



Economic Recovery: Sustaining U.S. Economic Growth in a Post-Crisis Economy

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Summary

The 2007-2009 recession was long and deep, and according to several indicators was the most severe economic contraction since the 1930s (but still much less severe than the Great Depression). The slowdown of economic activity was moderate through the first half of 2008, but at that point the weakening economy was overtaken by a major financial crisis that would exacerbate the economic weakness and accelerate the decline.

Evidence suggests that the process of economic recovery began in mid-2009. Real gross domestic product (GDP) has been on a positive track since then. The stock market has recovered from its lows, and employment has increased moderately. On the other hand, significant economic weakness remains evident, particularly in the labor and housing markets.

In the typical post-war business cycle, lower than normal growth during the recession is quickly followed by a recovery period with above normal growth. This above normal growth serves to speed up the reentry of the unemployed to the workforce. Once the economy reaches potential output (and full employment), growth returns to its normal growth path where the pace of aggregate spending advances in step with the pace of aggregate supply.

There is concern that this time the U.S. economy will either not return to its pre-recession growth path but perhaps remain permanently below it, or return to the pre-crisis path but at a slower than normal pace. Problems on the supply side and the demand side of the economy may lead to a weaker than normal recovery.

If the pace of private spending proves insufficient to assure a sustained recovery, would further stimulus by monetary and fiscal policy be warranted? One of the important lessons from the Great Depression is to guard against a too hasty withdrawal of fiscal and monetary stimulus in an economy recovering from a deep decline. The removal of fiscal and monetary stimulus in 1937 is thought to have stopped a recovery and caused a slump that did not end until WWII.

Opponents of further stimulus maintain that the accumulation of additional government debt would lower future economic growth, but supporters argue that additional stimulus is the appropriate near-term policy.

In regard to the long-term debt problem, it is true that for an economy operating close to potential output, government borrowing to finance budget deficits will in theory draw down the pool of national saving, crowding out private capital investment and slowing long-term growth. However, the U.S. economy is currently operating well short of capacity and the risk of such crowding out occurring and damaging future economic growth seems low.

Once the cyclical problem of weak demand is solved and the economy has returned to a normal growth path, mainstream economists' consensus policy response for an economy with a looming debt crisis is fiscal consolidation—cutting deficits. Such a policy would have the benefits of low and stable interest rates, a less fragile financial system, improved investment prospects, and possibly faster long-term growth.

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Background

Severity of the 2008-2009 Recession

The 2007-2009 recession was long and deep, and according to several indicators was the most severe economic contraction since the 1930s (but still much less severe than the Great Depression). The slowdown of economic activity was moderate through the first half of 2008, but at that point the weakening economy was overtaken by a major financial crisis that would exacerbate the economic weakness and accelerate the decline.¹

When the fall of economic activity finally bottomed out in the second half of 2009, real gross domestic product (GDP) had contracted by nearly 4.0%, or by about \$500 billion.² The decline in economic activity was much sharper than in the two most recent recessions, in 2001 and 1990 respectively. The most recent recession of similar severity was in 1973 in which real GDP fell about 3.2%. (However, the recent decline falls well short of the experience during the Great Depression when real GDP decreased by 30%).³

As output decreased the unemployment rate increased, rising from 4.6% in 2007 to a peak of 10.1% in October 2009, and remaining only slightly below that high into 2010. The U.S. unemployment rate has not been at this level since 1982, when in the aftermath of the 1981 recession it reached 10.8%, the highest rate of the post-war period. (During the Great Depression, the unemployment rate reached 25%). This recent rise in the unemployment rate translates to about 7 million persons put out of work. Another 8.5 million workers have been pushed involuntarily into part-time employment.⁴

The recession was intertwined with a major financial crisis that exacerbated the negative effects on the economy. Falling stock and house prices led to a large decline in household wealth (net worth), which plummeted by over \$10 trillion or nearly 16% during 2008 and 2009. In addition, the financial panic led to an explosion of risk premiums (i.e., compensation to investors for accepting extra risk over relatively risk-free investments such as U.S. Treasury securities) that froze the flow of credit to the economy, crimping credit supported spending by consumers such as for automobiles, as well as business spending on new plant and equipment.⁵

The negative shocks the economy received in 2008 and 2009 were, arguably, more severe than what occurred in 1929. However, unlike in 1929, the severe negative impulses did not turn a recession into a depression, arguably because timely and sizable policy responses by the government helped to support aggregate spending and stabilize the financial system.⁶ That

¹ See CRS Report R40007, *Financial Market Turmoil and U.S. Macroeconomic Performance*, by Craig K. Elwell.

² Real GDP is the output of goods and services produced in the United States.

³ Data on GDP is available from the Department of Commerce, Bureau of Economic Analysis, <http://www.bea.gov/national/index.htm#gdp>.

⁴ Data on unemployment and employment available from the Department of Labor, Bureau of Labor Statistics, <http://www.bls.gov/>.

⁵ Data on wealth and financial flows available at the Board of Governors of the Federal Reserve System, <http://www.federalreserve.gov/releases/z1/Current/>.

⁶ See IMF, *World Economic Outlook*, October 2009, Chapter 2, <http://www.imf.org/external/pubs/ft/weo/2009/02/pdf/c2.pdf>.

stimulative economic policies would have this beneficial effect on a collapsing economy is consistent with standard macroeconomic theory, but without the counterfactual of the economy's path in the absence of these policies, it is difficult to establish with precision how effective these policies were.

Policy Responses to the Financial Crisis and Recession

Both monetary and fiscal policies as well as some extraordinary measures were applied to counter the economic decline. This policy response is thought to have forestalled a more severe economic contraction, helping to turn the economy into the incipient economic recovery by mid-2009. The policies already put in place are likely to continue stimulating economic activity into 2011.

Monetary Policy Actions

To bolster the liquidity of the financial system and stimulate the economy, during 2008 and 2009 the Federal Reserve (Fed) aggressively applied conventional monetary stimulus by lowering the federal funds rate to near zero and boldly expanding its “lender of last resort” role, creating new lending programs to better channel needed liquidity to the financial system and induce greater confidence among lenders. Following the worsening of the financial crisis in September 2008, the Fed grew its balance sheet by lending to the financial system. Between September and November 2008, the Fed's balance sheet more than doubled, increasing from under \$1 trillion to over \$2 trillion.

