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Is Greece the Tip of the Iceberg?

Executive Summary

The sustainability of a government's debt-to-GDP ratio depends on its current value, the size of the primary fiscal deficit, the interest rates the government needs to pay on its debt and the economy's nominal GDP growth rate. Although the Greek government may have the most difficult task ahead, government debt in some other Euro-zone economies will also grow without bound under current policies. Government debt-to-GDP ratios in Japan, the United Kingdom and the United States will also rise indefinitely unless significant fiscal adjustments are made.

History shows that governments can achieve significant fiscal corrections, but these adjustments have generally been spread out over a few years. Belt tightening requires sacrifice, which increases as the speed of the underlying adjustment quickens. A government's ability to deliver fiscal adjustment ultimately depends on the willingness of the public to accept painful spending cuts and tax increases. The questions that investors need to ask themselves regarding each of theses economies is whether the citizenry will have the will to bear the necessary pain. Answers to these questions likely will not be forthcoming overnight. Therefore, long-term government bond yields in economies that require significant fiscal adjustments could remain elevated for quite some time.

Who Else Looks and Smells Like Greece?

The crisis in Thailand in 1997 quickly spread to other countries.

When Thailand was forced to break its peg to the U.S. dollar on July 2, 1997, many observers at the time considered the devaluation of the baht to be just an isolated event. However, the imbalances in the Thai economy that led to the speculative attack on the currency (i.e., an overvalued exchange rate, a large current account deficit and an overheated economy) were symptomatic, and investors began to look around to see if there were any other countries with similar problems. They quickly discovered that many other Asian economies looked and smelled like Thailand. By the end of the 1997, not only had the International Monetary Fund (IMF) come to the rescue of Thailand, but the IMF also had to extend support packages for Indonesia and Korea. The crisis then went global as the Russian government defaulted in July 1998 and Brazil was forced off its fixed exchange rate in January 1999.

Fast forward 12 years. Concerns have surfaced recently over the ability of the Greek government to honor its debt obligations. However, Greece is not the only country in the world in which the government has racked up enormous deficits over the past year or two, and investors are rightfully questioning who else "looks and smells" like the Hellenic republic. Is Greece in 2010 the equivalent of Thailand in 1997? That is, is the current crisis of confidence regarding government debt destined to spread from Greece to other economies much like the financial crisis that began in Thailand in July 1997 eventually took down a number of other countries as well?

Concern has focused mostly on other European countries that have large government debt-to-GDP ratios and/or gaping fiscal deficits such as Ireland, Italy, Portugal and Spain. In this report, we analyze the determinants of government debt sustainability for these countries. As the Thailand example reminds us, however, financial crises need not remain confined to a single region like continental Europe. Are there economies outside of the immediate euro area on which investors could begin to shine the spotlight? Could the crisis in Greece spread to the governments of Japan, the United Kingdom and the United States, which have all experienced a significant deterioration in fiscal positions over the past few years?

The sustainability of a government's debt-to-GDP ratio depends on four factors.

Some investors fear that the debt-to-GDP ratio of the Greek government may be unsustainable, meaning that it will continue to increase nonstop. Economic theory shows that sustainability depends on four factors.[1] First, the ratio tomorrow depends on its value today. Second, the ratio will tend to rise over time if the government incurs a primary fiscal deficit, which is defined as a situation in which government spending (net of interest payments on past debt) exceeds government revenue. That is, debt will tend to rise if the government spends beyond its means. However, the government may still be able to incur a primary deficit without provoking an unsustainable situation as long as nominal GDP growth, which is the denominator in the debt-to-GDP ratio, exceeds the rate of interest the government needs to pay on its debt. Therefore, interest paid on the debt and the nominal growth rate of the economy are the third and fourth factors determining sustainability. How do the countries mentioned above stack up in terms of the four variables that determine debt sustainability?

