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The US Fiscal Cliff

- While financial markets have focused on sovereign debt sustainability in Europe, the US has not yet suffered a debt-sustainability contagion due its monetary autonomy and safe-heaven status.
- The US has been running persistent budget deficits since 1970, mainly attributed to increasing government spending and a trend towards lower taxation since the late 1990s.
- The continuing disproportion between revenues and spending, combined with the aging of the population and the rising health care cost, could result in a greater accumulation of government debt and create doubts about longer-term debt sustainability of the US economy.
- Implementing effective consolidation and reform plans in a fragile US economic recovery will probably prove a real challenge for the US authorities.
- Scheduled increases in taxes and reductions in spending at the end of the year would constitute a significant drag for real economic activity, imposing a recession-sized fiscal tightening.
- However, we believe that policymakers will probably act in late 2012 to remove most of the restraint called for under current law in 2013. We expect the fiscal restraint to reduce growth by at least 1% in 2013, with the average GDP growth rate hovering around 2.0%.
- Eliminating the fiscal restraint expected to occur in 2013 should be accompanied by a larger deficit reduction in future years, so as to minimize the short-term costs of a rapid narrowing of the budget deficit while also minimizing the long-term costs of allowing large deficits to persist.

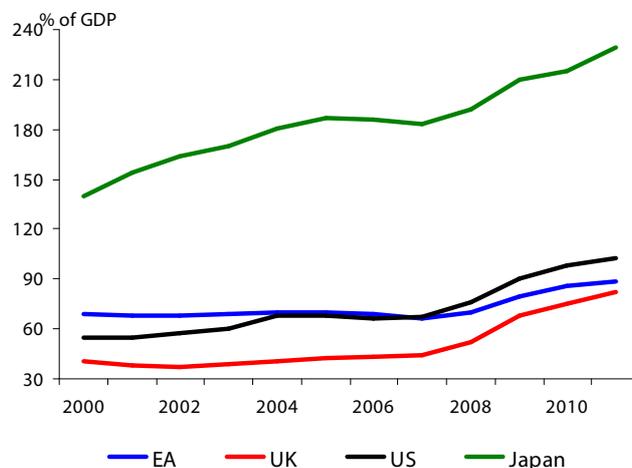
Sovereign debt crisis has not spread to the US

The global financial crisis that began in 2007 and the global recession that followed over the next couple of years contributed to large increases in budget deficits (Figure 1) and debt-to-GDP ratios (Figure 2) in all advanced economies. Markets have focused on sovereign debt sustainability in Europe, as the perceived risk of default on Greece's debt has spread to other members of the euro area: Ireland and Portugal and, then, Italy and Spain. As a consequence, investors demanded higher yields to keep buying the debt issued by this group of countries, creating additional

pressure on their debt levels and budget positions (Figure 3). As is evident in Figure 3, the sovereign debt crisis has not spread to the US, UK and Japan, although these countries have experienced even larger increases in their budget deficits and debt levels than the euro area. In particular, while the budget deficits of these three countries have increased by an average of 7.0% between 2007 and 2011 and their debt-to-GDP ratios have increased by an average of 40.0%, the euro area as a whole experienced only half of that increase in its debt level and budget position since the onset of the crisis (Table 1).