By the beginning of 2009, demand for loans from the Fed was falling as financial conditions normalized. Had the Fed done nothing to offset the fall in lending, the balance sheet would have shrunk by a commensurate amount, and the stimulus that it had added to the economy would have been withdrawn. In the spring of 2009, the Fed judged that the economy, which remained in a recession, still needed stimulus. On March 18, 2009, the Fed announced a commitment to purchase \$300 billion of Treasury securities, \$200 billion of Agency debt (later revised to \$175 billion), and \$1.25 trillion of Agency mortgage-backed securities. The Fed's planned purchases of Treasury securities were completed by the fall of 2009 and planned Agency purchases were completed by the spring of 2010. At this point, the Fed's balance sheet stood at just above \$2 trillion.⁷

Fiscal Policy Actions

Congress and the Bush Administration enacted the Economic Stimulus Act of 2008 (P.L. 110-185). This act was a \$120 billion package that provided tax rebates to households and accelerated depreciation rules for business. Congress and the Obama Administration passed the American Recovery and Reinvestment Act of 2009 (P.L. 111-5). This was a \$787 billion package with \$286 billion of tax cuts and \$501 billion of spending increases that is projected to add fiscal stimulus equivalent to about 2% of GDP in 2009 and 2.5% of GDP in 2010.⁸

⁷ For further discussion of Fed actions in this period, see CRS Report RL34427, *Financial Turmoil: Federal Reserve Policy Responses*, by Marc Labonte.

⁸ See CRS Report R40104, *Economic Stimulus: Issues and Policies*, by Jane G. Gravelle, Thomas L. Hungerford, and Marc Labonte.

In terms of extraordinary measures, Congress and the Bush Administration passed the Emergency Economic Stabilization Act of 2008 (P.L. 110-343), creating the Troubled Asset Relief Program (TARP). TARP authorized the Treasury to use up to \$700 billion to directly bolster the capital position of banks or to remove troubled assets from bank balance sheets.

Congress was an active participant in the emergence of these policy responses and has an ongoing interest in macroeconomic conditions. Current macroeconomic concerns include whether the economy is in a sustainable recovery, rapidly reducing unemployment, speeding a return to normal output and employment growth, and addressing government's long-term debt problem.

Is Sustained Economic Recovery Underway?

Recent evidence suggests that the process of economic recovery is occurring. However, the pace of growth is slow, much of that growth is currently sustained by transitory factors, and growth has recently shown signs of decelerating.

- The economy began to recover in mid-2009. Real GDP (i.e., GDP adjusted for inflation) increased at an annualized rate of 2.2% and 5.6% in the third and fourth quarters of 2009; and 3.7%, 1.7%, and 2.5% in the first, second, and third quarters of 2010. Much of this upward momentum has been sustained by the transitory factors of inventory increases and fiscal stimulus. Of concern, however, is that in the second and third quarter of 2010, growth has slowed to around a 2% annual rate, a pace that may not be fast enough to keep the unemployment rate from rising. Moreover, without the temporary contributions of inventory adjustments and federal stimulus spending, the real economy grew only 0.5% in the third quarter of 2010. On the positive side, during 2010 the rate of consumer spending (representing nearly 70% of GDP) has increased moderately and exports have continued to grow.⁹
- Manufacturing activity is increasing. By October 2010, output had increased 6.1% over a year earlier and capacity utilization has risen from a low of 65% in mid-2009 to nearly 74%.¹⁰
- Since mid-2009 employment has increased, but the gains have been modest.
- The stock market has rebounded and interest rate spreads on corporate bonds have narrowed. The DowJones stock index had plunged to near 6500 in March 2009 but has risen substantially since then. Spreads on investment grade corporate bonds, a measure of the lenders' perception of risk and credit worthiness of borrowers, have fallen from a high of 600 basis points in December 2008 to less than 100 basis points by mid-2010.¹¹
- China and Asia's other emerging economies are having strong recoveries and the large advanced economies of Germany, France, and Japan have recently recorded

⁹ Department of Commerce, Bureau of Economic Analysis, <http://www.bea.gov/national/index.htm#gdp>.

¹⁰ Board of Governors of the Federal Reserve System, *Statistical Release G.17*, <http://www.federalreserve.gov/releases/g17/>.

¹¹ Data on spreads found at <http://www.bloomberg.com/apps/quote?ticker=.TEDSP%3AIND>.

positive output growth. Recovery in the rest of the world would likely transmit a positive impulse to the United States by boosting demand for U.S. exports.

On the other hand, significant economic weakness remains evident.

- Consumer spending, although improving, remains tepid.
- Employment gains are only keeping pace with growth of the labor force, leaving the unemployment rate historically high at 9.6%.
- The housing market remains weak. Mortgage loan foreclosures continue to rise. House prices are still falling, continuing to have an adverse effect on the balance sheets of households and banks, and dampening the recovery of aggregate spending.
- Despite low interest rates, the Fed reports that credit conditions remain tight, making getting loans difficult for consumers and businesses, and limiting many types of credit supported expenditures.

The Shape Of Economic Recovery

In the typical post-war business cycle, lower than normal growth of aggregate demand during the recession is quickly followed by a recovery period with above normal growth of spending, perhaps spurred by some degree of monetary and fiscal stimulus. The degree of acceleration of growth in the first two to three years of recovery has varied across post-war business cycles, but has been at an annual pace in a range of 4% to 8%.¹² This above normal growth brings the economy back more quickly to the pre-recession growth path, and speeds up the reentry of the unemployed to the workforce.

Once the level of aggregate demand approaches close to the pre-recession level of potential output (or full employment), the economy returns to its pre-recession growth path where the growth of aggregate spending is slower because it is constrained by the growth of aggregate supply, which in recent years is estimated to have been at an annual pace of near 3.0%. (A subsequent section of the report looks more closely at aggregate supply.)¹³

There is concern, however, that this time the U.S. economy, without further policy actions, will either not return to its pre-recession growth path, perhaps remain permanently below it, or return to the pre-crisis path but at a slower than normal pace, or worse, dip into a second recession. Below normal growth would almost certainly translate into below normal recovery of employment, whereas a second round of recession could increase the already high unemployment rate. The next sections discuss problems on the supply side and the demand side of the economy that could lead to a weaker than normal recovery.