General Government Debt: Greece Is Not the Worst Offender

Years of fiscal laxity caused the Greek government to enter the current crisis with a high level of government debt that the Organisation for Economic Cooperation and Development (OECD) estimates was equivalent to more than 110 percent of GDP last year (Figure 1).[2] Relative to the other economies in the Euro-zone that have received raised eyebrows from investors recently, such as Ireland, Portugal and Spain, Greece has the highest debt-to-GDP ratio. Indeed, the ratios of Ireland and Spain are well below the Euro-zone average of 80 percent, which is one of the reasons why some investors are not as downbeat on Irish and Spanish government debt as they are on Greek government bonds. Portugal's ratio is not as low as Ireland's or Spain's, but it still has plenty of "breathing room" relative to Greece. That said, deep recessions and government attempts to stimulate the economy have caused debt-to-GDP ratios in Ireland, Portugal and Spain to shoot up rapidly over the past two years.

Greece is by no means an outlier in terms of government debt.

The Hellenic republic is by no means an outlier, however. The debt-to-GDP ratio for Italy exceeds Greece's at present, and Japan's is well above the other countries shown in Figure 1. Indeed, Japan has the most highly indebted government among OECD countries when measured as a percent of GDP. Note that the U.S. government has a debt-to-GDP ratio that is more or less equivalent to Portugal's, where yields on government bonds have backed up somewhat this year due to concerns about fiscal sustainability.

Large Government Deficits Are Not Confined to Greece Only

Some other governments have large deficits as well.

If Ireland and Spain have relatively low government debt-to-GDP ratios, then why have they come under some investor scrutiny as well? As noted above, not only does debt sustainability depend upon the starting value of the debt-to-GDP ratio, but the size of the primary deficit also plays a role in determining its path. And on that score, Spain has a primary deficit that is in line with Greece's while Ireland's is the largest of the group shown in Figure 2. The Italian government may have an elevated debt-to-GDP ratio, but it has run respectable primary surpluses over the past two decades, which helps to explain why Italian government bonds have not experienced the same selling pressure as Greek sovereign debt. Note that the primary deficits of the American and British governments both exceed Greece's at present.

Thankfully, Interest Rates are Relatively Low in Most Countries at Present

Financial crises can become self-fulfilling. If investors believe that the probability of default has risen, they will demand higher yields to compensate them for higher risk. The associated increase in interest rates then make it harder for borrowers to service their debt, which raises the

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[1] For a technical discussion on debt dynamics see, for example, Christian Broda and David Weinstein, "Happy News from the Dismal Science: Reassessing Japanese Fiscal Policy and Sustainability," National Bureau of Economic Research Working Paper #10988, December 2004.

[2] For a discussion of Greece's fiscal history and its debt-to-GDP dynamics, see "The Long Road Ahead for Greece (and Others)" (February 5, 2010), which is available from the author upon request.

probability of default even higher. Yields on 10-year Greek government bonds have risen from 4.50 percent last autumn and have exceeded 6 percent so far this year (Figure 3). Moreover, interest rates further down the Greek yield curve have also risen significantly this year. If yields remain at current levels, the task that the Greek government faces in stabilizing its debt-to-GDP ratio will become even more onerous than it already is (see below). The Japanese government has the lowest borrowing costs among OECD countries, and the U.S. government needs to pay less than 4 percent per annum at present to borrow for 10 years.

Figure 1

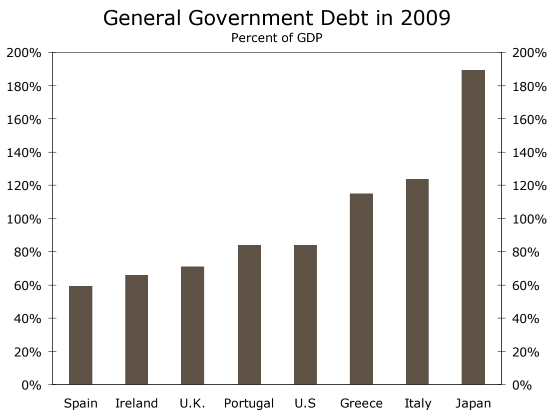
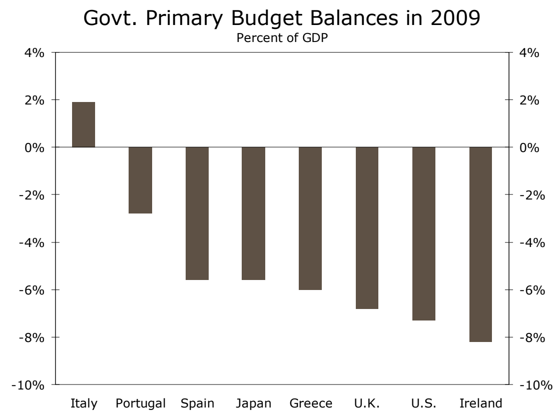


