



Strategic Analysis

May 2015

FISCAL AUSTERITY, DOLLAR APPRECIATION, AND MALDISTRIBUTION WILL DERAIL THE US ECONOMY

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Introduction

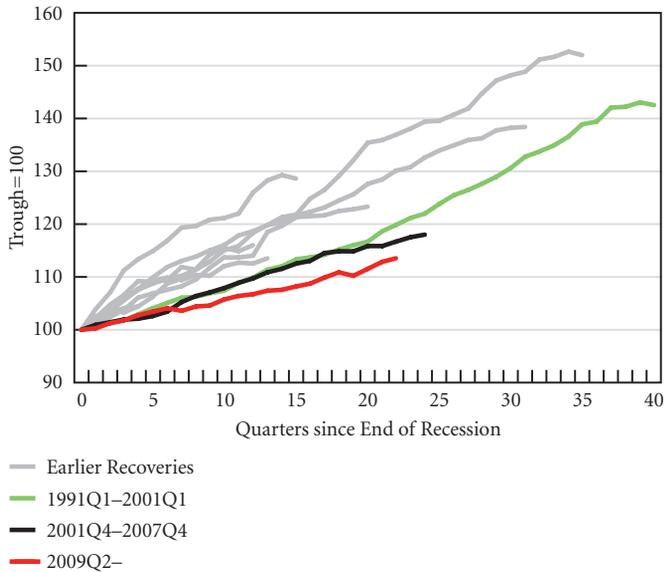
The US economy is about to enter the seventh year of its recovery. The GDP growth rate, with the exception of two quarters, has been positive since 2009Q3, and the unemployment rate has steadily decreased, from a peak of 10 percent at the height of the crisis in mid-2009 to 5.4 percent in April 2015. This was within the range of unemployment the Federal Reserve had declared acceptable.

However, even after such a long recovery period and fall in the unemployment rate, the US economy does not seem to have gathered enough steam. According to the advance estimates from the Bureau of Economic Analysis (BEA), real GDP grew by only 0.2 percent in the first quarter of this year, and was only 8.8 percent above its precrisis peak. Finally, according to the April 2015 data from the Bureau of Labor Statistics (BLS), total employment is just 2.1 percent higher than its precrisis peak in January 2008.

The weakness of the current recovery can also be understood within the context of previous recoveries in the postwar period. Figure 1 depicts the path of real GDP from the trough to the peak for each economic recovery since World War II, at quarterly frequency. The three lines shown in color correspond to the three latest US economic recoveries, including the current one.¹ The gray lines correspond to all postwar recoveries prior to 1991Q1.

Two things stand out. First, the last three recoveries have been visibly weaker than the previous ones. Second, the current recovery is the weakest in the postwar era. The picture would become even worse had we included the large drop in GDP during the 2008–9 recession.

Figure 1 Index of Real GDP in US Recoveries, 1949–2015Q1



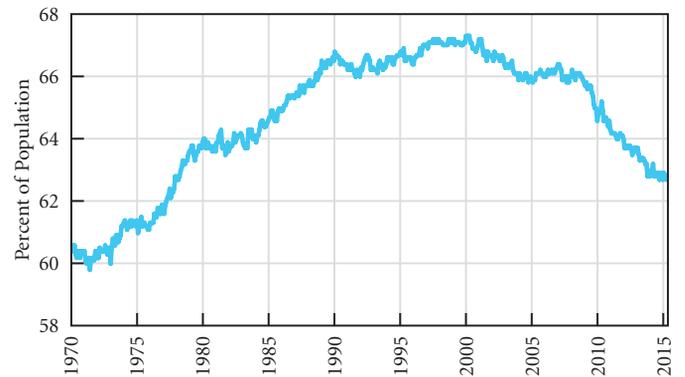
Sources: BEA; National Bureau of Economic Research (NBER); authors' calculations

Moreover, if we look more closely at the labor market we find that the unemployment rate has decreased mainly for the wrong reasons.² In Figure 2 we can see that the labor force participation rate has fallen by more than three percentage points compared to its precrisis level, and is now hovering around its mid-1970s level. This decrease manifests the long-lasting effect of the crisis on the US labor market, and shows that a significant part of the population has become discouraged and dropped out of the labor force. A decrease in labor force participation tends to lower the unemployment rate even when there is no improvement in overall employment or the employment-to-population ratio.

Figure 3 confirms that. The large drop—more than five percentage points—in the employment-to-population ratio that accompanied the crisis was followed by a flat ratio over the next four years. Only very recently has this ratio started to slowly pick up, but it is still 4 percent lower than its precrisis level—more on a par with its mid-1970s (and mid-1980s) levels.

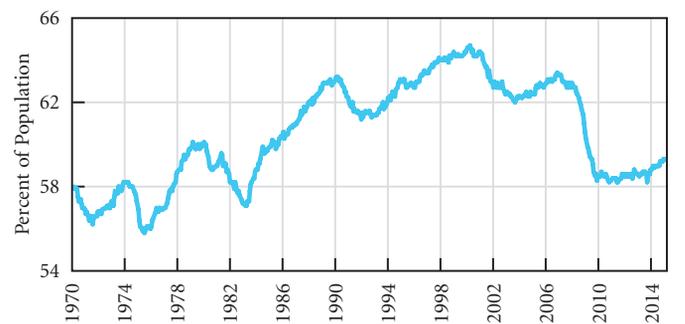
Similar to the performance of real GDP, the employment-to-population ratio during the current recovery has been the weakest of the postwar period, as shown in Figure 4. Another interesting feature of this figure is that the last three recoveries—again, like real GDP—have been distinctly weaker compared to

Figure 2 Civilian Labor Force Participation Rate, 1970–2015Q1



Source: BLS

Figure 3 Civilian Employment–Population Ratio, 1970–2015Q1

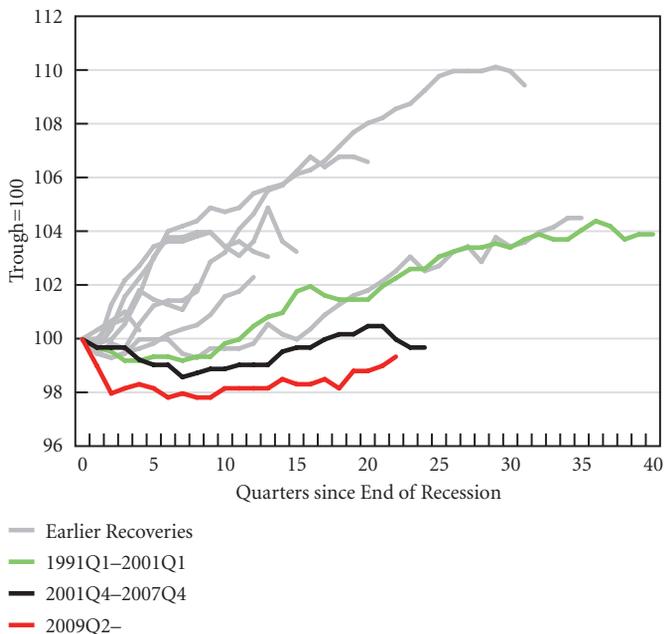


Source: BLS

the previous ones (an exception to this is the recovery of the 1960s—the gray line that roughly follows the trajectory of the recovery in the 1990s—but this is most likely related to the very high employment rates of the period).

