## Levy Economics Institute of Bard College



# Strategic Analysis

December 2011

## IS THE RECOVERY SUSTAINABLE?

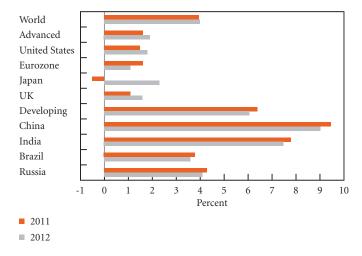
DIMITRI B. PAPADIMITRIOU, GREG HANNSGEN, and GENNARO ZEZZA

Fiscal austerity is now a worldwide phenomenon. The United States and many other countries are essentially importing fiscal austerity from troubled economies in Europe and elsewhere. This is one way of looking at the predicament posed by the current world growth slowdown, which has developed during America's weak recovery from the 2007–09 recession. Following the financial collapse of perhaps four countries in Western Europe, US companies will not find much demand for their products abroad, since few of the affected countries will be able to implement appropriate stimulus measures within a year. Rather, countries such as Greece, Portugal, and Ireland are being forced to implement austerity measures as a condition for receiving international loans and bailouts, and some staggering giants such as the United Kingdom, Spain, and Italy are making deep budget cuts of their own.

Unfortunately, even before the collapse of the Greek and Italian governments, and the debacle in the relatively large Italian bond market, forecasters were predicting weak economic growth in most of the world in the coming months and years. Figure 1 corresponds to International Monetary Fund (IMF) growth-rate forecasts for this year and next for some of the largest nations, certain economic blocs, and the world. The 2011 forecast for the eurozone is less than 2 percent—among the worst of the forecasts depicted in the figure—and the IMF expects the region to experience even slower growth of 1.1 percent next year (the European Union's own forecast for its member countries is a grimmer 0.6 percent [Dalton 2011]). Overall, the advanced economies will grow at a 1.9 percent annual rate next year, according to the IMF numbers.

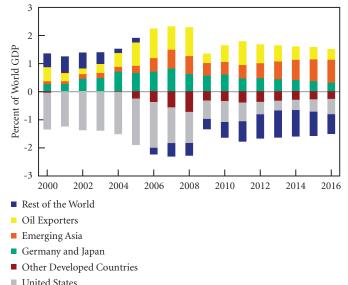
Although the IMF expects a modest uptick in growth rates for many countries in 2012, the important point is that many of the largest countries are already in an abysmal slump, even as the euro debt crisis intensifies and spreads. Moreover, as seen in the figure, even the economies of the developing world, which grew the most quickly last year, are expected to slow down at least modestly in 2012. Finally, some more recent forecasts are even less optimistic. In new figures released

Figure 1 IMF Annual Real GDP Growth Forecasts



Source: International Monetary Fund (IMF) World Economic Outlook database

Figure 2 Current Account Balances



Source: IMF World Economic Outlook database

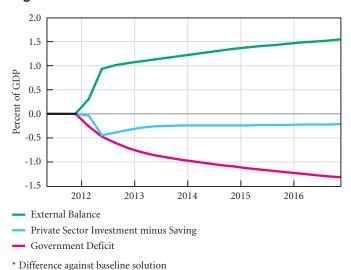
late last month, the Organisation for Economic Co-operation and Development projected economic growth in the eurozone at 1.6 percent in 2011 and 0.2 percent in 2012 (OECD 2011). All official forecasters seem to recognize, if belatedly, the implications of the deepening European fiscal crisis and related economic problems around the world.

Growth abroad is helpful to faltering economies, so the international slowdown documented by these forecasts is very unfavorable for the outlook of policymakers at the national level. In these conditions, it will be hard for the United States to turn a huge trade deficit into even a moderate one without transforming US industry into an export leader, as Japan, Korea, and other Asian nations did in the last half of the 20th century. This kind of industrialization has been a rare feat in world economic history, and it is unlikely that more than a handful of countries will follow in the footsteps of Japan and other export-oriented, late-developing economies. To the extent that more countries adopt an export-led growth strategy, they may accomplish little more than drawing a small number of scarce customers away from other exporting nations, which will also be counting on exports to lead domestic growth. IMF figures support this point of view.