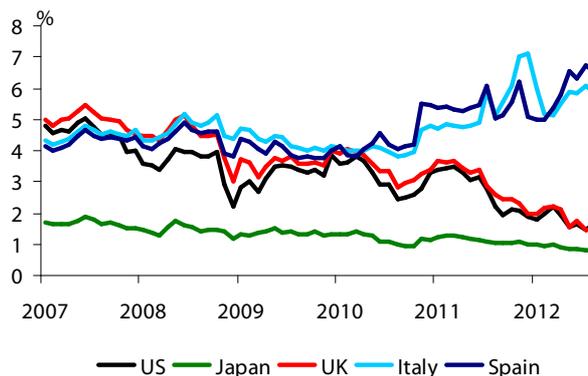
An important reason for the resistance of the US, UK and Japan against debt-sustainability contagion is the monetary autonomy the Federal Reserve, Bank of England and Bank of Japan have and their ability to influence their own currencies, compared to the European Central Bank (ECB) that is held back by its restrictive institutional framework. The central banks of these three countries have provided large amounts of credit and liquidity (directly or through open market purchases of secondary market securities) to address a potential crisis of confidence, while the ECB has been reluctant to purchase euro bonds, focusing only on non-conventional measures (the so called LTROs) to support credit and liquidity in the euro area money market. Furthermore, the US, the UK and Japan have preserved their safe-heaven status, a factor that undoubtedly contributes to their low financing costs and rollover risk. The economic and financial uncertainty amid Europe's sovereign debt crisis has increased the demand for risk-free assets, maintaining low yields for "safe-haven" bonds that would otherwise be considered unattractive due to the governments' debt and budget positions. In particular, about \$13.5tr assets that were considered to be safe in 2007 have lost their safe-haven status in 2010 and 2011 (including Italian and Spanish government bonds, GSE obligations, agency and GSE backed mortgage pools, privately issued ABS). More than 30% of that decline was offset by an increase in US Federal government debt held by private investors between 2007 and 2011, helping preserve such low yields for US government bonds (Figure 4).

Figure 2
General government gross debt



Source: World Economic Outlook Database April 2012

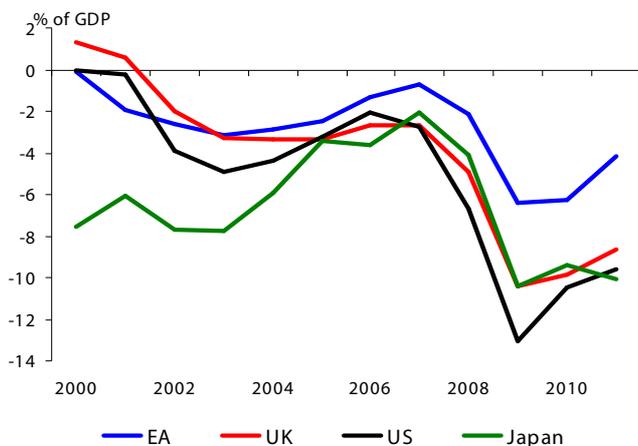
Figure 3
10y Government Bond Benchmarks



Source: Bloomberg

Figure 1

General government net lending/borrowing



Source: World Economic Outlook Database April 2012

Table 1

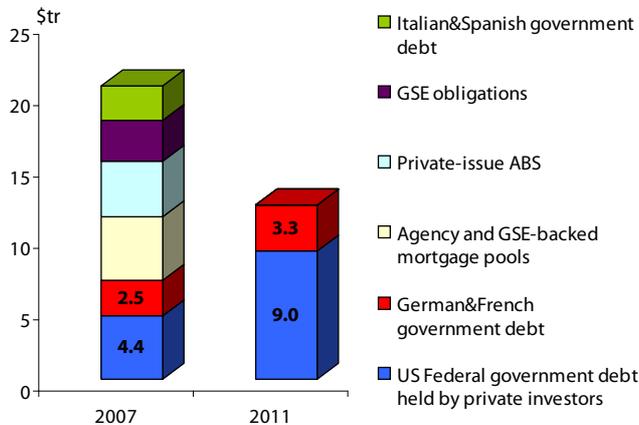
Debt and budget positions across advanced economies pre- and post-crisis

	2007		2011		Percent change between 2007-	
	Budget Balance (% of GDP)	Gross Debt (% of GDP)	Budget Balance (% of GDP)	Gross Debt (% of GDP)	Budget Balance (% of GDP)	Gross Debt (% of GDP)
EA	-0.7	66.4	-4.1	88.1	-3.4	+21.7
US	-2.7	67.2	-9.6	102.9	-6.9	+35.7
UK	-2.7	43.9	-8.7	82.5	-6.0	+38.6
Japan	-2.1	183.0	-10.1	229.8	-8.0	+46.8