Figure 2



Source: Organisation for Economic Cooperation and Development and Wells Fargo Securities, LLC

Slow GDP Growth Will Complicate Efforts to Stabilize Debt Ratios

Strong GDP growth enhances the ability of a government to stabilize its debt ratio.

Everything else equal, strong nominal GDP growth makes it easier for a government to stabilize its debt-to-GDP ratio. Although Greece has been incurring sizable fiscal deficits for years, its debt-to-GDP ratio trended lower during the last decade due to strong growth in nominal GDP. Over the next few years, however, Greece may not have the same luxury of strong GDP growth as it did just a few years ago. The IMF projects that nominal GDP growth in the Hellenic republic will average only 3 percent or so per annum between 2011 and 2014, down significantly from the 7.8 percent average rate that was achieved during 2003-2007 (Figure 4). Ireland and Spain, which have also experienced housing market bubbles, are projected to grow slowly over the next few years as well. The IMF forecasts that nominal GDP in the United States will grow at an average rate of 4.3 percent between 2011 and 2014, which would be 1.5 percentage points slower than during the last expansion, but which would be a significant improvement compared to the 1.3 percent contraction registered in 2009.

Figure 3

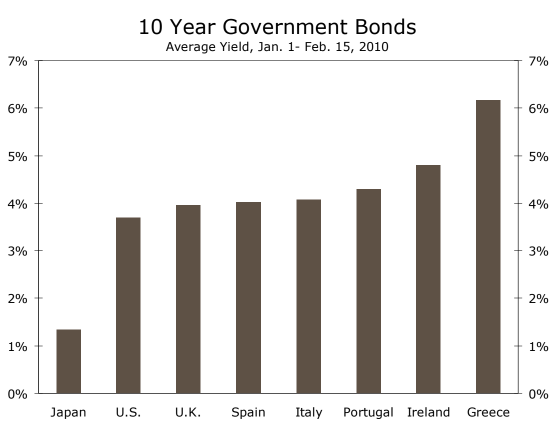
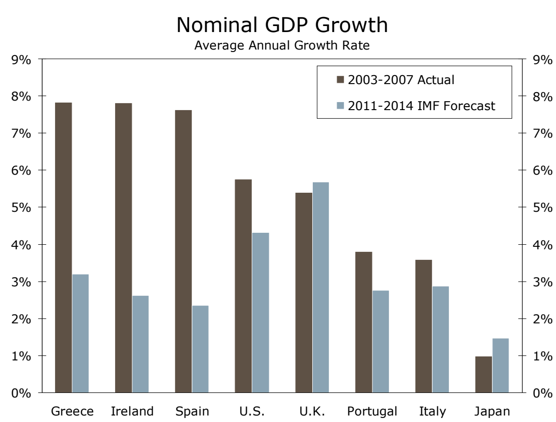


Figure 4



Source: Bloomberg LP, International Monetary Fund and Wells Fargo Securities, LLC

Large Fiscal Adjustments Will Be Necessary to Bring About Sustainability

Most of the countries discussed in this report will require significant fiscal adjustment programs.

When looking at the four variables discussed above that determine debt sustainability—the current value of the debt-to-GDP ratio, the primary fiscal balance, interest paid on the debt and nominal GDP growth—market concerns about the dynamics of Greece's government appear to be warranted. Not only is the Greek government starting off on the wrong foot with an elevated debt-to-GDP ratio, but it has a gaping primary deficit at present and the economy faces bleak growth prospects over the next few years. In addition, the rise in government bond yields this year will make it more expensive for the government to rollover its debt. However, Greece is hardly unique. Most of the countries that are highlighted above have some problematic combination of elevated debt, a large fiscal deficit, high borrowing costs and/or a lousy growth outlook. Could the current crisis of investor confidence spread from Greece to some of these countries?

