Strategic Analysis

The Developing U.S. Recession and Guidelines for Policy

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Levy Economics Institute, October 2001

This report updates a report published by the Levy Institute in July (Godley and Izurieta 2001). It takes into account new and revised figures and the possible economic effects of the September 11 attacks. The authors have benefited from Bill Martin's sharp observations on this and previous model results, and from Boriana Handjiyska's able research assistance.

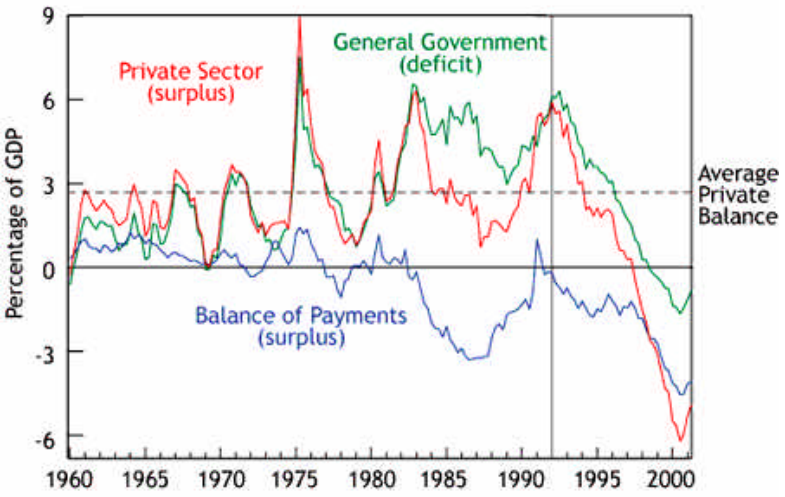
Introduction

The United States should now be prepared for one of the deepest and most intractable recessions[1] of the post-World War II period, with no natural process of recovery in prospect unless a large and complex reorientation of policy occurs both here and in the rest of the world. The grounds for reaching this somber conclusion are that very large structural imbalances, with unique characteristics, have been allowed to develop. These imbalances were always bound to unravel at some stage, and it now looks as though the unraveling is well under way. There may be no spontaneous recovery because the unraveling that has started is a reversion toward what, in the relevant sense, is a normal situation. This consideration leads us to take issue with some distinguished commentators, such as Alan Blinder (2001) and Laura Tyson (2001), who apparently assume that because a spontaneous recovery will occur relatively soon, any fiscal relaxation should be temporary. The general predicament is made worse by a deteriorating world economy; U.S. exports fell sharply in the first seven months of 2001, when the balance of payments was already heavily in deficit.

Recent History

What is not in question is that the financial balances of the three main sectors of the U.S. economy have moved in a completely unprecedented way since 1992. Chart 1 shows how the financial balance of the general government moved from deficit (shown as a positive number in the chart in order to emphasize that government deficits create assets for the private sector) to record surplus at the end of 2000, and how the current balance of payments likewise moved, over the same period, into record deficit. As we have pointed out many times, both of these processes were characterized by withdrawing funds from ("bleeding") the circular flow of income and destroying financial assets, thereby tending to reduce aggregate demand and output. These unusual negative forces were accompanied by a well-sustained expansion in the economy as a whole because of a similarly unprecedented expansion of private expenditure relative to disposable income. This unusual behavior of the private sector is illustrated by the heavy line in Chart 1, which shows how the private financial balance (total private disposable income less total expenditure) fell steadily between 1992 and the last quarter of 2000; in an extremely rare occurrence, the balance became negative in 1997 and reached a previously unheard of -6 percent at the end of last year.

Chart 1: Financial Balances of the Main Sectors

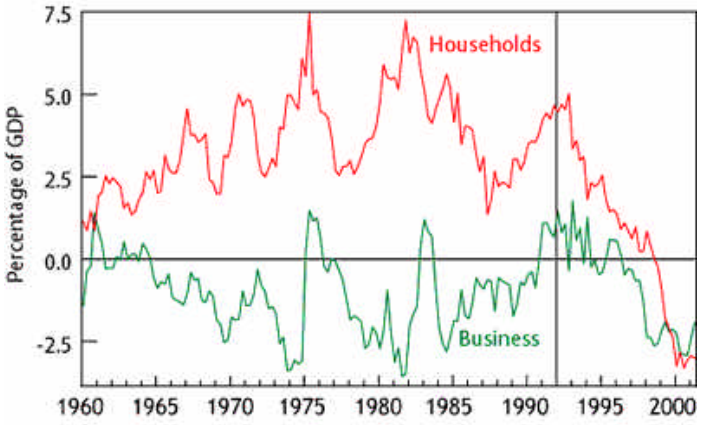


Note: General government deficits are shown as positive numbers.
Source: National Income and Product Accounts (NIPA).

As we have argued in previous reports, this structure in the growth of aggregate demand could not continue indefinitely. The growth of private expenditure relative to income required growing injections of net credit, which implied a growing ratio of debt to income--an intrinsically unsustainable process that has made the private sector increasingly vulnerable to negative shocks such as a downturn in income, employment, asset prices, profits, or investment. At the same time, the large and growing balance-of-payments deficit has required a growing inflow of foreign capital, thereby generating an accelerating deterioration in the U.S. net foreign debt position.