Source: World Economic Outlook Database April 2012

Figure 4

Safe assets before and after the 2007-09 financial crisis



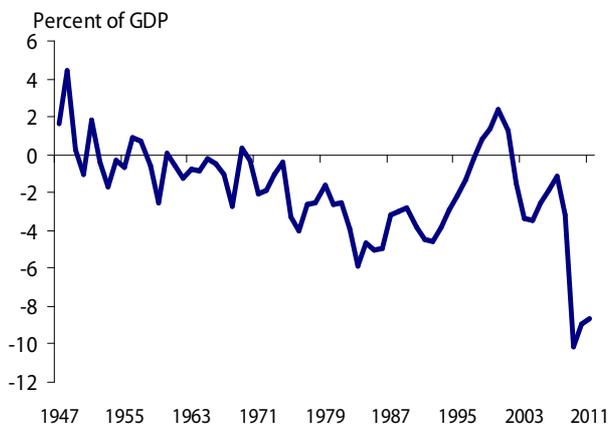
Source: Federal Reserve Flow of Funds, Bloomberg

The history of US fiscal imbalances

The US has been running persistent federal government deficits since 1970, with an average deficit as a percent of GDP of 2.5% from 1971 through 2007 (Figure 5). Looking back at government expenditures and revenues as a percent of GDP, we find that revenues and expenditures were a relatively constant percent of GDP from the early 1950s until the late 1960s; government receipts averaged 17.6% of GDP, while government outlays were slightly higher, averaging at 18.2%. From 1971 through 2007, government receipts stayed relatively constant as a percent of GDP, averaging at 18.2% of GDP. On the contrary, outlays increased from 17.6% of GDP during 1950-1970 to 20.6% of GDP during 1971-2007 (Figure 6), resulting in a 2.5% average deficit over the 1971-2007 period.

Figure 5

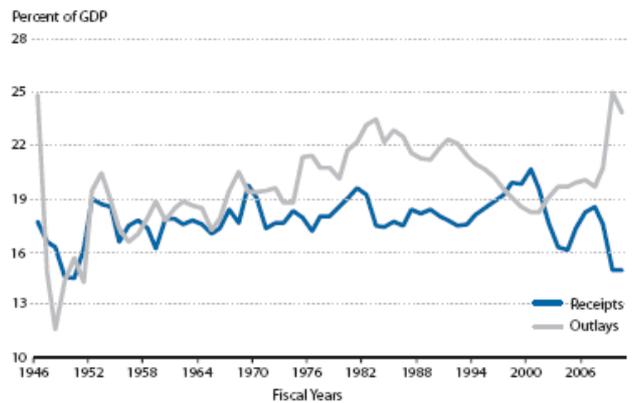
The Federal Surplus/ Deficit



Source: Fed of St. Louis

Figure 6

Government Receipts and Outlays

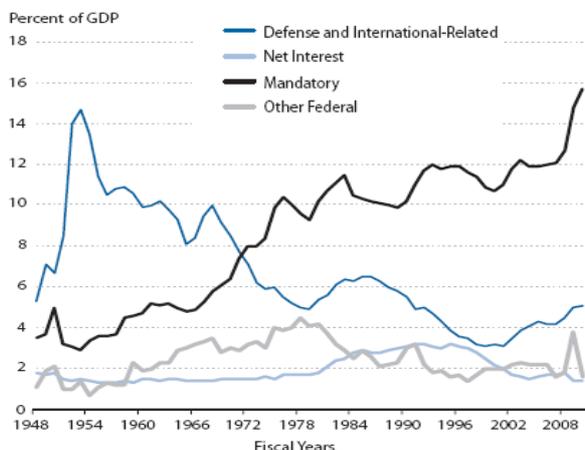


Source: Fed of St. Louis, Office of Management and Budget

Looking back at the individual sources of outlays and receipts, we find that the composition of government expenditures by category has changed significantly since 1948. While net interest expenses and other federal spending have been stable at around 2% of GDP during 1948-2007, mandatory outlays have tripled since 1948, increasing from 3.5% of GDP to 12% in 2007 (Figure 7). A large part of the increase was driven by population aging¹, as more than half of mandatory spending includes Social Security benefits and Medicare expenditures. Mandatory spending has risen further to almost 16% since 2007, as the rapid increase in the unemployment rate during the financial crisis of 2007-2009 has led to a surge in unemployment benefits. In contrast, after its sharp increase during the Korean War at the beginning of 1950s, defense and international-related spending has trended down and ranging around 3-7% of GDP. As far as government revenues are concerned, corporate income and excise taxes have been on a downward trend, while social insurance and retirement revenues have increased significantly over time (Figure 8). Hence, the persistent deficit since 1971 is attributed to increased government spending and mainly its mandatory component, as total revenue as a percent of GDP has remained relatively stable since 1950.

