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Strategic Analysis

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THE U.S. ECONOMY: IS THERE A WAY OUT OF THE WOODS?

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During the last 10 years, the Levy Institute has published a series of papers on the evolving strategic predicaments facing the U.S. economy. Our work has never really taken hold in the United States, which may be a consequence of the unrepentantly Keynesian structure of our model, by which we continue to stand although it is not currently fashionable. But it may also be a result of the rather parochial attitude of many U.S. economists and institutions. In any event, it is high time we looked back on our endeavor and made an evaluation of it. Some repetition is unavoidable.

Methods and Concepts

Our assessments of the U.S. economy have not so far focused on short-term prospects, and this has distinguished our work from that of commentators whose evaluation is based on monthly and quarterly indicators. Up to now, we have concentrated on the medium term, trying to diagnose whether or not the configuration of “drivers”—the forces generating expansion or contraction—would be sustainable in the medium term, and hence whether the overall stance of fiscal and monetary policy was viable looking forward to a strategic time horizon, and what changes in policy, if any, should come under consideration.

Looking back, we may have erred in not being more explicit about the model we use.¹ The following skeleton may be useful.

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The real (inflation-adjusted) national income, Y , is defined as

$$Y = G + X - M + PX \quad A)$$

where all variables are deflated flows, G is government expenditure, X is exports plus property income and foreign transfers, M is imports, and PX is total private expenditure. Subtracting T , defined as government taxes and transfers, from both sides and rearranging we have

$$Y - T - PX = [G - T] + [X - M] \quad B1)$$

or

$$0 = [G - T] + [X - M] - PNS \quad B)$$

where PNS is private net saving—that is, private disposable income less total private expenditure, including both consumption and investment.

Equations $B1)$ and $B)$ both state that private net saving is always identically equal to the government's budget deficit plus the current account surplus. Though in themselves nothing more than accounting identities, these equations carry some important implications. Each balance implies an equivalent change in a stock variable: subject to the effect of capital gains, the budget deficit implies a change in the stock of government debt, a current account deficit implies a change in the net stock of overseas assets, and the private balance implies a change in net private wealth. As there is a limit to the extent to which stocks of debt can be allowed to rise relative to GDP, there is a corresponding limit to the extent to which the financial balances can (be allowed to) fluctuate, implying that the ratios of stocks to GDP have *norms* that can sometimes be used to evaluate strategic options. For instance, if the government or overseas debt-to-GDP ratios are limited to 50 percent, this implies that the ratio of the budget or current account deficit to GDP cannot for long be allowed to exceed half the nominal growth rate. The nominal growth rate since 1960 has averaged 7 percent, so it is not surprising that the mean ratio of the budget deficit to GDP between 1960 and 2006 was 2.8 percent, for the foreign balance it was -1.1 percent, and for private net saving it was (plus) 1.6 percent, with a standard deviation of 0.02 in each case.

Although the three balances must always sum to exactly zero, no single balance is more a residual than either of the other two. Each balance has a life of its own, and it is the level of real output that, with minor qualifications, brings about their equivalence. Underlying the main conclusions of our reports is

an econometric model in which exports, imports, taxes, and private expenditure are determined as functions of such things as world trade, relative prices, tax rates, and flows of net lending to the private sector. However, neither the knowledge that this is the case nor the perusal of any list of econometric equations will, on its own, impart any *intuition* as to why output moved as it did over any set period.

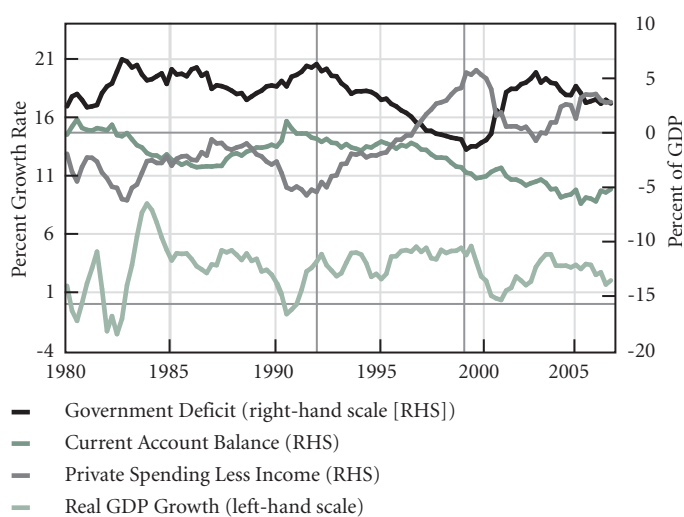
We attempt to rectify this, up to a point, in Figure 1.