It is now clear that even before September 11, a process of implosion had started. Between the third quarter of 2000 and the second quarter of 2001 there was, for the first time in 14 years, a significant fall in private expenditure relative to income, as illustrated in Chart 1 by the fall in the private sector's deficit from 6.2 to 4.9 percent of disposable income. At the same time there was a large fall in both U.S. exports and stock prices. These negative impulses slowed the economy such that growth effectively ceased in the second quarter, causing unemployment to rise sharply. All the necessary ingredients are now present for a self-reinforcing downturn.

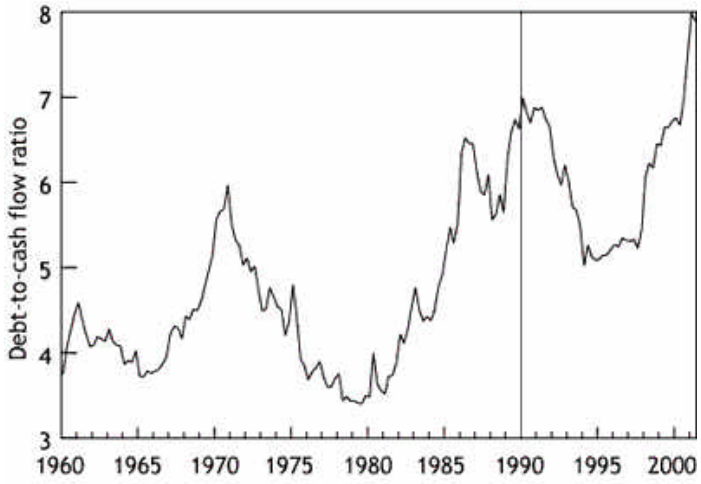
Chart 2: Financial Balances of Households and Business



Source: NIPA and Flow of Funds.

Chart 2 breaks down the private deficit into the household and business sectors. It shows that the fall in the overall private deficit in the first two quarters of 2001 was entirely generated in the business sector--a consequence of the large decline in investment, both fixed and in inventories. Although the decrease in investment caused the financial deficit of the business sector to fall in the second quarter, a lot of borrowing by business was still going on.

Chart 3: Ratio of Debt of the (Nonfinancial) Corporate Sector to Cash Flow



Source: NIPA and Flow of Funds.

Chart 3 shows indebtedness of the (nonfinancial) corporate sector as a proportion of its cash flow (i.e., undistributed profits gross of capital consumption). The combination of falling profits (which have been substantially revised downward since our last report, only three months ago) and continued borrowing has caused the debt ratio to rise sharply; business indebtedness at midyear was eight times the annual flow of undistributed profits--far higher than the peak reached just before the credit crunch at the beginning of 1990, and far higher than ever before that time. This unusually high debt ratio, partly engendered by large equity buy-backs over the last few years, must pose a serious danger for a number of corporations as profits fall even further. There is anecdotal evidence (for example, see Leonhardt and Atlas 2001) that many corporations, having acquired a great deal of debt during the "Goldilocks" period, when everyone believed that the good times were here to stay, are already seriously overextended.

Up to a point, personal consumption and investment sustained private expenditure as a whole during the past year. The deficit of the personal sector[2] remained exceptionally high throughout the first half of 2001, but as the negative numbers in Chart 2 imply, this could only take place by virtue of very high net borrowing, particularly mortgage borrowing, including home equity lines of credit. In the second quarter of 2001, the net flow of credit to the personal sector surged to a record $800 billion (expressed at an annual rate); as Chart 4 illustrates, this raised the indebtedness of the personal sector to a new record of 120 percent of disposable income. The debt of the private sector as a whole rose to 170 percent of disposable income, another record.

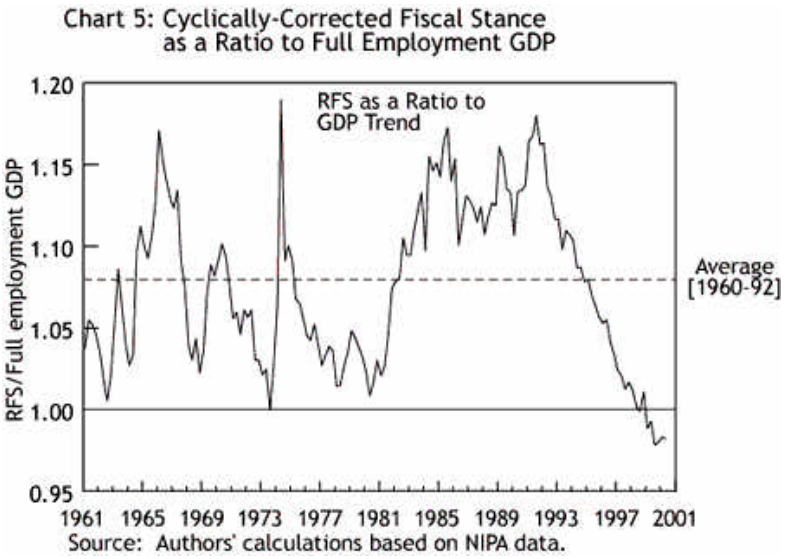
Through the middle of 2001, the only policy that the combined authorities have used to combat the incipient recession has been to aggressively cut interest rates. Without these cuts the recession, both in aggregate demand and asset prices, would probably have been even larger than it was. Nevertheless, interest rate cuts have been shown to be largely ineffective in counteracting the forces of contraction. Mortgage rates have fallen to a relatively low level, which may be why mortgage lending was so high in the second quarter. While this is perhaps the clearest example of interest rate cuts stimulating demand, it is doubtful whether the stimulus will be more than temporary, since in order to be durable the net flow of credit would have to continue expanding. It is doubtful, too, whether this is a stimulus of the right kind, since by adding to households' indebtedness it adds also to their vulnerability.

