

Twin Deficits and Twin Decades

Jeffrey Frankel
Harpel Professor of Capital Formation and Growth
Kennedy School of Government
Harvard University

This note was written for the conference on the Macroeconomics of Fiscal Policy, held by the Federal Reserve Bank of Boston, at Wequassett, June 14-16, 2004. The author would like thank Dora Douglass for efficient research assistance.

Summary: Fiscal policy of the current decade in many respects mirrors the fiscal policy of the 1980s. This is particularly true in that growing budget deficits are reflected in growing current account deficits. The twin deficits are back !

Perhaps the most important contribution to open-economy macroeconomics in the 1960s was the Mundell-Fleming model, with its prediction that a fiscal expansion under conditions of high capital mobility would be largely reflected in a current account deficit, more than in crowding out of domestic investment as closed-economy models of the time had emphasized. This prediction was mitigated by two contributions of the late 1970s. First, an important theoretical point: Barro's debt-neutrality hypothesis suggested that an increase in the budget deficit might be offset by an increase in private saving. With no fall in aggregate national saving, there need be no crowding out, of either the trade balance or investment. Second, an important empirical point: Feldstein and Horioka suggested that capital mobility must not be as high as previously assumed, because most of a fall in national saving is observed to be reflected as a fall in national investment, after all, rather than financed by borrowing from abroad.¹

The 1980s

Each of these propositions received its first major practical test in the early 1980s under Reaganomics. Massive tax cuts and increases in spending produced the largest budget deficits of the post war period. Figure 1 and Table 1 show the result.

Notwithstanding that the tax cuts were supposed to be pro-saving, the rate of private saving did not rise enough to offset the budget deficit as one might have predicted from Barro's debt-neutrality proposition. In fact, the rate of private saving actually fell substantially during the latter part of the decade (as Table 1 and Figure 2 show). One does not want to reject a theory based on a single historical episode, regardless how important the episode; but there are by now numerous empirical studies and theoretical explanations elaborating on the failure of debt neutrality.

¹ Feldstein and Horioka (1980).

Thus the total rate of national saving fell sharply in the 1980s. The question then became “What sector would bear the brunt of the crowding out?”: investment or the trade balance? Which prediction would prove correct: that of the Mundell-Fleming model under high capital mobility, or the Feldstein-Horioka finding? Three key attributes made the 1980s the first real test of the Mundell-Fleming model. First, the dollar was floating. Second, there were no controls on the capital account. These two structural aspects differentiated the experiment from the fiscal expansion of the 1960s (when President Johnson increased military spending to fight the Vietnam War, while simultaneously expanding domestic spending under his Great Society and, at first, refusing to raise taxes to pay for it all). The third reason why the 1980s were the first clear test was that the Federal Reserve had adopted a tough anti-inflationary stance in 1980, and stuck with it thereafter (although the monetarist armor that had been adopted for this bold venture was wisely, but quietly, jettisoned after 1982). The predictions of the Mundell-Fleming model required that the fiscal expansion not be accommodated by expansion of the money supply, as had been the case in the 1940s, 1960s, and 1970s. The stage was set as the 1980s began. What sector would be crowded out by the fall in national saving?

Figure 3 and Table 1 tell the story. In the event, the Reagan deficits crowded out *both* the investment rate and the trade balance. Simple ratios for the US data would imply that more than half of the fall in national saving showed up in the trade balance, and less than half showed up in domestic crowding out. In this respect, the prediction of the Mundell-Fleming model was borne out, as was also the specific predicted mechanism of high real interest rates, net capital inflows, and real appreciation of the dollar. Updates of the Feldstein-Horioka regressions (either based on time series or cross section data) tended to suggest something different: that the Feldstein-Horioka coefficient was still a bit above half. Either way, the verdict seemed to be that international economists had jumped the gun in the mid-1970s by proclaiming perfect capital mobility, but that the system had been moving very gradually further in that direction subsequently. And either way, the coefficient in the 1980s seemed to be not far from a half, comfortably in the middle of the range -- close to neither zero nor 1.

Quite possibly the appropriate interpretation was that, although the United States and a few other major countries had removed their capital controls in 1973-74, the UK and Japan did not begin liberalizing until 1979, and other countries still later. For deficits to be easily financed internationally it is necessary that *both* the borrower and the lender be free of capital controls. Japan, in particular, became a major funder of US deficits in the 1980s. It may also be relevant that the international debt crisis of 1982 marked a sudden reversal of what had been substantial capital flows to developing countries, thereby freeing up some more funds to pursue the high interest rates available in the United States.

The 1980s combination of a large U.S. fiscal deficit and a large trade deficit became known as the “twin deficits.” Martin Feldstein, as Chairman of President Reagan’s Council of Economic Advisers, was one of the first to popularize the phrase

“twin deficits” and to forecast that the US would soon lose its net creditor position as a result.² This was ironic, in light of the Feldstein-Horioka proposition.

