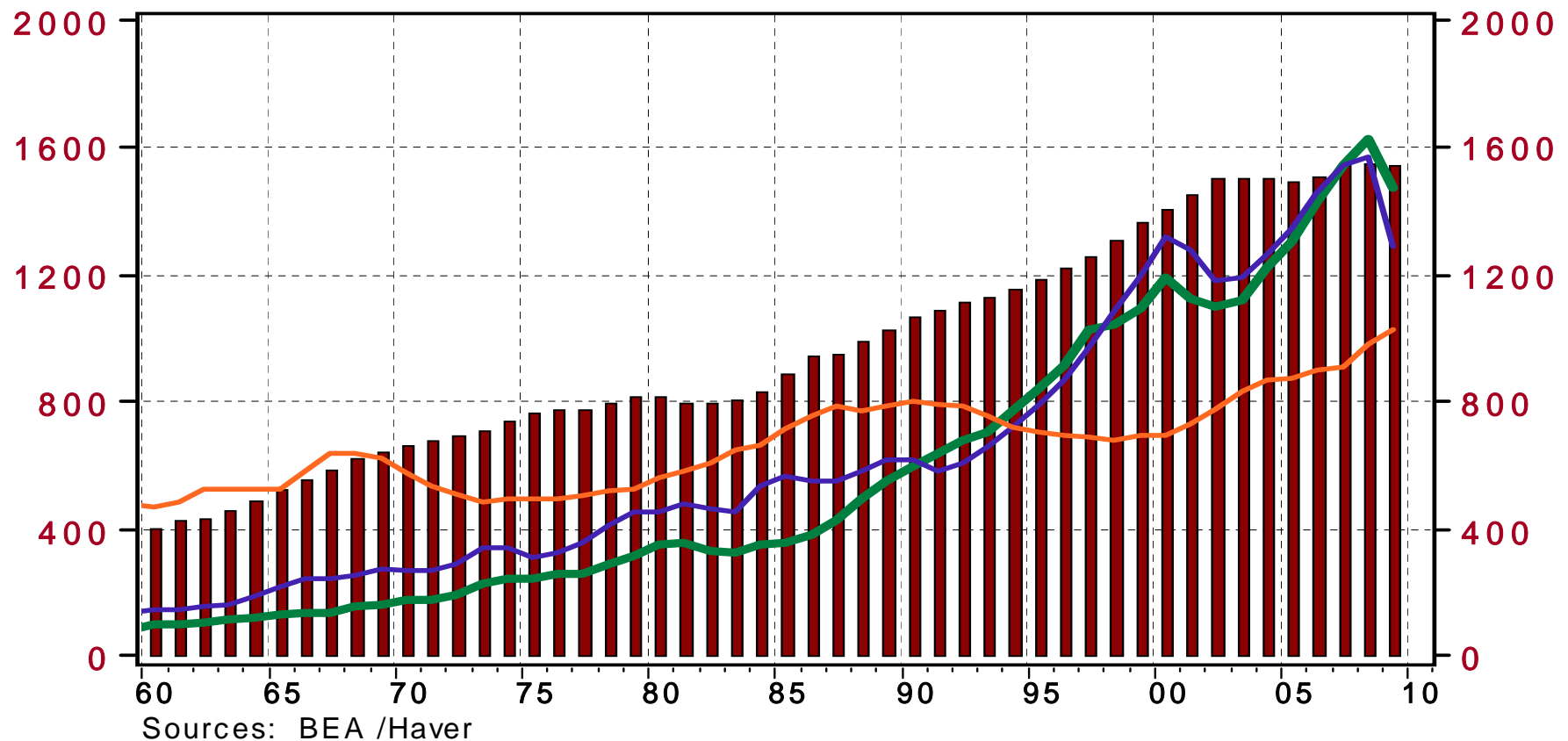
State & local government expenditures account for almost 12% of real GDP – about the same as exports and nonresidential fixed investment. In contrast, federal government expenditures account for only 8% of real GDP.

Real Federal Government Consumption & Gross Investment (Bil.Chn.2005\$)

Real Private Nonresidential Fixed Investment (Bil.Chn.2005\$)

Real Exports of Goods & Services (Bil.Chn.2005\$)

Real State & Local Govt Consumption & Gross Investment (Bil.Chn.2005\$)

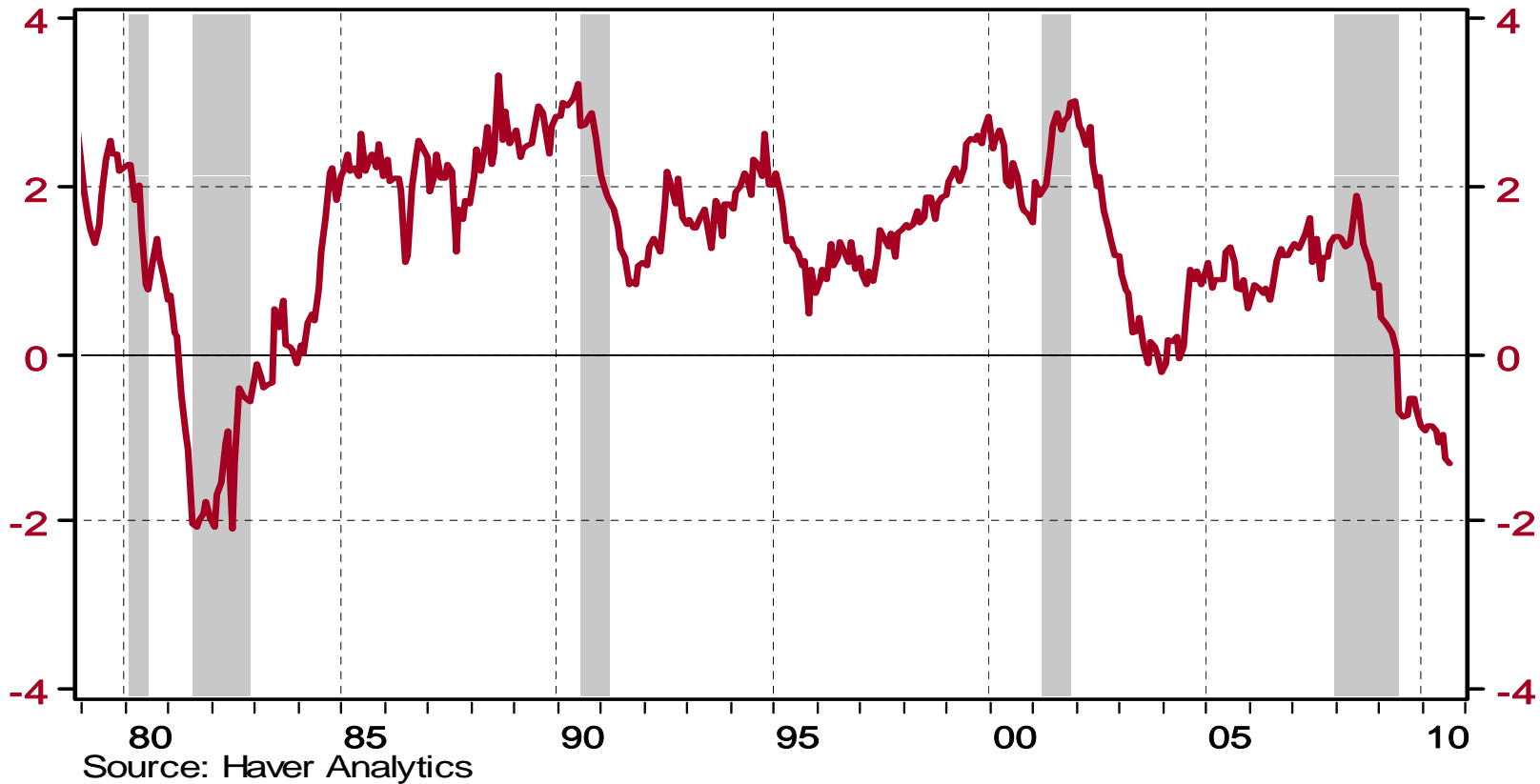




State & local governments, which directly account for about 15% of total nonfarm employment, have cut 258 thousand or 1.3% jobs in the 12 months ended September, the largest percentage decline since the 1981-82 recession.