Figure 2 shows the current account balances for all trading nations and economic "blocs" over the period 2000-16. The bars below the horizontal line correspond to deficits; the bars above the line represent surplus countries and blocs. Since the deficits and surpluses of all countries add up to zero, the stack of bars above the line is equal in length to the stack beneath it. The gray bars, which depict US deficits for all the years shown in the figure, shrank markedly during the recession of 2007–09; last year, the deficit once again began increasing. The IMF predicts a further reduction in the US current account deficit through 2013, followed by a renewed expansion of this drain on demand for US products beginning the following year. Through 2014, the US deficit is expected to fall from \$468 billion to \$273 billion. This would amount to a reduction in the current account deficit of \$194 billion, or about 1.3 percent of the approximate US GDP of \$15 trillion. The current shortfall in aggregate demand from the private, public, and foreign sectors combined is far larger than this. The US Bureau of Economic Analysis estimates that GDP was 6.8 percent below its potential level in the third quarter of this year (St. Louis Fed 2011).

While the IMF expects a lesser role for export-led growth in China and Germany, it also expects other countries in

Figure 3 US Main Sector Balances: Effects of a Devaluation\*

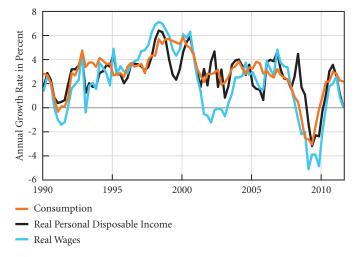


Source: Authors' calculations

emerging Asia to rely on exports for growth, so that the overall level of global imbalances stabilizes. (Recent figures suggest that the IMF may have actually underestimated the pace of export growth in Germany, as that country is expected by some observers to set all-time records for export volumes in 2011; see Parkin 2011). As implied in the chart, this would require nations in the "rest of the world" to be willing to absorb Asian imports by running a current account deficit. Since it is hard to believe that other developing countries would be able to sustain domestic growth with an external deficit on this scale, the IMF projections may prove to be inconsistent—that is, overall import demand may be insufficient to enable the world's economies to achieve the growth rates projected.

To estimate the impact of an export-led growth policy intended to reduce the US current account deficit, we ran a simulation in which we assumed a 10 percent devaluation of the dollar relative to a basket of currencies. Figure 3 shows the three US financial balances (which, by accounting identity, must sum to zero) and how each balance would change relative to a baseline in which the value of the dollar was held constant through the end of the simulation period in the fourth quarter of 2016. The uppermost line in the figure corresponds to a simulated path for the current account balance. Following

Figure 4 Real Disposable Income, Wages, and Consumption

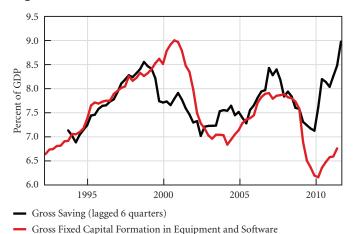


Source: Bureau of Economic Analysis (BEA)

a one-time depreciation beginning next quarter, the line rises throughout the simulation period but never surpasses +1.5 percent of GDP at any point. As we will see in a later section, our baseline analysis shows that a far larger impetus to growth is required to restore the economy to health.

Turning to the domestic private sector, signs of hope do not abound even in markets for products such as paper towels, wheat, and automobiles, although consumption is now growing again in real terms. Figure 4 depicts the percent change in consumption, personal disposable income, and wages, all measured at constant prices and at an annual growth rate. It is interesting to note that the effects of fiscal stimulus, in both the 2001-02 recession and the recent Great Recession, are visible in the figure when disposable income—sustained by net transfers from the public sector—grows faster than wages. The figure also marks the end of each of these two episodes, with accelerating wage and disposable-income growth beginning in 2003 and 2010. It is also evident that the effects of the recent stimulus are now over, and with both real wages and real disposable income stagnant in real terms, the increase in consumption will either be temporarily sustained by an increase in borrowing or possibly revised downwards with the next, "final" release of GDP data from the BEA.