¹² Department of Commerce, Bureau of Economic Analysis, <http://www.bea.gov/national/index.htm#gdp>.

¹³ The long-term growth of aggregate supply is determined by the growth in the supplies of capital and labor and on the growth in production technology used to turn capital and labor into goods and services.

Demand Side Problems?

Whatever vigor is now occurring on the demand side of the economy is largely coming from fiscal stimulus and businesses inventory restocking, and these are likely to remain an important propulsive force into 2011. Fiscal stimulus and inventory rebuilding are, however, temporary sources of support of aggregate spending. Sooner or later fiscal stimulus will fall away. The Congressional Budget Office (CBO) projects that fiscal stimulus will peak in 2010 and make progressively smaller additions to demand in 2011 and 2012¹⁴ Inventory building is a self limiting process that will not go on indefinitely; by 2011 stock-building will likely have only a small positive effect on aggregate demand.

A strong recovery of private sector demand, including consumer spending, investment spending, and exports is required to reduce unemployment and bring the economy quickly back to its pre-recession growth path. However, there are major uncertainties about the potential medium-term strength of each of these components that could dampen aggregate spending and constrain the economy's ability to generate a recovery period with above normal growth and quickly falling unemployment.

Consumption Spending

Personal consumption expenditures constitute the largest and most stable component of aggregate spending. During the first three post-war decades, personal consumption spending averaged a 62% share of GDP. However, that share rose significantly over the next three decades averaging about 65% in the 1980s, 67% during the 1990s, and about 70% between 2001 and 2007. The high level of household spending reached during the 2001-2007 expansion is unlikely to reemerge during the current recovery because it was supported by an unsustainable increase in household debt, decrease in personal savings, and ease of access to credit.

Household Debt

In the mid-1980s, after a long period of relative stability at a scale of around 45% to 50% of GDP, the debt level of households began to rise steadily, reaching over 100% of GDP by 2008. Such a substantial rise in the level of household debt was sustainable so long as rising home prices and a rising stock market continued to also rapidly increase the value of household net worth, and interest rates remained low, mitigating any rise in the burden of debt as a share of GDP.

The collapse of the housing and stock markets in 2008 and 2009 substantially decreased household net worth, which had, by the end of 2009, fallen about \$10 trillion below its level in 2007.¹⁵ This large fall in net worth pushed the household debt burden to what may be an unsustainable level especially if interest rates rise. Repairing household balance sheets will probably require a large diversion of current income from consumption spending to debt reduction for several more years.¹⁶

¹⁴ The Congressional Budget Office, *An Update: The Budget and Economic Outlook: Fiscal Years 2010 to 2020*, August 2010, http://www.cbo.gov/ftpdocs/108xx/doc10871/BudgetOutlook2010_Jan.cfm.

¹⁵ Board of Governors of the Federal Reserve System, "Flow of Funds Accounts," Table B.100, June 2010, <http://www.federalreserve.gov/releases/z1/Current/z1r-5.pdf>.

¹⁶ See Evan Tanner and Yassar Abdih, "Rebuilding U.S. Wealth," *Finance & Development*, IMF, December 2009.

The recent rise of the stock market from its low point in early 2009 has helped household wealth to recover. However, rising home equity, largely dependent on the path of house prices, has traditionally been the major contributor to household wealth. The rapid rise of home prices during the last economic expansion caused an equally rapid rise in home equity. Consumers borrowed against this equity to fund current spending. With the sharp fall of home prices, home equity was reduced substantially, erasing that source of funding. Home prices are still falling and the housing market is expected to remain weak for several more years. That weakness is likely to slow the rebuilding of household wealth, and be a drag on the rebound of consumer spending.¹⁷

In addition to diverting more personal income to saving, a continued weak labor market is likely to dampen income growth and, in turn, slow the recovery of consumer spending.

Credit Conditions

Easy credit availability in the pre-crisis economy enabled households to readily borrow against their rising home equity to fund added spending. Financial innovations allowed lenders to keep interest rates low and offer liberal terms and conditions to entice households to borrow. It seems likely that credit conditions will be tighter during the current expansion. Interest rates are still low but banks greatly tightened the terms and conditions of consumer loans during the crisis and recession and are likely to continue to do so in the near term. While not likely as important a cause of higher savings as high household debt, tighter credit conditions will make it less likely that households will exploit any increase in their home equity to fund current spending, further constraining consumer spending relative to what occurred during the 2001-2007 economic expansion.

Personal Saving

The U.S. personal saving rate had averaged about 10% of GDP consistently through the 1970s, 1980s, and 1990s. But since then the personal saving rate has declined sharply, reaching a low of 1.0% by 2005.¹⁸ It is likely that the evaporation of household saving was in large measure a consequence of the sizable increase in household net worth associated with increased house prices and stock prices occurring at that time. As wealth rose rapidly, it was less urgent to divert current income to saving.

The sharp reduction of household net worth during the recent recession dramatically changed the financial circumstances of households, reducing the use of debt financed spending. The need to repair household balance sheets is likely to induce households to pay down debt. The poor prospect for the appreciation of house prices will sharply limit the ability to use rising equity as a substitute for saving.

¹⁷ The standard model of consumer spending used in economic analysis assumes that consumers seek to avoid large swings in their living standards over the course of their lifetimes. Thus as incomes rise and fall both in the short and long term, individuals are expected to vary their saving rate in order to minimize the effect on their consumption. If consumers seek to maintain a fairly stable level of consumption over their entire lives, then the level of consumption at any given point in their lives will depend on their current wealth and some expectation about their income over the rest of their lives. See Annamaria Lusardi, Jonathan Skinner, and Steven Venti, "Saving Puzzles and Saving Policies in the United States," National Bureau of Economic Research, Working Paper 8237, April 2001.

¹⁸ See CRS Report R40647, *The Fall and Rise of Household Saving*, by Brian W. Cashell.