In what follows, we discuss the reasons behind this anemic recovery. We identify three main structural characteristics of the US economy that stand in the way of recovery: (1) the weak performance of net exports, (2) pervasive fiscal conservatism, and (3) high income inequality. As will become obvious in the next section, these three factors, together with the deleveraging of the household sector, can explain the slow recovery. At the same time, given these structural characteristics, the economy's future recovery is once again dependent on a rise in private borrowing and thus the debt and debt-to-income ratio

Figure 4 Index of Employment–Population Ratios in US Recoveries, 1948–2015Q1



Sources: BLS; NBER; authors' calculations

of the private sector, especially the households in the bottom 90 percent of the income distribution.

In our baseline scenario, we examine what the prerequisites are for the recent projections in the Congressional Budget Office's *Budget and Economic Outlook* (CBO 2015a, b) to materialize. Our simulations show that the private sector needs to keep decreasing its financial surplus, which by the end of 2017 becomes a deficit for the first time since the crisis began.

As Wynne Godley (1999) argued in the Institute's first Strategic Analysis and we reemphasized in our report last year (Papadimitriou et al. 2014), this kind of recovery, even if it happens, is unsustainable, and is bound to end in another serious crisis.

In the course of our discussion we identify the very significant increase in net exports of petroleum products as a positive development for the US economy. Without this, the US trade deficit would most likely have returned to its very high precrisis levels. This increase in the net export of petroleum and related products is mainly due to the increase in domestic production that became possible with the new extraction technology, and also due to the decrease in the

price of oil. On the downside, these new extraction techniques carry significant dangers for the environment. Moreover, the decrease in the price of oil reflects, to a certain extent, the weak state of demand in the United States and, most important, in the rest of the world. A hypothetical robust recovery of the US and the global economies would increase the price of oil.

This brings us to our last point. Besides the structural characteristics of the US economy that undermine long-run, sustainable recovery, two more factors threaten the current recovery: the appreciation of the US dollar and the fragile economies of many of the United States' trading partners. Using our model, we find that a further depreciation and/or slowdown of growth in the economies of US trading partners will have very significant consequences: an increase in the foreign deficit, which will lead to a decrease in the projected growth rate and, at the same time, an increase in the need for private (and government) borrowing, thus rendering the US economy even more fragile.

As is our usual practice in these reports, we do not attempt to make short-term forecasts. Instead, our perspective is medium term, and we concern ourselves with potential developments over the next few years.

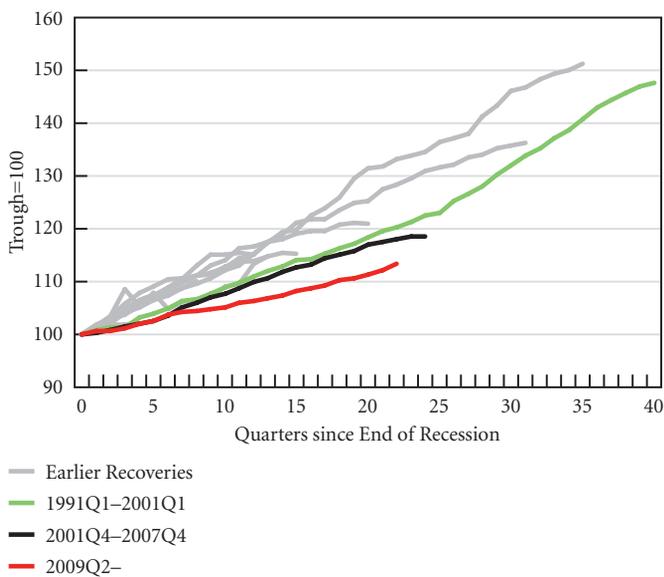
Components of Economic Recovery

Some clues about the reasons for the weak recovery can be found in detailed data from the BEA. Figures 5 through 9 each depict the path of one component of GDP from the trough to the peak of every postwar economic recovery, at quarterly frequency. As in Figure 1, the three lines shown in color correspond to the last three US economic recoveries and the gray lines to the previous postwar recoveries. Note that the five components shown in these figures sum to total GDP as follows:

$$GDP = \text{personal consumption expenditures} + \text{gross private investment} + \text{government consumption and gross investment} + \text{exports} - \text{imports}$$

The series have all been adjusted for inflation using the BEA's chain-weighted price-index series, with the first observation set equal to one hundred, so that the path for each period shows recovery or decline relative to the same base.

Figure 5 Index of Real Personal Consumption Expenditures in US Recoveries, 1949–2014



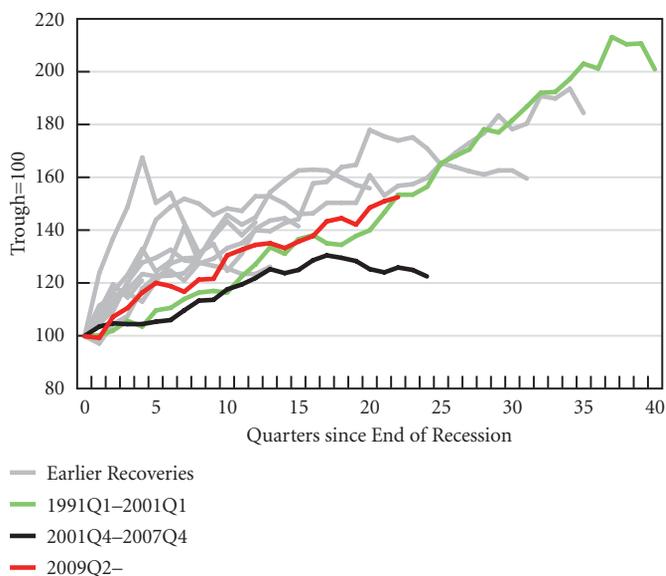
Sources: BEA; NBER; authors' calculations

Figure 5 shows the path of consumer spending. It is striking that the current recovery of consumption has been slower than any other recovery in the postwar period. Given the high share of consumption as a component of GDP, this has been the main reason for the anemic recovery of the past five years.

In turn, as we explained in our previous Strategic Analysis (Papadimitriou et al. 2014), the main reason for the slow recovery in consumption is the high inequality in the distribution of income—and, of course, the effort of US households to deleverage in the aftermath of the crisis. Later, we examine the role of consumer credit growth—not an inexhaustible propulsive force—in this latest expansion.

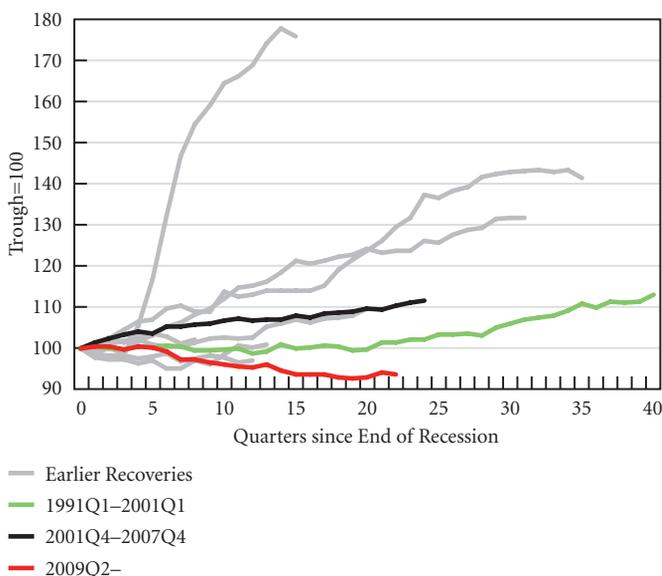
Figure 6 shows the path of private domestic business investment, using a similar format. Investment has performed better compared to the previous recovery, and its current path is similar to the one followed during the recovery of the 1990s. However, it is still below all other previous postwar recoveries. Moreover, the drop in private investment in the most recent recession was unusually severe, implying that, in the current recovery, this component of GDP started from a very low base. Hence, the performance of this component since the last cyclical peak, in 2007, is weaker than in any complete peak-to-peak period since 1949.