The lower part of the figure, using the left-hand scale, shows the year-by-year growth rate of GDP between 1980 and the second quarter of 2007. The upper part of the figure, using the right-hand scale, shows the quarterly evolution, over the same period, of the three balances expressed as proportions of GDP, but are otherwise exactly as described in equation B. Note that the negative sign on private net saving (PNS/GDP) in equation $B)$ signifies that the relevant line in the figure is describing private expenditure less disposable income (i.e., *negative* net saving). Thus, all three lines—our three “drivers”—are in equivalence with one another, in that an upward movement in each denotes an upward impetus to the economy, and vice versa.² Each balance is measuring an arterial flow of expenditure into the economy by one sector, less a counterpart outflow from the same sector, and therefore approximately measures its effect on aggregate demand. Figure 1 illustrates, for example, how each of the last three recessions (1982, 1991, and 2001) and each subsequent recovery was caused by a sharp fall in private expenditure relative to income, followed by a sharp rise. The first strong vertical line marks the beginning, in 1992, of the famously long period of relatively smooth and rapid “Goldilocks” expansion. The second vertical line indicates the year that the first major Levy Institute Strategic Analysis (Godley 1999) was published.

The Conclusions We Drew

It is not easy now to remember the atmosphere of self-congratulation that enveloped the public discussion around 1999. The economy had enjoyed seven years of reasonably smooth and rapid expansion without inflation. The budget was in surplus, and the Congressional Budget Office (CBO) was projecting a rise in that surplus. The United States was supposedly possessed of a New Economy, and the good times were here to stay. The business cycle had been abolished, leading Alan Blinder to compare the U.S. economy to Ol' Man River, which just kept rolling along. The use of fiscal policy as a regulator had forever been

Figure 1 U.S. GDP Growth and Balances of the Main Sectors in Historical Perspective



Sources: Bureau of Economic Analysis and authors' calculations

foresworn. And the budget surplus, shown in the figure as a negative balance in 1999, was seen as a good thing in and of itself.

We took a radically different view, however. As Figure 1 shows, the government and foreign sectors had both been falling rapidly throughout 1992–99, subtracting increasing amounts from aggregate demand. These falls were offset by private expenditure, which rose much faster than income, until private net saving—for the first time in history—became substantially negative, while private borrowing and debt rose to record levels. It should have been obvious to everyone at that euphoric time that this configuration of “drivers” could not possibly be sustained, and that a major change in policy would soon have to take place.

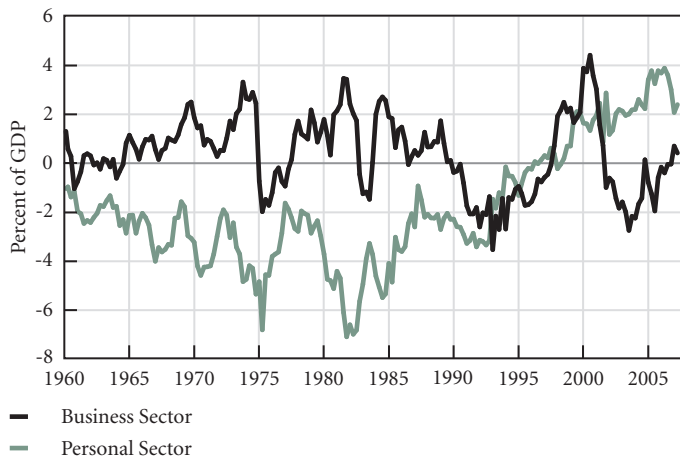
We made no short-term forecast in 1999, our view being that

bubbles and booms often continue much longer than anyone can believe possible and there could well be a further year or two of robust expansion. The perspective taken here is strategic in the sense that it is only concerned with developments over the next five to 15 years as a whole. Any recommendations regarding policy do not have the character of “fine-tuning” in response to short-term disturbances. They ask, rather, whether the present stance of either fiscal or trade policy is structurally appropriate looking to the medium- and long-term future (Godley 1999, p. 1).