In addition, the above normal increase in economic uncertainty in the aftermath of the financial crisis and recession will likely mean that over the medium term, households could be more inclined to save. As the economic decline intensified, the personal saving rate increased, climbing from 1.4% of GDP in the fourth quarter of 2007 to 4.5% of GDP in the third quarter of 2010.¹⁹ The financial imperatives behind greater personal saving are going to persist for some time and with the recovery of household income the ability to save will also improve, suggesting that the personal saving rate could continue to increase for several more years.

Slow Recovery of Consumer Spending?

If income rises and the personal saving rate stabilizes near 5%, that would translate into about a 3 percentage point increase over the rate that prevailed during the economy's 2001-2007 expansion, and in turn, a reduction in the consumption to GDP ratio, from about 70% to about 67%.

Therefore, for the U.S. economy to return to its normal pre-crisis growth path, a 3% share of GDP will have to come from another component of aggregate demand.

Investment Spending

Investment spending is the third largest component of aggregate spending, averaging 17% to 18% of GDP in years of near normal output growth. (Government spending is second largest at about 20%.) The largest portion of total investment spending is business fixed investment, averaging 11% to 12% of GDP in periods of normal growth. The second component of total investment is residential investment, averaging 4% to 5% of GDP.

However, investment spending is very sensitive to economic conditions and more volatile than consumer spending. This sensitivity is at least in part because investment projects are often postponable to a time when economic conditions are more favorable. Its volatility makes investment spending an important determinant of the amplitude, down and up, of the typical business cycle.²⁰

As aggregate spending fell and credit availability tightened in 2008, investment spending quickly weakened. As a share of real GDP, investment spending fell from about 16% in 2007 to about 11% at the economy's trough in 2009. The sharp fall in real GDP from the second quarter of 2008 through the first quarter of 2009 was nearly fully accounted for by the sharp fall of investment spending over this same period. Investment spending increased during 2010, elevating its share of real GDP to 12.8%.

Typically, this same sensitivity also works in the opposite direction. Strongly rising investment spending, responding to improving market demand, reduced uncertainty, and expanding credit availability, often gives above normal contribution to the rebound of aggregate spending during the recovery phase of the business cycle.

¹⁹ U.S. Department of Commerce, Bureau of Economic Analysis, *National Accounts*, Table 5.1, <http://www.bea.gov/national/nipaweb/SelectTable.asp?Selected=N>.

²⁰ Ibid, Table 1.1.5.

Looking forward, however, some significant constraints on both residential and business investment raise uncertainty about whether investment spending will be a strong contributor to economic recovery, and therefore, whether it could be a component of aggregate spending capable of compensating for a weaker than normal recovery of spending by consumers.

The principal constraint on residential investment is likely to be the large inventory of vacant housing, left over from the 2002-2006 housing boom. It is estimated that the number of vacancies could be more than 2 million units above what would normally be expected at this stage of the business cycle. As discussed above, it is still not clear that the housing market has stabilized and new construction remains very weak. The rate of housing starts is likely to remain low for the next two years while the inventory overhang is worked down to a more normal level.

The prospect for nonresidential investment is likely to be better than for residential investment, but it is not clear that nonresidential investment will exceed its pre-crisis level. On the supply side, capacity utilization rates have climbed back from record lows of below 70% reached during the recession, but, at about 75% currently, are still only at the lows reached in the 1990 and the 2001 recessions and well short of the 80% to 85% that would typically correspond to operating near or at capacity.²¹ On the demand side, business investment in new plants and equipment is most often a response to the expectation of increased demand for the products they produce. The main driver of that demand is consumer spending and as discussed above that spending has been tepid, with the not unlikely prospect that it may continue to be weak over the near term if households have made a lasting commitment to increased savings. Stronger foreign demand could also stimulate investment spending and in theory compensate for the weaker pull of domestic demand, but as discussed more fully below, foreign demand may also be weak. Also, problems in the financial sector have sharply reduced activity in commercial real estate, causing business investment in structures to continue to be flat.

Therefore, it seems unlikely that investment spending would provide the offset to any sizable fall in consumption's share of GDP over the near term.

Net Exports

The U.S. trade deficit (real net exports) shrank from about 6% of real GDP in 2006 to below 3% in 2009. Since the beginning of the recession in late 2007 through mid-2009, net exports made a significant positive contribution to real GDP in an otherwise declining economy. Even as economic weakness abroad caused U.S. exports to fall, imports fell more, providing a net positive push to current economic activity.²²

The 3 percentage point swing in real net exports is, however, largely the consequence of the severe economic weakness in the United States over this period. Since mid-2009, the trade deficit has increased, reaching 3.8% of real GDP in the third quarter of 2010. This increase means that over the course of the current recovery net exports have been subtracting from, not adding to economic growth. This recent pattern makes it uncertain that net exports can boost aggregate

²¹ Data for Capacity utilization are available at Board of Governors of the Federal Reserve System, *Industrial Production and Capacity Utilization*, Table G17, <http://www.federalreserve.gov/releases/g17/>.

²² U.S. Department of Commerce, Bureau of Economic Analysis, *National Economic Accounts*, <http://bea.gov/national/nipaweb/Index.asp>.

spending by offsetting weak consumption over the medium-term and help assure a sustained recovery at pace that steadily reduces unemployment.

Boosting U.S. Net Exports Through a Rebalancing of Global Spending

Increasing U.S. net exports to any degree requires that the trade deficit continue to decrease. For that to happen, trade surpluses in the rest of the world must simultaneously decrease. To achieve this adjustment of trade flows, a sizable rebalancing of domestic and external demand on the part of the deficit and surplus economies must occur.²³

Because a trade deficit is a consequence of an economy spending more than it produces, rebalancing in this circumstance requires a decrease of domestic spending and increase of domestic saving. In contrast, because a trade surplus is a consequence of an economy spending less than it produces, rebalancing in this circumstance requires an increase of domestic spending and decrease in domestic saving.

This rebalancing of spending will cause the dollar to depreciate and foreign currencies to appreciate. A fall in the value of the dollar relative to the currencies of the surplus countries causes the price of foreign goods to rise for U.S. buyers and the price of U.S. goods to fall for foreign buyers. This change in the relative price of foreign versus domestic goods will cause the net exports of the deficit country to rise, giving the boost in spending needed to potentially offset reduced consumption spending. The change in relative prices would also cause the net exports of surplus countries to fall as more of current output is absorbed by increased domestic spending.