State & Local Government Employees

% Change - Year to Year



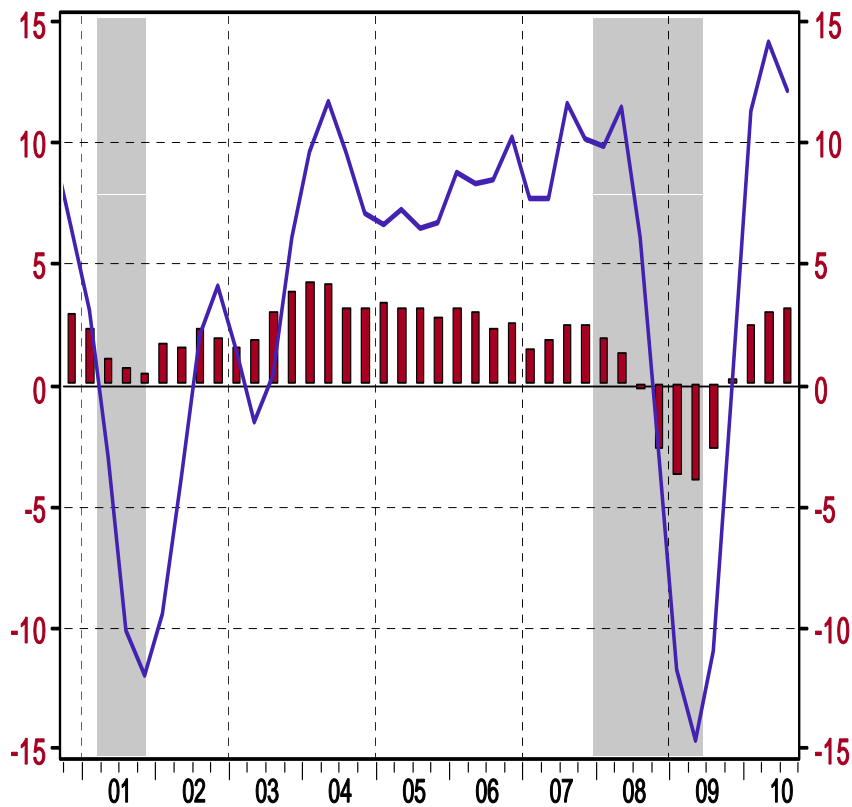
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U.S. exports have rebounded sharply in the recent recovery.

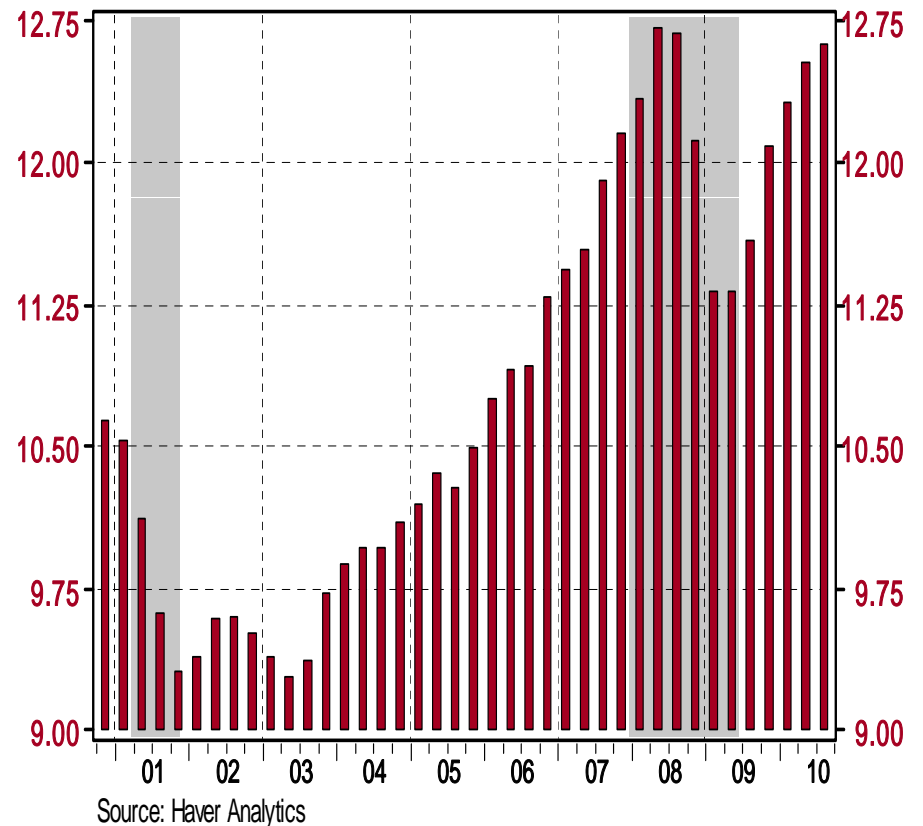
Real Gross Domestic Product
% Change - Year to Year SAAR, Bil.Chn.2005\$

Real Exports of Goods & Services
% Change - Year to Year SAAR, Bil.Chn.2005\$



Sources: Bureau of Economic Analysis/Haver Analytics

US Real Exports as a % of US Real GDP



Source: Haver Analytics



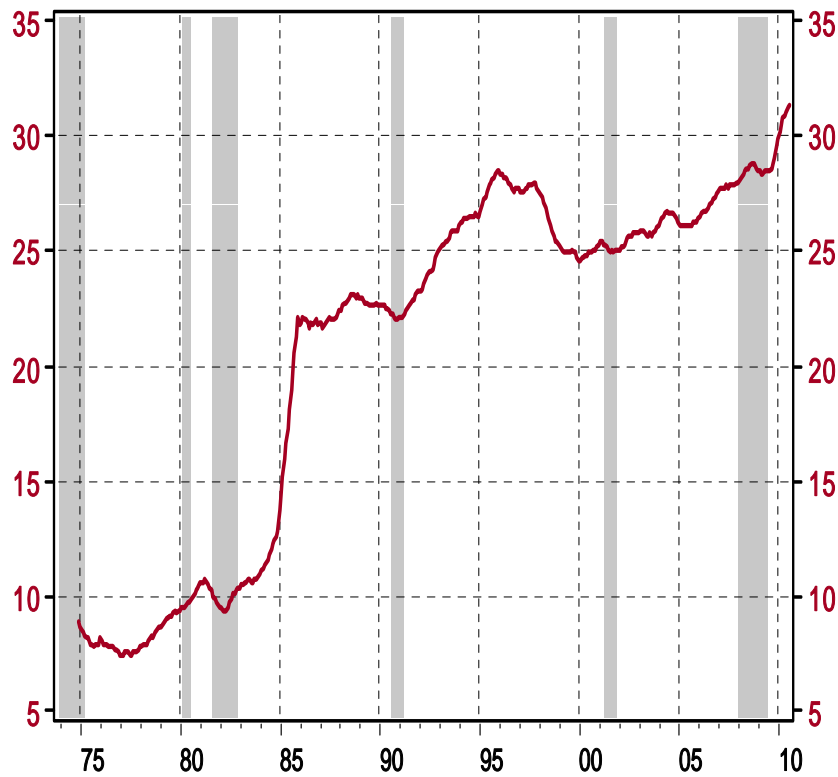
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Emerging markets have been and continue to be a key driver of U.S. exports.

