The Levy Economics Institute of Bard College



Strategic Analysis

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FISCAL STIMULUS: IS MORE NEEDED?

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Levy Institute Strategic Analyses have always stressed the relevance of the linkages between conditions in financial markets and the real economy. In our last Strategic Analysis (Godley et al. 2007), we reported a simulation showing a high probability for a recession and an increase in unemployment in 2008, conditional on the assumption that turmoil in financial markets would slow the pace of household borrowing to more moderate levels. We projected that there would be serious consequences for aggregate demand, output, and employment. At the time of that analysis, in November 2007, most commentators still focused on financial markets, doubting that the financial upheaval that began last summer would have effects on the real economy. Subsequently, the assumed drop in household borrowing that underlay our conditional projection was borne out in actual data, and a U.S. recession is now thought by almost everyone to be a serious possibility (Bernanke 2008b).

Already, by December, calls for a fiscal stimulus plan echoed among politicians, prominent economists, the Federal Reserve (Fed), and think tanks, and by January, numerous proposals had been offered. Most economists called for a plan that would be "timely, targeted, and temporary"—rapidly implemented, aimed at those who needed money and would spend it quickly, and lasting only a short time, to avoid adding significantly to the federal debt (Bernanke 2008a; Congressional Budget Office [CBO] 2008b; Elmendorf and Furman 2008; Stone and Cox 2008; Summers 2007). Almost all commentators called for a stimulus equal to about \$150 billion, or 1 percent of GDP, though some noted that it might turn out that more was needed later on. In our November Strategic Analysis, we argued that fiscal policy was now "far below a deficit consistent with balanced growth at full employment" (Godley et al. 2007, p. 8). We called for an immediate, sustained fiscal stimulus of 2 percent of GDP, and for a plan for a much larger additional fiscal stimulus "should the slow-down in the economy over the next two to three years come to seem intolerable" (p. 8).

In January, as economists increasingly worried about a possible recession, the president and the House of Representatives undertook a largely bipartisan effort to pass a stimulus bill. The House

was quickly able to do so, and the Senate followed suit with a similar bill, after Senate Democrats barely failed to pass a much larger version that would have provided help to greater numbers of low-income households. In February, the president signed a \$168 billion stimulus package, made up mostly of tax rebates that would begin arriving in May, but also including payments to some Social Security recipients and veterans.

Since then, conditions have significantly worsened. Recently released data from the Mortgage Bankers Association show that foreclosures reached an all-time high late last year, and home prices have continued to fall. According to Federal Reserve flow-of-funds data, household net worth declined by over \$500 billion in the fourth quarter, mostly as a result of the real estate crisis.

The latest in a series of financial market disturbances occurred in March. The value of securities backed by home mortgages plunged further. Hedge funds and other large financial players that had borrowed cash to help them buy mortgage-related securities were forced to put up more cash, as the value of their collateral fell. Some of these players found themselves unable to borrow, even with relatively safe collateral. Without help, they would have to sell securities, putting further downward pressure on their prices. These developments led to a quick decision by the Fed to intervene by offering an unlimited credit line to the major Wall Street firms, and by aiding the bailout of Bear Stearns, which had been heavily involved in mortgage-backed securities and related derivatives.

Paul A. Volcker, the former chairman of the Federal Reserve Board, was quoted in mid-January as saying, "Too many bubbles have been going on for too long" (Authers 2008). It has become clear that rising late payments and defaults, which many claimed would remain confined to the subprime mortgage sector, have spread to other forms of home mortgages, mortgages on commercial real estate, home equity lines of credit, and loans to businesses. As a result of this trend, and the ongoing erosion of capital in the financial sector, banks report that they are tightening lending standards and raising interest rates for many types of credit (Federal Reserve 2008a). And banks are charging unusually large risk premiums for loans to one another.