Figure 5 Profits and Investment in Nonfinancial Business

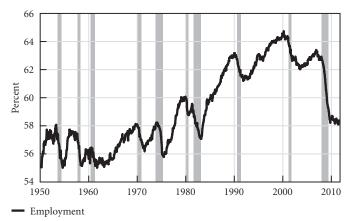


Source: BEA

Some domestic demand growth may come from nonresidential investment. As shown in Figure 5, an increase in profits in the nonfinancial business sector is usually followed by an increase in investment, with a high correlation after a lag of about six quarters. We therefore expect that the recent strong surge in profits in this sector will sooner or later show up in investment, which has started to pick up already. On the other hand, profits in the financial industry have recovered from the Great Recession and the financial crisis, but the correlation between profits in this sector and gross investment is very small. We therefore expect no net contribution to aggregate demand growth from the financial sector, even if the major US banks manage to emerge from the eurozone sovereigndebt crisis in relatively good shape.

The lack of strong growth in demand has kept unemployment at high levels since early 2009. The ratio of employed people to the total population remains well below the levels that were first reached as women entered the labor force in large numbers in the 1970s and 1980s (Figure 6). Results from the government's most recent (September) Job Openings and Labor Turnover Survey show that there are about 3.4 million available jobs (BLS 2011b), while 12.6 million Americans (5.6 million women and 6.9 million men) reported to the Census Bureau that they were completely unemployed and looking for work in November (BLS 2011a). In that month, more than 5.6 million people had been looking for work for 27 weeks or more.

Figure 6 Employment as a Share of Working-age Population



Note: Shaded areas indicate recession.

Source: Bureau of Labor Statistics (BLS)

Another 8.3 million were working part-time rather than full-time for economic reasons.

Meanwhile, the sudden intensification of the euro debt crisis in November led to an abrupt deterioration in consumer sentiment and ripple effects in the domestic financial sector. All of these developments have helped elicit more pessimistic US economic forecasts from all quarters.

Given this bleak situation in industries that must sell their products to paying customers either at home or abroad, further fiscal stimulus is in order. But as in Europe, a particularly ill-timed round of fiscal austerity seems to be in prospect. In fact, as a result, Washington may be in a situation as perilous as the one that President Roosevelt faced in 1937–38 (Bartlett 2011; Krugman 2010). To wit, the lead-up to the recession in those years began with a political defeat not unlike the one suffered by congressional Democrats in 2010's off-year election.

In 1936, having waged a bruising and largely unsuccessful campaign on behalf of the Democratic Congress, Roosevelt returned to the capital to find a more conservative mood. His treasury secretary was advising sharp cuts in the deficit. It appeared that strong growth had gained momentum, and the financial and business establishment was anxious to put an end to what it regarded as dangerous overspending. What followed was a cut in government stimulus that could not have been more decisive. The deficit, which had sharply increased

during Roosevelt's first four-year term, plunged because of deliberate and untimely policy actions. Specifically, federal spending was cut by about 7 percent in 1937 and 11 percent in 1938, while the introduction of payroll taxes for the new Social Security program resulted in a tax revenue increase of 38 percent in 1937 and 24 percent the following year. The ensuing rise in the government balance led, predictably, to a new recession within the Great Depression, with growth turning negative in 1938.

Within a similarly hostile political setting, President Obama was forced in July to agree to a set of automatic cuts to discretionary spending amounting to a total of \$1.2 trillion over a 10-year period. These cuts were to go into effect if the congressional "supercommittee" failed to come up with deficit reductions of a similar size and secure their approval by Congress and the president. With the supercommittee deadlocked over the appropriate choice of spending cuts and tax increases, the automatic cuts will begin to go into effect in January 2013, probably resulting in massive layoffs of federal government workers.

Obama's most recent stimulus proposal—which amounted to \$447 billion in deficit-neutral changes to taxes and spending programs—foundered on the congressional rocks. The plan contained provisions for cutting corporate subsidies and reforming the tax code that lent credibility to the administration's description of the bill as deficit-neutral. In other words, if passed without amendment, the bill would have paid for itself. Keynesian theory suggests that the multiplier for new spending that is exactly matched with new taxes is equal to one. This means that \$1 in new spending coupled with \$1 in new taxes raises overall GDP by \$1. This plan has unfortunately failed in Congress, where Republicans continue to insist on cuts for larger businesses and wealthy taxpayers, as well as a virtual ban on new spending. Only a few, relatively minor provisions in the bill have made it through Congress so far.