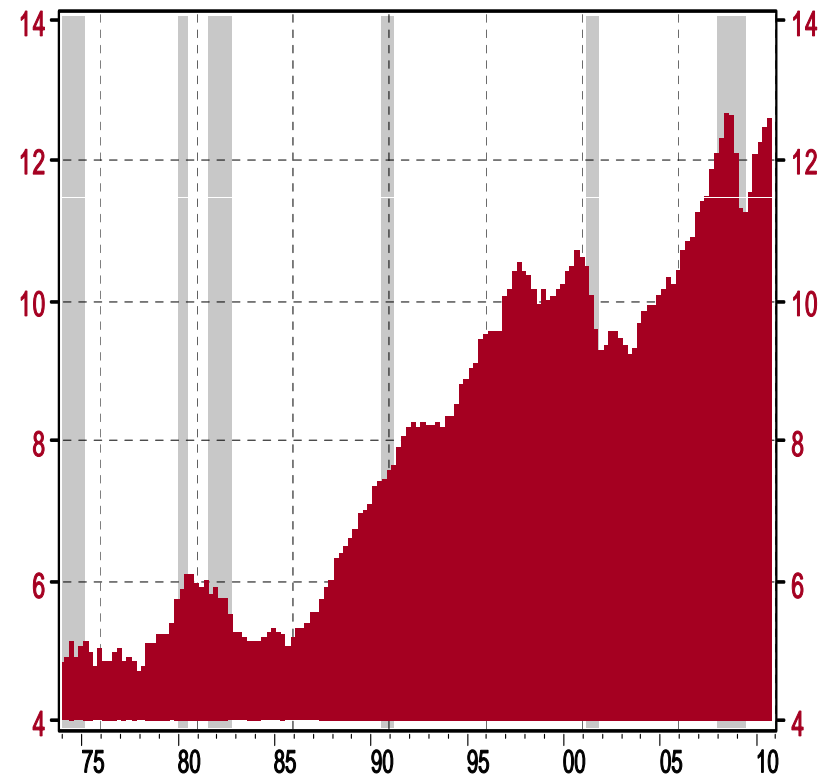
US Exports: Pacific Rim ex Japan plus South America / Total

%, 12-month moving average



Source: Haver Analytics

Real US Exports as a % of Real US GDP



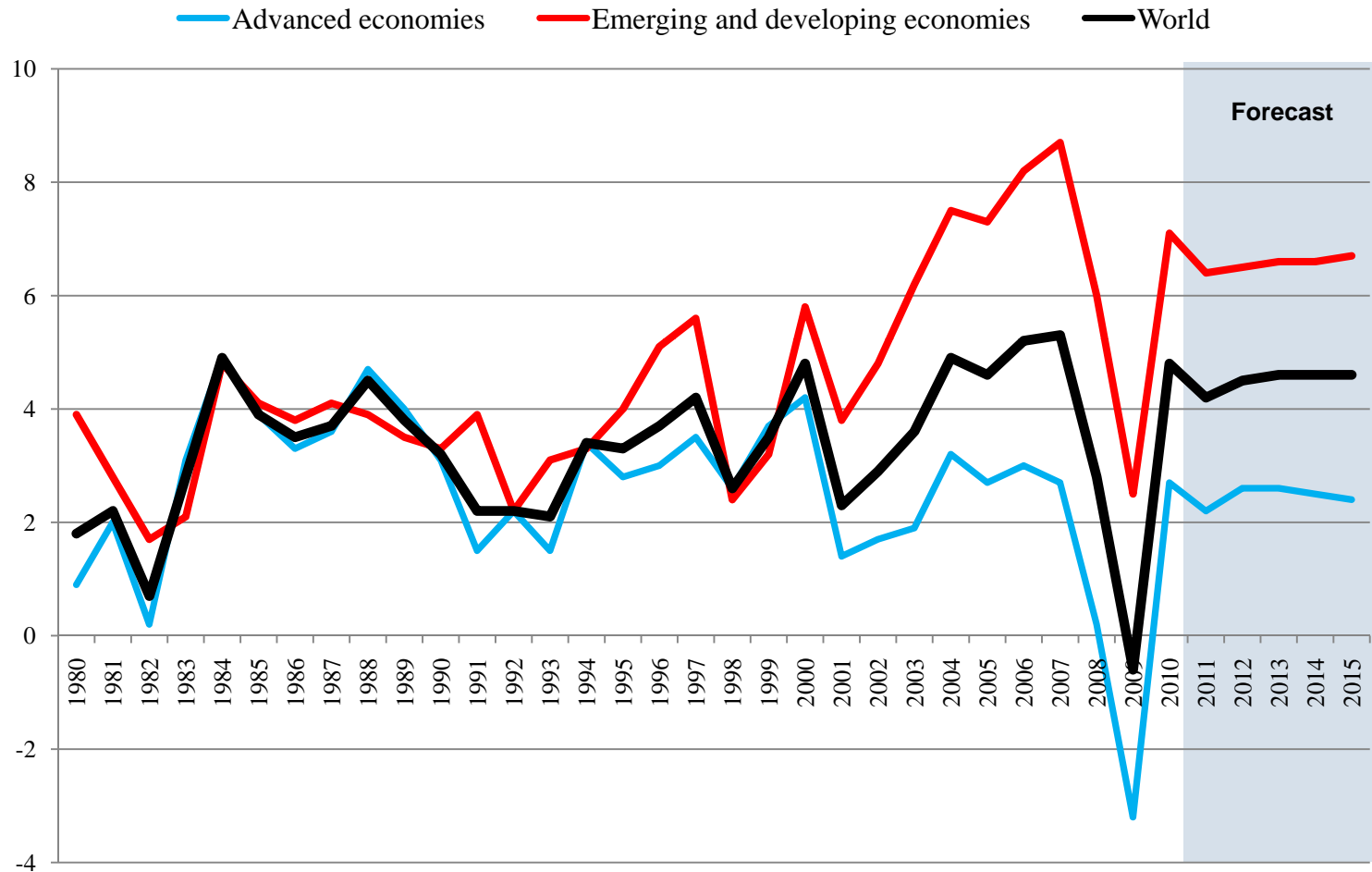
Source: Haver Analytics



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Projections of world economic growth imply that emerging markets will continue to be an important source of U.S. export demand.



Source: IMF staff estimates



Inflation or Deflation – What are the Risks?



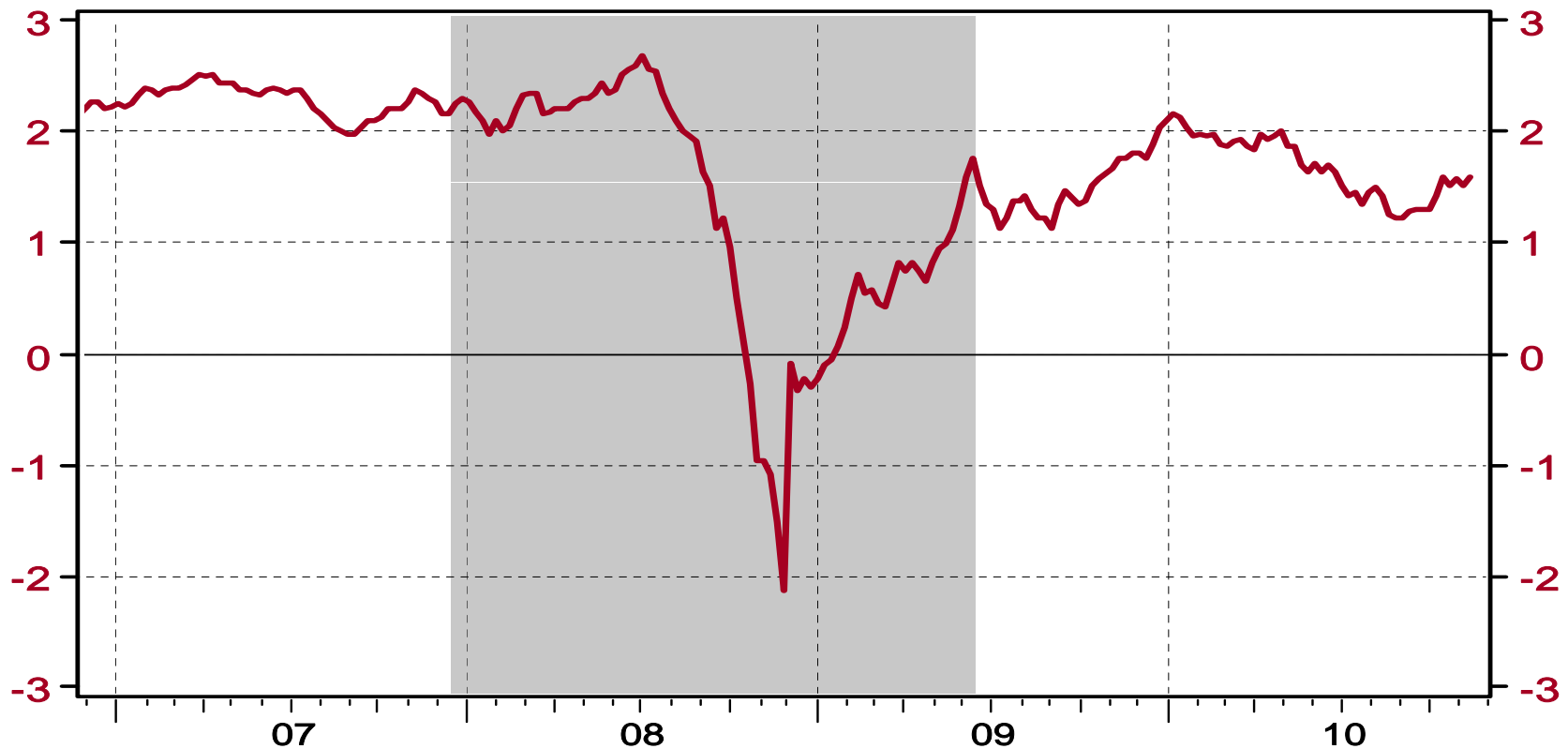
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The market is relatively sanguine about the inflation outlook over the next five years.