In the United States, as discussed above, some measure of rebalancing seems to be occurring, as evidenced by the increase in the personal saving rate. Although there are good reasons to expect this increase to be durable, there is the possibility that households would eventually revert to their pre-crisis low saving ways. However, even if household saving remains higher, it is likely that any significant increase in the overall U.S. national saving rate would also require an increase in government saving via smaller federal budget deficits.

Large U.S. budget deficits over the near term are providing a needed boost to weak aggregate spending during the early stages of an economic recovery. With the strengthening of private spending as the recovery matures, large government budget deficits would fade away, causing government saving to rise. What puts this fading away of budget deficits in doubt over the long-term is the prospect of having to fund the obligations attached to the rising demand of an aging U.S. population for healthcare, social security, and other entitlements. Without policy actions to address these long-term demands, it is not clear how the long-term budget deficits will fall.

Effective global rebalancing arguably also involves sizable adjustments by the largest surplus economies—Germany, Japan, and China. However, there are significant potential constraints on how substantially each of these three economies can “save less and spend more,” perhaps limiting any sizable appreciation of their currencies relative to the dollar, and any associated boost in U.S. net exports.

²³ On global rebalancing, see for example: Olivier Blanchard, “*Sustaining Global Recovery*,” International Monetary Fund, September 2009, “Rebalancing,” *The Economist*, March 31, 2010, <http://www.imf.org/external/pubs/ft/fandd/2009/09/index.htm>, and Board of Governors of the Federal Reserve System, Vice-chairman Donald L. Kohn, Speech “Global Imbalances,” May 11, 2010, <http://www.federalreserve.gov/newsevents/speech/kohn20100511a.htm>.

The inability of Germany to move its exchange rate independently from the other Euro area economies reduces its flexibility of adjustment. In addition, the effects of recession have left limited room for further fiscal expansion and small ability to lower the household saving rate. While its level of debt is not high, recent German policy actions have stressed fiscal consolidation, tending to increase saving and dampen spending. Japan, which does have a very high level of public debt, has little to no room for fiscal expansion and a poor prospect of boosting household spending. Moreover, both Germany and Japan, faced with substantial near-term economic weakness in the aftermath of the global recession, may take steps to avoid the dampening of their net exports that a sizable appreciation of the exchange rate would cause.

China has the largest bilateral trade surplus with the United States and therefore has the potential to have a large impact on U.S. export sales and through that a significant positive impulse on the pace of the U.S. economic recovery. Also, economic growth has remained relatively strong in China through the recent global financial crisis and recession and aggregate demand is expected to be strong through the next two to three years. What is uncertain, however, is whether a greater share of this spending will be domestic demand, particularly consumption spending by Chinese households.

The very high rate of saving by Chinese households is thought to be a precautionary measure to compensate for a lack of social insurance. It likely also reflects limited access to consumer credit. The difficulty for the near-term task of sustaining economic recovery is that even if policy actions are taken to remove these constraints on consumer spending, households are likely to only gradually change their pattern of consumption and not provide a sharp near-term boost to domestic spending.

Also, a closer look at the sources of increase in China's domestic saving over the last decade reveals that the principal contributor to that growth was Chinese companies, not households. Therefore changing the saving practices of Chinese companies is likely to be an important aspect of any large increase in China's saving rate. It is argued by some that Chinese companies retain too large a share of their earnings. Better access to credit and changes in the governance rules of Chinese business would likely reduce the business saving rate. But, as with households, even if such policy initiatives are forthcoming, the change in the business saving rate is likely to emerge only gradually.²⁴

Even with a successful rebalancing, it is unlikely that China alone can propel a boost in U.S. net exports sufficient to offset weak domestic demand and pace economic recovery. China's global trade surplus is estimated to be about 10% of GDP. However, China is only about one-third the size of the U.S. economy. Therefore, if China's trade were only with the United States, it would have to reduce its trade surplus by 3% of GDP to affect a 1 percentage point reduction of the U.S. trade deficit. But since, in fact, only about 16% of China's trade is with the United States, it would take a 15 percentage point change in China's trade balance (moving from a surplus equal

²⁴ Of course, for these reforms to translate into a shift in China's trade balance, that nation must be willing to allow its' exchange rate to rise relative to the dollar, causing a decrease in the price of foreign goods relative to domestic goods, and exerting downward pressure on China's trade surplus. From July 2005 to February 2009, China abandoned its dollar peg, allowing the yuan to appreciate by 28% (on a real trade-weighted basis). However, faced with weakening export sales due to the global financial crisis China for the last 10 months has re-pegged the yuan to the dollar. China's export-led growth model, relying on a high saving rate (to keep internal demand low) and a low exchange rate pegged to the dollar (to keep external demand high), has been very successful and, despite the possible advantages of reforms to boost domestic demand, it is uncertain whether China would move substantially away from this model.

to 10% of GDP to a deficit equal to 5% of GDP) to reduce the U.S. trade deficit by 1 percentage point. (This assumes that the fall of China's trade surplus is not offset by an increase of other trading partners surpluses.)

Other emerging Asian economies also run trade surpluses and adding these to the calculation makes the relative scale of rebalancing needed to achieve a given amount of improvement in the U.S. trade deficit more feasible. However, all of emerging Asia is only about half the size of the U.S. economy. Therefore, if the U.S. share of the whole region's trade is similar to China's, emerging Asia would need to accomplish a sizable 7 percentage point change in its trade balance to generate a 1 percentage point change in the U.S. trade balance. As with China, for a reduction of the trade surpluses of other emerging Asian economies to happen quickly, their currencies will need to appreciate against the dollar.

All and all, there are reasons to doubt whether U.S. net exports can increase over the near term at a pace sufficient to fully compensate for the prospect of slower than normal growth of other components of U.S. domestic spending.

Supply Side Problems?

The supply side of the economy governs its capacity for producing goods and services. That capacity is a function of the economy's supplies of labor and capital and the level of technology used to turn labor and capital into the output of goods and services. In the short run, the potential supplies of these productive factors is relatively fixed and will determine the economy's potential output. In periods of economic slack, rising aggregate demand can increase the economy's output and employment up to the level of potential output, which corresponds with full employment.