While the implications of this latest round of turbulence on Wall Street and in financial centers around the world are uncertain, evidence of a broader slowdown or recession on Main Street has been mounting for some time. Consumer confidence, as measured by the Conference Board's index, is at a five-year low, and declined sharply in February and again in March. There were net losses of jobs in January and February. The Federal Reserve "beige book" on economic conditions across the country indicates that growth has slowed in early 2008, though it has not stopped (2008b).

While the authorities have not declared a recession in progress—a move that usually comes well after a recession has started—many economists have begun to speculate how steep a possible downturn might be. Martin Feldstein of Harvard University believes that the recession could be "substantially more severe" than other recent downturns and perhaps the worst in the United States since World War II (Krasny 2008). William White, chief economist at the Bank for International Settlements, an umbrella organization for central banks worldwide, has said that the "difficulties now facing policymakers 'seem as great today, if not greater, than at any other time in the postwar period'" (Guha 2008). Other commentators are now stressing the relevance of the high level of household debt, which calls either for a cut in expenditure or for additional finance from the government sector (Wolf 2008).

Because we agree that the current economic situation is quite dire, we explore in this Strategic Analysis the possibility of an additional fiscal stimulus of about \$450 billion spread over three quarters. We start from a plausible baseline projection, which we obtain by updating and verifying our work for the November 2007 Strategic Analysis, but we do not initially include the effects of the recently passed stimulus plan. We then simulate the effects of that plan. Finally, we simulate the effects of a \$600 billion stimulus spread over four quarters, starting in the third quarter of this year. Stimulus plans can include (1) transfers, such as tax rebates or increases in unemployment benefits, which merely put money in the hands of U.S. residents for them to use as they please; and (2) purchases of goods and services, such as public works projects, which directly add to GDP (Elmendorf and Furman 2008, p. 19). Since these two types of stimuli usually have different effects on the economy, we first simulate a transfer to households and then, alternatively, an increase in government purchases of goods or services. In reporting our results, we challenge the notion that a larger and more prolonged additional stimulus would be unnecessary and generate inflationary pressures.

We confine our attention to fiscal remedies, though we do not doubt that Federal Reserve decisions have the potential to reduce the severity of the current crisis. The Fed, in lowering short-term interest rates by 3 percentage points since last summer, has helped banks by lowering the cost of their funds, and has also reduced the burden of interest rate resets on homeowners with adjustable-rate mortgages. However, since many banks now lack capital, they will be reluctant to lend to businesses and consumers regardless of the level of wholesale interest rates such as the federal funds rate. Also, as the surveys cited earlier suggest, investors and lenders are in no mood to take further risks, especially now that an economic slowdown is widely anticipated. Even if the Fed adopts a stimulative stance, the era of easy money is over, at least for now.

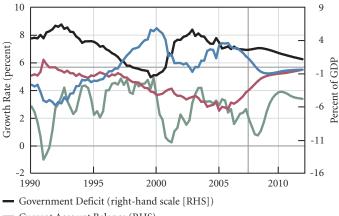
Aside from such standard macroeconomic measures, action will have to be taken to deal with foreclosures, mortgage fraud, failures of financial institutions, problems with securities ratings, and so on. In focusing on fiscal stimulus plans, we do not mean to suggest that these other measures are not extremely important. Blinder (2008), Gramlich (2007), and Wray (2007) are among those who have offered constructive policy suggestions.

Borrowing and Other Determinants of Private Expenditure

Our projections of the effects of stimulus plans begin from a baseline scenario similar to the one we dubbed a "soft landing" in our last Strategic Analysis. This scenario projected the effects of relatively optimistic assumptions about the future paths of household and business borrowing. In constructing the soft landing, we adopted forecasts of world growth rates from the Economist and the International Monetary Fund (IMF), and assumed a continuation of October 2007 monetary policy and a further 5 percent devaluation of the dollar by the end of 2007. Figure 1 shows the results of the projection. We found that a growth recession would take place beginning in the last quarter of 2008, with growth slowing to around 1 percent per annum. The current account gap would narrow rapidly as the economy slowed, reaching about 1.3 percent of GDP by the first quarter of 2010.