Measuring the Fiscal Stance

We stated in the introduction that the general government's fiscal operations and net exports have had a strong negative effect on aggregate demand during the last decade. However, the truth of this proposition is not decisively demonstrated by the falling balances shown in Chart 1 because these three balances are constructed in such a way that by the rules of accounting, any one of them is implied by the other two. Thus it necessarily follows that if the private sector moves into deficit, the sum of the other two balances must move in the same way. The entire move of government finances into surplus was the consequence not of a tightened fiscal stance, but of the economic expansion itself, which caused tax receipts to increase.

To convey the unusually disinflationary stance of fiscal policy, we have devised a measure called the *real fiscal stance* , or RFS,[3] which has a strong affinity with the concept of a cyclically adjusted budget deficit. The RFS measures deflated outflows (expenditures and transfers) from the general government; these are expressed as a ratio to the average rate of taxation, with numerator and denominator both corrected for the business cycle--or, more precisely, standardized to correspond with an unemployment rate of 5 percent. The RFS is thus constructed in such a way that if the budget of the general government were exactly balanced and if unemployment were steady at 5 percent, the RFS would be exactly equal to the real GDP.[4]

Chart 5 shows the RFS as a ratio to full-employment GDP since 1962. Until about 1992, the RFS-to-GDP ratio fluctuated fairly narrowly around 1.08, which is just what one would expect, given that the government was in deficit. But ever since 1992, the RFS has been falling relative to full employment GDP. In 1999 the ratio fell below unity, implying that for the first time there was a structural, or cyclically adjusted, surplus; since then it has fallen further. In the second quarter of 2001 the RFS relative to full-employment GDP was 0.98, which is 10 points below the norm prior to 1992. Translated into money, the numbers imply that in the middle of 2001 the fiscal stance was about $300 billion tighter (scaled to 2001 values) than the previous norm.

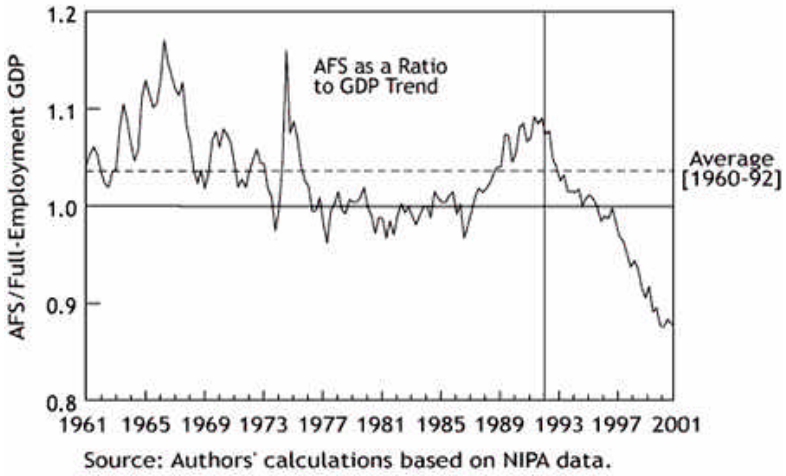


A similar calculation measures the combined impetus from the RFS and the U.S. trade performance. We measure this by adding together the flows into the economy from exports and government outlays and dividing this sum by the tax rate plus the average import propensity, with all cyclical variables again corrected to correspond with 5 percent unemployment[5]; we call this number the *augmented fiscal stance* , or AFS.

As Chart 6 shows, the AFS has fallen since 1992 and in mid 2001 was 15 percent below the pre-1992 norm. Translated into dollars, this implies that government outlays plus exports (given tax rates and import propensities) might have to be $600 billion per annum higher than they actually were in mid 2001 in order to restore the AFS to its

normal ratio to GDP. In other words, a permanent injection on this scale might be necessary to achieve full employment should private expenditure revert fully to its normal relationship to income. However rough our calculations may be, they provide reasonable evidence that the government's fiscal policy stance and the country's trade performance has indeed exercised a very strong and growing negative influence on aggregate demand, and that a large reorientation of policy may at some stage be necessary.