Similarly, the main economic proposals offered by the Republican presidential candidates purport to be "revenue neutral," leaving the deficit unaffected once both tax cuts and increases are taken into account. The candidates' plans for flat taxes, sales taxes, and other "tax reforms" would further tilt the burden of taxation toward the middle and lower classes. Their positions tend toward cutting spending above all else, regardless of the state of the economy and the labor market, and their speeches hold out little hope that this anti-Keynesian

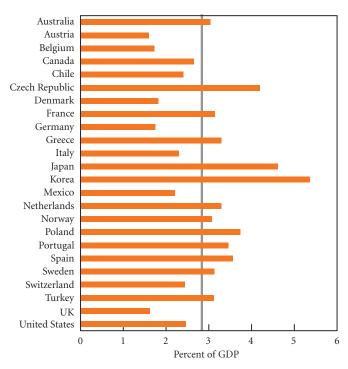
approach would usher in prosperity or help the country grow stronger in any other way. Rather, they rail against government interference and the government's purportedly illegitimate use of money for what the candidates inevitably regard as frivolous expenditures. This emphasis contrasts with the substance of the new American Jobs Act, which includes practical and simple approaches such as providing funds to help localities avoid cutting police, firefighters, and teachers from their payrolls (White House 2011).

But many groundbreaking and major projects also remain undone, and they need to be done as soon as possible. One only has to think of the nation's potholed roads and meager disaster preparations to see that stimulus spending need not be spending for spending's sake, or for the enrichment of an "elite." The American Society of Civil Engineers (ASCE) tracks the nation's efforts to keep ahead of the decay of its bridges, roads, pipelines, drinking water systems, et cetera. In its latest report, the ASCE (2009) gave US infrastructure low ratings once again. Only one category—energy—has improved its mark since 2005, and even this rating is a subpar D+. As one example of the ASCE's concerns, the report estimated the nation's five-year shortfall in public infrastructure spending at nearly \$550 billion in the roads and bridges category alone.

Figure 7 shows that the United States has lagged behind most industrialized countries in this regard. In other words, we are high on the list of countries that have directed the most resources toward boosting individual consumption and private investment rather than constructing and maintaining long-lasting public goods. The need for improved and bettermaintained infrastructure is seemingly evident to almost everyone but the various political candidates vying to establish their conservative bona fides in the struggle for the Republican presidential nomination.

As a final example, how about investments in care work? This term refers to labor-intensive services such as home health care, preschool, and day care for children. Simply scaling up a number of existing federal, state, and local government programs could create new jobs in this area. These include Head Start, which has never been fully funded; and home-based care provided by Medicaid, which unfortunately has lost its funding in some states. (See Antonopoulos et al. 2010 and Kim and Antonopoulos 2011.)

Figure 7 Government Investment\* in OECD Countries, 1995–2009



— OECD average (2.83 percent)

Source: OECD

Thus, Keynesian stimulus need not involve make-work, though simply putting people to work is relevant any time there is a large supply of available and even desperate workers. Rather, infrastructure work answers an important long-term need. Also, researchers and ordinary Americans don't have to look hard to find families in their own localities who badly need help with child care, health care, and other labor-intensive care work.

Right-wing economists claim to be able to show that the government spending multiplier is less than one—even when selling bonds pays for the spending involved. Figures cited in some of their opinion pieces in the press purport to show that a \$100 increase in government spending would *decrease* GDP, or at best increase it by a few dollars (Barro 2011). Figures of this type tend to be repeated in the media, but they lack a solid basis in fact and logic.

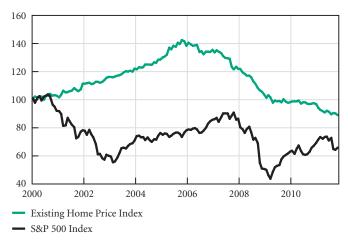
It can be put no more plainly than by Princeton economist Alan Blinder in a recent newspaper article: "In sum, you may view any particular public-spending program as wasteful, inefficient, leading to 'big government' or objectionable on some other grounds. But if it's not financed with higher taxes, and if it doesn't drive up interest rates, it's hard to see how it can destroy jobs" (2011). By definition, when the government hires people to work in the public sector or buys goods from the private sector, it is undertaking economic activity that counts as part of officially measured GDP. As long as these activities do not cause the business sector to reduce its total output of goods and services, they will immediately increase GDP at least dollar-for-dollar as government spending increases.