Our new baseline scenario uses assumptions that are somewhat similar to those we used to generate this "soft landing," especially with regard to business and household borrowing. Private sector borrowing decelerated at the end of 2007,1 although it remains high at 5.4 percent of GDP, implying a rising debt-to-income ratio. We assume that borrowing continues to decelerate in 2008, increases slightly in 2009, and then stabilizes, so that household debt slowly turns back downward before it reaches 100 percent of GDP (Figure 2).

Figure 1 History and November 2007 "Soft Landing" Projections: U.S. GDP Growth and Main Sector Balances



- Current Account Balance (RHS)
- Private Expenditure Less Income (RHS)
- Real GDP Growth (left-hand scale)

Sources: Bureau of Economic Analysis (BEA) and authors' calculations

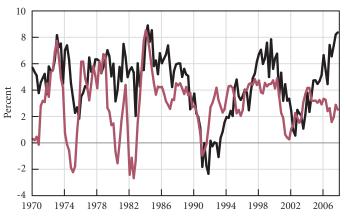
Figure 2 Household Debt and Borrowing



- Household Borrowing (left-hand scale)
- Household Debt (right-hand scale)

Sources: BEA, Federal Reserve, and authors' calculations

Figure 3 Business Borrowing and GDP Growth



- Business Borrowing (percent of GDP)
- Annual GDP Growth Rate

Sources: BEA, Federal Reserve, and authors' calculations

Figure 4 Business Debt and Borrowing



- Business Borrowing (left-hand scale)
- Business Debt (right-hand scale)

Sources: BEA, Federal Reserve, and authors' calculations

Borrowing in the nonfinancial business sector (Figure 3) increased at the end of 2007, reaching 8.3 percent of GDP—a value that is close to its historical maximum—and accelerating the business-debt-to-GDP ratio. Figure 3 reveals that nonfinancial business borrowing follows GDP growth, perhaps with a lag, but it has been increasing faster than expected in the last three years. A similar phenomenon occurred in the late 1990s, so we project business borrowing to start dropping in the second quarter of 2008, along the lines of what occurred between 2000 and 2003 (Figure 4). The overall debt of the nonfinancial business sector therefore reaches a peak of about 76 percent of GDP, and then declines.

Our assumptions about business and household borrowing will influence the projected path for private expenditure, together with our assumptions about the stock market and the housing market. We assume that the recent fall in the stock market—the S&P 500 index is, at this writing, 13 percent lower than its peak in December 2007—will not continue in 2008, and that the stock market resumes its trend growth from 2009 onward. For the housing market, we assume that the market price of existing homes will resume its upward trend, rising at the same rate as the general price index. The latter assumption implies that capital gains on homes will no longer boost household expenditure. For oil prices, we adopt the optimistic assumption that there will be no further increase from the second quarter of 2008 onward.

The Balance of Payments and Fiscal Policy

The rest of our assumptions are standard to our Strategic Analysis approach: we assume a path for the government deficit broadly in line with Congressional Budget Office predictions of a moderate increase (CBO 2008a), followed by a gradual reduction in the general government deficit; we adopt widely accepted forecasts (IMF 2007) for world output growth; we assume no change in monetary policy from its current (March 2008) stance. In our last Strategic Analysis, we assumed a further 5 percent devaluation of the dollar from its value in the second quarter of 2007. It turns out that the value of the dollar has now fallen by 6.9 percent,² so we assume no further devaluation for the rest of the simulation period.