Chart 6: Cyclically-Corrected, Augmented Fiscal Stance as a Ratio to Full-Employment GDP



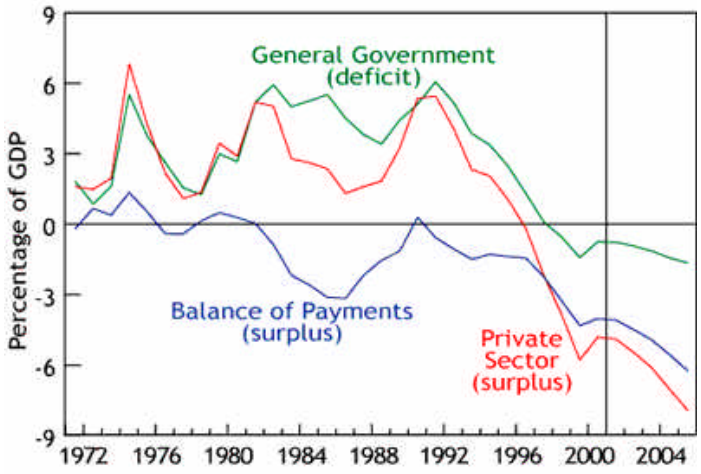
Source: Authors' calculations based on NIPA data.

We reconsider these huge numbers in the following sections, which simulate alternative medium-term scenarios. In the remainder of this report we quantitatively explore a range of five-year scenarios, in order to convey some approximation of the magnitudes involved and to consider in broad outline which policy responses may be appropriate. It is not our prime objective to make short-term forecasts, although we shall make our opinions, for what they are worth, absolutely clear.

The Medium-Term Future

As in our July assessment, our starting point for making medium-term projections is the most recent report by the CBO.[6] We begin with the CBO's projections of the federal budget surplus, which were conditional on assumptions (not forecasts) of GDP growth and inflation during the next decade.[7] The CBO assumes an average growth rate of 3.1 percent between 2001 and 2006, accompanied by a rise in unemployment, to 5.2 percent. Next, we made projections of the balance of payments conditional on the growth rates assumed by the CBO. We could then infer what the private financial deficit would have to be (since this is given by the sum of the fiscal surplus and the balance of payments deficit) for this whole story to come true. The results of this exercise are illustrated in Chart 7.

Chart 7: Financial Balances: Actual and Baseline Projections Implied By CBO



Source: Authors' projections based on data from Congressional Budget Office (CBO).

Our conditional projection of the balance of payments is particularly uncertain because we don't know how to interpret the large falls in both exports and imports during the first seven months of this year; in each case the fall was much larger than can be accounted for in our very aggregative equations. The sluggish performance of the world economy is partly responsible for the decline in exports, but the fall in both exports and imports has been heavily concentrated in information technology and computer-related items, which may have a one-time component and from which there should eventually be some spontaneous recovery. Yet we are confident that if, by hook or by crook, the U.S. economy were to grow as fast as the CBO assumes, and if the dollar exchange rate does not change much, the balance of payments would indeed deteriorate significantly. Making due allowance for some rise in net income paid abroad as the net foreign asset position deteriorates further, we put the balance of payments deficit at 6.5 percent of GDP in 2006 (again using the CBO's growth assumptions).

The inevitable counterpart to the slowly rising fiscal surplus projected by the CBO, combined with the significantly deteriorating balance of payments deficit is that after the private deficit, initially reverts toward balance (in the first half of 2001), it will start to rise again. In other words, a rapid growth of private expenditure relative to income would once again have to become the engine of U.S. growth, with a rise in the private deficit from 5 percent in the second quarter of 2001 to as much as 8 percent in 2006.

At this stage of the game, it seems out of the question that an expansion of private expenditure relative to income on anything approaching this scale is in the cards, even with a further fall in interest rates. Such a rise could occur only if there were a sharp upturn in the flow of net lending to the private sector, to levels well above those seen at the peak of the boom; this would, in turn, generate a much more rapid rise in the burden of private indebtedness than has occurred in the past year. This cannot be expected to happen at a time when many firms are already overindebted and many households, already heavily indebted and threatened with unemployment and reduced earnings, have had their financial wealth depleted as a result of the fall in asset prices. There have recently been strong indications that sharp falls in net borrowing have indeed been occurring.[8]

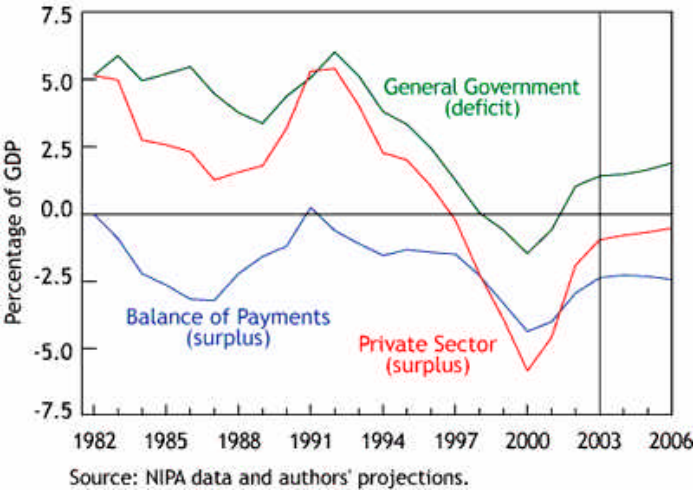
To get a realistic sense of the magnitudes, we present two scenarios. In both we assume no further change in fiscal policy beyond what has already been announced. The first scenario deliberately strains all the assumptions in an optimistic way, while the second makes what we believe to be realistic assumptions. We humbly recognize that the room for error is gigantic. Yet the issues involved are so important and the dangers so great that we think it worthwhile to set forth our results in order to prepare people for what could conceivably be in store. The "realistic" scenario is by no means the worst that could be generated without straining assumptions in a pessimistic direction; the course of events could be much worse if an interactive implosion of asset prices, credit flows, profits, income, employment, and expenditures really got going. However, there is no point in multiplying instances. We might even convey a false sense of accuracy if we showed, say, five or more different possibilities.