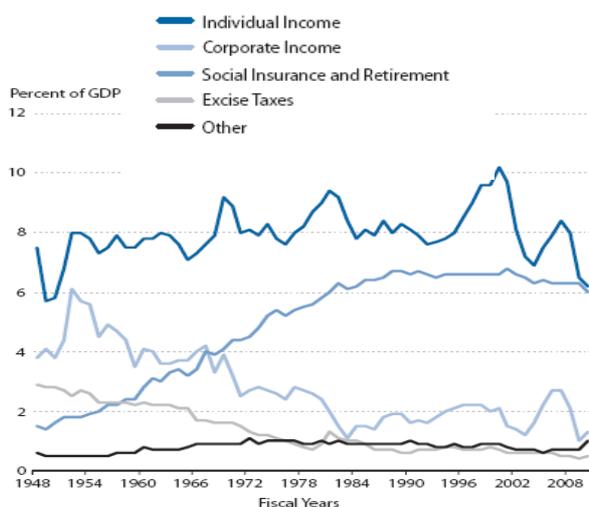
¹ The CBO projects federal spending on social security and health care to increase from 10.3% of GDP in FY2010 to 13.2% in FY2025.

Figure 7
Federal Government Expenditures by Category



Source: Fed of St. Louis, Office of Management and Budget

Figure 8
Federal Government Receipts by Category



Source: Fed of St. Louis, Office of Management and Budget

Policymakers' dilemma between austerity and growth

While the European fiscal crisis has been at the epicentre of investors' interest over the last couple of years, the US faces its own fiscal crisis at the end of the year. US policymakers have postponed the important budgetary decisions in order to reduce budget deficits to right after the US elections in November 2012. Should the currently enacted fiscal policy measures continue in the following years, the receipts collected by the federal government will fall short of government outlays. This disproportion between revenues and spending, combined with the aging of the population and the rising health care cost, could

result in a greater accumulation of government debt and, therefore, create doubts about longer-term debt sustainability of the US economy. On the other hand, immediate spending cuts or tax increases would constitute a major drag on the weak economic recovery, given the current fragile state of the US economy. Without new legislation passed by the Congress (both the House and the Senate), scheduled increases in taxes and -to a lesser degree- reductions in government spending will lead to a sharp decline in the federal budget deficit in 2013 to almost half the 2012 deficit. According to CBO's estimates, the expected expirations of tax provisions and the automatic enforcement procedure (established in the Budget Control Act of 2011) scheduled to lower spending in 2013 will reduce the federal budget deficit by about \$600bn in 2013, or 4.0% of GDP. The so called "fiscal cliff" would constitute a significant drag for real economic activity, imposing a recession-sized fiscal tightening. In such a case, the risk of a double-dip recession of the US economy would be high, given that there is not enough room for monetary policy actions alone to boost a stagnant economy.

Fiscal restraint scheduled to occur in 2013

Under current law, several tax measures and spending policies that have been enacted or extended in recent years are set to expire at the end of 2012, resulting in a deficit reduction of about \$600bn between fiscal year 2012 and 2013 (without taking into account any feedback from their impact on the US economy, Table 2). About \$400bn include the following changes in tax policies that will raise government revenues:

- Deficit reduction of \$221bn: (a) Provisions of the Tax Relief, Unemployment Insurance Reauthorization and Job Creation Act of 2010 that limited the reach of the alternative minimum tax (AMT) expired at the end of 2011. The subsequent increase in taxes will be paid by taxpayers in 2013. (b) Other provisions of the 2010 tax act², originally enacted in the Economic Growth and Tax Relief Reconciliation Act of 2001, the Jobs and Growth Tax Relief Reconciliation Act of 2003, and the American Recovery and Reinvestment Act of 2009, expire at the end of 2012.
- Deficit reduction of \$95bn due to the expiration of the 2% cut in the employee's portion of the payroll tax at the end of 2012. This provision initially went into effect in January 2011.
- Deficit reduction of \$65bn due to the expiration of other provisions affecting the tax code, mainly including the expiration of partial expensing of investment property.