Our conclusion (1999, p. 9) was that the boom in private expenditure could not continue indefinitely and must at some stage go into reverse, implying that “the whole stance of fiscal policy [was] wrong in that it [was] much too restrictive to be consistent with full employment in the long run.” The implication for policy was that when the tide turned (not before) there would have to be a fiscal deflation on the order of \$400 billion (1999, p. 10). We also took the view in 1999 (and again, with more precision, in 2001) that in the absence of measures to improve net exports, an adequate growth in output would generate a current account deficit in 2006 equal to about 6 percent of GDP (Godley and Izurieta 2001, p. 9). This conditional prediction, which turned out to be quite accurate, was derived from some very straightforward econometric equations that have so far served us well. We have been surprised that so many people—including Federal Reserve Board Chairman Ben S. Bernanke (2007)³—when they belatedly realized how large the current account deficit had become, put the whole thing down to a “saving glut” in the rest of the world and not the “fault” of the United States at all. Our earlier conclusion (Godley 1999, p. 10) was that, in addition to a large fiscal stimulus, there would have to be a large real devaluation of the dollar—which we put at 20 percent—to take place immediately.

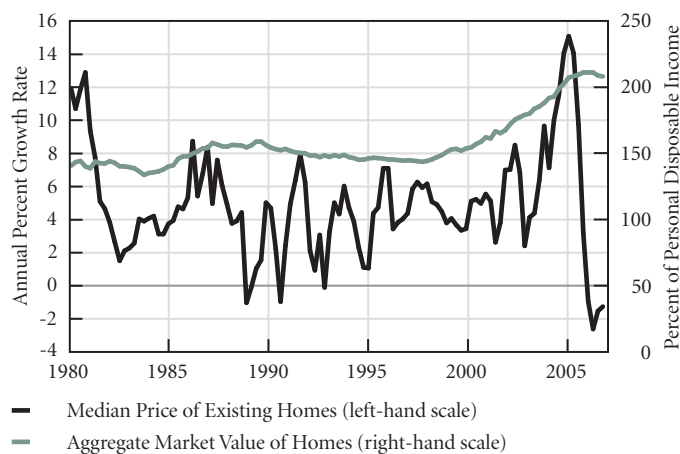
These judgments look reasonably good today. The boom did indeed continue for another year or so, but private net saving, as shown in Figure 1, started to rise sharply in 2000—shown as a *fall* in the chart (because it describes a fall in expenditure relative to income)—and this would have generated a severe recession had there not been, simultaneously, a large fiscal stimulus (also clearly shown in the figure).⁴ It is not a simple matter to measure the scale of the fiscal stimulus,⁵ but in 2001 the CBO was projecting a budget *surplus* equal to 3.4 percent of GDP in 2005, whereas the outturn shows a *deficit* of about 2.6 percent (although output had reached roughly the same level as that originally projected by the CBO). This seems to imply that the fiscal stimulus was equal to about 6 percent of GDP. Regardless, Figure 1 shows a rise in the budget deficit between 2001 and 2003 that quite neatly offsets the fall in private expenditure relative to income. The stimulus was in some degree reinforced by a relaxation in monetary policy, but the effect of this cannot have been very large *at that time*, as no effect on private net saving can be observed. The dollar, far from falling 20 percent, actually appreciated until 2002, and no other measures were taken to improve the current account balance,

Figure 2 Personal and Business Spending in Excess of Income



Sources: Bureau of Economic Analysis, Federal Reserve, and authors' calculations

Figure 3 Price of Homes and Aggregate Value of Homes



Sources: Bureau of Economic Analysis, Federal Reserve, Association of Realtors, and authors' calculations

which continued to deteriorate rapidly in 2002 and for several years thereafter.