The pattern was reversed in the 1990s. That the current account deficit briefly disappeared in 1990 was a coincidence, attributable to the US recession and the contributions by Kuwait, Saudi Arabia, and other allies to cover the cost of the first war against Iraq. But paths of rising tax revenue and declining spending shares were established for the 1990s, with the result that they intersected by 1998, and record surpluses followed.³ As a result, national saving rose. To be sure, the current account deficit continued to rise throughout the 1990s. But this was because investment was rising faster than saving. Whether one views the boom as having been propelled by a private-sector productivity boom led by IT, by a perceived return of long-run fiscal virtue, or by a Fed that cooperated in bringing down interest rates, the resulting rise in investment and in the current account deficit is not surprising.

The current decade

The current decade is still not old enough to have received a convenient name (“00s”?). But the decade was only weeks old when it became clear that the United States was in for a new experiment with massive fiscal expansion.⁴ Sure enough, the budget surplus vanished almost overnight, and record deficits soon returned.

There are many parallels between the current decade and the 1980s. In both cases, a major cause of the widening deficits was aggressive tax cuts, made against a background of (questionable) claims to long-run fiscal probity. In both cases, forecasts that were predictably overly optimistic were part of the problem. (Figures 4 and 5.) Further, in both cases, some in the Administration, including the president, subscribed to the Laffer hypothesis that a reduction in US tax rates would stimulate growth so much that tax receipts would go up rather than down. In both cases, although the optimistic forecasts were soon shattered, the Administration for awhile continued to blame the deficits on recession and to repeat the claims that they would go away before long. In both cases, the failure of the budget outcomes to follow the scripts that had been prepared by White House speechwriters led to a switch to an alternative claim known as “Starve the Beast,” that is, the proposition that deficits were a deliberate strategy to force the political process to cut spending. In both cases this theory of political economy rang hollow in light of the proclivity of the Republican White House to continue to submit to

² Council of Economic Advisers, 1984; Feldstein, 1986.

³ The author would give substantial credit to three deliberate policy decisions: (1) *The 1990 Budget Enforcement Act*. The first President Bush bravely revoked his “no new taxes pledge,” and spending caps and PAYGO provisions were established to prevent future budgetary giveaways unless they were paid for. (2) *The 1993 Clinton budget*. President Clinton gave up his middle-class tax cut and some other campaign priorities, to put emphasis on the budget, renewing the caps and PAYGO provisions. (3) *The policy of “Save Social Security first”* in the 1998 State of the Union Message. It led to a bipartisan consensus to continue foregoing spending increases and tax cuts until Social Security was put on a firm footing. To be sure, a booming economy and stock market were a large part of the elimination of the deficit during the course of the decade. But some would claim that the boom was partly endogenous -- mutually reinforcing, together with a credible path of fiscal discipline. Views of Robert Rubin, Martin Feldstein, and many others are represented in Frankel and Orszag (2002).

⁴ I am counting the decade as beginning on January 1, 2001. George Bush’s inauguration was January 20.

Congress budgets with rapidly growing spending and to promise in speeches plans that were yet more extravagant than what was built into the budget.⁵ (Figure 6 shows the pattern of spending.) In both cases, economists debated the extent to which deficits affect interest rates. In both cases, private saving did not offset the new deficits -- no Ricardian equivalence. In both cases, the fall in national saving was soon reflected as a fall in the current account. In other words, the twin deficits are back.

An Update of Feldstein-Horioka

It is important to acknowledge the role of cyclical factors. The recessions of 1981-82, 1990-91, and 2001 exacerbated the remarkable pattern whereby new Republican presidents have presided over sharp deteriorations in the federal budget. (Return to figure 1.) More generally, it is a regular pattern that national saving rates fall in recessions and rise in booms. Investment rates tend to vary cyclically as well (even more so, with the result that current account balances tend to rise in recessions and fall in booms). Of the many critiques of Feldstein-Horioka, some attribute the saving-investment correlation to this endogenous cyclical pattern; and most of the rest attribute it to endogeneity of national saving with respect to some other particular factor, such as growth rates of productivity or population or changes in world interest rates. Many of the critics have failed to notice that Feldstein and Horioka (1980) and Feldstein (1983) were aware of the cyclical and other endogeneity problems, and sought to address them by using decade averages, instrumental variables, and cross-sections instead of time series. The saving-investment correlation tends to emerge even with these corrections.⁶

The subject at hand is recent US history, and full cross-section econometrics is probably overkill to the task. Instead we ran a simple Feldstein-Horioka regression on an updated US time series, covering the period 1964-2003. Table 2.1 reports a saving-retention coefficient of .60. When we allow for a time trend in the coefficient, it appears to be positive. As a check we run the regression in Table 2.2 with the current account on the lefthand side in place of the investment rate. In theory, the two regressions should be precisely equivalent, with the new coefficient equal to one minus the old (and the trend of opposite sign); but it is worth checking, because statistical errors and omissions in fact

⁵ In several respects, the record of the current Administration is worse than that of the Reagan Administration. In the first place, President Reagan allowed some exchange of views, for example between the monetarists who believed that exchange rates should float and the supply siders who believed they should be pegged. In the second place, the Reagan Administration began to adjust course after a year or two in office (like the first Bush Administration after it), and to reverse some of the tax cuts, whereas the current administration has yet even to acknowledge fiscal reality. In the third place, we now have the example that was set by the 1990s as to how fiscal discipline can be restored: a set of mechanisms (such as caps and PAYGO provisions) that constitute a system of shared sacrifice and the principle of budget neutrality for future changes. We know that the political economy of this approach can work to balance the budget ("I will forego my spending increase if you forego your tax cut"), unlike the political economy of Starve the Beast ("I will screw you on taxes, and you will forego your spending increase.")