Figure 6 Index of Real Gross Private Investment in US Recoveries, 1949–2014



Sources: BEA; NBER; authors' calculations

Figure 7 Index of Real Government Consumption and Gross Investment in US Recoveries, 1949–2014



Sources: BEA; NBER; authors' calculations

Figure 7 presents the series for government spending—which, as we can see, has been the other major drag on the present recovery. There has been no other recovery in the modern history of the US economy in which government spending decreased in real terms (with the exception of a short cycle in the early 1970s). The picture does not change if we examine the cycles from peak to peak and thus take into account the effect of the fiscal stimulus of 2008–9, which mostly predated the last cyclical trough. Even examining these full cycles, the current recovery stands out as one in which the level of government spending is lower at the end of the period under examination than at the beginning.

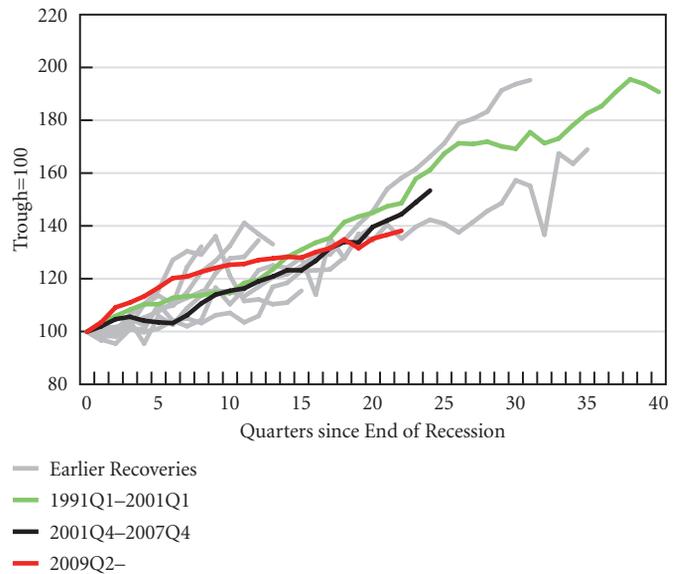
Figure 8 shows that exports helped to spark the current recovery; their performance at the initial stage of the recovery was average compared to the rest of the postwar cycles but significantly better compared to the previous two cycles. However, the weak foreign demand of the recent period has affected exports, and their growth has slowed significantly.

Finally, Figure 9 illustrates the path of US imports. It is important to keep in mind that imports reduce GDP, and thus the steeper the line in the figure, the greater the drag on GDP growth. The behavior of imports during the recovery can be divided into two subperiods. The beginning of the recovery is marked by a steep increase in imports—much steeper than in the previous two recoveries and almost every other postwar recovery. However, in the last three years the pace of imports has slowed considerably, substantially aiding growth and, to a certain extent, counteracting the poor performance of the other components of GDP. We will discuss the foreign sector in more detail in the next section.

In conclusion, we can make the following points about the components of GDP during the current recovery:

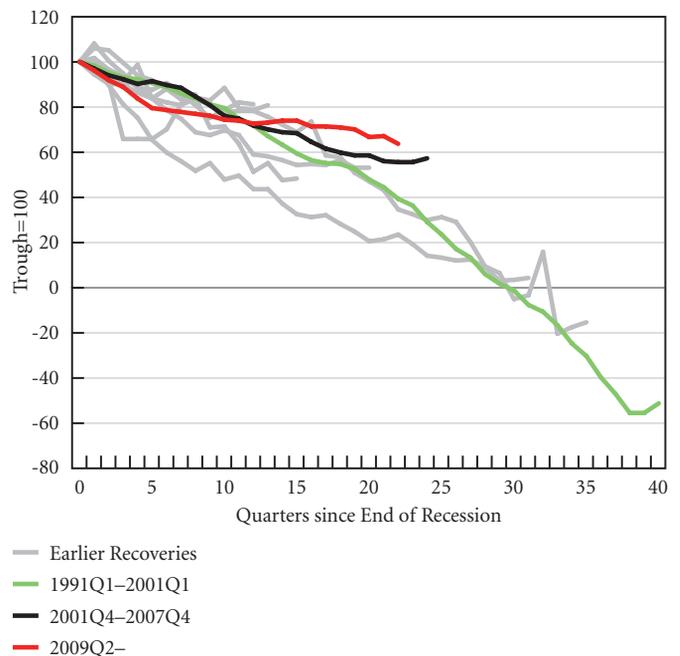
1. Figures 5 and 7 show that the biggest obstacles for the recovery have been the unequal distribution of income and the debt overhang from the previous cycle—which have resulted in the feeble recovery of consumption—and the fiscal conservatism of the US government.
2. The performance of investment has been average compared to other recoveries.
3. The path of exports in the recent period is a sign of the weak foreign demand for US products, largely due to the

Figure 8 Index of Real Exports in US Recoveries, 1949–2014



Sources: BEA; NBER; authors' calculations

Figure 9 Index of Real Imports in US Recoveries, 1949–2014



Note: Figure shows the negative of the change in imports, as imports are a subtraction from GDP.

Sources: BEA; NBER; authors' calculations

economic problems of US trading partners. We believe this is a very important issue for the future as well.

4. From a macroeconomic point of view, an encouraging sign has been the recent performance of imports, whose rate of growth has slowed.

The Foreign Sector

As we have repeatedly argued in previous Strategic Analysis reports—starting with the very first one in 1999—the structural current account deficit is one of the biggest problems the US economy faces.³ Improvement in the current account is a necessary condition for sustainable recovery in the future. It is thus worth having a closer look at the recent behavior of the current account and its components and thinking how these components will behave in the medium-term future.

In Figure 10 we can see that, beginning in the early 1990s, net borrowing and the trade deficit increased, reaching 6 percent of GDP on the eve of the Great Recession. The year 2007 marked a reversal of this trend, which continued until the recession’s end in 2009Q2. The (weak) recovery that followed was not accompanied by a significant increase in the trade deficit or in net lending. The trade deficit increased until 2012Q1—reaching 3.6 percent of GDP—and then decreased

again, and is now around 3 percent of GDP. On the other hand, net borrowing increased only slightly after 2009, and has followed the downward trend of the trade deficit since 2012. It is now around 2.3 percent of GDP.