We have not rehearsed all this merely to support a claim that our work has been a useful contribution to the public discussion. We are also implicitly contrasting our views about how the economy functions with those fashionable at that time and subsequently. In our strong opinion, the huge fiscal stimulus in 2001 saved the United States from a much deeper recession than actually occurred. But because this stimulus was applied contrary to the philosophy and rhetoric of the times, few have seemed to admit, or even notice, that it happened. The configuration of balances illustrated in the figure suggests that *a rehabilitation of fiscal policy as a key regulator of the economy is now in order, together, by implication, with some demotion of monetary policy from its present exalted status.*

Postrecession

Analysis of net saving by the private sector often requires that the total be disaggregated into the personal and business sectors, because the two often behave quite differently from each other. For instance, Figure 1 does not reveal that the 2001 recession was caused by a fall in *business* spending beginning in 2000 that exceeded the continued rise in personal spending.

Figure 2 shows how business expenditure stopped falling in 2004 and started rising again, while personal expenditure rose at such a rate that private sector spending as a whole rose again relative to income, by 3 percent, between 2002 and 2007. The rise in *personal* expenditure, on which continuous growth of the U.S. economy largely depended after 2001, was directly and indirectly caused by the hysterical boom in the housing market. The genesis of this boom has been extensively discussed in the financial press and elsewhere. It was partly caused by over-lax monetary policy. It was also helped along by the fact that subprime mortgages had been “packaged,” securitized and bought with borrowed money in U.S. and world markets, even when they were worth far less than the rating agencies claimed, to the great (and largely risk-free) profit of the lending chain. Although subprime mortgages account for only a small proportion of all mortgages, their total has risen to a very large figure—about \$1.5 trillion.⁶ That all this was happening was well known two or more years ago, and it was quite well described in our September 2005 Strategic Analysis (Godley et al., p. 8), so it is a bit strange that the process was

allowed to continue for so long, and that so much money was lost by financial “experts” when the debacle arrived.

Scenarios for the Future

As pointed out at the beginning of this report, our work hitherto has concentrated entirely on medium-term, strategic developments. This is not sensible on the present occasion because of likely adverse developments in the very short term as a result of the credit crunch that would be ridiculous to ignore. However, medium-term prospects have been transformed as a consequence of the devaluation of the dollar (21 percent for the broad measure since 2002, and more than 50 percent against the euro)⁷ and the unusually rapid growth of world trade. There has already been a large increase in net exports, a trend that seems likely to continue. Our first major conclusion (ignoring exotic possibilities such as the spread of war) is that *developments over the next two to three years will turn on the scale and duration of the fall in demand immediately resulting from the crunch, and whether, and to what extent, this fall will be offset by a continued rise in net export demand.*

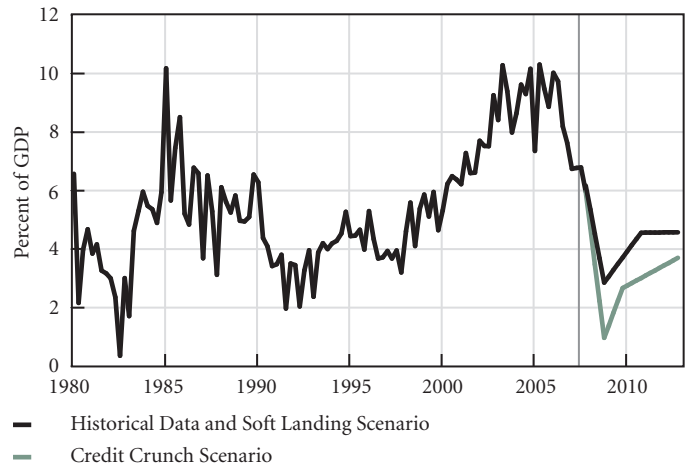
Putting Numbers on All This

While recognizing the hazardous nature of the following exercise, we now attempt to put numbers on various possible outcomes. We do this in four stages. First, we describe a range of outcomes for private borrowing based (very unscientifically) on an inspection of past crunches. Second, we infer, using econometric estimates, the implications for private expenditure of our assumptions about borrowing. Third, we make assumptions about the balance of payments and fiscal policy in the medium term. Finally, we put all these and other assumptions together to derive medium-term projections for the three financial balances and changes in total output, using the same format as in Figure 1.