⁶ Frankel (1991) surveyed the critiques as of that date, and sought to address endogeneity by instrumental variables. Regression results using military spending as an instrument for government spending and the age-dependency ratio as an instrument for private saving showed little decline in the Feldstein-Horioka coefficient, relative to OLS estimation. Imperfect integration across markets in securities and across markets in goods may be the culprit, despite high integration for short-term deposits and bills. However the coefficient had indeed declined a bit between the 1970s and 1980s.

invalidate the national saving identity. In this case we duly find a coefficient of .38: fluctuations in national saving are 38% financed by borrowing from abroad and 62% reflected as crowding out of national investment.

It is likely that cyclical fluctuations seriously raise the saving retention coefficient and perhaps its trend. In Table 2.3 we repeat the Feldstein-Horioka regression with cyclically adjusted rates of national saving and investment. Now the coefficient for the sample overall falls to .49. The positive trend is no longer statistically significant. Table 2.4 repeats the regression with the current account as the dependent variable. The coefficient is essentially equivalent, at .50. There is now a significant and positive trend in the coefficient, implying more plausibly a gradual increase in the degree of capital mobility in the Feldstein-Horioka sense. Although these results are liable to charges of endogeneity and all the other critiques that have been launched against Feldstein-Horioka, they seem to confirm the findings of earlier studies, including those with instrumental variables: Fluctuations in national saving are reflected roughly half in the current account and half in investment, possibly with a gradual trend suggesting that the United States has found it easier over time to borrow to finance its deficits.

Any Differences Between the Decades?

There are, to be sure, a number of important differences between the pattern of the 1980s and the current decade. Interest rates have been low (nominal and real) during 2001-2004, and the dollar began to depreciate in 2003 – just the opposite of the Mundell-Fleming prediction and the experience of the 1980-84. But this is not surprising: the Federal Reserve lowered interest rates aggressively in 2001, just the opposite of what it did in at the beginning of the earlier recession/presidency/decade (and in 1990 as well). The Mundell-Fleming prediction applies specifically to a fiscal expansion that is *not* accommodated by monetary policy, whereas the 2001-04 expansion clearly *has* been accommodated so far. The real test will come when the Fed responds to the recovery by raising interest rates. That is, assuming the central bank declines to play the role of enabler to the fiscal alcoholic, in the same way that Volcker declined to play the role of enabler to Reagan in the early 1980s (and the Bundesbank to the German government in the early 1990s). Furthermore, the tendency of central banks in Asia and other foreign countries to buy up US treasury securities, thereby keeping interest rates low and the dollar high, has been as important as the tendency for our own central bank to do so. But it is likely to come to an end as well.

Another difference this time around is that our initial condition is a far higher national debt, and far fewer years to go until the babyboomers start to retire, than was the case in 1981. Admittedly, the current debt and prospects for likely future deficits have not yet shown up in long-term interest rates or stock market valuations. But it is *expectations of future* deficits that matter most for long-term interest rates.⁷ If most poll participants are unaware of what are realistic forecasts for the budget deficits over the next ten years, then perhaps it is not surprising that participants in the securities markets are also not yet fully aware of them. That Japan and Europe have debt and demographic

⁷ Table 3 reports some regression results for six countries. Expected future deficits have statistically significant effects on real interest rates, after remembering to control for a few other important determinants.

problems at least as bad as ours is of some reassurance. But it only reinforces the prediction that the trend for world interest rates from here on out is likely to be upward.

References

Council of Economic Advisers, 1994, "The United States in the World Economy: Challenges of Recovery," Chapter 2, Economic Report of the President 1994, Washington, DC.

Feldstein, Martin. 1983. Domestic saving and international capital movements in the long run and the short run. *European Economic Review* 21: 129-51.

Feldstein, Martin. 1986. The budget deficit and the dollar. *NBER Macroeconomic Annual 1986* (September).

Feldstein, Martin, and Charles Horioka. 1980. Domestic saving and international capital flows. *Economic Journal* 90: 314-29.

Frankel, Jeffrey, "International Capital Flows; and Domestic Economic Policies," in The United States in the World Economy, edited by Martin Feldstein, University of Chicago Press: Chicago, 1988, 559-627.

Frankel, Jeffrey, "Quantifying International Capital Mobility in the 1980's." In National Saving and Economic Performance, D. Bernheim and J. Shoven, eds., University of Chicago Press: Chicago, 1991, 227-260.

Frankel, Jeffrey, and Peter Orszag, editors, American Economic Policy in the 1990s, MIT Press, Cambridge MA, 2002.