5-Year Nominal minus 5-Year TIP Rate

Avg, %



Source: Federal Reserve Board/ Haver Analytics



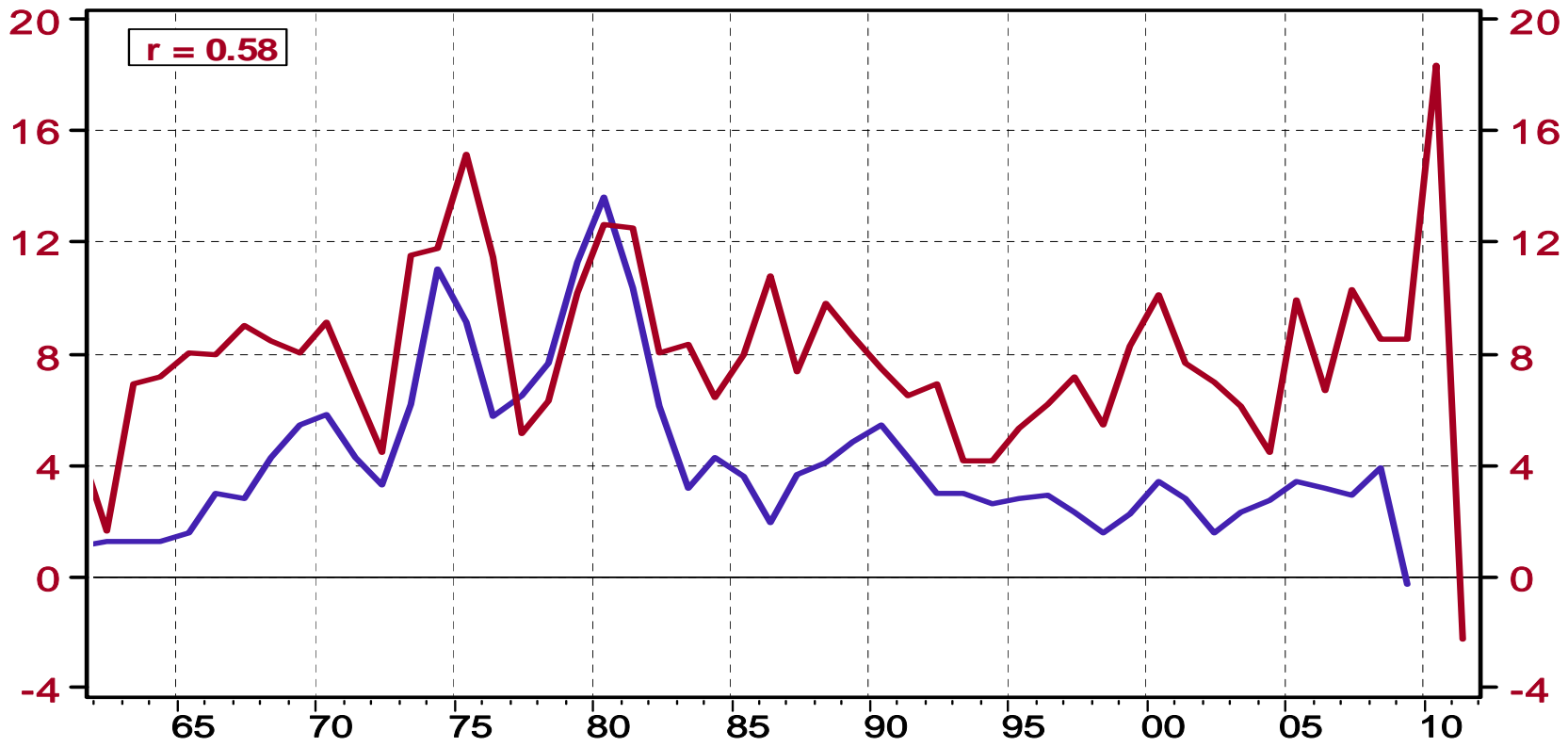
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The recent contraction in the sum of Federal Reserve and commercial banking system credit, if taken literally, would suggest some future deflation.

Sum of Federal Reserve and Commercial Banking System Credit [-2]
% Change - Year to Year

CPI-U: All Items
% Change - Year to Year NSA, 1982-84=100



Source: Haver Analytics



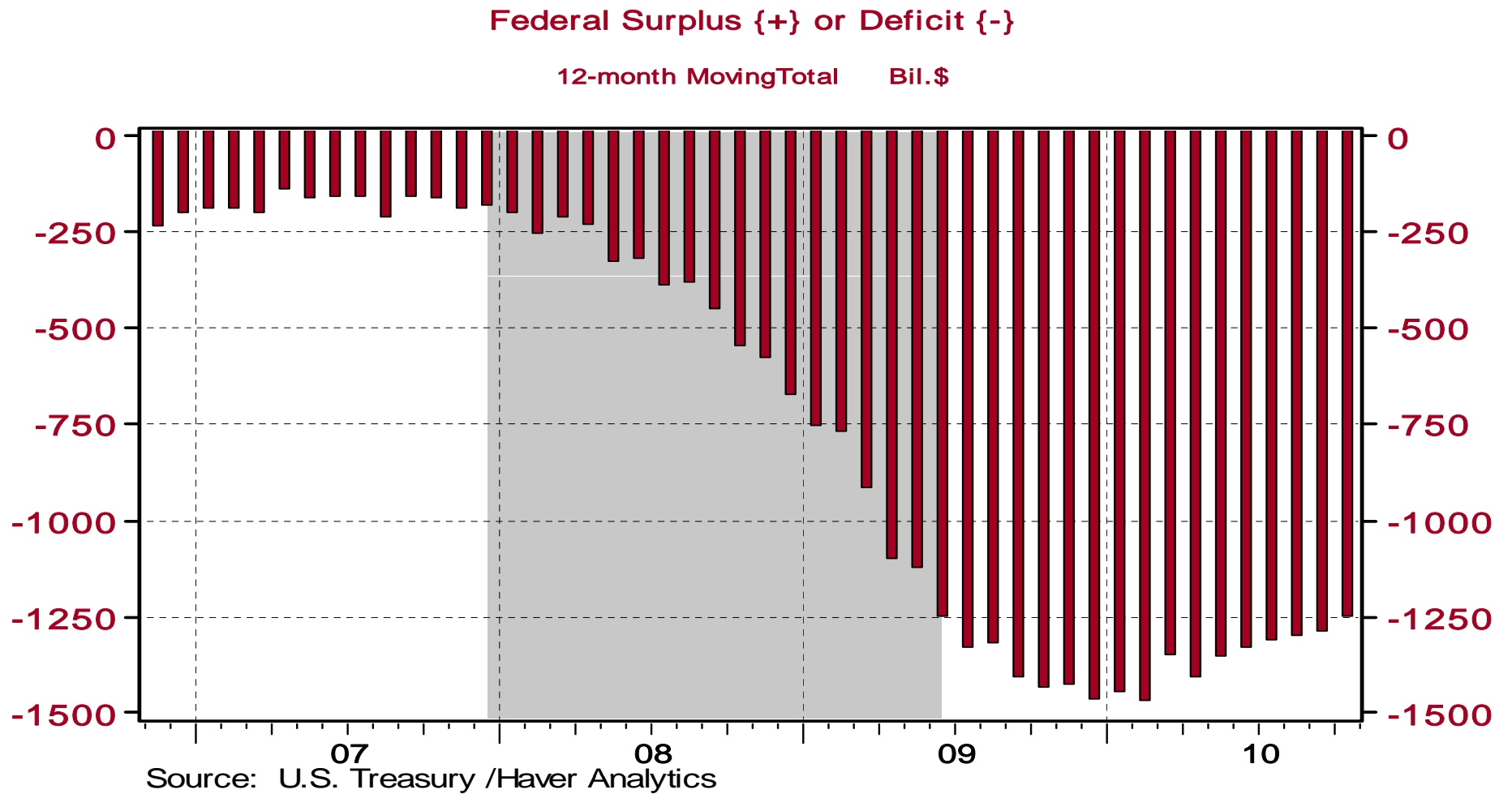
Federal Deficit – Short Run vs. Long Run



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Barring a "double dip", the deepest deficit of this cycle is behind us.