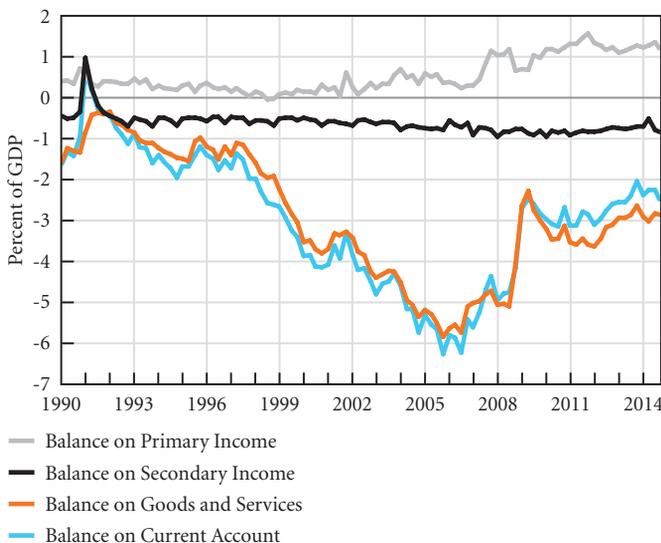
Based on the above—and as we can see in Figure 10—the improved performance of net borrowing and the current account balance can be decomposed into two parts: (1) the overall improvement in the trade balance and (2) an increase in net income receipts from abroad on the order of 1 percent of GDP.

Trade Balance

In Figure 11 we can see that the overall improvement in the trade balance (as of end 2014) is mostly due to the improvement in the balance of trade in goods, although there has been a slight improvement in the balance of trade in services as well.

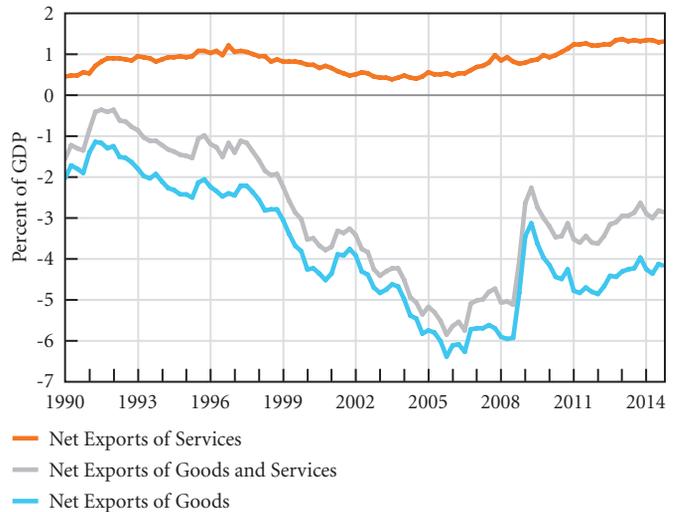
If we go one step further, we can understand where this improvement in the trade balance comes from. In Figure 12 we decompose net exports of goods into (1) net exports of goods except petroleum products and (2) net exports of petroleum products. As we can see, when the recovery began in 2009, the trade deficit in both categories started to increase, despite the depreciation of the dollar over the same period. The downward

Figure 10 Current Account Balance and Its Components, 1990–2014



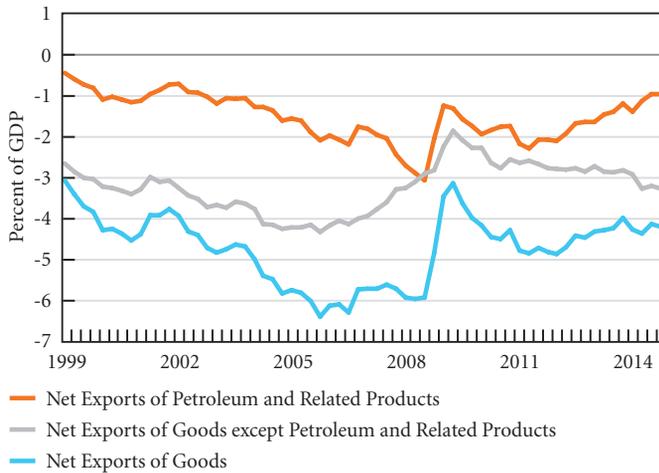
Sources: BEA; authors' calculations

Figure 11 Net Exports, 1990–2014



Sources: BEA; authors' calculations

Figure 12 Net Export of Goods, 1999–2014



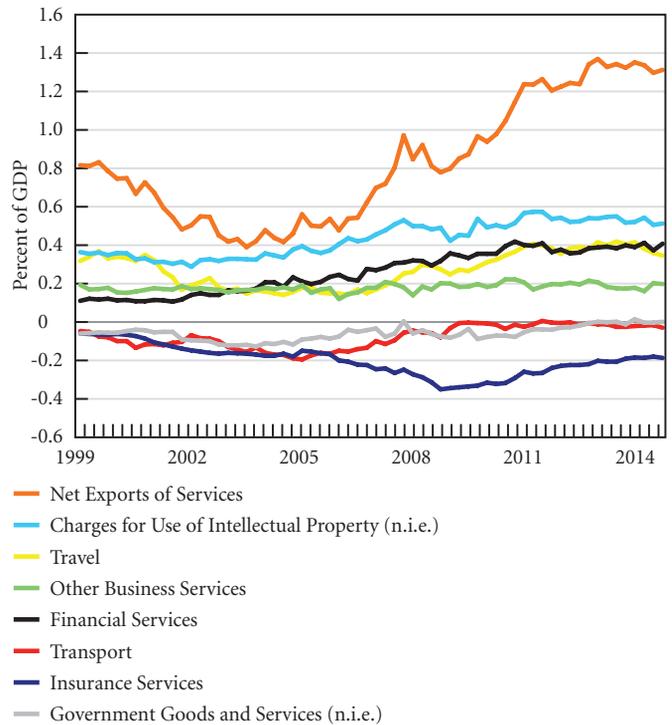
Sources: BEA; authors' calculations

trend in net exports of “goods except petroleum products” has continued uninterrupted, and has accelerated in the last few quarters.

The game changer in the overall trade of goods is the export of petroleum and petroleum products. Because of the new oil extraction methods, the trade deficit in these products reversed course in 2011 and has been shrinking ever since. The decrease in this deficit between 2011Q2 and 2014Q4 is more than 1 percent of GDP. If we look at the trade deficit in petroleum products in 2014Q4 in relation to where it would have been if it had continued along its pre-2011 path, we would see an improvement of more than 2 percent of GDP. If net exports of petroleum products were 2 percent lower, the trade deficit would have returned to its precrisis level. Finally, it is worth mentioning that this improvement has come about mostly through a decrease in US imports of petroleum products rather than an increase in US exports.

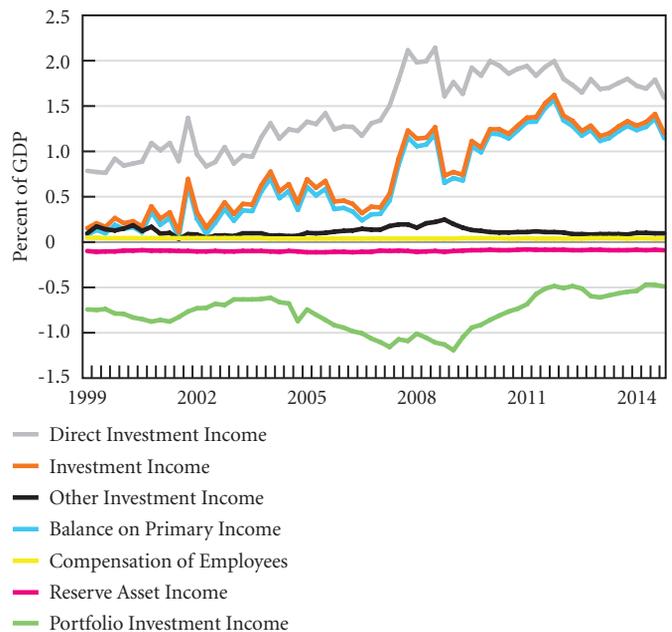
The new methods that have been used for extracting oil and gas—known as hydraulic fracturing, or “fracking”—are still controversial because of the potential harmful environmental implications (such as air pollution, earthquakes, and adverse effects on the water supply). Moreover, from the point of view of environmental economists—even before the application of fracking—our biggest problem is not that we do not have enough oil to burn; rather, we have too much oil to burn.