Figure 1: US Federal Deficit as a Share of GDP, by Presidential Term

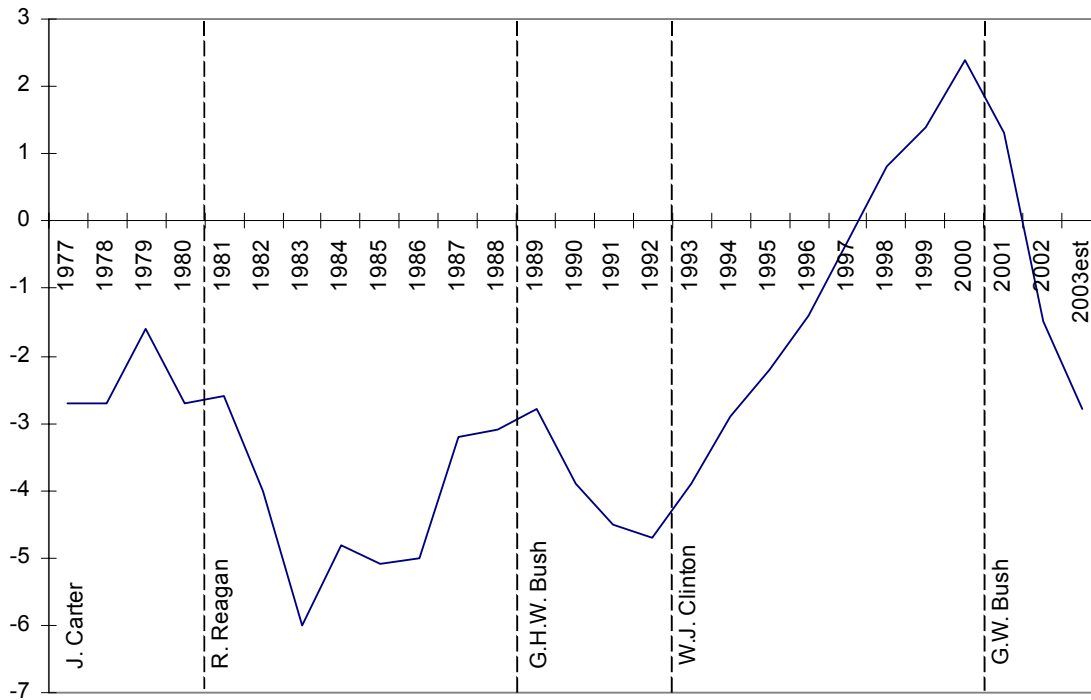


Table 1

	Net Private Saving (% of GDP) (1)	Net Government Saving (% of GDP) (2)=(3)+(4)	Net State & Local Saving (% of GDP) (3)	Net Federal Saving (% of GDP) (4)	Net National Saving (% of GDP) (5)=(1)+(2)	Net Domestic Investment (% of GDP)	Current Account (% of GDP)
(average)							
1961-1964	9.9%	1.4%	0.9%	0.5%	11.2%	10.4%	0.8%
1965-1968	10.6%	0.7%	0.9%	-0.2%	11.3%	11.3%	0.5%
1969-1972	9.4%	-0.4%	0.8%	-1.3%	8.9%	9.6%	0.1%
1973-1976	10.2%	-1.6%	0.6%	-2.2%	8.6%	8.8%	0.7%
1977-1980	9.4%	-0.9%	0.6%	-1.4%	8.6%	10.1%	-0.1%
1981-1984	10.3%	-3.5%	0.2%	-3.7%	6.8%	8.2%	-0.7%
1985-1988	8.6%	-3.1%	0.4%	-3.5%	5.5%	8.6%	-2.8%
1989-1992	7.5%	-3.3%	0.1%	-3.4%	4.2%	6.2%	-0.8%
1993-1996	6.5%	-2.7%	0.2%	-2.9%	3.8%	6.7%	-1.3%
1997-2000	4.9%	1.2%	0.5%	0.7%	6.1%	8.5%	-2.6%
2001-2003	4.4%	-1.8%	0.0%	-1.9%	2.6%	6.3%	-4.3%

Source: National Income and Product Accounts, Bureau of Economic Analysis, US Department of Commerce.