Stage 1

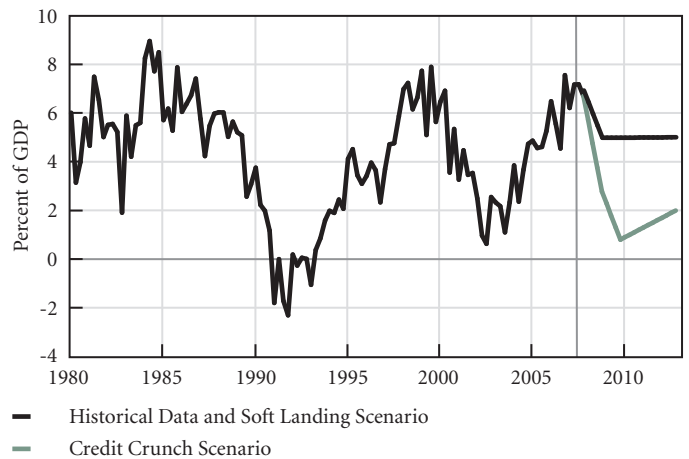
So far as the credit crunch goes, there seems to be widespread agreement that, everything taken together, the present crisis is already more serious than any that has occurred before in modern times. Major banks and other financial institutions are still, almost daily, revealing huge losses as a result of imprudent lending. House prices are falling (Figure 3). And there is a general

Figure 4 History and Alternative Projections: Personal Sector Borrowing



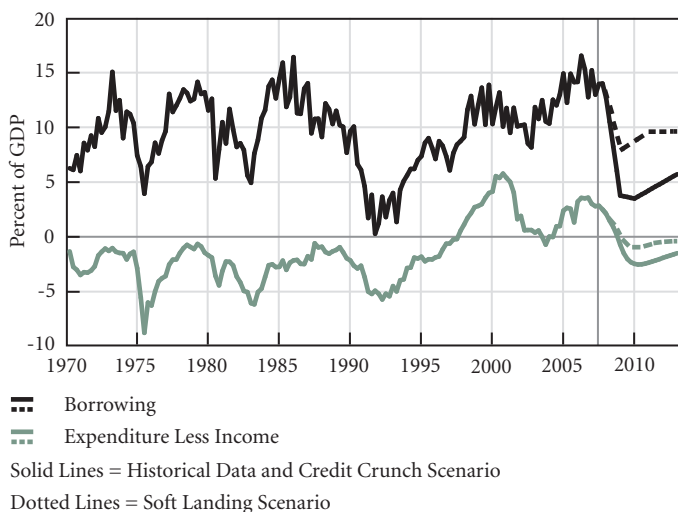
Sources: Bureau of Economic Analysis, Federal Reserve, and authors' calculations