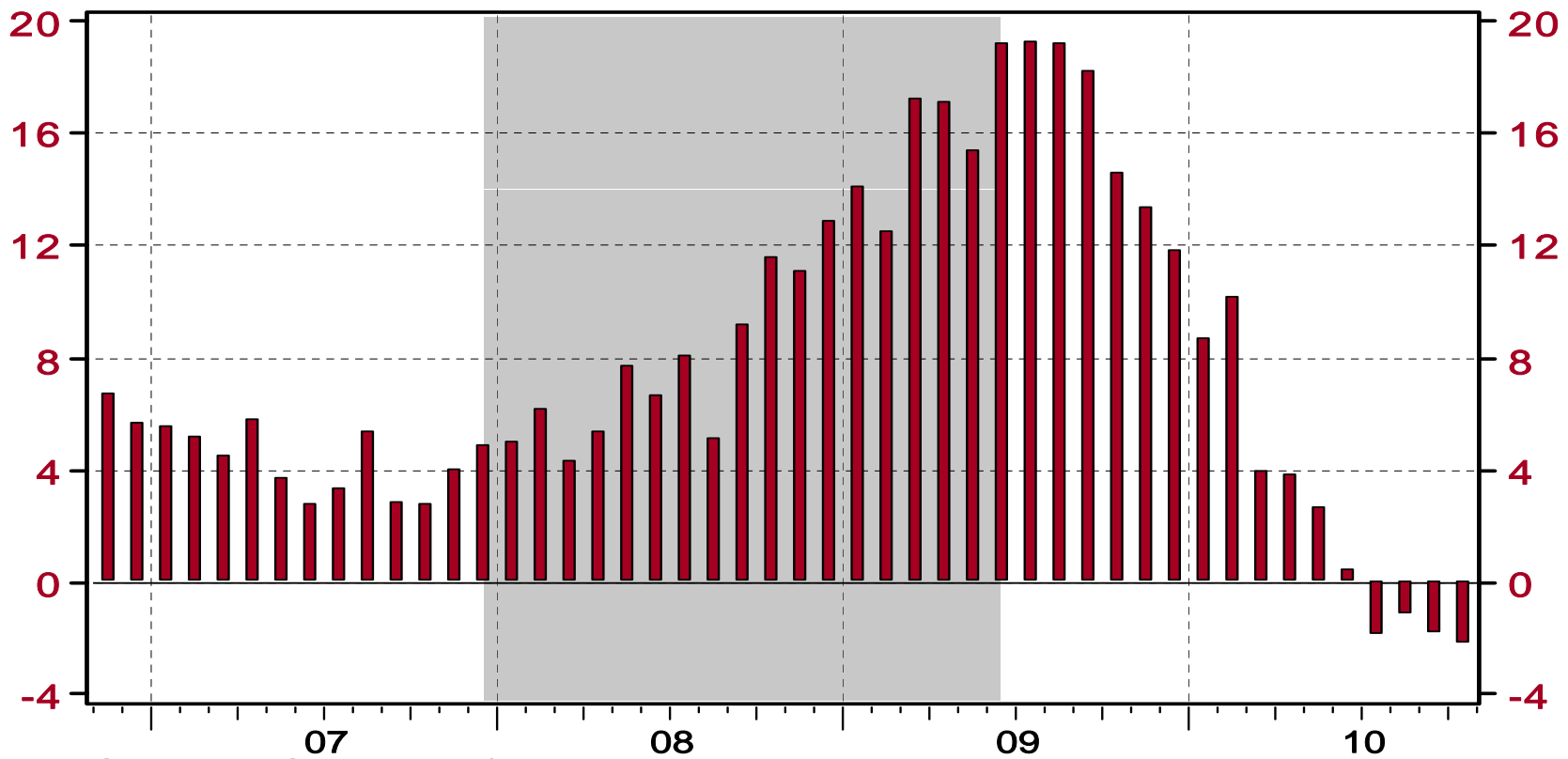




Federal outlays are, believe it or not, now contracting!

12-Month Cumulative Total Federal Outlays

% change from year-ago month



Source: U.S. Treasury /Haver Analytics



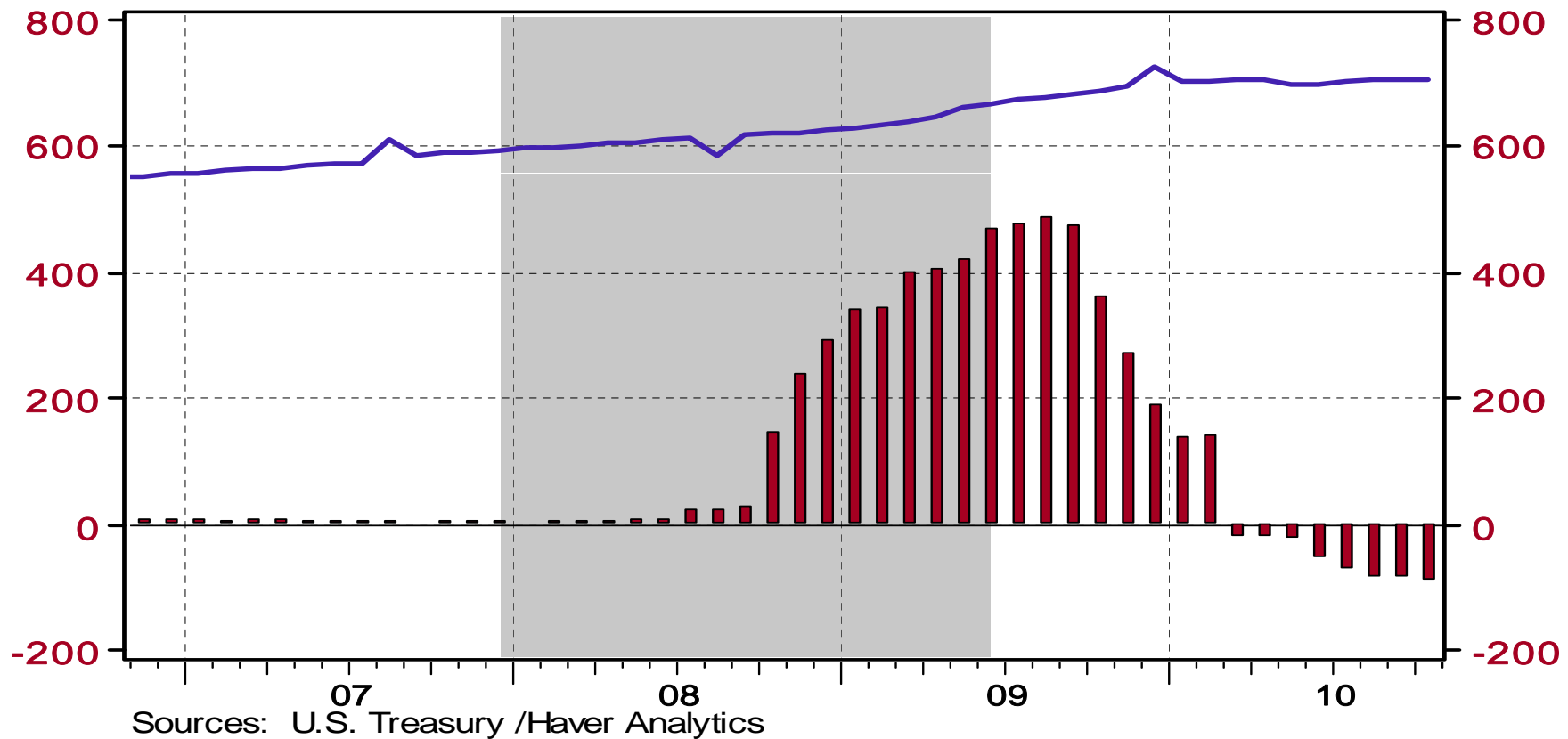
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Why did outlays balloon between mid 2008 and mid 2009? TARP and income maintenance programs (i.e., unemployment benefits, food stamps and Medicaid).