Figure 2: Budget Balances, Private Saving, and National Saving, as Shares of GDP

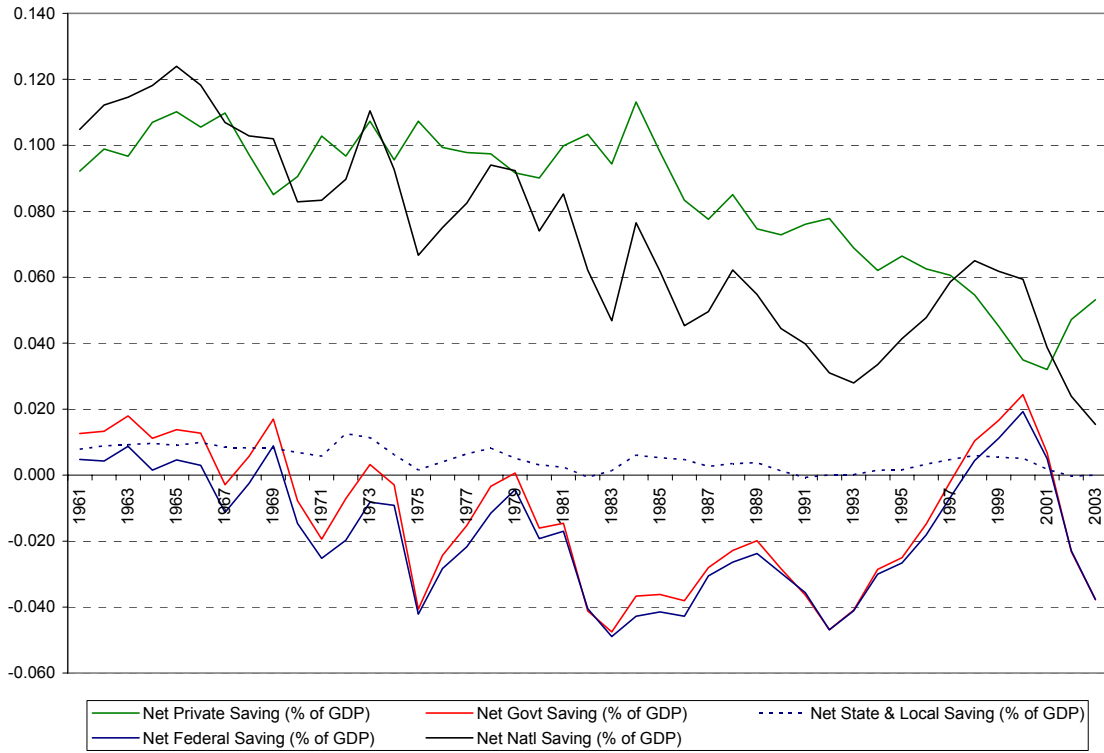


Figure 2b:
 Private Saving Fails to Rise to Offset Budget Deficits; Rather National Saving Falls
 (shares of GDP 1980-2002)