In the long run, as the supplies of capital and labor and the level of technology increase, the level of potential output also increases. Over time the steady rise of potential output will define the economy's long-term growth path (called the "trend" growth rate). When aggregate demand is below potential output the economy can grow faster than trend growth, but when the level of aggregate demand reaches the level of potential output, further growth of output will be constrained to the trend growth rate.

Typically the long run growth path is thought to be relatively stable and not greatly affected by recessions and the associated short-term fluctuations in aggregate demand. Over the post-war period, the average annual growth rate of potential output for the United States has been 3.4%, however, since the 1970s it has averaged closer to 3.0%.²⁵

Recent analysis by the International Monetary Fund (IMF) examines the question of whether output will return to its pre-crisis trend after the crisis.²⁶ It examines the medium-term and long-run paths of output after 88 banking crises over the past four decades in a wide range of countries (including both advanced and developing economies). A key conclusion was that seven years

²⁵ Ibid, CBO, p.39.

²⁶ P. Kannan, A. Scott, and M. Terrones (2009), "From Recession to Recovery: How Soon and How Strong?," in *World Economic Outlook*, pp. 103-138. International Monetary Fund. Also see Furceri, Davide and Annabelle Mourougane, "The Effect of Financial Crisis on Potential Output: New Empirical Evidence from OECD Countries," *Economics Department Working Papers No. 699*, May 2009.

after the crisis, output had declined relative to trend by nearly 10% for the average country. But there was considerable variation of outcomes across crisis episodes.

In other words, such crises not only reduce actual output, but also may reduce potential output (the economy's structural and institutional capacity to produce output). In this circumstance, the economy could return to its trend growth rate, but there is unlikely to be a rebound period of above normal growth to quickly return the economy to its pre-crisis potential output and growth path and, in turn, quickly reduce unemployment. This failure to return to the pre-crisis potential output means that the economy bears the burden of a permanent output loss and the large initial increase in the unemployment rate caused by the crisis could persist even as the economy is growing at its trend rate.

The reduction of the post-crisis growth path is found to be the consequence of decreases of approximately equal size in the employment rate, the capital-labor ratio, and productivity. The adverse effect of the financial crisis on the employment rate is thought to arise from an increase in the "structural unemployment rate," hampering the post-crisis economy's ability to accomplish the needed reallocation of labor from sectors that have contracted permanently to sectors that are expanding.

Because the aftermath of the crisis will likely involve sizable changes in the composition of the economy, it likely also increases the mismatch between the skills of the unemployed and the skills demanded in the post-crisis labor market—job vacancies go unfilled for lack of a worker with sufficient skills for the job.²⁷ Also, labor force participation rates may fall if the crisis is severe enough to substantially increase the numbers of the long-term unemployed, some of whom may become discouraged from searching for a new job. A crisis induced fall of house prices and a rising incidence of mortgages with negative equity will also discourage the geographic mobility of workers who are unable to sell their house.

The adverse impact of a financial crisis on capital accumulation is likely the combined outcome of several factors. Decreased demand for products and heightened uncertainty of potential return dampens the incentive to invest. In addition, the financial crisis could impede the process of financial intermediation for up to several years, as weakened balance sheets, lower collateral values, and elevated risk premiums slow the flow of credit and elevate the real cost of borrowing.

The dampening effect on productivity may occur as higher risk premiums and a generally more cautious approach to spending by businesses diminishes the willingness and ability to finance relatively high-risk projects. Expenditures on research and development are very pro-cyclical and likely to be sharply reduced in times of crisis.

Productivity tends to recover quickly after recessions and thus allow the economy to resume growth at the pre-crisis trend rate. However, the capital and employment losses tend to endure and keep the economy on a lower growth path.

Has the recent financial crisis caused a reduction in the potential output of the U.S. economy and placed it on a lower trend growth path? It is difficult to make a concurrent determination because potential output is not directly observable, and can only be imputed from the economy's actual

²⁷ Employment in construction, financial services, and some types of manufacturing may remain depressed for some time, requiring some who lose their jobs in those sectors to seek employment in other sectors.

post-crisis performance. Therefore, a clear determination of such a permanent output loss is some years in the future.

Although the IMF study gives reasons why the financial crisis possibly could have adversely affected the economy's supply-side, the study also finds that there can be some significant mitigating factors that could be particularly relevant for the U.S. economy. First, a high pre-crisis investment share is a good predictor of a large potential output loss. This is a reflection of the high sensitivity of investment to the negative effects of a financial crisis. For the United States there was no sharp increase in investment spending above trend as measured as a share of GDP for the three years prior to the financial crisis, averaging near a typical 16% of GDP.

Second, the IMF study also found that those economies that aggressively apply stimulative fiscal and monetary policies during the crisis tend to have smaller medium-term output losses. As already discussed, the United States has applied quickly and substantially stimulative policies in response to the financial crisis.

Third, countries with fewer labor market rigidities suffered smaller medium-term output losses. U.S. labor markets, as compared to other advanced economies, are relatively free of labor market rigidities, though as mentioned declining house prices may have reduced mobility of some workers who own their own homes.

Policy Responses to Increase the Pace of Economic Recovery

If the pace of private spending proves insufficient to assure a sustained recovery, would further stimulus by monetary and fiscal policy be warranted? One of the important lessons from the Great Depression is to guard against an overly hasty withdrawal of fiscal and monetary stimulus in the fragile early stages of recovering from a sharp economic decline. The removal of fiscal and monetary stimulus in 1937 is thought to have stopped the ongoing economic recovery and caused a slump that did not end until WWII.²⁸

The Case for More Fiscal Stimulus

In a recent speech, Lawrence Summers, Assistant to the President for Economic Policy and Director of the National Economic Council, argued that further fiscal stimulus is necessary because the effects of the first stimulus package are now beginning to fade, and because of the prospect that private spending may still lack sufficient vigor to sustain a healthy recovery.²⁹ The risk, in Summers' view, of not applying further fiscal stimulus is possibly several years of sub-normal growth, or worse, dipping into a second recession. Nevertheless, in his speech, Summers also recognized the need for a complementary policy to address the long-term challenge to economic growth of large future budget deficits. In periods of normal economic growth,

²⁸ For further discussion of economic policy during the Great Depression, see Christina D. Romer, "The Nation in Depression," *The Journal of Economic Perspectives*, vol. 7, no. 2 (spring 1993), pp. 19-39.