² Those provisions include the extension of lower tax rates and expansion of credits and deductions.

- Deficit reduction of \$18bn due to increased tax rates on earnings and investment income for high-income taxpayers that are set to take effect at the beginning of 2013³.

Furthermore, about \$103bn include a reduction in government spending:

- The automatic enforcement procedure established in the Budget Control Act of 2011 is scheduled to take effect at the beginning of 2013. According to the CBO's estimates, the reductions in both discretionary and mandatory spending should amount to as much as \$65bn in 2013 and about \$40bn in subsequent years.
- The expiration of emergency unemployment benefits established in the Middle Class Tax Relief and Job Creation Act of 2012 at the end of the year is expected to lower spending by about \$25bn in 2013.
- Medicare's payment rates for physicians are set to be reduced at the end of the year, resulting in a decline of about \$11bn in 2013.

Other changes in government receipts and outlays are expected to reduce the deficit by another \$105bn in 2013, resulting in a total deficit reduction from fiscal policy changes of roughly \$610bn. Should we take into account the economic feedback from changes in fiscal policy in the economy, given that the automatic response of the fiscal restraint is expected to lower taxable incomes and increase spending, the expected deficit reduction between 2012 and 2013 is about \$560bn, i.e. 3.7% of GDP⁴. On a calendar year basis, the change in fiscal policy measures is even larger, resulting in a federal budget deficit reduction of about 4.7% of GDP, after taking into account the economic feedback to the change in the deficit.

The fiscal drag on US GDP growth in the short run

Based on OECD's staff calculations⁵ for multipliers used to evaluate the fiscal packages in the US, a budget deficit reduction by 1% of GDP typically reduces real economic activity by about 0.5% within two years. The output cost for spending-based consolidation exceeds that for tax-based consolidation by 0.4%: a 1% GDP rise in taxes would result in a 0.3% average decline in real GDP growth, while a 1% cut in government spending would lead to a 0.7% average decline in real GDP growth. Using these estimations of the fiscal multipliers, the \$607bn deficit reduction will lead to a decline of real GDP by 2%, given that about two thirds of the expected deficit reduction stems from changes in tax policies and only one third of the reduction stems from changes in government spending (Figure 9). The Congressional Budget Office (CBO) estimates

that the fiscal cliff would weigh on real GDP growth in 2013 by nearly 4 percentage points, bringing the real GDP growth rate in calendar year 2013 down from 4.4% (CBO's growth estimate with no fiscal restraint) to just 0.5% (CBO's growth estimate under current-law fiscal policy). CBO's estimations for 2013 GDP growth include a recessionary contraction of -1.3% in H1 2013 as the fiscal restraint unfolds, before rebounding to 2.3% in the second half of the year (Table 3). This contraction in the first half of 2013 would probably constitute a mild US recession, like the two recent mild US recessions in 1990-91 and 2001 reported by the National Bureau of Economic Research (NBER).

Table 2
Scheduled change in the Federal Budget Deficit between FY 2012 and FY2013

Changes in Revenue Policies	
Expiration of income taxes and estate and gift tax provisions and of indexing the Alternative Minimum Tax (AMT) for inflation	\$221bn
Expiration of the reduction in the employee's portion of the payroll tax	\$95 bn
Other expiring provisions	\$65 bn
Taxes included in the Affordable Care Act	\$18 bn
Changes in Spending Policies	
Effects of the automatic enforcement procedures	\$65 bn
Expiration of eligibility to start receiving emergency	\$26 bn
Reduction in Medicare's payment rates for physicians	\$11 bn
Other Changes in Revenues and Spending	\$105 bn
TOTAL change in Deficit	\$607 bn

Source: Congressional Budget Office (CBO)

³ The \$18bn deficit reduction includes tax provisions of the Affordable Care Act, which comprises the Patient Protection and Affordable Care Act and the health care provisions of the Health Care and Education Reconciliation Act of 2010.

⁴ Congressional Budget Office, "Economic effects of reducing the fiscal restraint that is scheduled to occur in 2013", May 2012.