Source for figures: NIPA accounts, BEA

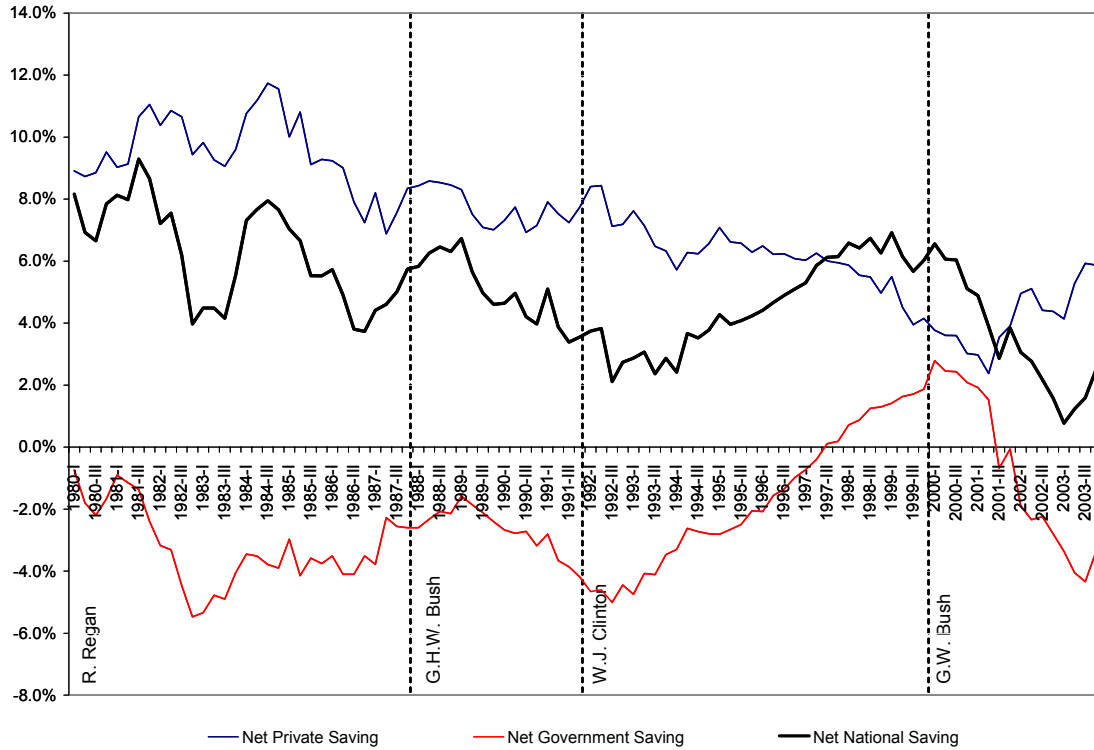


Figure 3: National Saving, Investment, and Current Account, as Shares of GDP

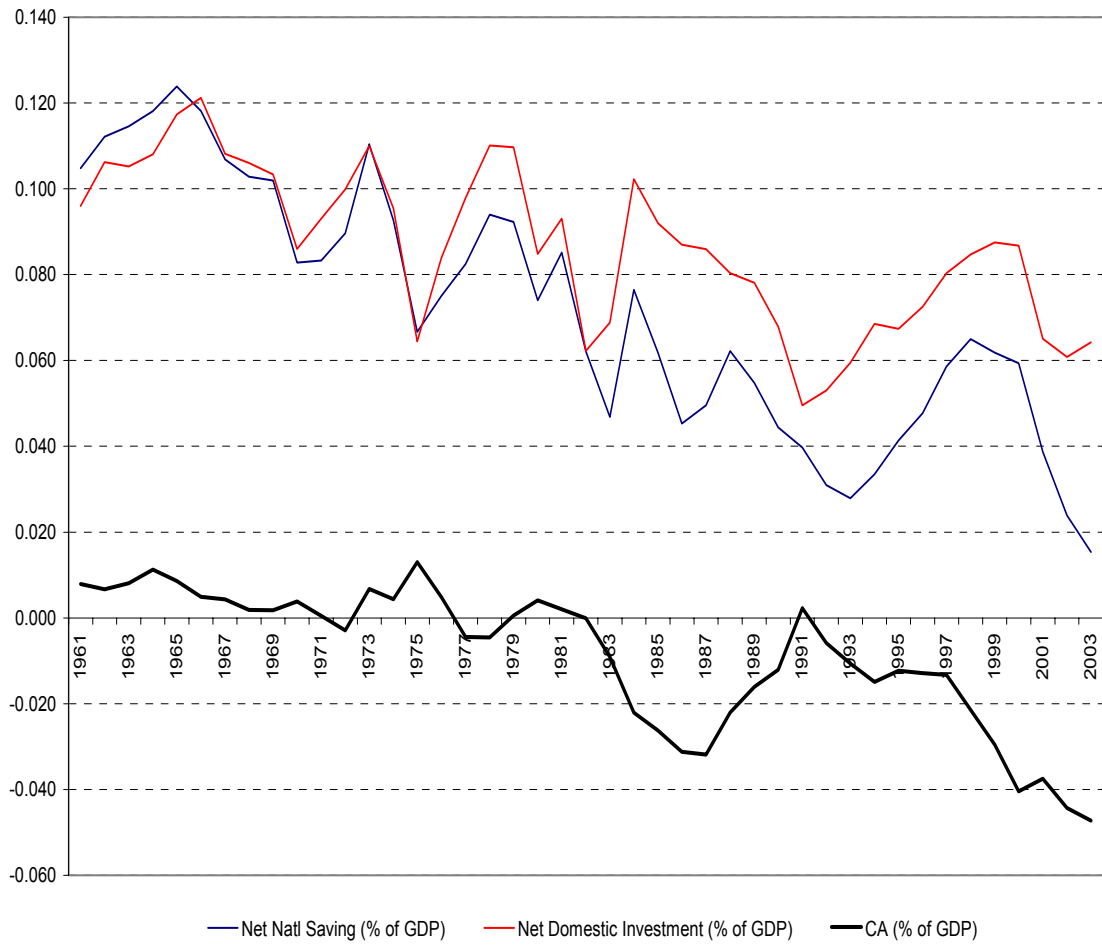


Figure 4: Three years of budget forecasts that soon proved too optimistic

Source for figures: OMB

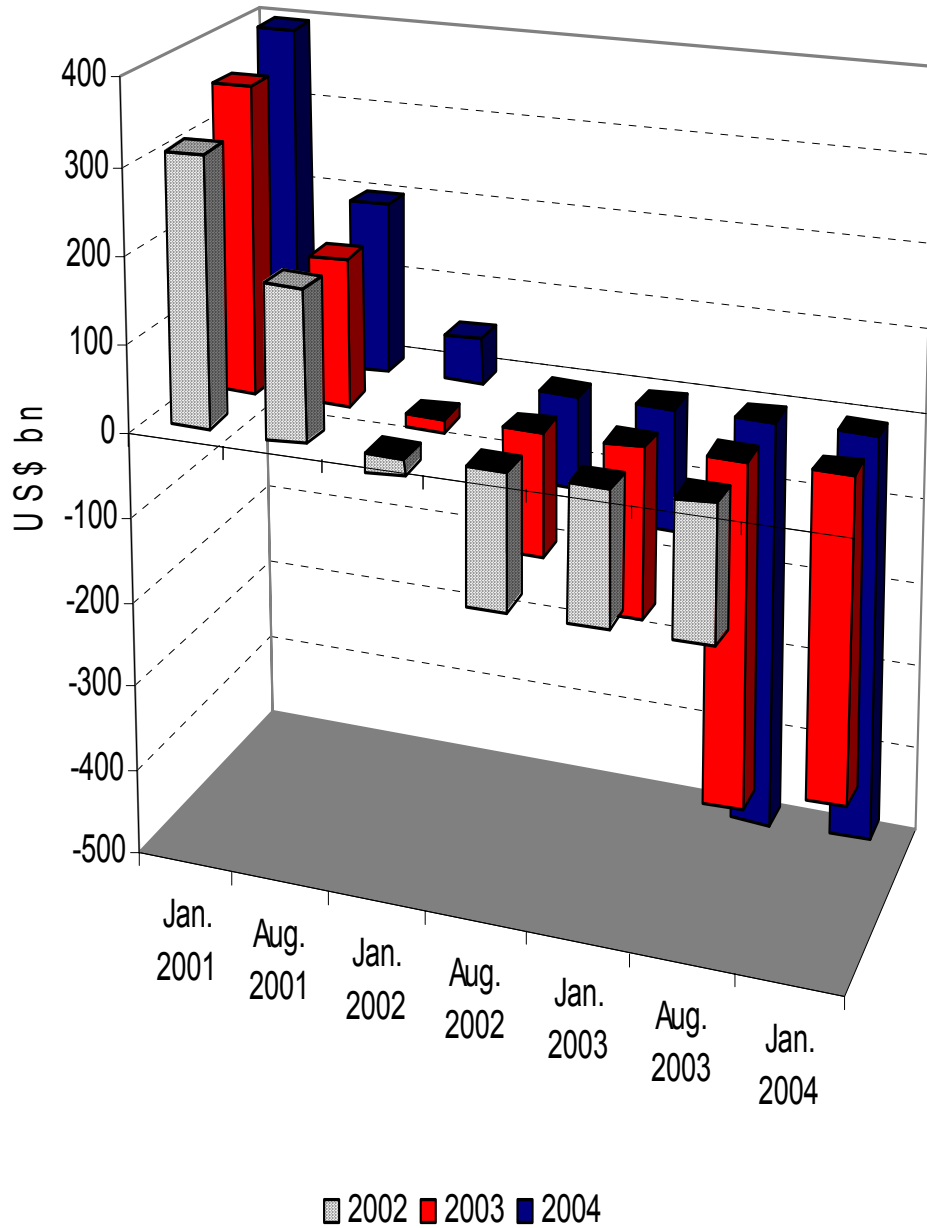


Figure 5: As of 2004, the official budget forecasts are still too optimistic

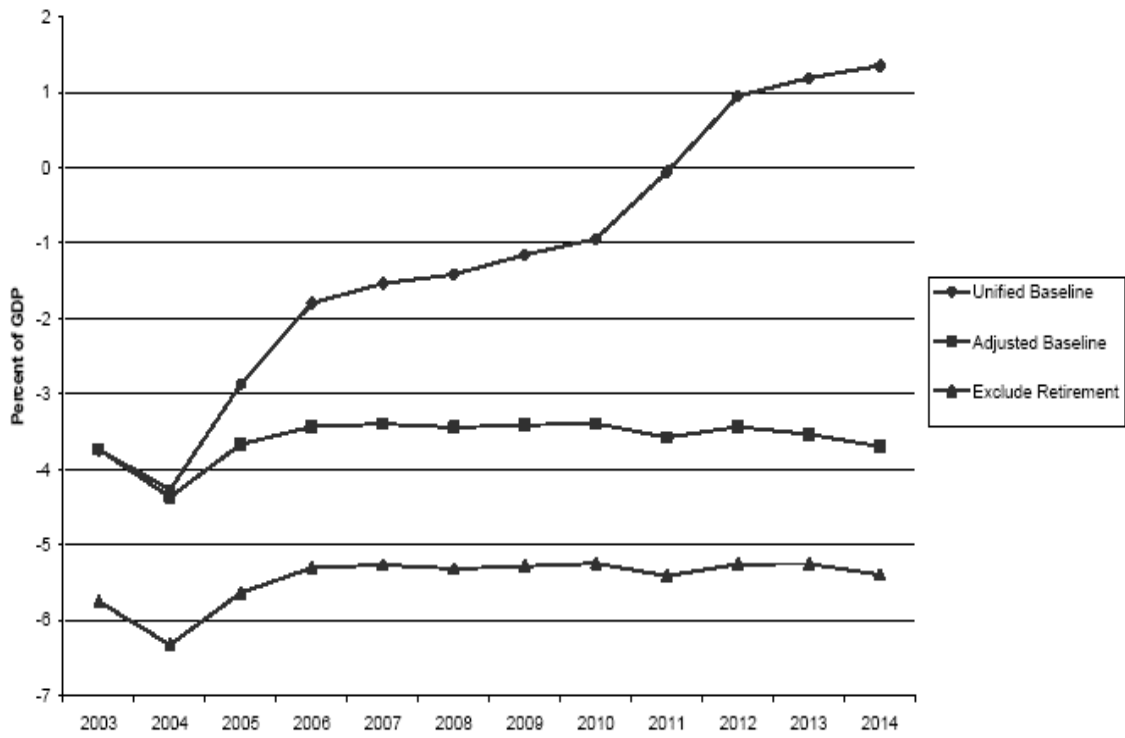


Figure 6: US Federal Spending as a Share of GDP, by Presidential Term

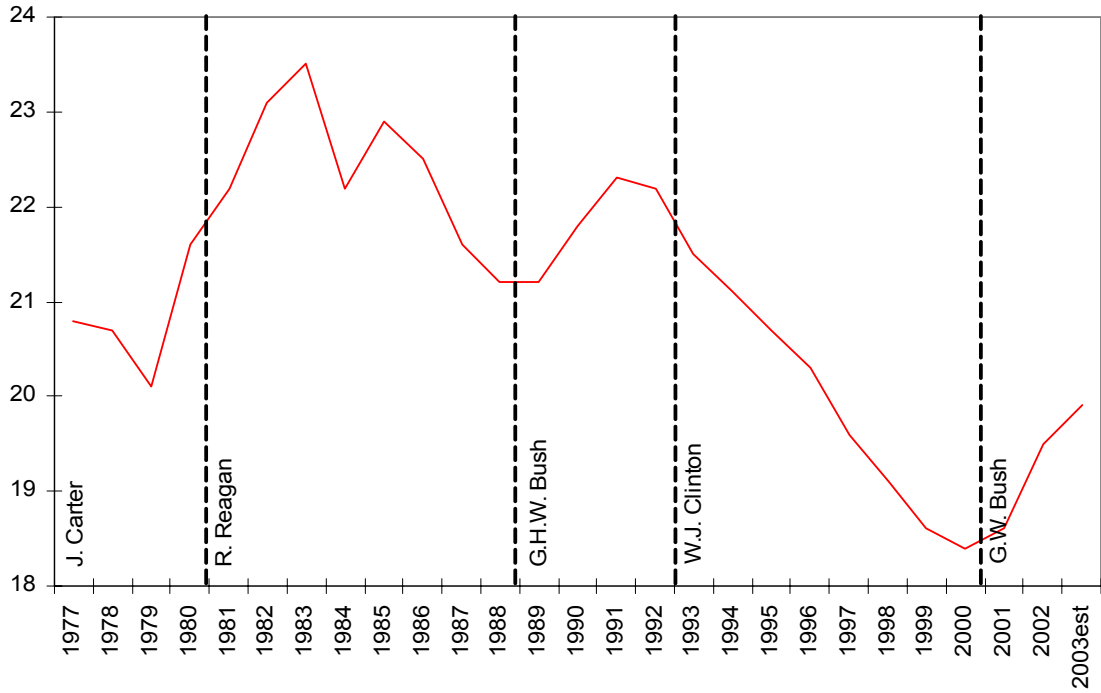


Table 2: Feldstein-Horioka Regressions for US -- 1964-2003 (160 obs.)

2.1 -- Dependent Variable: National Investment as Share of GDP, *NOT Cyclically Adjusted*

	Coefficient (Std. Error)	Coefficient (Std. Error)
National Savings as Share of GDP (NS)	.5969 ** (.0246)	.6186 (.0253)
Trend in Coefficient on Saving (NS * t)		.0009 (.0003)
Constant	.0444 ** (.0018)	.0387 (.0027)
R-sqd.	.79	.80

2.2 -- Dependent Variable: Current Account as Share of GDP, *NOT Cyclically Adjusted*

National Savings as Share of GDP (NS)	.3798 ** (.0335)	.3301 ** (.0329)
Trend in Coefficient on Saving (NS * t)		-.0022 ** (.0004)