²⁹ Lawrence H. Summers, "Reflections on Fiscal Policy and Economic Strategy," Speech at the Johns Hopkins School of Advanced International Studies, May 24, 2010. Other economists have also concluded that further stimulus is called for. See, for example, Brad DeLong "The Worst -of-Both-Worlds Fiscal Policy," June 18, 2010, <http://delong.typepad.com/sdj/2010/06/worst-of-both-worlds-fiscal-policy.html>; and "The Case for More Stimulus" Interview with William Gale of the Brookings Institution, June 2010, <http://www.theatlantic.com/business/archive/2010/06/the-case-for-more-stimulus/57776/>.

unconstrained by weak aggregate demand, large budget deficits are thought to increase interest rates, depress investment, and dampen economic growth. He urged Congress to pass a variety of spending measures it is now considering that would inject up \$200 billion into the economy.

A recent CBO report examined the potential for various fiscal policy options for increasing economic growth and employment in 2010 and 2020, emphasizing the policies' cost effectiveness as measured by the effects on GDP and employment per dollar of budgetary cost.³⁰ Recognizing the role of uncertainty, high and low estimates were generated giving a range for the effects. For 2010, the biggest "bang for the buck" came from increasing aid to the unemployed, reducing employers' payroll taxes, and reducing employer payroll taxes for firms that increase their payroll. (Providing an additional one-time social security payment and allowing full or partial expensing of investment costs also had a positive impact). For 2011, the CBO finds the strongest effects would come from providing aid to states for projects other than infrastructure and providing additional refundable tax credits for lower and middle income households.

However, the CBO report also cautioned that despite their beneficial short-run effects, these actions would also add to already large future deficits. Unless future actions were taken to offset the accumulation of additional government debt, future economic growth would tend to be lower than otherwise. However, the scale of economic stimulus now being discussed, while possibly having a sizable effect on aggregate demand in the short run, would have a relatively small effect on the size of the government's long-term debt.

Because the United States faces two macroeconomic problems, two policy responses are, arguably, appropriate: a short-term policy to sustain a cyclical recovery of economic growth and a long-term policy to trim government debt. Conceptually there is no necessary tradeoff between these two objectives. They can be mutually reinforcing: a credible commitment to dealing with the long-term debt problem allays investor uncertainty and increases the near-term incentive to spend, while effectively dealing with the short-term problem of weak aggregate demand puts the economy on a stronger growth path, which boosts tax revenue and eases the long-term debt problem.

The Case Against More Fiscal Stimulus

The case against more fiscal stimulus comes in three forms, used separately or in combination; one, no further stimulus is needed; two, fiscal stimulus does not work; and three, stimulus increases the budget deficit, makes the U.S. long-term debt problem worse, and dampens economic growth.³¹

In regard to the need for stimulus, the U.S. economy does have strong recuperative powers and it is possible that private spending and economic growth will soon surge without further fiscal stimulus. Events such as improved consumer confidence, lower energy prices, a more normal flow of credit, or faster growth in the rest of the world could separately or in combination induce stronger spending by households and businesses. However, given the severity of the recent

³⁰ CBO, Policies for Increasing Economic Growth and Employment, January 2010, <http://www.theatlantic.com/business/archive/2010/02/heres-why-government-stimulus-does-not-work/36466/>.

³¹ See for example: Derek Thompson, "The Case Against More Stimulus," *The Atlantic*, June 2010, <http://www.theatlantic.com/business/archive/2010/06/the-case-against-more-stimulus/57774/>, and "Here's Why Fiscal Stimulus Won't Work," *The Atlantic*, February 2010.

recession and, as outlined above, given the current weakness of private spending and the several economic obstacles that households and businesses will probably continue to face over the near term, there remains a significant risk of sub-normal growth for the next one to two years.

In regard to the ability of fiscal stimulus to boost output and employment, some economists argue that fiscal stimulus only shifts spending, it does not increase spending. In this view, when people see the government running a budget deficit, they anticipate that the government will need to increase taxes in the future to pay off the debt, and increase their current savings to pay for the higher taxes. The increase in saving tends to offset the stimulative effect of the budget deficit.³² There is little empirical support for this theory, however. Mainstream economic analysis indicates that in circumstances like the present, where the economy's output is likely constrained by insufficient demand, fiscal stimulus can raise the level of output and employment.³³

In regard to the long-term debt problem, it is often pointed out that for an economy operating close to potential output, government borrowing to finance budget deficits will draw down the pool of national saving, leaving less available to support private capital investment. Private investment by business and households in education, housing, research & development, and capital equipment that would have otherwise occurred is in theory "crowded out" through higher interest rates bid up by the government borrowing. If budget deficits divert national saving from private investment, other things equal, future productivity and income growth may be slowed. However, the U.S. economy is currently operating well short of capacity and the risk of such "crowding out" occurring and damaging future economic growth does not seem immediate.³⁴

Once the short-term problem of weak demand is solved and the economy has returned to a normal growth path, the appropriate policy response for an economy with a looming debt crisis is fiscal consolidation—cutting deficits. Such a policy would have the benefits of low and stable interest rates, a less fragile financial system, improved investment prospects, and possibly faster long-term growth.

Is More Monetary Stimulus Needed?

Could monetary policy do more to put the economy on the path of sustained recovery? The Fed thinks it could. On November 3, 2010, the Fed announced that it would provide more monetary stimulus by means of the purchase an additional \$600 billion of Treasury securities at a pace of about \$75 billion per month, and continue the practice of replacing maturing securities with Treasury security purchases. This would effectively increase the size of the Fed's balance sheet to

³² This theory is called "Ricardian equivalence." It is named after the nineteenth-century economist David Ricardo who first made the argument. For further discussion see N. Gregory Mankiw, *Principles of Economics* (Ft. Worth, Dryden Press, 1998), p. 556, and Robert J. Barro, "Are Government Bonds Net Wealth?" *Journal of Political Economy*, vol. 82, no. 6. (November-December, 1974), pp. 1095-1117.