Scenario 1

In Scenario 1[9] we try to incorporate the relaxation of the fiscal stance that was announced after the CBO's August report (CBO 2001a), which incorporated the effects of earlier tax cuts and scheduled increases in public expenditure. As it is difficult to assess the magnitude and timing of these subsequent changes, we have assumed, wishing to err on the optimistic side, that there will be additional fiscal reflation, equal to $100 billion per annum, starting in the final quarter of 2001. We also assume that the stock market will not fall compared with its mid-October level, but that it will stabilize for two quarters and then rise moderately during the rest of the five-year period. We further assume that net lending to the private sector will fall only from 13 percent to 9 percent of disposable income over a period of six quarters and hardly decline thereafter, implying some continued rise in the debt-to-income ratio from its present high level. We also assume that world output will recover moderately.

The consequences of making these assumptions are illustrated in Chart 8. The private sector deficit continues to fall for a time, particularly in 2001 and 2002, because of the (moderate) fall in net lending and the lagged effect of the fall in stock prices that has already taken place. However, the private deficit is assumed not to revert fully to a positive number, but to converge on a negative number equal to about one-half percent of GDP. The balance of payments stops deteriorating, but there is a general government deficit that rises to 2 percent of GDP in 2003 and stays at roughly that level for the rest of the period.

Chart 8: Financial Balances: Actual and Projected Based on Optimistic Assumptions



Source: NIPA data and authors' projections.

Yet even with this optimistic set of assumptions, the implications for output and unemployment are pretty grim. They have, in a moderated form, a shape that characterizes every simulation we have carried out, including a large number not shown in this report. This common characteristic is that output falls absolutely, at least for two or three quarters, after which the growth rate does not recover properly and unemployment continues to rise, albeit at a more moderate pace, for the rest of the period. During the five-year period from 2001 to 2006, the average growth rate, based on these assumptions, is only 1.7 percent per annum. Unemployment rises quite rapidly, to 7 percent over the next two years, but because the economy does not recover properly, unemployment continues to rise slowly, reaching nearly 8 percent in 2006. The main difference between the future and the past, according to this scenario, is that the economy is deprived of its main engine of growth during the Goldilocks period, namely, an exceptionally rapid, credit-financed expansion of private expenditure that stimulated and was stimulated by a huge boom in asset prices. The fiscal measures so far announced are not nearly large enough to replace this engine, while the stimulus coming from abroad is likely to be even more negative than in the boom period. We have no confidence that a further reduction in interest rates, without any other policy changes, could significantly modify this story.

At the risk of belaboring the point, it seems to us that current public discussion concentrates far too much on whether total output is falling absolutely. The word *recession* is reserved for periods of falling output, and *recovery* is often considered to have taken place as soon as growth is positive. However, we take the view that a recession is occurring whenever output is rising significantly less than the growth of productive potential (which may now be as high as 3 percent or more), since this is enough to cause unemployment to rise and profits to fall. In Scenario 1 we attach far more significance to the fact that the growth of output is well below that of productive potential throughout the whole five-year period than to a few quarters of negative growth at the beginning of the period.

Scenario 2

The second scenario is based on what we believe to be neutral assumptions. The major difference from Scenario 1 is that the private sector deficit is assumed to revert quite rapidly to its normal ratio to GDP and then overshoot it a little. As in our last report, we have been influenced by the only comparable experiences of private deficits that we are aware of, which occurred some 10 years ago in the United Kingdom and Scandinavia. In each of these cases, a boom had developed that was driven by private expenditure growth in excess of private income, on roughly the same scale as recently occurred in the United States. In each case there was eventually a self-reinforcing implosion of the credit flow that led to the private financial balance's becoming even more positive than normal. And in each case there was a large and intractable recession.

But we are not relying on the British and Scandinavian examples to establish our point. There is good reason to suppose that net lending to the (nonfinancial) private sector during the next 12 months will be substantially below the still very high figure of $1.2 trillion (13 percent of disposable income) that occurred in the second quarter of 2001. As noted above, firms have already, in aggregate, incurred record levels of debt relative to income, and it has been reported that many have already become overextended. With a poor immediate prospect for sales and profits, it seems probable that the growth of corporate debt will slow down further and quite likely that it will cease altogether, implying that the flow of net lending will fall to zero.