Constant	-.0360 ** (.0025)	-.0231 ** (.0035)
R-sqd.	.45	.52

2.3 -- Dependent Variable: National Investment as Share of GDP, Cyclically Adjusted

	Coefficient (Std. Error)	Coefficient (Std. Error)
National Savings as Share of GDP, Cyclically Adjusted (CyclAdjNS2)	.4913 ** (.0228)	.3967 ** (.0551)
Trend in Coefficient on Saving (CyclAdjNS2 * T)		.0011 # (.0006)
Constant		.0011 (.0008)
R-sqd.	.75	.75

2.4 -- Dependent Variable: Current Account as Share of GDP, Cyclically Adjusted

National Savings as Share of GDP, Cyclically Adjusted (CyclAdjNS2)	.5027 ** (.0332)	.3554 ** (.0803)
Trend in Coefficient on Saving (CyclAdjNS2 * T)		.0018 * (.0009)
Constant		.0018 (.0012)
R-sqd.	.59	.60

** (1% significance); * (5% significance); # (10% significance)

Note: Cyclical adjustment of a series is the residuals from a regression of the series against the logarithmic percentage difference between actual and potential output.

Data sources

Bureau of Economic Analysis:

GDP, Table 1.1.5, Line 1

Net Domestic Investment, Table 5.1, Line 31; and Net National Savings, Table 5.1, Line 2

OECD *Economic Outlook*:

GDPV, gross domestic product, volume, market prices; and GDPVTR, gross domestic product, volume, potential