Figure 13 Net Export of Services, 1999–2014



Sources: BEA; authors' calculations

Figure 14 Balance on Primary Income, 1999–2014



Sources: BEA; authors' calculations

The newly added supply of oil extracted by fracking obviously worsens this problem.

Nevertheless, leaving aside these very serious concerns, the decrease in the trade deficit in petroleum products is a very significant development for the US macroeconomy.

Another good piece of news comes from the net export of services. As we can see in Figure 13, between 2008 and 2014Q4 net services increased by around 0.6 percent of GDP.

Primary Income

As we mentioned above, another source of improvement in the current account is the increase in the net primary income balance. In Figure 14 we present the components of the primary income receipts. In the most recent period—after 2009—this improvement is entirely due to the decrease in portfolio investment income payments. In the years preceding the crisis—especially in 2007 and 2008—there was also an improvement in net direct investment income receipts, which have since remained around 1.8 percent of GDP.

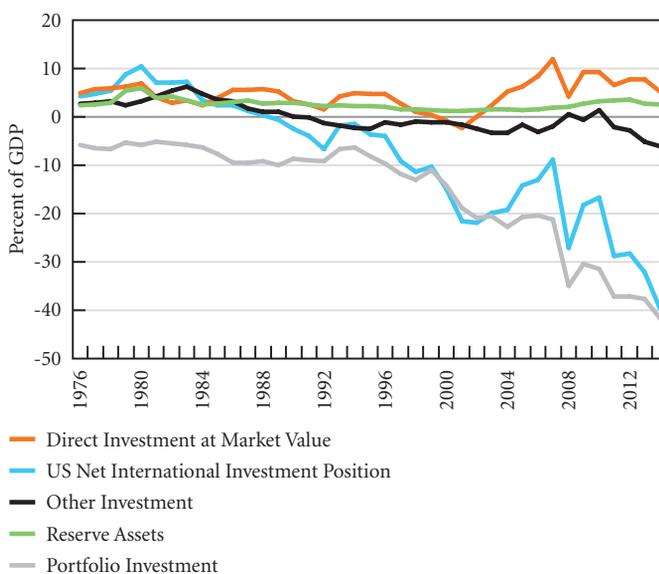
An interesting question is whether this improvement in net primary income receipts is sustainable or just symptomatic of the crisis. In our view, it is most likely the latter.

In Figure 15 we present the net foreign assets of the US economy. Given the current account deficit (see Figure 10), it is not surprising that net foreign liabilities as a share of US GDP have continued to rise since the crisis, albeit at a slower rate.

The reason for the improvement in the primary income balance is that the implicit yield spread between US-owned foreign assets and foreign-owned US liabilities has increased since the crisis. However, this increase is a sign of the fragility of the global economy, a result of the increase in demand for US liabilities, and, finally, an outcome of the aggressive quantitative easing (QE) programs of the Federal Reserve. The spread is bound to return to lower levels when the QE program is rolled back and the Fed raises interest rates, especially if the global economy returns to a state of relative stability.

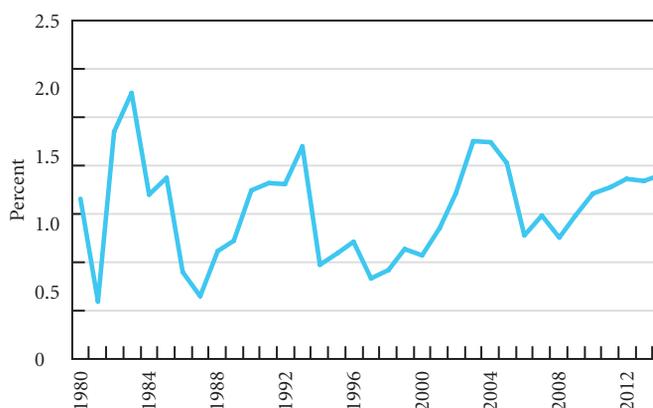
Figure 16 confirms this conclusion. For the calculation of the spread we estimated the implicit yield on foreign assets earned by the US economy as the ratio of the income receipts on US-owned foreign assets to the value of those assets the previous year. Similarly, we calculated the implicit yield paid by the United States as the ratio of the income payments on foreign-owned US assets to the corresponding assets of the previous year. The spread is simply the difference between these two yields. As we can see, this “yield spread” is correlated

Figure 15 US Net International Investment Position, 1976–2014



Sources: BEA; authors' calculations

Figure 16 Yield Spread, 1980–2014



Sources: BEA; authors' calculations

with the business cycle and tends to peak one or two years after each crisis. Thus, a high value for the spread is a bad sign for the condition of the US and global economies.

US Trading Partners

An examination of US trading partners is necessary for our analysis because of their influence on the performance of the foreign sector of the US economy and the current account balance. As we have argued in previous reports, a lower current account balance (a higher deficit) makes the recovery of the US economy dependent on debt-fueled private sector spending, which is not sustainable in the medium term.

We identify three factors that might have a negative effect on the foreign sector of the US economy in the immediate future: (1) weaker growth among US trading partners and thus weak demand for US exports; (2) lower inflation in the economies of US trading partners, which will increase the relative price of US products; and (3) appreciation of the nominal exchange rate of the dollar.

The recent strong performance of the US macroeconomy, at least until 2014Q4, has been an exception in the midst of a slowdown of economic activity worldwide. It is likely that the eurozone as a whole will lapse into another recession. Japan is in a deflationary situation as well. The United Kingdom has not convinced anyone that it has escaped a cycle of weakening growth and fiscal austerity measures, though its growth rates remain strong at the moment, largely because of its control of an independent currency and its own fiscal policy. Finally, Canada's economy is vulnerable to elevated levels of household indebtedness and imbalances in the housing market (Bank of Canada 2014) as well as a decline in oil revenues in the west of the country.

A slowdown in economic activity is also evident in the so-called emerging markets. The Chinese economy, which has experienced decades of two-digit growth rates, is cooling, and decreases in the price of oil and food commodities, along with a rising dollar, are exerting enormous pressure on the economies of Latin America and Russia. This situation is made worse by the geopolitical instability in many parts of the world, especially in Russia and the Middle East.