Figure 5 History and Alternative Projections: Business Sector Borrowing



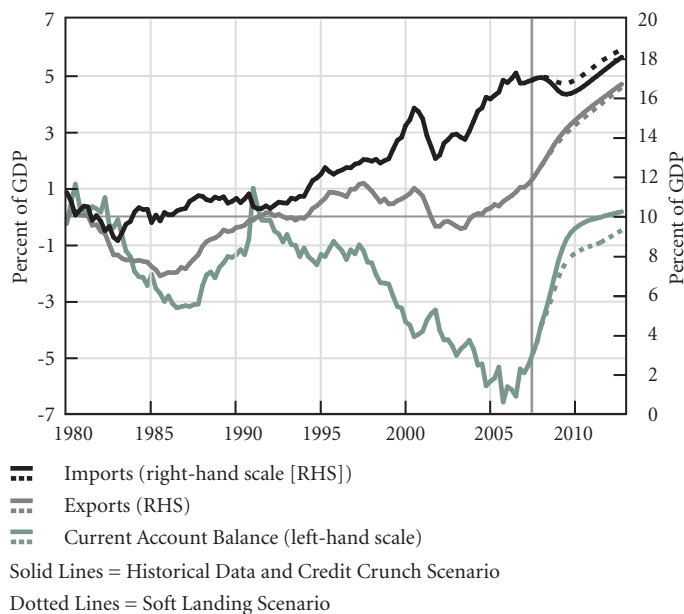
Sources: Bureau of Economic Analysis, Federal Reserve, and authors' calculations

Figure 6 History and Alternative Projections: Private Sector Borrowing and Expenditure Less Income



Sources: Bureau of Economic Analysis, Federal Reserve, and authors' calculations

Figure 7 History and Alternative Projections: Current Account Balance and Its Components



Sources: Bureau of Economic Analysis and authors' calculations

sense that some further deterioration is in prospect, particularly as many more subprime borrowers (and some others who obtained so-called “interest only” loans or loans with enticing “teaser” rates of interest) are going to come under increased pressure as their initial rates are raised over the coming year. We are going to assume that the overall effects on the economy at large will largely depend on the extent to which net lending to the private sector is reduced through the unwillingness, or inability, of borrowers to borrow and lenders to lend.

As there is no reliable way of inferring the effects of the crunch on borrowing, we set out a range of possibilities, using the past as a guide, which are illustrated in the next three figures. Each of these figures shows upper and lower projections that together describe what we take to be a reasonable range within which the outcome will lie.

So far as the personal sector is concerned (Figure 4), our “pessimistic” guess is that borrowing will fall, over a period of two years, to almost zero, after which it recovers moderately. We think it unlikely (under the postulated “pessimistic” assumption) that there could be any significant mitigation from an easing of monetary policy. Our “optimistic” assumption is that borrowing will fall to 2.8 percent of GDP, which is roughly what it did in the early 1990s, and then recover to a rate of about 4.5 percent, causing debt to rise at about the same rate as disposable income.

As to the business sector (Figure 5), we have entered a much wider range of possibilities, reflecting our very great uncertainty about the future. Our “pessimistic” projection is not unlike what happened in each of the last three recessions, while our “optimistic” assumption is that borrowing will hardly fall at all.

Figure 6 simply combines the two previous figures to give the implied range for total private borrowing within which we expect, with considerable misgiving, the outcome to lie.

Stage 2: Borrowing and Spending

Figure 6 shows the history, from 1970 to the present, of private spending in excess of income (negative net saving) together with private borrowing, illustrating the close, if somewhat erratic, relationship between these two series in the past. Going forward, we have entered, for borrowing, our range of projections for the personal and business sectors (derived from Figures 4 and 5) together with implied levels of spending in excess of income. These projections for spending are not the outcome of a process of mere “eye balling.” Rather, they are derived from a

simultaneous solution of the whole of our model, which, in addition to assumptions about net saving, includes assumptions about fiscal policy, the balance of payments, and capital gains.

Stage 3: The Balance of Payments and Fiscal Policy

Our further assumptions are standard to our Strategic Analysis approach: we assume a path for the government deficit broadly in line with CBO (2007) predictions, one based on a gradual reduction in the general government deficit; we adopt widely accepted forecasts for world output growth;⁸ we assume no change in monetary policy from its current (October 2007) stance; and we assume a further 5 percent devaluation of the dollar by the end of 2007 and a stable exchange rate for the rest of the simulation period.