Federal Outlays: Commerce and Housing Credit
12-month Moving Total Bil.\$

Federal Outlays: Social Security
12-month Moving Total Bil.\$

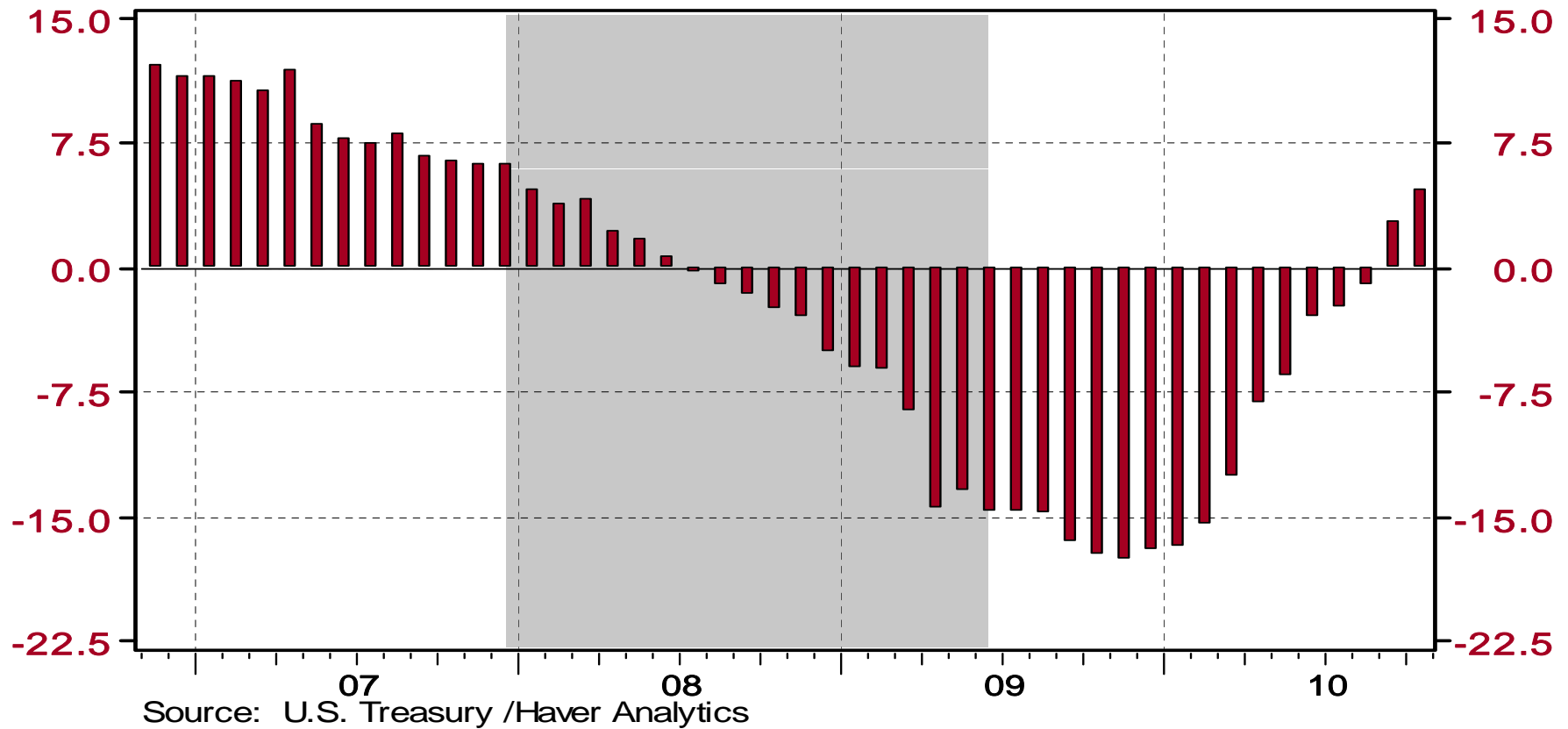




Federal receipts, after having contracted, are once again on the rise.

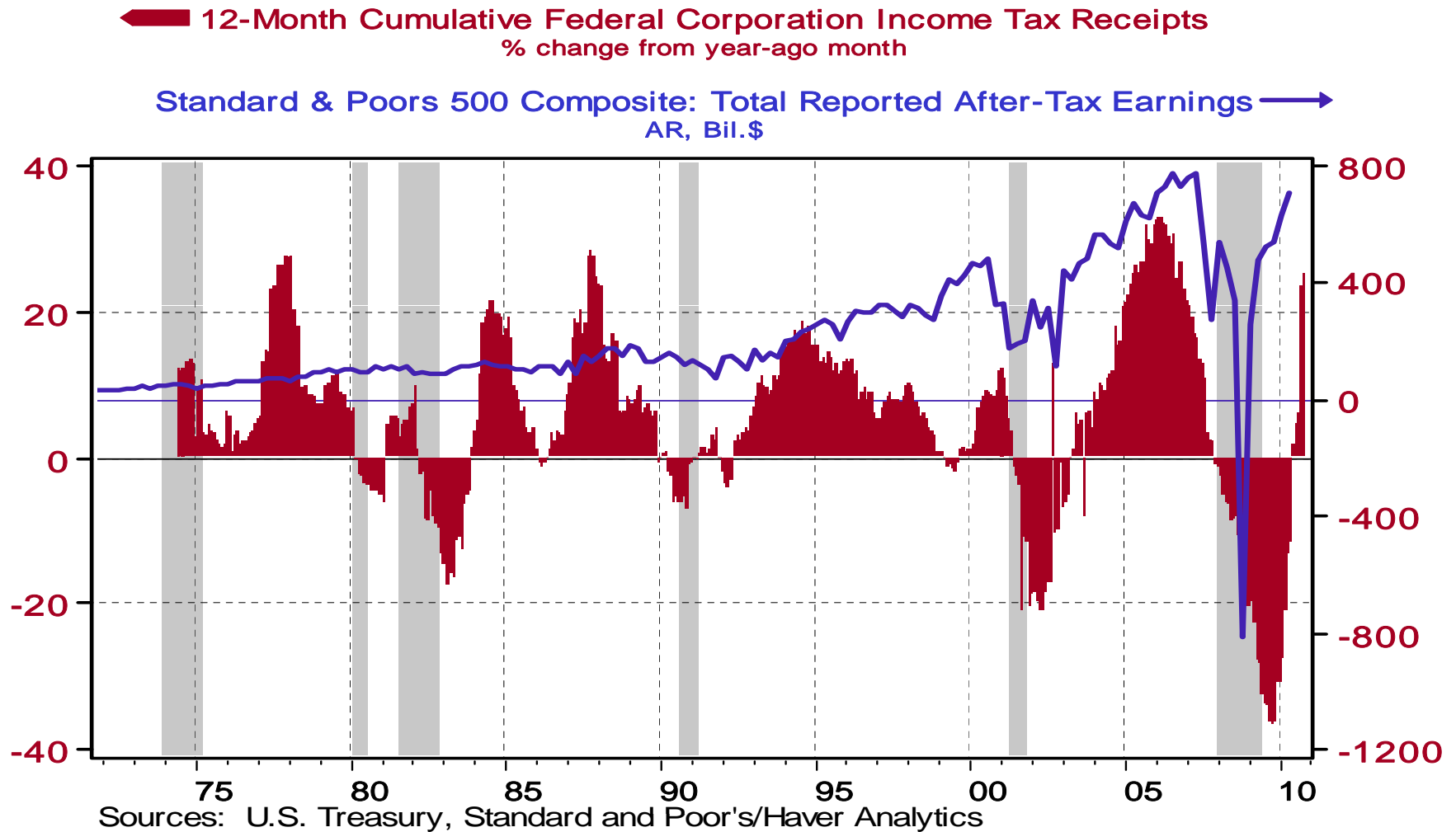
12-Month Cumulative Total Federal Receipts

% change from year-ago month





Why did federal receipts fall so much? It might have been related to the most severe corporate profits recession in the post-WWII era ...