Interest Rates and Expected Budget Deficits: Six Countries

Source: Menzie Chinn and Jeffrey Frankel, October 15, 2003

Table 3: Determinants of long term real interest rates

	US	Germany	France	Italy	Spain	UK
Constant	-0.001 (0.008)	-0.122*** (0.038)	-0.022 (0.027)	-0.081 (0.041)	-0.043* (0.023)	-0.034 (0.030)
Inflation	1.00	1.00	1.00	1.00	1.00	1.00
debt ratio	0.060** (0.019)	0.182*** (0.047)	0.027 (0.040)	0.109 (0.062)	0.031 (0.051)	0.067 (0.044)
expected change in debt ratio	0.144** (0.061)	0.112*** (0.032)	0.177** (0.073)	0.324** (0.106)	0.289*** (0.048)	0.066 (0.110)
output gap	0.388** (0.174)	0.608** (0.219)	0.252 (0.202)	0.297 (0.484)	0.218 (0.223)	-0.316 (0.324)
Foreign interest rate	0.096 (0.122)	1.529*** (0.327)	0.923*** (0.241)	0.390 (0.446)	1.204*** (0.145)	0.815** (0.348)
N	15	15	15	15	15	15
Adj.R ²	0.32	0.51	0.82	0.77	0.82	0.55
DW	2.24	2.50	2.47	1.70	2.47	1.44

Notes: OLS regression using annual data, in levels
(Newey-West robust standard errors in parentheses).

Percentage variables defined in decimal form.

N is the number of observations.

Adj.R² is the adjusted R-squared.

*(**)[***] denotes significance at the 10%(5%)[1%] level.