Moreover, it is hard to escape the conclusion that government spending has an additional "multiplier" effect. Namely, people who are hired by the government or by government contractors tend to contribute most of their paychecks toward household purchases, broadly defined. Hence, one would tend to assume that the effects on GDP of a \$100 increase in government spending would be a multiple of the original spending increase. For example, suppose that such a spending increase leads to a \$60 increase in the aftertax income of workers' households. The household savings rate in the United States is currently about 6 percent, and has not been above 10 percent in the last 20 years. Hence, it seems reasonable to propose that government workers' households would save roughly 6 percent of a \$60 increase in their paychecks, or \$3.60. This would leave \$56.40 for new household purchases. Hence, including first- and second-round effects, our hypothetical \$100 stimulus would increase GDP by a total of \$156.40.

As suggested above, orthodox economic theory sometimes suggests that multiplier effects may be much smaller than in this example (Barro 2011). Many economists believe that households tend to save a much higher percentage of *increases* in their incomes than 6 or even 10 percent. They argue that unless people know their income will remain at an elevated level for a fairly long time, they will increase their household expenditures by much less than one dollar for each dollar of new disposable income. They often use models that rely upon the existence of a measurable human preference to spread purchases out over one's lifetime. In behavioral studies, such economic theories often prove inadequate as an

<sup>\*</sup> Government expenditure on gross fixed capital formation

**Figure 8** Indexes of the Real Prices for Equities and Existing Homes (January 2000 = 100)



Sources: S&P; National Association of Realtors; BEA

explanation of observed consumer spending habits. For example, many consumers will wait months for a much-anticipated check to come in the mail before committing the funds represented by the check toward new purchases.

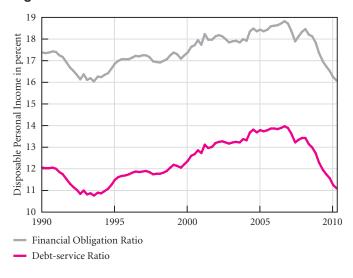
Many stimulus skeptics have gotten used to the idea that the Federal Reserve is far better suited than Congress and the president to deal with a lack of aggregate demand. In other words, we should just lower short- and long-term interest rates further and wait for the business sector to respond with increased investment. Indeed, proposals for new types of monetary policy stimulus continue to emanate from the academy, including nominal GDP targeting (Romer 2011). This would be quite a departure from the Fed's de facto practice of informally targeting an acceptable range of inflation rates and treating growth as a secondary objective. In general, the academic literature is skeptical of claims that interest rate changes substantially affect corporate investment. Hence, it seems likely that the Fed's actions are aimed at stocks and at the housing market, where prices are still falling. Real price indices for these markets are shown in Figure 8. It is clear from the figure that the economic progress since the official end of the last recession relied to a significant extent on a rising stock market.

Even the business-oriented Fed itself has been pointing out that in this era of contraction and stagnation, restoring growth will require more than readily accessible loans—probably much more. Daniel Tarullo, a Fed governor and member of the Fed's policy-setting committee has pointed out that "neither monetary nor fiscal policy will be able to fill the whole aggregate demand shortfall quickly. But appropriate policies could surely boost output and employment" (2011, 6). He goes on to attack the red herring that unemployment is high mostly because of structural problems in the labor market, such as a workforce that is largely ill qualified for work in the key industries that are still hiring. Such comments are a measure of the extraordinary seriousness of the current crisis. In fact, the Fed's recent pleas for additional stimulus legislation represent a significant departure from that institution's usually cautious fiscal approach. During the past 30 years, the Fed has done nothing more frequently in congressional hearings than urge legislators to cut fiscal deficits.