Even if nominal GDP grows in line with the IMF's projections, all the eight countries discussed above, with the notable exception of Italy, have such large fiscal deficits at present that they will see their debt-to-GDP ratios move higher in the years ahead unless they make a significant fiscal adjustment (i.e., unless they significantly reduce their deficits). In that sense, none of these countries (again with the notable exception of Italy) has sustainable debt dynamics at present. In order to stabilize their debt-to-GDP ratios, each government will need to implement a fiscal adjustment program. The big question is how large does each respective fiscal adjustment need to be in order to achieve debt sustainability?

Using the IMF's forecast of GDP growth and current 10-year government bond yields, we calculate the amount deficit reduction necessary to stabilize the debt-to-GDP ratio in each country.[3] For example, Greece would need to adjust its primary balance from a deficit of 6 percent of GDP last year to a surplus of 3 percent, a swing of 9 percent of GDP (Figure 5). The adjustment required in Ireland is even more onerous. Adjustments on the order of 5–6 percent of GDP will also be required in Japan, the United Kingdom and the United States to stabilize government debt-to-GDP ratios in those economies.

Figure 5

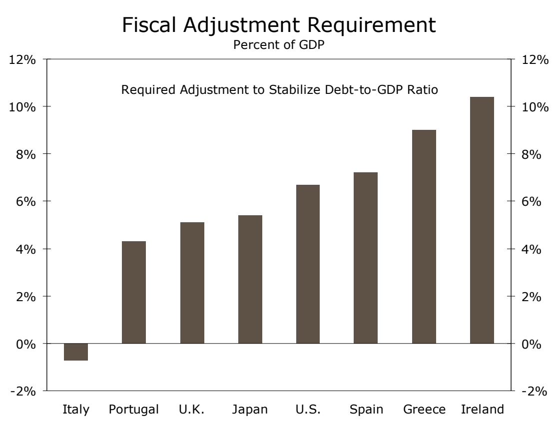
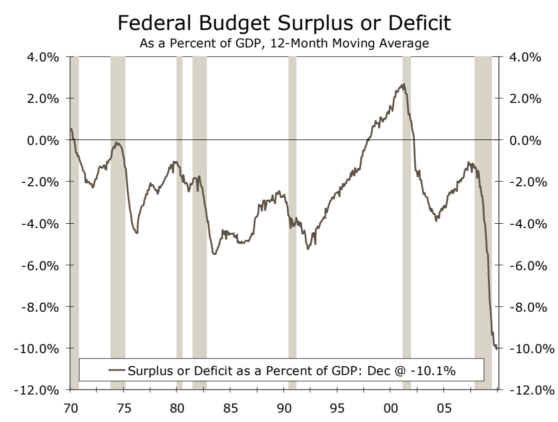


Figure 6



Source: Organisation for Economic Cooperation and Development, International Monetary Fund, U.S. Department of the Treasury, U.S. Department of Commerce and Wells Fargo Securities, LLC

Each country will get some benefit from stronger GDP growth in the years ahead as tax revenues automatically increase, which will help to narrow fiscal deficits. We estimate that tax revenues

[3] **Using 10-year government bond yields overstates the total borrowing costs for governments at any point in time. For example, nearly 25 percent of U.S. government debt outstanding at present is in the form of Treasury bills, which have maturities of less than one year, and the yield on the one-year T-bill as of this writing is only 35 bps, significantly less than 370 bps that is shown for the United States in Figure 3. As economies recover over the next few years, however, yield curves should shift higher, which will raise government borrowing costs.**

will increase roughly 2–3 percent of GDP for most of the countries shown above if the IMF's growth forecasts are realized. However, even if the numbers shown in Figure 5 are adjusted downward by 2–3 percent of GDP, major deficit reduction programs will still be needed in most countries. For example, the Greek and Irish governments would need to implement spending reductions and/or revenue increases totaling 7–8 percent of GDP that would entail significant pain for the citizenry of those two countries. Are these adjustments feasible?