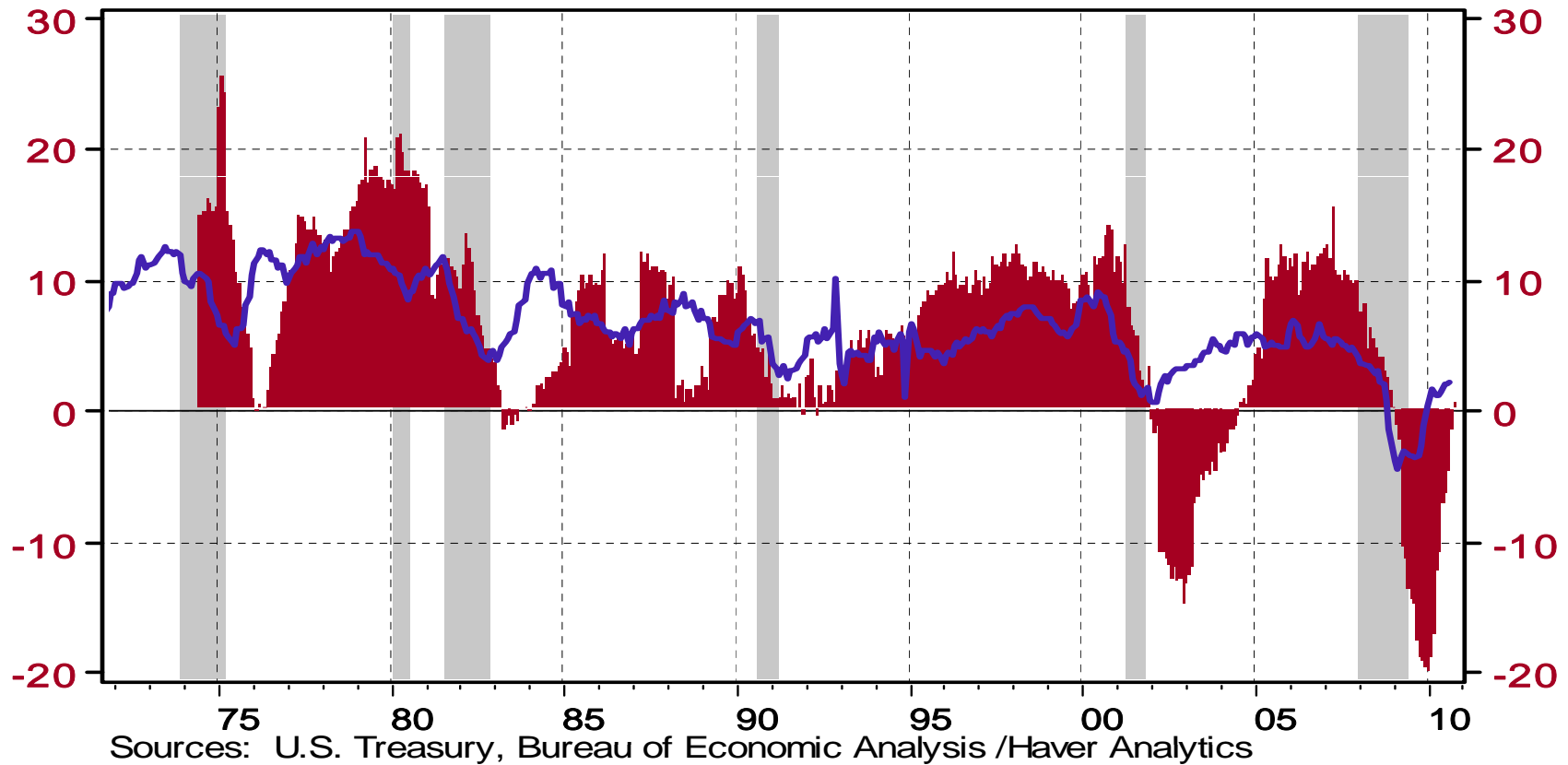




... and the first year-over-year contraction in nominal employee compensation since the 1960s.

12-Month Cumulative Personal Income Tax Receipts
% change from year-ago month

Compensation of Employees, Received
% Change - Year to Year SAAR, Bil.\$

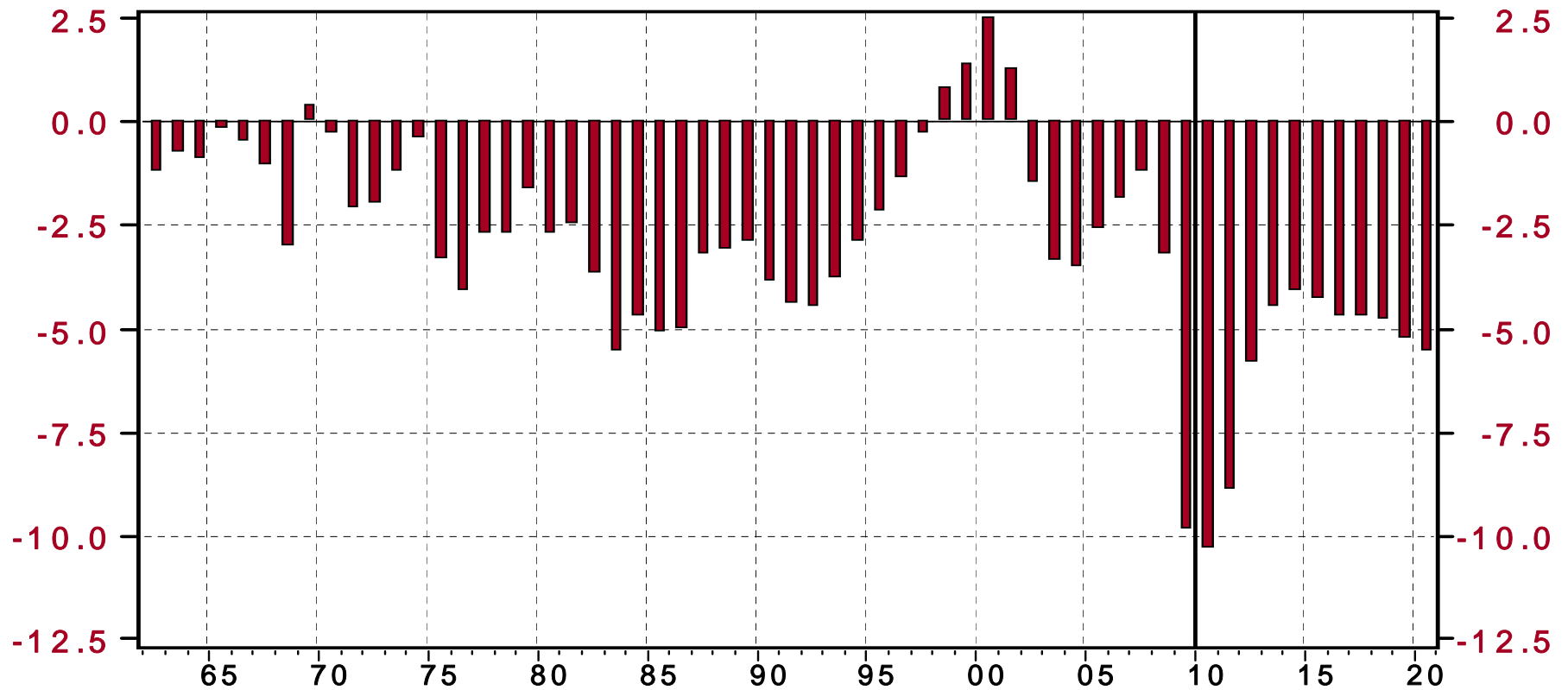




The magnitude of the current deficit, although alarming, is temporary due to TARP and recession-induced decreased revenues and increased expenditures. It is the projected deficit 10 years from now that is the more serious challenge.