⁵ Barrell, R., D. Holland and I. Hurst (2012), "Fiscal Consolidation: Part 2. Fiscal Multipliers and Fiscal Consolidations", OECD Economics Department Working Papers, No. 933, OECD Publishing. <http://dx.doi.org/10.1787/5k9fd6bs78r>
OECD Economic Outlook, Interim Report, Chapter 3, March 2009.

Table 3

CBO's estimates: Growth of inflation-adjusted gross domestic product in 2013 under two alternative scenarios

(Percent at annual rates)	H1 2013	H2 2013	2013
Under Current-Law Fiscal Policy	-1.3	2.3	0.5
With No Fiscal Restraint			
Central estimate	5.3	3.4	4.4
Range	(1.0-9.6)	(1.9-5.0)	(1.4-7.3)

Source: Congressional Budget Office (CBO)

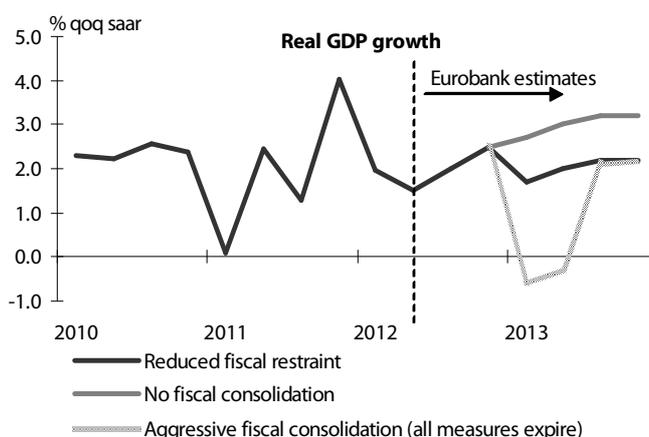
However, we believe that policymakers will probably act in late 2012 to remove most of the restraint called for under current law in 2013. The recent political debate on the fiscal tightening scheduled to occur after year end centers on the spending reduction under the "sequester", the 2001/2003 tax cuts and the alternative minimum tax (AMT). In particular, the House has voted to postpone most of the "sequester" automatic cuts for the fiscal year 2013 and replace them with other savings over the next ten years but the Senate has not acted yet. Moreover, both the Senate and the House have voted to extend the 2001/2003 tax cuts, but while the House insists on extending cuts on all levels of income, the Senate agrees on the extension of tax cuts on income below \$250,000. Furthermore, the Senate has voted for the extension of expiring corporate tax provisions and a created "patch" for the Alternative Minimum Tax (AMT) covering both 2012 and 2013. Our baseline scenario includes the expiration of the payroll tax cuts and emergency unemployment benefits, but assumes the extension of the 2001/2003 tax cuts and alternative minimum tax rate and the replacement of the "sequester" automatic cuts by a smaller amount of spending cuts. In such a case, fiscal restraint would reduce growth by at least 1% in 2013, with the average GDP growth rate hovering around 2.0% (Figure 9).

Economic effects of alternative fiscal adjustment policies in the longer run

Trying to assess the economic effects of alternative fiscal policies in the longer run, we estimate a scenario analysis of US federal debt over the next ten years. In particular, we estimate federal government debt for the next 10 years using the dynamic debt identity $b_{t+1} = b_t + b_t (r_{t+1} - g_{t+1}) + def_{t+1}$, where b is the debt-to-GDP ratio, r is the real interest rate, i.e. the inflation adjusted interest rate on 10y Treasury notes, g is the real GDP growth rate and def is the primary deficit, i.e. the federal government budget deficit after deducting net interest payments (as shares of GDP). Our