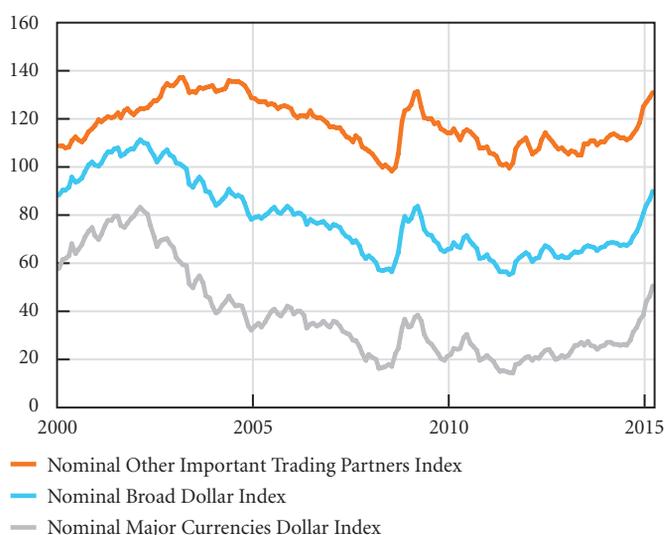
As far as the United States is concerned, the stagnation, or weaker-than-expected performance, of the “rest of the world”

translates into weaker demand for US exports and has a negative impact on the rate of growth.

On top of that, the weak(er) economic performance of US trading partners has an impact on their inflation rates. As their economies slow down, the rate of inflation slows as well. In turn, this tends to lift the price of US products relative to the products of its trading partners—an appreciation of the real exchange rate—and thus has a negative impact on US exports and imports. Our model includes the effects of such changes in the current account balance.

Finally, another source of pressure on the US foreign sector is the appreciation of the nominal exchange rate (which, of course, affects the real one as well). Quantitative easing ended in October 2014, but this step marked only the end of new securities purchases under the QE program. Official statements indicate that the federal funds rate—the US policy rate—may begin to rise later this year, with employment growth being the key factor in this decision. On the other hand, the European Central Bank recently launched a program of quantitative easing, and some two-year yields are negative in the eurozone. Central banks in Japan and the UK are also holding off on plans to tighten monetary policy in light of deflation, putting them in the camp of governments expected to loosen domestic monetary policy relative to the US Federal Reserve.

Figure 17 US Exchange Rate Indices, 1980Q1–2015Q1



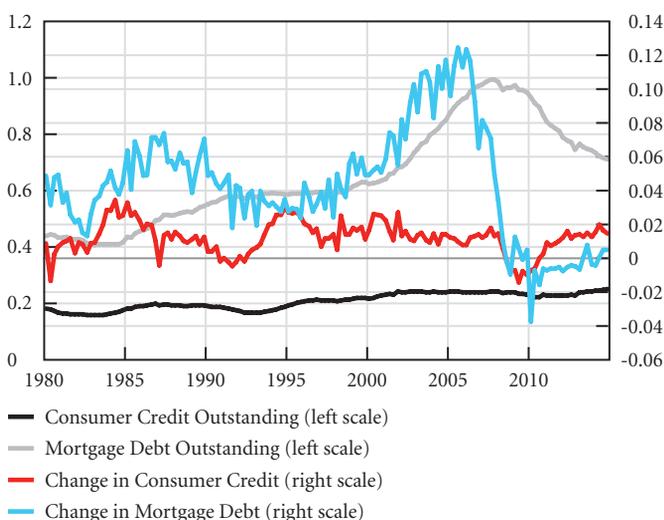
Source: Federal Reserve

This divergence in the direction of monetary policy has led to a significant appreciation of the dollar. As Figure 17 shows, the dollar has appreciated by more than 10 percent against the currencies of the United States' trading partners since the second quarter of last year. It is very possible that this nominal appreciation will continue in the upcoming period as the path of monetary policy and the pace of economic growth in the United States and the rest of the world continue to diverge.

US Households: Some Forces Affecting the Prospects for Economic Recovery

The growth in consumer expenditures in the recovery has rested largely on the accumulation of household debt. Figure 18 shows updated series for both mortgage debt and consumer debt, which includes items such as auto loans. To obtain measures of leverage, we have divided all series in the figure by household sector disposable income. As we have pointed out previously (Papadimitriou, Hannsgen, and Nikiforos 2013a), net new consumer debt as a proportion of household disposable income was steadily climbing in the initial stages of the recovery (late 2009 through 2012), feeding the weak recovery in consumption expenditures documented in Figure 5 and the second section above. Net increases in

Figure 18 Ratio of Household and Nonprofit Sector Liabilities to Disposable Income (Stocks and Flows), 1980–2014



Sources: Federal Reserve; BEA; authors' calculations

consumer credit as a percentage of household disposable income, as illustrated by the red line in Figure 18, have remained above zero since 2011. Still, the net increases have declined in recent quarters, imparting a rounded, though upward-sloping, shape to the portion of this line corresponding to the period 2009Q2–2014Q4. The black line offers a different perspective on the same phenomenon, showing that the total stock of consumer debt is trending upward and has stayed persistently at levels well above those seen in the 1980s and early 1990s.

The situation with mortgage debt is sharply different. We have consistently argued that, overall, the household sector, starting in the midst of the financial crisis, has been forced to deleverage, impairing growth. This has largely been a story about the stock of mortgage debt, which, following the precrisis housing boom, has declined in most quarters of the recovery. Mortgages are traditionally the dominant form of household debt because they offer middle-class homeowners a chance to borrow against a large amount of collateral. The hill-shaped gray line in Figure 18 shows the arcing trajectory of the total stock of mortgage debt owed by the household and nonprofit sector, while the blue line shows that the net addition to this stock has emerged from mostly negative territory only since 2013. The blue line still remains below the red line, meaning that consumer credit—which has so far escaped deleveraging—now accounts for the bulk of net new debt each quarter. Increased borrowing of one kind or another can often be sustained for a long time, as in this case; but eventually, retrenchment takes place relative to incomes. The consequences of any further retrenchment in debt-financed consumer spending would be felt throughout industries that produce for the US consumer, and again, as we noted above, the recovery in real private domestic consumption is already weak relative to any previous recovery.

The use of household debt has been integral to recent expansions, partly owing to an increasingly lopsided income distribution (Papadimitriou, Hannsgen, and Zezza 2012; Papadimitriou et al. 2014). Recently, Steve Keen (2015) observed that leverage remains dangerously high. Detailed analysis of household-level data reveals that little deleveraging has occurred in the lower quintiles of the distribution (Wolff 2014). In other words, the recovery has not yet witnessed the repair of balance sheets in all social strata. In fact, net worth

has not grown strongly in the recovery except among the wealthiest Americans, whose portfolios stood to gain significantly from a strong stock market. On average, households of modest means, especially those in the bottom quintile, still carry very high levels of debt in relation to their incomes. The deleveraging of household balance sheets continues, and still has not progressed to a sufficient extent in the aftermath of the Great Recession of 2007–9. We continue to believe that the combination of anemic wage growth (Rios-Avila and Hotchkiss 2014) and rising household debt—of whatever kind—cannot sustain growth. What’s more, very low general inflation in wages and prices slows progress in reducing leverage, as it stymies growth in nominal household incomes. The 2010–14 deceleration in the growth in consumer credit relative to disposable income may prove to be a harbinger of a second postcrisis household deleveraging.

Baseline Scenario

In order to evaluate the prospects for the US economy, we simulate four scenarios using the Levy Institute’s macro-econometric model.

As is our usual practice, we draw on the CBO’s projections for the US economy to form our baseline scenario. More precisely, we use *The Budget and Economic Outlook: 2015–2025* (CBO 2015a) and its more recent update (CBO 2015b) and examine what the prerequisites for and implications of these projections are.