³³ See CRS Report RL31235, *The Economics of the Federal Budget Deficit*, by Brian W. Cashell; Alan J. Auerbach and William G. Gale, "Activist Fiscal Policy to Stabilize Economic Activity," working paper, September 29, 2009, available at <http://elsa.berkeley.edu/~auerbach/activistfiscal.pdf>; and Robert E. Hall, "By How Much Does GDP Rise If the Government Buys More Output?" *Brookings Papers on Economic Activity*, fall 2009, pp. 183- 250.

³⁴ For discussion of the long term debt issue see President Obama's *National Commission on Fiscal Responsibility and Reform*, <http://www.fiscalcommission.gov/>.

more than \$2.5 trillion. The planned maturity length of the securities that will be purchased is mostly between 2 ½ and 10 years.³⁵

The Fed argues that more monetary stimulus is needed because economic growth is decelerating and much of that momentum is being provided by the transitory factors of inventory adjustment and fiscal stimulus. Since the second quarter of 2010, growth has slowed to around 2%, a pace that may not be fast enough to keep the unemployment rate from rising. Fed Chairman Ben Bernanke indicated that of particular concern is the substantial increase in the share of the long-term unemployed (workers who have been without work for six months or more). Such long-term unemployment tends to convert temporary cyclical unemployment into more intractable structural unemployment. In addition, the lingering economic slack in the economy has added to deflationary pressure. Measures of core inflation have been decelerating over the last year and are currently only slightly above 1%. A continuous decline in the price level is troublesome because in a weak or contracting economy it can lead to a damaging, self-reinforcing, downward spiral of prices and economic activity. Deflation was a major exacerbating force to the economy's decline during the Great Depression.

The Case Against More Monetary Stimulus

The Fed's recent policy initiative to provide more monetary stimulus has also been criticized. One concern is the increased risk of inflation. Such a large increase in bank reserves would also lead to a rapid increase the overall money supply through the "money multiplier" effect, which in normal times might generate inflation. At present, the sizable degree of slack in the economy and the banks heightened tendency to hold reserves rather than lend them out, keeps the risk of inflation low. However, when the economy returns to more normal conditions, reserves would likely need to be removed to avoid excessive upward pressure on prices. The likely unprecedented scale of the reserves that might need to be drained from the economy has raised concerns about whether the Fed could effectively provide the degree of restraint needed to keep inflation under control.

Another criticism of the Fed's new round of monetary stimulus is that it will depreciate the dollar. Although influencing the exchange rate is not a stated goal of the Fed's policy, standard macroeconomic theory would predict, all else equal, that a by-product of monetary stimulus would be to reduce the value of the dollar (assuming other countries do not similarly alter their monetary policy in response). Although a weaker dollar would have a stimulative effect on total spending in the United States by increasing exports and decreasing imports, countries such as Germany, Japan, and China that have relied on net exports to propel their economic growth are resistant to a depreciating dollar and have criticized the Fed's actions.

In addition, the argument is made that further monetary stimulus will have little impact on real economic activity. In the current economic environment, with badly weakened household and business balance sheets placing a premium on improving liquidity, it is difficult for monetary policy to get "traction" stimulating the broader economy.

³⁵Board of Governors of the Federal Reserve System, *Federal Open Market Committee*, <http://www.federalreserve.gov/monetarypolicy/fomccalendars.htm>.

Economic Projections

Given the large deterioration of the balance sheets of households and businesses, the possible reduction of the U.S. economy's level of potential output, and the weakened state of the global economy in the aftermath of the recent financial crisis, projections of the U.S. economy's near-term path carry a high degree of uncertainty. Weighing the several forces, positive and negative, that are likely to influence economic activity over the near term, most economic projections indicate U.S. economic recovery will continue, albeit at a slower than normal pace:

- CBO projects that the recovery will continue at a modest pace. Real GDP is projected to grow by only 2.0% from the fourth quarter of 2010 to the fourth quarter of 2011, down from a 2.8% pace over the previous four quarters. The unemployment rate is projected to fall to 9.0% in 2011.³⁶
- The Blue Chip consensus, the average of about 50 forecasts by private-sector economists, projects real GDP will continue to rise, up 2.7% in 2010 and 2.5% in 2011. The unemployment rate is projected to fall to 9.3% in 2011.³⁷
- The IMF projects real GDP in the United States to increase 2.6% in 2010 and 2.3% in 2011. Growth at this pace implies that the gap between actual and potential output will remain wide. Therefore the unemployment rate is expected to remain high at 9.7% in 2010 and 9.6% in 2011. Globally, the IMF expects modest but steady recovery in most advanced economies and strong growth in many emerging and developing economies. World output is projected to increase 4.6% in 2010 and 4.3% in 2011.³⁸
- Fed Chairman Bernanke says “despite the recent slowing, it is reasonable to expect some pick-up in growth in 2011 and subsequent years. Broad financial conditions, including monetary policy are supportive of growth, and banks appear willing to lend. Importantly households may have made more progress than we had earlier thought in repairing their balance sheets, allowing them more flexibility to increase their spending as conditions improve. And as the expansion strengthens, firms should become more willing to hire.”³⁹

Forecasts are always subject to uncertainty. That uncertainty is likely to be especially high at this time because forecasting the path of the economy near turning points in the business cycle is always difficult and because of the singular characteristics of the current business cycle (i.e., sharp financial crisis, unusual and strong policy responses, and an elevated risk of deflation).

³⁶ Congressional Budget Office, *The Budget and Economic Outlook:an Update*, August 2010, <http://www.cbo.gov/ftpdocs/117xx/doc11705/08-18-Update.pdf>.

³⁷ Aspen Publishers, *Blue Chip Economic Indicators*, September 10, 2010.

³⁸ International Monetary Fund, *World Economic Outlook: An Update*, October 2010, <http://www.imf.org/external/pubs/ft/weo/2010/02/pdf/c2.pdf>.

³⁹ Board of Governors of the Federal Reserve System, Chairman Ben S. Bernanke, “The Economic Outlook and Monetary Policy,” Speech at the Federal Reserve Bank of Kansas City Economic Symposium, Jackson Hole, Wyoming, August 27, 2010, <http://www.federalreserve.gov/newsevents/speech/bernanke20100827a.htm>.

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