Taken together, and although we kept our assumptions on the optimistic side, our model projects a further slowdown in U.S. GDP growth, and a mild recession in 2008, similar to what occurred in 2001.³ The slowdown in borrowing and private expenditure will help the private sector regain a positive balance (Figure 5), and the lower growth rate—combined with a weak dollar and the expectation of no further increase in oil prices—will gradually improve the U.S. balance of payments. This improvement is the key to the sustainability of the economic rebound shown in our baseline scenario. In the absence of an improvement in the balance of payments, government spending would have to be excessive, and the private sector balance, too far into negative territory. We stress that our results are projections, not predictions; in other words, we look at the implications of certain assumptions about future variables, such as borrowing. If our assumptions prove wrong, so, most likely, will our projections.

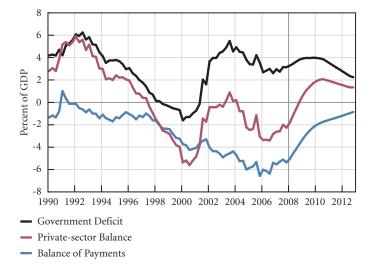
To estimate the impact of the recession on output and unemployment, we compare our baseline real GDP path with potential output, which is simply the long-term trend of GDP.⁴ According to our estimates (Figure 6), output will be 2.7 percent lower than potential by the end of 2008, and 4.4 percent below potential by 2010. By the end of the simulation period, output will be permanently reduced by about 4.1 percent. According to our estimates, this will translate into an increase in unemployment of about 2 percentage points.

The Fiscal Stimulus

We next investigate the impact of a \$150 billion (about 1 percent of GDP) fiscal stimulus, in the form of net transfers from the government to the private sector, in the third quarter of 2008. This is roughly the total size of the stimulus that will be implemented starting late this spring, mostly in the form of tax rebates.

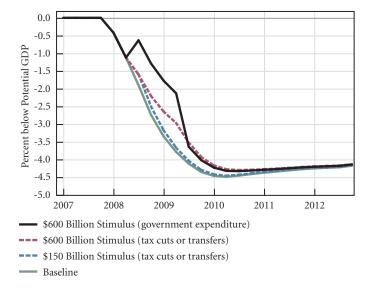
In general terms, a stimulus that consists of a once-and-for-all transfer from the government to the private sector will have only a temporary effect on the *level* of demand and output, but it will not affect their *growth rate*. When households (or businesses) receive a check from the government, they can either spend it—thereby stimulating demand—or save it, reducing their existing stock of debt and therefore allowing for additional spending in the future. However, in the following quarter, when no additional transfer is received, the economy suffers the equivalent of a *negative* fiscal shock, and output drops back to its previous growth rate. To permanently counter a slowdown in the growth rate of output, the government would have to provide a shock *to the growth rate* of net transfers to the private sector.

Figure 5 U.S. Main Sector Balances



Sources: BEA and authors' calculations

Figure 6 Output Loss



By our estimates, the immediate impact on private expenditure will amount to about 30 cents per dollar of stimulus; given that the size of the shock to transfers is close to 1 percent of GDP, the stimulus will provide an increase in real GDP, relative to our baseline, of about 0.3 percent (Figure 6).⁵ As expected, the impact of the shock on output decreases rather quickly, and is less than 0.1 percent of GDP after one year.

According to our model, the credit crunch implies a fall in private expenditure of about \$100 billion due to reduced household borrowing, and a fall of about \$160 billion in expenditure due to reduced nonfinancial business borrowing. In our projection, borrowing begins to increase again in 2010. The shock to output from recent problems in financial markets will amount to approximately \$260 billion *each quarter* in the current year. A fiscal stimulus given in one period only, and taken away in the next, will hardly change the picture.

Once the debt-to-income ratio has been reduced, we assume that borrowing will increase again both for households and for business, at growth rates that are sufficient to keep the debt at least stable relative to income and allow GDP growth to return to its historical average.