There are several reasons that tend to justify Tarullo's views on the power of monetary stimulus to awaken the stagnant economy. First, nonfinancial corporations are already sitting on at least \$2 trillion in cash. Specifically, the most recent flow-of-funds data report from the Fed Board of Governors noted the following assets on the books of non-financial, nonfarm corporate businesses: \$84.2 billion in deposits in foreign countries, \$501.8 billion in checking accounts in the United States, \$574.5 billion in time deposits and savings accounts, \$479.7 billion in money market funds, \$77.0 billion in commercial paper, \$46.1 billion in Treasury securities, \$15.4 billion in certain other types of federal securities, and \$235.5 billion in mutual fund shares (Federal Reserve 2011b).

Second, banks had about \$1.5 trillion in excess reserves on their balance sheets as of early November (Federal Reserve 2011a) and are offering extremely low rates for many kinds of loans, including mortgages. Third, loan officers are apparently still pessimistic about the chances that business borrowers will repay their loans on time and with interest, given financial and economic conditions. In October, fewer loan officers reported easing their lending standards than in previous months (Federal Reserve 2011c). Even major Fed policy actions will not easily change lenders' minds about the riskiness of lending during this financial and economic crisis. The data depicted in Figure 9 suggest that low interest rates and reduced mortgage lending have lowered the burden of servicing existing household debt, but an aura of financial caution seems likely to

Figure 9 Debt Burden



Source: Federal Reserve

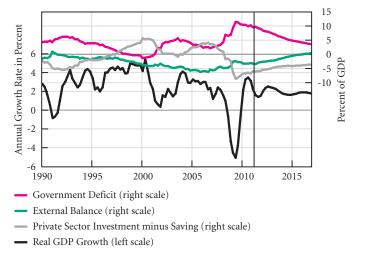
prevail following the trauma of the subprime crisis. The "deleveraging" process has reversed a long rise in household borrowing, but as seen in the figure, the cost of servicing household loans is no lower than it was in the aftermath of the much milder recessions of the early 1980s and early 1990s. Once again, we are reminded of the high likelihood that demand will be weak in the coming months and years in the absence of *increased* fiscal stimulus.

#### Our baseline forecast remains glum.

Following our standard approach for the Strategic Analysis series, we conducted a baseline simulation based on various given conditions, which include official forecasts for the future path of the deficit and growth in the rest of the world. The baseline forecast assumes no change in the value of the dollar and deficit levels consistent with the bipartisan Congressional Budget Office's most recent "no change" scenario (CBO 2011). Prices for oil and other commodities are assumed to grow at an annual rate of 2 percent throughout the simulation period. We also assume that interest rates will remain at current levels, and posit gradually rising rates of business and household borrowing.

As shown in Figure 10, the results of our simulation indicate that growth will remain very weak indeed, with a growth

Figure 10 Baseline Scenario: US Main Sector Balances and Real GDP Growth

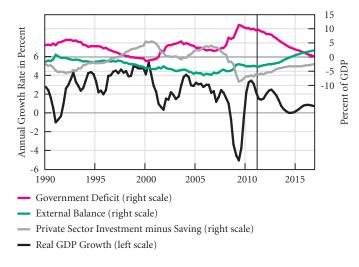


Sources: BEA; authors' calculations

rate hovering a bit above 2 percent in 2012 before falling to between 1.5 and 2 percent through 2016. Growth of this magnitude does not generate sufficient demand for labor; measured against our baseline estimate, unemployment will fall slightly in 2012 and then rise again, remaining somewhat above 9 percent up to our forecast horizon (see Figure 13). Figure 10 shows that in our baseline scenario, the general government budget deficit (that of all levels of government combined) falls significantly, while the debt increases, reaching 94 percent of GDP by the end of 2016. The private sector deficit is now negative, meaning that saving exceeds investment in that sector. During the simulation period, the absolute size of this deficit also falls, an outcome that indicates more borrowing and/or less lending by the private sector. Finally, the current account balance gradually rises to zero by the endpoint of the simulation—a rebalancing act that could end with the economy collapsing anyway.

In other words, if our assumptions hold true, fears of prolonged stagnation and flat employment are well justified.

Figure 11 Scenario 1: US Main Sector Balances and Real GDP Growth



Sources: BEA; authors' calculations

## Scenario 1 indicates that the austerity ahead will only make things worse.

Starting in 2013, the federal government will be forced to implement large budget cuts that will total \$1.2 trillion over 10 years. In scenario 1, we modify the assumptions used in our baseline simulation in order to simulate the effect of new austerity measures of a similar magnitude. However, we assume that the spending cuts all occur between the next fiscal year and the end of our simulation period. Specifically, spending and net transfers are reduced relative to the baseline, beginning in the fourth quarter of 2012, in amounts that add up to \$1.5 trillion through the end of the simulation period in the fourth quarter of 2016.