Fed Surplus % of Potential GDP: CBO Est of the President's Budget

Fiscal Yr, %



Source: Congressional Budget Office /Haver Analytics

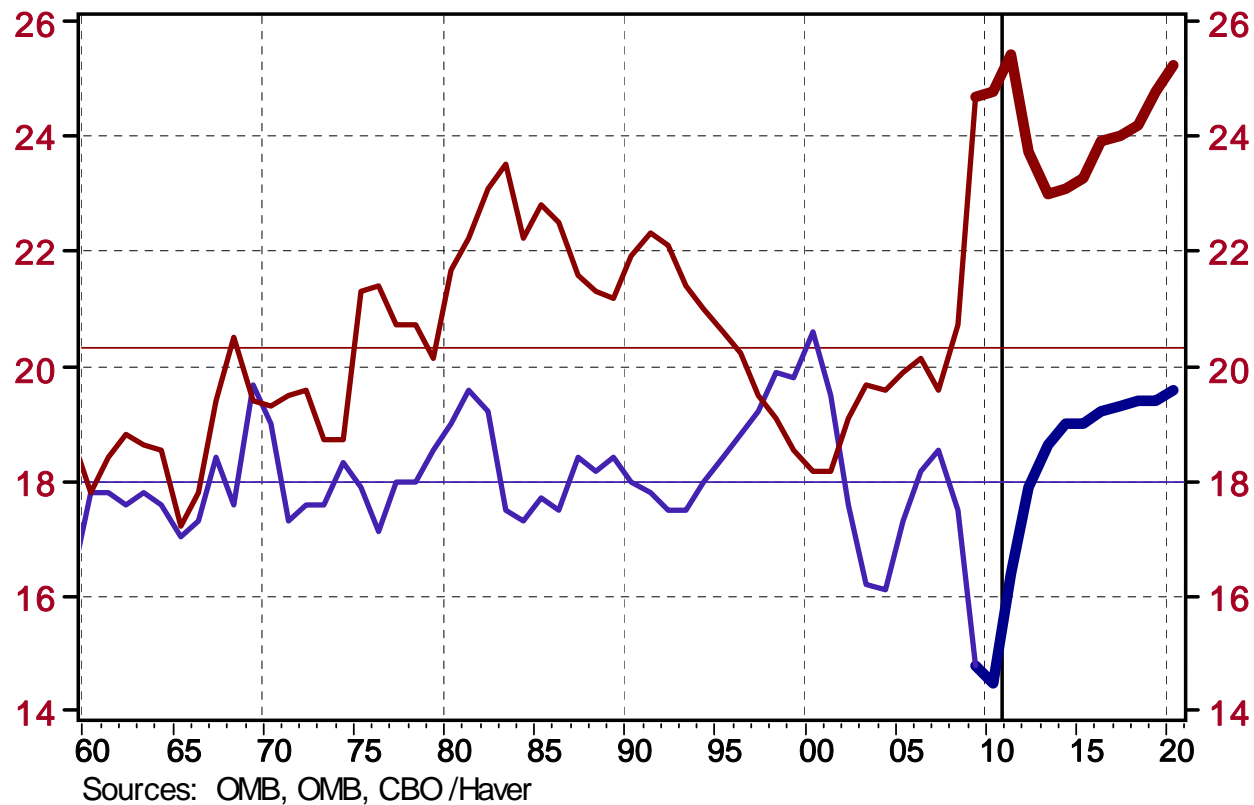


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In the out-years, revenues are above average, but so, too, are outlays. What's driving outlays so high?

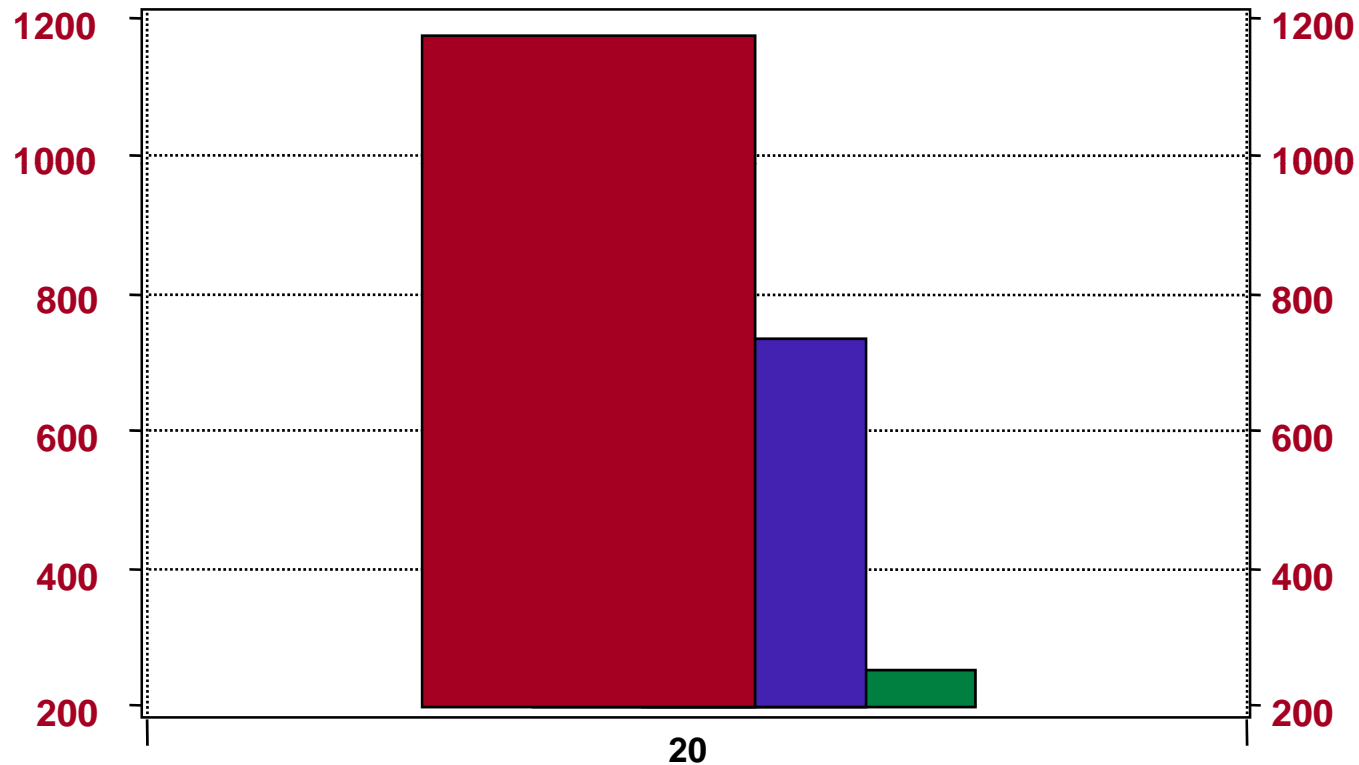
CBO Estimate of President's Budget: Federal Outlays (Fiscal Yr, %)
CBO Estimate of President's Budget: Revenues as % of GDP (Fiscal Yr,%)





Medicare, Medicaid, Social Security and interest on the debt.

Estimated Chg. in Mandatory Spending in 11 yrs. ended 2020, \$Bill.
Estimated Chg. in Net Interest Payments in 11 yrs. ended 2020, \$Bill.
Estimated Chg. in Discretionary Spending in 11 yrs. ended 2020, \$Bill.



Sources: Congressional Budget Office /Haver Analytics



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What are the implications for future real U.S. economic growth if federal entitlement-program spending is not reduced from its projected levels?

- More economically-productive resources will be used to care for U.S. retirees.
- Given the finite supply of economically-productive resources, other sectors of the economy will be deprived of the use of these resources.
- Investment in the state-of-the-art equipment/software and R&D by U.S. businesses will be curtailed, adversely affecting labor productivity.
- Resources will be curtailed for education, which will adversely affect the productivity of future workers.
- With current and future labor productivity growth be adversely affected, the U.S. economy's long-run rate of growth will be adversely affected.



Thank You



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