Similar considerations apply to households, many of which have seen substantial losses in their stock market wealth and are presumably retrenching in response to widespread job losses and reductions in hours of work. It is worth recalling that should the gross flow of lending dry up, the commitment to repay loans remains in place. This raises the possibility (which, however, we have not embodied in any of our simulations) that the flow of net lending will actually turn negative. As already pointed out,

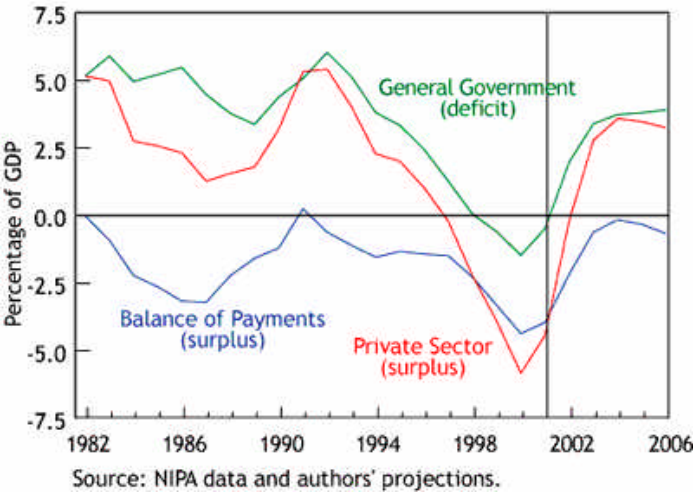
there have been disturbing reports that this is already happening.

The specific assumptions we have made in order to derive Scenario 2, which we believe to be a realistically possible outcome somewhere in the center of the range of probabilities, are as follows. First, net lending falls, as it did 10 years ago, to about 1 percent of disposable income, and thereafter recovers slowly. Second, stock market and housing prices fall significantly compared with their mid-October level (notwithstanding some further falls in interest rates) before recovering moderately; this conclusion follows, using successive approximation, from the finding that according to Scenario 2 there is a sharp fall in total output in mid 2001 and mid 2002. Third, output in the rest of the world, already turgid, is adversely affected by the fall in U.S. output, so net exports hardly contribute at all to the growth of aggregate demand.

The outcome generated in Scenario 2 (see Chart 9) is a recession roughly equal to that of 1982, which up to now has been the most severe of the postwar period. Further, given our contention that the private deficit is merely moving back to its normal state, the scenario shows no proper recovery after the "technical" recession (the forthcoming period of negative growth) comes to an end. Without some further stimulus, unemployment is likely to continue rising under this set of assumptions, reaching 10 percent by the end of our period.

This scenario projects a fall in GDP of 2 percent between 2001 and 2002. We are inclined to believe that a fall of this magnitude may well occur if there is no further change in policy. However, our strategic assessment does not turn on the accuracy of this short-term forecast.

Chart 9: Financial Balances: Actual and Projected, Based on Realistic Assumptions



Source: NIPA data and authors' projections.

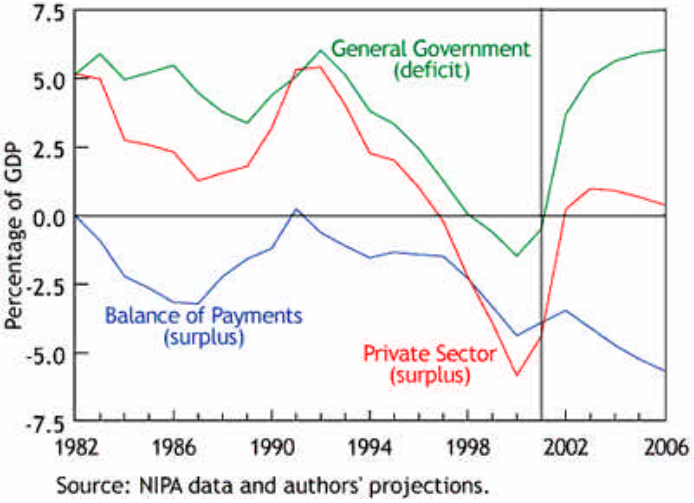
The Shape of Policy Responses

In the rest of this report we attempt to quantify possible and appropriate policy responses. We emphasize that in doing so, we are uncertain about timing. It will probably prove impossible to match any shortfall in demand step-by-step with a compensating change in fiscal policy, and therefore unwise to try. In making our calculations we inevitably assume that the policy responses will be phased in, in a particular way, over several years. But the phasing-in that we describe is not part of our policy recommendation. We seek only to indicate the orders of magnitude of appropriate policy responses over the medium term. We expect, however, that the worst phase of the incipient recession is likely to take place during the next 18 months.

Policy Simulation 1

In our first policy simulation we start from Scenario 2 and add whatever fiscal stimulus is necessary to keep output growing fast enough to maintain unemployment at about 5 percent. The main features of this simulation are, first, that the additional reflation required, over and above the $100 billion already allowed for, rises between now and 2006 to an extremely large number, probably in excess of $500 billion[10] per annum at 2001 values.[11] Second, however, this simulation shows that if fiscal reflation were the only instrument used, the balance of payments deficit would probably expand on a grand scale, even though the expansion in the United States would stimulate activity abroad, thereby adding to U.S. exports. As the growth of output in the first policy simulation is similar to that in our base run (based on CBO assumptions, illustrated in Chart 7), our conditional projection of the balance of payments deficit in 2006 is unchanged compared with the base run--that is, it rises to about 5.5 percent of GDP. The path of the three financial balances generated by these assumptions is shown in Chart 10, which indicates the reemergence of the "twin deficit" situation similar to that in the mid 1980s.