In the case of government spending *cuts*, the multiplier effect works in the direction of reducing economic growth rather than increasing it, relative to the outcome of the baseline scenario. Hence, growth remains stable at an annual rate of 2.3–2.8 percent during calendar year 2012, as depicted in Figure 11. It then falls as low as approximately 0.06 percent in the second quarter of 2014, before leveling off at around 1 percent for the balance of the simulation period.

The figure also shows the nation's three financial balances—government, foreign, and private. In this scenario, the government deficit falls gradually to about 0.2 percent, reflecting both spending cuts and reductions in revenue that occur because of lower GDP growth rates. The private sector deficit also moves fairly steadily toward balance, reaching as high as –2.6 percent at the end of the simulation period. This private sector rebalancing is faster than the one in the baseline scenario, mostly because the government deficit falls more quickly in this case.

The total balance of the two domestic sectors, which equals the current account balance, moves above 2.4 percent by the end of the simulation period. This reversal occurs largely because slow domestic growth tends to reduce imports relative to exports. It is likely that such a reduction in import demand would cause severe consequences for economies that export to the United States—consequences that would reverberate among all trading nations, including the US. Not surprisingly, given the sharp expenditure cuts and the lack of a currency devaluation in this scenario, unemployment gets worse, rising to 10.7 percent by the fourth quarter of 2016 (again, see Figure 13).

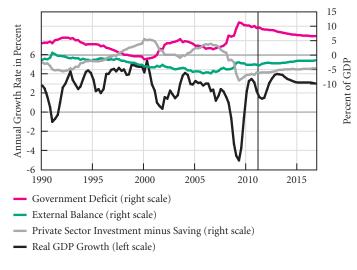
## Scenario 2 shows that even a frugal stimulus package would be of great help.

In scenario 2, we conduct a fiscal stimulus experiment. The modest "stimulus package" considered in this exercise is made up of two components: (1) an extension of the 2 percent reduction in federal payroll taxes that went into effect earlier this year, and (2) an increase in outlays large enough to yield a reduction of unemployment to approximately 7 percent by 2016. We determined the appropriate increase in outlays by starting with the baseline CBO fiscal policy assumptions and adjusting total government expenditures and transfers until we found a path that reached the 7 percent unemployment rate objective in 2016.

Again, we begin our discussion with projected growth rates. As shown in Figure 12, the additional stimulus assumed in scenario 2 increases real GDP growth very quickly. Growth rises to 2.4 percent in the first quarter of 2012 and peaks at 4 percent in the first quarter of 2013. The effect of the stimulus gradually subsides, causing the growth rate to fall starting in the first quarter of 2013. Yet the growth rate remains at a reasonably strong 3 percent even at the end of the simulation period.

The same figure shows that the government deficit declines fairly sharply, despite the tax-cut extension and spending

Figure 12 Scenario 2: US Main Sector Balances and Real GDP Growth



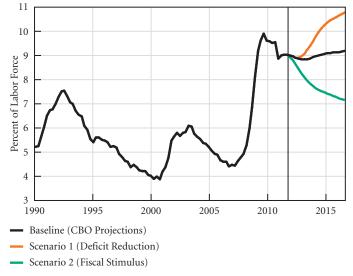
Sources: BEA; authors' calculations

increase. The projected fourth-quarter 2016 deficit of 6.5 percent of GDP exceeds our baseline but may sound remarkably low, given the hysteria about deficits found in much of the news media. As mentioned earlier, the private sector deficit is currently negative, reflecting the tendency of households and businesses to keep spending low as they deleverage from the excess borrowing of the prerecession boom years. Returning to Figure 12, we see that our scenario 2 stimulus plan causes the private sector to begin spending more and the sector deficit to rise, although it remains below –4.6 percent throughout the simulation period.