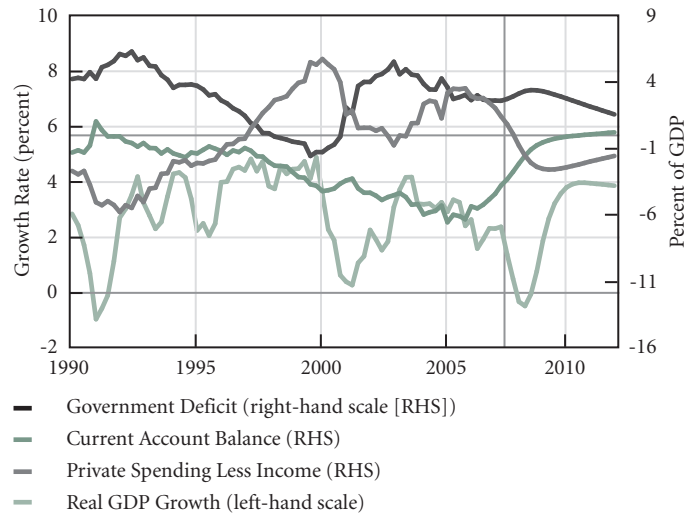
Such assumptions imply that exports continue to grow at a fast rate, relative to GDP (Figure 7), while imports growth slows down—an impact that is more marked in the “credit crunch” regime than in the “soft landing.” The balance of payments improves not only because of trade, but also because the flow of interest payments on U.S. financial assets denominated in euros, as well as net property income from U.S. direct investment abroad, will increase their dollar value after the dollar devaluation.

Stage 4: Putting It All Together

In Figures 8 and 9 we have drawn the implications of our assumptions for the growth rate in real GDP and the balances of the main sectors.

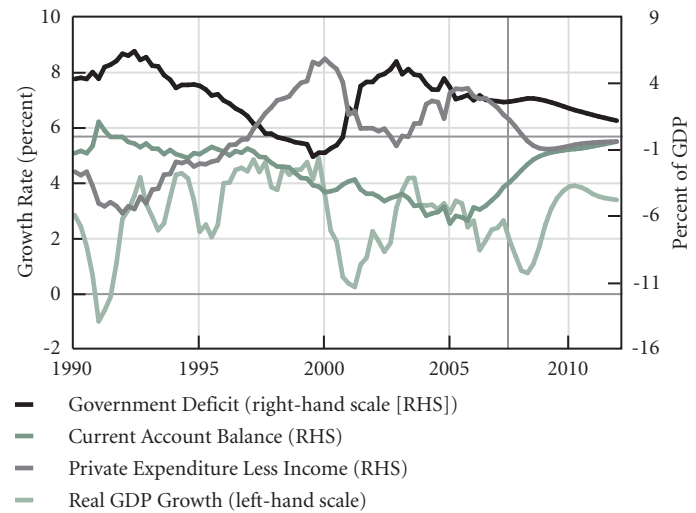
The entirely new feature of this projection relative to our earlier estimates is that there is an improvement in net exports such that the balance of payments approaches zero by 2010, to a considerable extent sustaining aggregate demand. Nevertheless, under the “credit crunch” assumption (Figure 8), the fall in private expenditure is so large that the economy will enter a recession next year. Our projections, taken literally, imply three successive quarters of negative real GDP growth in 2008. Spending in excess of income returns to negative territory, reaching -1.6 percent of GDP in the last quarter of 2012—a value that is very close to its “prebubble” historical average. The recovery in total demand comes about as the fall in private expenditure begins to level off. Since private spending (less income) stabilizes as a proportion of GDP from 2009 onward, this carries the implication that private spending is rising at roughly the same rate as GDP.

Figure 8 History and “Credit Crunch” Projections: U.S. GDP Growth and Main Sector Balances



Sources: Bureau of Economic Analysis and authors’ calculations

Figure 9 History and “Soft Landing” Projections: U.S. GDP Growth and Main Sector Balances



Sources: Bureau of Economic Analysis and authors’ calculations

The budget deficit will deteriorate with respect to CBO projections, as the slowdown in the economy implies a drop in general government receipts that we don't compensate for in our simulation.

Our "soft landing" assumptions (Figure 9) imply a less severe growth recession in 2009, with real GDP growth slowing to less than 1 percent.