Countries have been able to implement sizable adjustment programs in the past.

Countries have been able to pull off significant changes in their primary fiscal balances in the past. Following its currency crisis in 1992, Italy engineered a swing in its primary balance that was equivalent to 6 percent of GDP between 1992 and 1997. The Swedish government turned its primary balance from a deficit of nearly 5 percent of GDP in 1993 to a surplus of 3 percent of GDP in 1998. Thus, large fiscal adjustments are not impossible.

However, to prevent the economy from completing tanking, deficit reduction programs need to be undertaken over a number of years, as in the Italian and Swedish examples, not over the course of a year or two as some investors would like to see in the cases of some of the indebted Euro-zone governments at present. Moreover, Italy and Sweden were able to offset the pain of fiscal adjustment by strong export growth. Not only was global economic growth solid in the mid-1990s, but currency depreciation helped to improve the price competitiveness of Italian and Swedish goods. As we have pointed out in previous special reports, however, individual countries within the Euro-zone have their hands tied because monetary policy is the sole domain of the independent European Central Bank.[4] In addition, it will be difficult for individual countries in the euro area to export their way back to prosperity due to their high export exposure to other Euro-zone economies with which they share a common currency.

The U.S. government has been able to reduce its deficit previously.

The United States experienced its own large fiscal correction in the 1990s as the federal government's budget balance swung from a deficit of 5 percent of GDP in 1992 to a surplus that equaled nearly 3 percent of GDP in 2000 (Figure 6). Although the strength of the economy and the sharp rise in equity prices in the late 1990s helped to swell the government's coffers, much of the improvement in the deficit that occurred during the decade reflects conscious policy choices. Not only were income taxes raised modestly in 1993, but total federal outlays rose only 3.2 percent per annum between 1992 and 2000, significantly less than the 5.8 percent nominal GDP growth rate that was averaged over that period. However, the probability that the U. S. economy will expand at the same pace over the next few years as it did in the 1990s seems rather low at present. Moreover, major political compromises will need to be made to retard growth in Medicare and Social Security expenditures in the years ahead.

Conclusions

Greece has dominated headlines in the financial press recently, but the Hellenic Republic is not the only country with a government debt problem at present. The analysis above finds that some other economies in the euro area, notably Ireland, Portugal and Spain, will also need to implement significant deficit reduction programs in the years ahead. Given its high debt-to-GDP ratio, the Greek government may have less "breathing room" than some of its Euro-zone counterparts. However, governments in Ireland, Portugal and Spain will also need to make major fiscal adjustments in order to stabilize their debt-to-GDP ratios. Outside of the Euro-zone, debt-to-GDP ratios will continue to rise rapidly in Japan, the United Kingdom and the United States if governments in those countries continue along their current fiscal paths.

History shows that governments can achieve significant fiscal corrections. However, belt tightening requires sacrifice, and a government's ability to deliver adjustment ultimately depends on the willingness of the public to accept painful spending cuts and revenue increases. In order to stabilize its debt-to-GDP ratio, Ireland faces a fiscal adjustment that is more or less as onerous as the correction that is necessary in Greece. However, investors have been more willing to buy Irish government bonds than Greek government bonds due, at least in part, to the willingness of Irish voters to accept the government's deficit reduction program, at least so far. Strikes by civil

[4] **See "The Long Road Ahead for 'Club Med' Countries" (March 18, 2009) as well as the special report that was referenced in footnote #2.**

servants in Greece to protest wage cuts does not inspire the same degree of confidence among investors. Fiscal adjustment programs in the countries discussed in this report are theoretically possible. The question that investors need to ask themselves is whether the citizenry of each country has the will to bear the pain. Answers to these questions likely will not be forthcoming overnight. Therefore, long-term government bond yields in economies that require significant fiscal adjustments could remain elevated for quite some time.

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