Can a larger fiscal stimulus help moderate, or eliminate, the recession? Note that, when GDP growth turned negative at the end of 2000, the U.S. general government (federal, state, and local combined) had a surplus of about 1.3 percent of GDP. After one year, in the third quarter of 2001, the surplus had turned into a deficit of about 2 percent of GDP—and the deficit continued to rise, reaching a peak at 4.9 percent of GDP by the end of 2004. Therefore, the magnitude of a fiscal stimulus to avoid the current dangers of a recession has to be much larger than 1 percent of GDP, as we argued in our November analysis.⁷

Because of the inadequacy of a stimulus of 1 percent of GDP in one quarter, we have conducted a new simulation, in which we assume that government net transfers will be higher than the baseline by \$150 billion in each of the four consecutive quarters starting in the third quarter of 2008, for a total fiscal stimulus of about 4 percent of GDP. Again, when the stimulus is eliminated, the economy receives a negative shock, and expenditure returns to its baseline path. Given our estimate for the multiplier of fiscal transfers, this policy will raise GDP by about 1.2 percent over its baseline value, as seen in Figure 6—still not enough to counter our estimated 4 percent fall of GDP below potential.

What if the stimulus were given to government expenditure, instead of taking the form of a net transfer? According to

the standard analysis of the Keynesian multiplier for a fiscal stimulus, if a transfer of \$1 from the government to the private sector has an impact of \$0.30, an increase of \$1 in government expenditure (buying or producing goods or services) will have an impact of \$1.30. This follows from the fact that government expenditures (bridge building, education, and so on) are part of GDP, and any change in expenditure will thus have an immediate, direct, 100 percent impact on GDP. Then, employees of the government and/or government contractors will spend 30 percent of the initial stimulus, for a total of 130 percent.

If the policy objective is stated in terms of the level of real GDP, an increase in government expenditure will therefore be much more effective than an increase in net transfers, for the same dollar value as the increase in government payments. Our simulation, again shown in Figure 6, shows the superior effectiveness of this type of stimulus. Output loss is at least a full 1 percent less than in the baseline scenario in each of the four quarters in which the stimulus is applied.

The first message of the simulations is that a \$600 billion stimulus would not be too much, given even our projection of a moderate recession. The form of the stimulus—transfers or expenditures—will depend on the feasibility of quickly ramping up public works projects. A number of commentators have overstated the difficulty of doing this, as many localities have put off urgent school, road, and bridge repairs, lacking only the cash to complete these projects (Mishel 2008). Moreover, even if we experience only a short-lived recession, weak employment growth may be with us for some time. The second message of our simulations is that a temporary stimulus—even one lasting four quarters—will have only a temporary effect, as seen in Figure 6, which shows a convergence of all paths after 2010. An enduring recovery will depend on a prolonged increase in exports, due to the weak dollar, a modest increase in imports, and the closing of the current account gap.

It is somewhat discouraging to see that even a relatively large stimulus plan will fail to prevent a substantial loss of output. But over the medium term, as the devaluation of the dollar and reduced spending begin to exert a moderating effect on the current account deficit, foreign trade will boost output and employment, providing the impetus for renewed growth.

Notes

- 1. Our projections for household borrowing in Godley et al. (2007, Fig. 4, p. 9) turned out to be extremely accurate for the last two quarters of 2007.
- 2. This figure is computed from the Federal Reserve's broad dollar index.
- It must be stressed that our assumptions are optimistic, and a further deterioration in credit conditions, the housing market, or oil prices will undoubtedly generate a worse outcome.
- 4. Looking at long moving averages of real GDP growth, we project potential output to increase at about 3 percent. Although our scenario is not constructed as a forecast, the goal of which would be to maximize the accuracy of our estimates for the next few quarters, but rather as a conditional projection, we note that our results are in line with recently produced forecasts for the U.S. economy (McKelvey 2008).
- 5. Given the current phase of the business cycle, we believe the impact of the stimulus on inflation to be negligible.
- These figures are obtained by evaluating the impact of one dollar of borrowing on private sector demand, separately for households and nonfinancial business.
- 7. We are not claiming that the increase in the general government deficit between 2001 and 2004 was entirely the result of a fiscal stimulus, since any deficit will automatically increase when GDP growth slows down and tax revenues fall.

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