Chart 10: Balances Resulting From Simulating a Fiscal Expansion



Source: NIPA data and authors' projections.

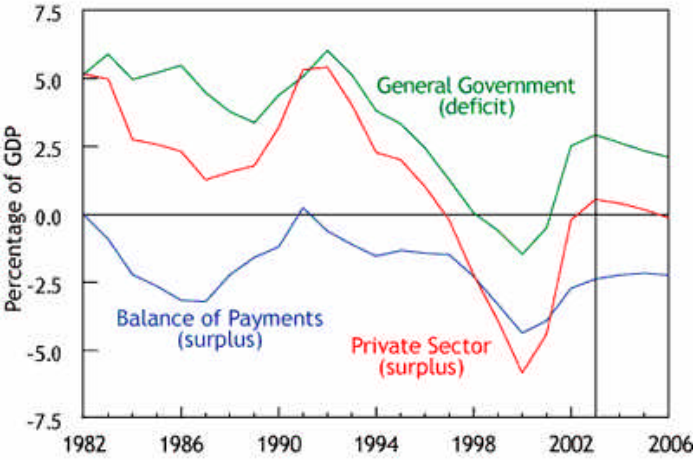
The projected timing and magnitudes may prove wrong, but we stand by two major conclusions drawn from this simulation. First, the scale of the permanent shortfall in aggregate demand in the medium term is very large--probably much larger than most estimates currently under consideration. Second, it is inconceivable that the remedy could reside in fiscal stimulus alone because of the wholly unacceptable implications for the balance of payments. If the external deficit rose to about 6 percent during the next five years, quite apart from the need for huge inflows of foreign capital that might not be readily forthcoming, the net foreign indebtedness of the United States would reach startling levels. The negative net foreign asset position would be on the order of 40 percent by the end of 2006. To many people, the scale of the budget deficit would also be unacceptable. As shown in Chart 10, the general government deficit would be 6 percent of GDP at the end of the period, the federal deficit would be 5.5 percent, and the public debt would again be rising rapidly.

Policy Simulation 2

In our second policy simulation we retained the assumption that the net saving of the private sector reverts to its normal relationship to income, while an adequate growth rate is achieved by a more moderate fiscal expansion nicely matched, step by step, by an increase in net export demand. It is only by a combination of internal and external policies that it will be possible to achieve adequate growth that can be sustained in the medium-to-long term. An era of balanced and sustainable growth could require an additional fiscal stimulus that might rise to $300 billion per annum over the next five years, combined with measures to increase exports by a roughly similar amount.

This dream scenario, in which an adequate growth rate is brought about by a combined internal and external stimulus, is illustrated in Chart 11. The private balance becomes moderate, and the balance of payments and the general government's balance both revert to acceptable levels of deficit.

Chart 11: Balances Resulting from Simulating Fiscal and World Expansions



Source: NIPA data and authors' projections.

We write about "measures to increase net exports" with an uncomfortable awareness that the phrase is vacuous, given the present state of international opinion and international institutions. The exchange rate is no longer an instrument of policy in any ordinary sense, and clearly does not respond reliably, if at all, to changes in relative interest rates. Nor do market forces cause exchange rates to move in a way that corrects imbalances in a timely way, if at all. It is conceivable that a substantial depreciation of the dollar will nevertheless occur, and if this happens it is paramount that the U.S. authorities do not resist it. There is reasonable econometric evidence that a substantial dollar devaluation would greatly improve the balance of trade, and that it would do so without significantly increasing the dollar value of U.S. foreign debts, which are largely dollar denominated. There is also evidence that even a sizable dollar devaluation would not cause significant price inflation. Import prices seem insensitive to the changes in the exchange rate, while the value of imports is still only 14 percent of nominal GDP. Certainly, there was very little inflationary pressure the last time there was a big devaluation of the dollar, in the second half of the 1980s.

The main obstacle to increasing U.S. net exports derives from the obvious fact that this can come about only if net exports from the rest of the world are reduced. But lower net exports from the rest of the world can occur, and can be combined with adequate levels of activity abroad, only if foreign countries also adopt more expansionary fiscal and monetary policies. The message is clear, but the omens are unfavorable. Neither institutions nor agreed-upon principles for the international coordination of macroeconomic policy exist, and neither Euroland nor Japan is exhibiting the will or the competence to cooperate effectively.

Obiter Dicta

Barely a year ago, it was widely accepted and tyrannically projected that the U.S. growth rate had been permanently raised, the business cycle had been abolished, the good times were here to stay, fiscal policy should never be used as an instrument of policy, the budget should always be in surplus, and judicious adjustments to short-term interest rates by the Federal Reserve were all that was needed to keep noninflationary growth permanently on track. In August 2000, Edmund Phelps pronounced U.S. growth to have become "structural," while the consensus among economic forecasters in September 2000 held that U.S. GDP would expand by 3.7 percent between 2000 and 2001.