Under both assumptions, household debt relative to GDP peaks in 2008, and then decreases—more rapidly in the "credit crunch" regime.⁹

Summary and Conclusions

It cannot be too strongly emphasized that we are not making short-term forecasts, nor forecasts of the ordinary kind at all. If we put numbers on things to help ourselves think precisely about strategic problems, we must necessarily assign them precise dates; but we can really only hope to represent broad shapes and trends. Our projections are, however, described in a way that will be extremely easy to verify and modify as the future unfolds, and we look forward to finding out, albeit with some trepidation, how well we have scored.

As we write (on November 6), events have, if anything, taken a turn for the worse, and the financial press seems to be presiding over an incipient maelstrom. This makes us inclined to think that the outcome during the next two years is rather likely to resemble the projections derived from our more pessimistic assumption.

Two mitigating factors are, first, net export demand looks set to expand at an unusually rapid rate and for a considerable length of time. Second, while the fall in private expenditure (in excess of income) may be relatively large over the next two to three years, it should eventually stabilize and thereafter contribute positively to the growth of aggregate demand.¹⁰ Both Figure 8 and Figure 9 show a satisfying convergence of all three balances toward zero over the next five years. However, while the rate of growth in GDP may recover to something like its long-term average, all our simulations show that the level of GDP in the next two years or more remains well below that of productive capacity.

In our view, the failure of GDP to recover properly is directly related to the fiscal policy stance, which, as it stands, implies a budget deficit equal to 1.5 percent of GDP at the end of the projection period in the "credit crunch" scenario. This is

far below the average deficit in the past and, in our view, correspondingly far below a deficit consistent with balanced growth at full employment, because it would generate insufficient financial assets to meet the demand from the private sector. We conclude that at some stage there will have to be a relaxation of fiscal policy large enough to add perhaps 2 percent of GDP to the budget deficit. Moreover, should the slowdown in the economy over the next two to three years come to seem intolerable, we would support a relaxation having the same scale, and perhaps duration, as that which occurred around 2001.

Our projections suggest the exciting, if still rather remote, possibility that, once the forthcoming financial turmoil has been worked through, the United States could be set on a path of balanced growth combined with full employment.

Notes

1. A fairly detailed account was given in Godley (1999), appendix 2.
2. But it obviously does *not* imply that the sum of changes in the balances equals the growth rate. Changes in the balances, measured ex post, can do no more than broadly illustrate the sources of expansion or contraction.
3. We find it surprising that Bernanke (2007) seems to suppose that a sufficient condition for improving the notorious imbalances is that saving increases in the United States and falls elsewhere. But this would be an incomplete and counterproductive remedy, unless there were also a mechanism, such as dollar devaluation, to move resources into the export sector.
4. We use “fiscal stimulus” to mean any increase in government deficit that our model shows to be independent of changes in other sector balances.
5. See CBO (2001) Table 1–2, p. 5. Figures refer to the federal deficit for the fiscal year.
6. This figure is taken from a *Wall Street Journal* study of Home Mortgage Disclosure Act data (Brooks and Ford 2007), and covers loans at 3 percentage points or more above the rates on U.S. Treasuries of comparable durations made from 2004 to 2006. It includes loans from banks, savings and loans, credit unions, and mortgage companies, so it is comprehensive.
7. The amount of the devaluation varies considerably according to how it is measured. The dollar fell by 50.4 percent against the euro if we compare the September 30, 2007, figure with the 2002 average. It has declined by 65.4 percent if we compare the 2007 figure against the 2002 peak, which occurred on January 31. The devaluation against the Federal Reserve nominal broad index has been 20.8 percent against the 2002 average and 22.8 percent against its 2002 peak, which occurred on February 27.
8. *The Economist* 2007; IMF 2007
9. We also briefly considered what would happen if household borrowing did not decrease at all, and remained at the current level of 6.7 percent. In this case, real GDP would keep growing at a reasonable rate throughout the simulation period, but household debt would keep rising relative to GDP. Such a scenario would simply postpone the day of reckoning.
10. A stable ratio implies that growth is positive at the same rate as GDP.

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