Finally, the current account balance continues its upward trend accordingly, beginning with a deficit of 2.9 percent in the fourth quarter of 2011 and reaching approximately 1.9 percent by the end of 2016. These figures show welcome progress from the much larger current account deficit of around 6.5 percent of GDP run by the United States in the fourth quarter of 2005, despite the administration of a serious dose of fiscal stimulus in the interim.

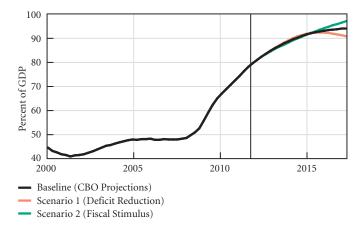
According to our simulation, the stimulus package does raise the ratio of government debt to GDP, as seen in Figure 14. The increased deficits in this last scenario cause total government debt to rise somewhat relative to our baseline num-

Figure 13 Unemployment Rate in Three Scenarios



Sources: BLS; authors' calculations

Figure 14 Public Debt under Alternative Assumptions



Sources: BEA; authors' calculations

bers, but not by much: 97.4 percent of GDP in scenario 2 versus 94.4 percent of GDP in the baseline and 91.1 percent in scenario 1. This difference in the path of the debt-to-GDP ratio is relatively small, since the assumed fiscal stimulus package has the effect of increasing the denominator of the ratio as well as its numerator.

### The impact of a eurozone crisis on US financial assets could be significant.

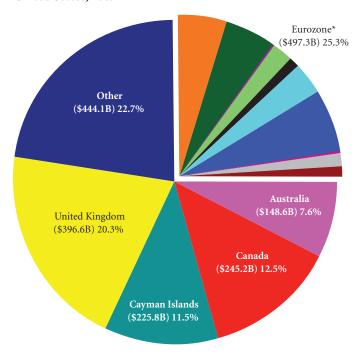
Our simulations have been based on the latest IMF projections for world growth, which do not take into account recent events in the eurozone. It is thus interesting to evaluate how a further slowdown, or possibly a financial crisis, in the eurozone might affect our simulation results.

The importance of the euro area as a market for US exports has declined steadily: while it accounted for more than 24 percent of total US exports in the 1970s, it now accounts for only about 16 percent, while the relative importance of other (mostly Asian) countries has increased in terms of US trade. Slower growth in Europe will thus have an impact on US exports, and therefore on US growth and employment, but one of limited size.

On the other hand, a financial crisis that affects the value of US assets held in the eurozone may have a much more significant impact on net US financial wealth, which in turn is an important determinant of private expenditure.

Figure 15 breaks down the total value of US debt securities (bonds, notes, bills, et cetera) by country of origin, according to the latest IMF figures. As seen in the figure, Greece, Ireland, and Portugal made up a fairly modest slice of US debt-security portfolios as of 2009. Yet all European economies are at risk. For example, Italy has been running a budget surplus (not including interest payments of course), but bond markets have been spurning new securities offerings, leading to escalating yields on the sovereign debt of that country. And the UK, which still enjoys the benefits of low interest rates, has nonetheless been rapidly implementing harsh fiscal austerity measures, and may already be caught in a spiral of low growth, falling tax revenues, rising debt, and government spending cuts. As seen in the figure, that country accounts for more than 20 percent of total debt security holdings in the United States. So, even though the United States is not directly holding a large percentage of its financial assets in troubled eurozone countries, its assets in the UK and other international financial centers may be significantly affected by a financial crisis in the euro area. Many of the world's central banks have been intervening to lend to these debt markets, in an effort to prevent a financial collapse. Such a collapse would threaten the world economy with a crisis perhaps much more severe than the one that followed the bankruptcy of Lehman

Figure 15 Total Foreign Debt Securities Held By the United States, 2009



- France (\$105.9B) 5.4%
- Germany (\$96.8B) 4.9%
- Greece (\$1.8B) 0.1%
- Ireland (\$40.8B) 2.1%
- Italy (\$19.2B) 1.0%
- Luxembourg (\$62.8B) 3.2%
- Netherlands (\$124.1B) 6.3%
- Portugal (\$0.9B) 0.0%
- Spain (\$26.0B) 1.3%
- Other (\$19.0B) 1.0%

Source: IMF

Brothers in 2008. The US government must take this threat far more seriously. It could do no better than to prevent a national recession that would contribute to a chain reaction of defaults and misery.

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