Has all this been simply forgotten? The economy started to falter in the last quarter of 2000, ground to a halt in the second quarter of 2001, and probably entered technical recession in the third quarter of 2001, well before the terrorist attacks. In other words, the consensus has been downright confuted, over a nine-month period, by the course of events. But no one is saying he is sorry. There has been, to our knowledge, no statement of what went wrong that is other than descriptive, and no sense has been conveyed that the system of ideas that might be held to underlie the previous orthodoxy has come under threat or requires modification.

However, a recognition, generated by force majeure, has emerged that a fiscal stimulus is needed immediately. Everyone is suddenly a short-term Keynesian! Does *anyone* think that fiscal stimuli should not now be applied? No, but what an incredible volte-face! So swift, so silent, so total!

Yet this sudden conversion to demand management, as mentioned at the beginning of this report, is commonly qualified by the view that the palpable need for fiscal stimulus at the moment, even if puts the government's accounts into deficit, is generated by short-term factors and, hence, that any measures taken now should be reversible.

This report has argued that the fall in private expenditure relative to income, which has generated the slowdown, is not temporary at all. It is only the beginning of a reversion toward a normal situation that still has a long way to go. It is an implication of this view that, as the private sector's financial balance, or net saving, reverts to its normal positive state,[12] the government's budget also must revert to its normal state of deficit.

The prospect of the government's finances returning to structural deficit, which in our view is strongly to be welcomed, runs afoul of the absurd notion, too often voiced these days, that a surplus must normally be maintained now if those who retire in about 10 years' time are to be decently provided for. Reduced to essentials, the retirement of the baby boomers raises only two substantial questions: How much are the pensioners to get? And who, when the time comes, is going to foot the bill? Surpluses today cannot in any way ease the burden of giving a growing number of pensioners a decent standard of living in 10 years' time. It is normal for the government to be in deficit in order to provide the assets that the private sector needs when the economy is growing, and concern for the future solvency of the Social Security fund should not in any way

qualify the macroeconomic need for a permanent fiscal stimulus.

Notes

1. By "recession" we mean a period during which output growth is significantly below that of productive potential, so that unemployment rises. The difference between a small absolute fall in output (which alone qualifies as a recession, according to common parlance) and a small absolute rise has, in our view, no particular significance; both would imply growth far below that of productive potential, and both would generate a rapid rise in unemployment.

2. For reasons explained in Godley and Izurieta (2001), we prefer the concept of the personal financial balance to the more typical concept of personal saving. In contrast to saving, the financial balance defines receipts to include capital consumption, while expenditure includes personal investment. The financial balance thus measures the extent to which the sector is acquiring net financial assets or, when in deficit as at present, net debts.

3. This measure was first used and fully described in Godley and McCarthy (1997).

4. More precisely, the RFS is equal to g_c/ϕ_c, where g_c is total government outlays corrected for the cycle and deflated by the GDP deflator and ϕ_c is corrected government receipts (t) as the proportion of full-employment GDP_c. If the budget is balanced at 5-percent unemployment, government outlays equal receipts, so $g = g_c = t_c = t$. As $t_c = \phi_c GDP_c$, it follows that in these circumstances $GDP = g_c/\phi_c$ = RFS.

5. The AFS is defined as $(g_c + x)/(\phi_c + \mu_c)$, where x is exports deflated by the GDP deflator and μ_c is the average import propensity corrected for the cycle. If the budget were balanced and if, simultaneously, the balance of payments were zero, at 5-percent unemployment the AFS would be exactly equal to real GDP.

6. The latest CBO full report was published on August 28 (CBO 2001a), and a correction was issued on September 26 (CBO 2001b).

7. Things have clearly not been made easy for the CBO by the sharp revisions made since the beginning of 2000 of the official estimates of the path of GDP. We have done our best, adapting the CBO numbers to the new levels of GDP and splicing their figures, which refer to the federal accounts, onto NIPA estimates of the general government fiscal balance.

8. For a graphic account, see Leonhardt and Atlas (2001).

9. We derive all scenarios by feeding assumptions into our very simple but rigorously consistent model of the U.S. economy, solved sequentially. This model, featuring a private expenditure function that seems to have passed the test of time quite well, is described in the appendix to Godley (1999).

10. The needed amount of fiscal reflation calculated this way is in very broad agreement with that obtained via our "AFS" calculations described earlier.

11. By "2001 values" we mean that the needed stimulus is scaled by 2001 values. The corresponding fiscal stimulus in later years would have to be raised to account for the fact that nominal GDP would be growing by about 5 percent per annum.

12. Even during recent years, the private sector's net acquisition of financial assets has been negative but its *gross* acquisition of financial assets has been positive. Net lending to the nonfinancial sector generates financial assets just as much as budget deficits. Total inflows to the private sector are given by disposable income plus gross lending, while total outflows are given by total expenditure plus repayment of debt. The gap between inflows and outflows equals gross acquisition of financial assets. This quantity has remained substantially positive throughout the boom, confirming the belief that should private net lending dry up, the stock of financial assets will have to be supplemented by government deficits if full-employment GDP is to be maintained.

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