A summary of the CBO’s projections is shown in Table 1. The federal budget deficit, as a percentage of GDP, is projected to decrease slightly, from 2.8 percent in fiscal year 2014 to 2.4 percent in 2018. At the same time, real GDP will increase by 2.8 percent in 2015, 3.0 percent in 2016, 2.7 percent in 2016, and, finally, 2.1 percent in 2018.⁴

For our simulations we assume a mild increase in the price level and stock market and a constant real exchange rate. The growth and inflation rates of US trading partners are taken from the International Monetary Fund’s *World Economic Outlook* (IMF 2014). We also assume that nonfinancial corporations will continue to accumulate debt at the same—constant—pace as they have been doing since the end of the recent crisis.

In effect, the question we ask, given the above assumptions, is, what would the expense and borrowing behavior of

the private sector need to be in order for the CBO’s projections to be realized?

The results of these baseline simulations are summarized in Figure 19. We can make two important observations. The first is the significant worsening of the US foreign position. According to our model, the current account deficit will reach 5 percent of GDP by 2017 and will remain there throughout the following year.

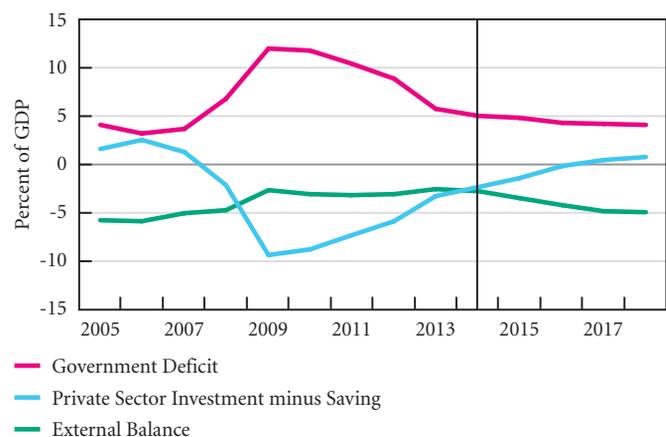
Following simple accounting rules, this increase in the current account deficit combined with the government’s tight fiscal stance (as projected by the CBO) implies that the private sector balance will decrease. As we can see in Figure 19, private sector net borrowing (investment minus saving) maintains its postcrisis trend and continues to rise, reaching positive territory in 2017 and remaining there throughout 2018. This is the first time in the postcrisis period that private sector spending exceeds income.

Table 1 CBO Baseline Projections, 2014–18

	2014	2015	2016	2017	2018
Outlays (%GDP)	20.3	20.4	20.8	20.6	20.5
Revenues (%GDP)	17.5	17.7	18.4	18.3	18.1
Deficit (%GDP)	-2.8	-2.7	-2.4	-2.3	-2.4
Real GDP growth rate (%)	2.2	2.8	3	2.7	2.1

Source: CBO (2015a, b)

Figure 19 Baseline Scenario: US Main Sector Balances, Actual and Projected, 2005–18



Sources: BEA; authors’ calculations

We cannot emphasize enough the importance of this finding. As we have repeatedly argued in the past, private sector spending in excess of income implies an increase in the sector's debt-to-income ratio, and is therefore unsustainable. In the context of our baseline scenario, the projected trajectory of the private sector gross-debt-to-disposable-income ratio is depicted in Figure 20.

This kind of unsustainability was the primary reason for the downturn of 2001 and the more recent Great Recession. As our simulation results show, the recovery of the US economy requires that the same unsustainable process be repeated once more.

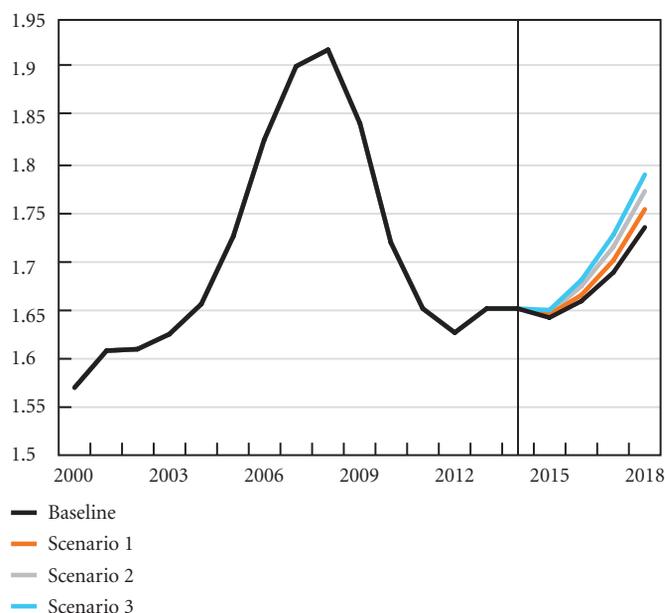
Other Scenarios

As we mentioned above, the fragile economies of many US trading partners as well as the recent appreciation of the dollar—which is bound to appreciate even further—are among the biggest obstacles to economic recovery in the United States.

To make this point more clear, we simulated three additional scenarios. In scenario 1 we assume that the annual growth rate of real GDP of US trading partners will be 1 percent lower than the rate projected by the IMF. This is a plausible scenario given that the IMF's projections are usually on the optimistic side. In scenario 2 we assume a further 25 percent appreciation of the dollar over the next four years. Finally, scenario 3 combines scenarios 1 and 2, and the lower growth rate of US trading partners is combined with dollar appreciation.

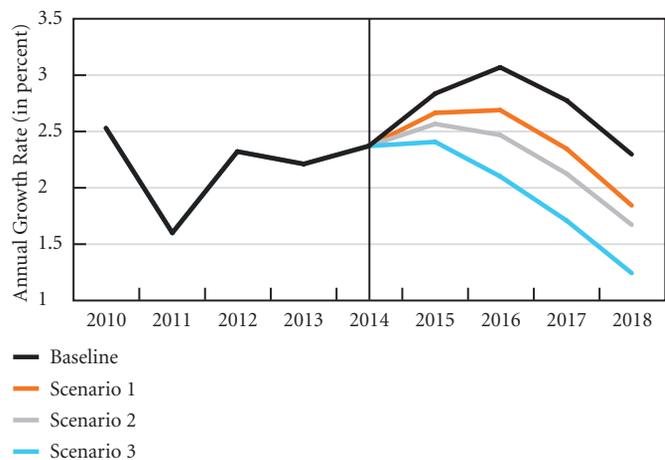
The effect of these developments on the future growth rate of the US economy can be seen in Figure 21. Weaker growth abroad and the rise of the dollar can have significant consequences for the US economic growth rate. In scenario 1 the growth rate is around half a percentage point lower than in the baseline in every year of the projection period (except in 2015, where the difference is smaller). The dollar appreciation has a more negative impact and the growth rate differential is close to 0.8 percentage points. When appreciation and slower growth are combined, the growth rate differential is more than 1 percentage point. These results show that even a minor decrease in demand for US exports and/or a moderate appreciation of the dollar could lead the US growth rate to its lowest levels since the beginning of the recovery. In fact, the

Figure 20 Private Gross-Debt-to-Disposable-Income Ratios, Actual and Projected, 2000–18