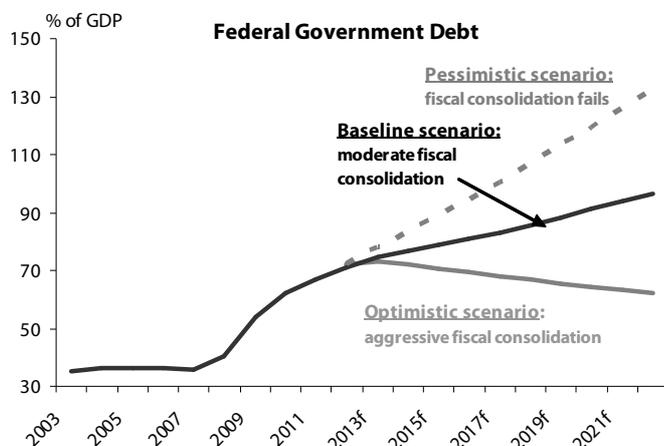
estimates are based on benchmark economic projections for real interest rates and real GDP growth to account for alternative fiscal adjustment policies, without taking into account the effect of the budgetary changes on the economy. In particular, real interest rates are projected flat for 2012 and 0.5% for 2013. For the long run, real interest rates are projected to gradually increase to around 2.0% until 2017, and stay stable around 2.5% during 2018-2022, which is near the average of the past four decades. We expect a 2.0% real GDP growth rate for 2012 and 2013. For the following years, real GDP increases gradually to about 2.75% per year, a rate well below its long term average in the post war period. We believe that the potential economic growth has slowed significantly over time due to labor market dislocations (higher long-term unemployment, lower job-market participation), the effect of deleveraging on the economy and a crowding-out effect on long-term growth from persistently higher public debt. In our optimistic scenario, which includes an aggressive consolidation program embodied in current law, the primary deficit is projected to decline gradually from about -7% of GDP in 2011 to about -0.5% by 2015, resulting in a primary budget surplus of 1.0% by 2022. In such a case, federal government debt would gradually fall from 73% in 2013 to about 60% in 2022 (Figure 10, optimistic scenario). However, this analysis does not take into account the substantial economic costs of such a sharp fiscal restraint, which would dip the US economy into a recessionary territory. The huge fiscal drag on economic activity would lead to slower revenues and higher budget deficits, so the debt reduction would not be as high as in Figure 10. The case of Greece is instructive in this respect, as the significant fiscal drag on the Greek economy has led to negative debt dynamics.

Figure 9



Source: Bureau of Economic Analysis (BEA), Eurobank estimates

Figure 10



Source: Fed of St. Louis, Eurobank estimates

However, if the expected fiscal restraint was restricted by extending some of the existing policies, then federal government debt would gradually increase to about 97% over a 10-year horizon (Figure 10, baseline scenario). Under this scenario, the primary deficit is projected to decline slowly over the next ten years, from -7% of GDP in 2011 to about -3.0% by 2022. If all existing measures that expire at the end of the year were extended and the primary deficit stayed at the high level of around -7% of GDP, then debt would climb to about 130% of GDP (Figure 10, pessimistic scenario). Rising debt would induce higher interest payments on that debt, resulting in higher taxes or a reduction in social benefits and several services. Furthermore, households' savings used to finance investments in productive capital would have to be used to purchase government debt, while policymakers would not be able to use taxes and spending to tackle with potential economic downturns or financial turmoil and crises. Moreover, growing debt would increase the risk that bondholders become concerned about US public finances, diversifying away from investing in the US debt. As a result, interest rates would rise in the US, not only making it harder for the government to finance budget deficits and sustain debt, but also raising borrowing costs across the US economy, slowing investment spending and private consumption. The US dollar would weaken further, undermining the value of currency reserves around the world. Given that global growth remains highly dependent on US economic activity, slower growth in the US economy could affect global demand, which in turn could offset the positive contribution from the dollar weakness to US exports, creating a vicious cycle of negative implications for the US and the global economy.

To conclude, implementing effective consolidation and reform plans in a fragile US economic recovery will probably prove a real challenge for the US authorities. Given the recent softness of US economic data, fiscal consolidation focused on reinforcing medium-term debt sustainability should be gradual, so as not to curb growth prospects. In our view, policymakers should extend some measures that expire at the end of the year, widening the deficit in 2013 relative to what would occur under existing policies, but offsetting the changes in taxes and spending in the short run with a larger deficit reduction for the years to come. That approach to fiscal policy would minimize the short-run costs of narrowing the budget deficit rapidly and would support economic growth and employment, while at the same time minimizing the longer-run costs of allowing large deficits to persist.

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