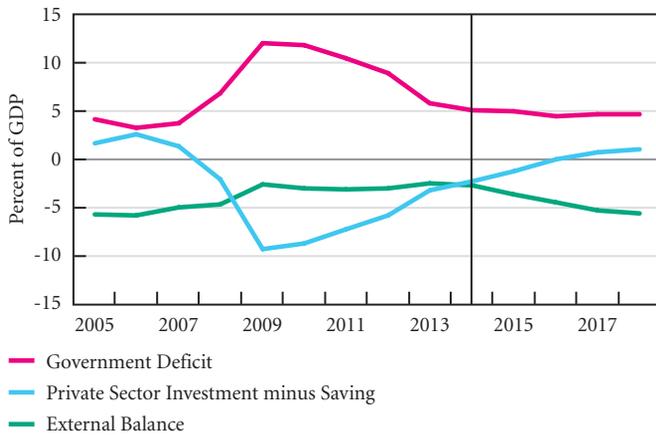
Sources: BEA; Federal Reserve; authors' calculations

Figure 21 Real GDP Growth, Actual and Projected, 2010–18



Sources: BEA; authors' calculations

Figure 22 Scenario 1: US Main Sector Balances, Actual and Projected, 2005–18



Sources: BEA; authors' calculations

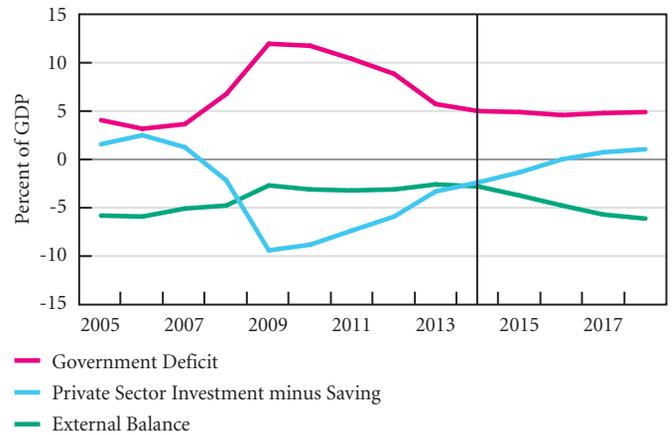
growth rate projected under scenario 3 for the year 2018 would be the lowest of any recovery in the last four decades.

To understand the full implications of our scenarios, Figure 21 needs to be read together with the related financial balances of the three institutional sectors of the economy, shown in Figures 22 to 24. As we can see, the progressively weaker growth rate in all three scenarios is accompanied—in fact, it is caused—by a similar, progressively higher current account deficit. In scenario 3 a growth rate of slightly more than 1 percent in 2018 is combined with a current account deficit of close to 7 percent of GDP.

The increase in the current account deficit is partly covered by an increase in the deficit of the government sector. The change in the government sector balance is solely the result of automatic stabilizers, since our assumptions about discretionary government spending still follow the projections of the CBO.

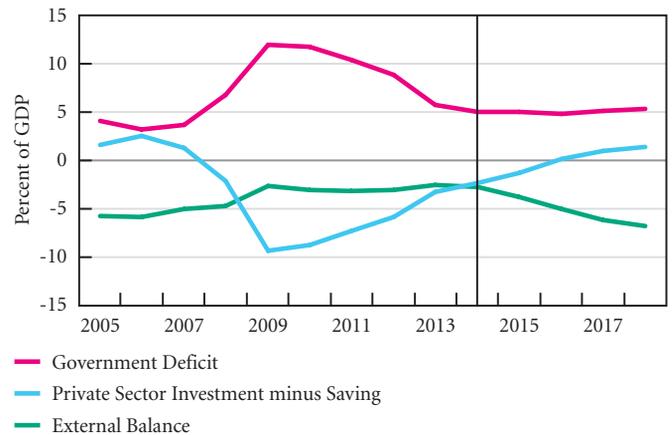
However, the most important consequence of this increase in the current account deficit is a further increase in the deficit, and thus the debt-to-income-ratio, of the private sector. In other words, not only does the growth performance of the economy become (progressively) worse in scenarios 1 through 3, but also this weaker performance contributes to a further increase in the private sector debt-to-income ratio, which in turn makes the economy more fragile. As shown in Figure 20, the gross-debt-to-disposable-income ratio of the

Figure 23 Scenario 2: US Main Sector Balances, Actual and Projected, 2005–18



Sources: BEA; authors' calculations

Figure 24 Scenario 3: US Main Sector Balances, Actual and Projected, 2005–18



Sources: BEA; authors' calculations

private sector increases more rapidly compared to the baseline scenario, and by the end of our projection period achieves levels comparable to those reached in 2006, the last year prior to the Great Recession.

Conclusion

The goal of the present report was to highlight the main structural problems of the US economy. We analyzed the nature of the present recovery by decomposing GDP into its various components. Through this prism, it is not hard to identify the main reasons for the slow pace of the recovery, principally:

1. *The fiscal conservatism of the US government.* This is the only recovery in which there has been a decrease in government expenditure.
2. *The weak performance of US exports and imports.* A significant exception to this is the increase in net exports of petroleum and related products due to new extraction technologies and the sharp decline in the price of oil.
3. *The high income inequality and debt overhang from the previous cycle,* which have resulted in the slowest recovery of consumption in the postwar period.

The first two factors make the US recovery dependent on an unsustainable increase in private expenditure over private borrowing. Our baseline scenario shows that for the CBO projections to materialize, the private sector, beginning in 2017, has to again become a net borrower—for the first time post crisis—and increase its debt and debt-to-income ratio. Moreover, as our last report showed, given the high levels of income inequality, this unsustainable increase in debt and the debt-to-income ratio will disproportionately fall on the households at the bottom of the distribution, which are bearing an ever-rising consumer-debt burden.

Finally, we argued that a long-run sustainable recovery could be undermined by two additional factors: the appreciation of the US dollar and the fragile economies of many of the United States' trading partners. In scenarios 1 through 3 we showed that further dollar appreciation and/or a growth slowdown in the trading partner economies will lead to an increase in the foreign deficit and a decrease in the projected growth rate, and at the same time heighten the need for private (and government) borrowing and increase the fragility of the US economy.

A final note: in our simulations, we assumed away any negative feedback effects from a slowdown in the United States on the growth rate of its trading partners. However, as the recent experience of the eurozone shows, these effects can be significant, and lead to a vicious cycle of weak demand and low growth.

Notes

1. Each period shown in the figure is inclusive of the trough of a recession and the peak of the subsequent recovery. For the recession dates, we use the quarter corresponding to the monthly date published by the NBER. This method results in the use of 1953Q3, rather than 1953Q2, as the date of the 1953 trough, which occurred in July of that year.
2. We have previously discussed this issue of “jobless recoveries” in Nikiforos (2013) and Papadimitriou, Hannsgen, and Nikiforos (2013a).
3. More recent reports that have tackled this issue include Papadimitriou, Hannsgen, and Nikiforos (2013b) and Papadimitriou et al. (2014).
4. Note that the projections for the budget refer to fiscal years while the projections for the growth rate refer to fourth-quarter-to-fourth-quarter percentage changes. In our simulations we take into account these differences in timing. However, in our graphs we present the results for calendar years, which explains some minor discrepancies between our simulations and the projections of the CBO.

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