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Stress Scenarios: Greece, Portugal, And Spain

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Stress Scenarios: Greece, Portugal, And Spain

In this article, Standard & Poor's Ratings Services analyzes potential government debt trajectories for Greece (BB+/Negative/B), Portugal (A-/Negative/A-2), and Spain (AA/Negative/A-1+) under two stress scenarios. The results, while dependent on a series of static assumptions which exclude potential multiplier effects, suggest that Greece, and to a lesser extent Portugal and Spain, will likely be subject to severe fiscal limitations. Note that all of our projections for Spain and Portugal--including revised primary fiscal positions, debt-to-GDP ratios, and real GDP forecasts--reflect recently announced fiscal consolidation measures that were approved by their respective parliaments on May 27 and June 2, 2010. Projections for Greece reflect all consolidation measures agreed to under the EU/IMF program announced on May 2.

Stress Scenarios

We have projected debt levels under two stress scenarios to measure the possible impact of three years of lower-than-anticipated growth, a weaker deflator, and a consequent weakening in the primary balance on government gross debt levels. Under our single- and double-stress scenarios, we have also assumed that governments would likely inject capital into their banking systems equivalent to 25% and 50%, respectively, of our estimate of gross problematic assets under lower growth scenarios. The debt-stabilizing primary balance (DSPB) in the following tables represents the debt-stabilizing primary general government balance a country would operate in any one year in order to stabilize the gross general government debt burden measured as a percentage of GDP (given our projections of nominal GDP growth, borrowing costs, and historical debt levels).

Baseline general government debt trajectory

This trajectory incorporates our baseline projections of nominal GDP and primary fiscal balances (PB), as well as largely off-balance sheet items.

Single-stress scenario

For 2010-2012, we assume a 150bps decline in average real GDP growth versus our baseline projections, and average deflator growth of 100bps below baseline projections. In addition, we assume that every 1% of GDP decline in nominal growth leads to a 0.2% of GDP deterioration in the primary fiscal result (on the operating assumption that any deterioration on the revenue side would be partly offset by additional expenditure cuts). This scenario also assumes higher government support of the financial sector (1).

Double-stress scenario

Our double-stress scenario for 2010-2012 assumes a 300bps decrease in average real GDP growth versus our baseline projections, and lower average deflator growth of 200bps. Similar to the single-stress scenario, we assume every 1% of GDP decline in nominal growth leads to a 0.2% of GDP deterioration in the primary fiscal result. The double-stress scenario assumes that recapitalization costs for the government are roughly twice what they are under the single-stress scenario (1).

Greece

Under our baseline projections, we view Greek gross general government debt not stabilizing until 2015 at levels of 144% of GDP. For 2010, the debt stabilizing primary surplus under our current average effective interest rate assumption of 5.0% (which reflects the invocation of the EU/IMF package) and nominal growth rate assumption of

-3% (real GDP contraction of 4% and 1% growth in the deflator) is 9.6% of GDP, or 12.5% of GDP above our projected 2010 primary deficit result of -2.9% (see chart 3, which reflects our baseline scenario on the DSPB versus the PB). The gap between our projected primary general government fiscal result and the DSPB narrows to 11.5% of GDP in 2011, but only meaningfully begins to compress in 2012 to 2.6% of GDP as nominal growth returns. Under our baseline projections, Greek debt-to-GDP would stabilize at 142% of GDP in 2015.

Under our single-stress scenario, gross debt would increase up through and beyond 2016, when it reaches 165.3% of GDP. Under the double-stress scenario, public sector leverage rises further, implying gross general government debt of 189.2% of GDP in 2016.

Table 1

Greece Scenarios

	2009	2010e	2011f	2012f	2013f	2014f	2015f	2016f
Base case								
Effective rate	5.0	5.0	5.0	5.1	5.2	5.3	5.3	5.3
GG balance / GDP (%)	(13.6)	(8.9)	(6.9)	(4.6)	(4.2)	(3.9)	(3.5)	(3.4)
GG debt / GDP (%)	116.3	128.6	139.7	141.8	143.1	143.9	143.6	143.2
Growth (% change)	(2.0)	(4.0)	(2.5)	0.8	1.0	1.2	1.5	1.5
Primary Balance / GDP (%)	(8.5)	(2.9)	(0.2)	2.4	3.0	3.5	4.0	4.0
Deflator (% change)	1.0	1.0	(1.0)	0.7	0.9	1.0	1.2	1.2
Off-balance sheet items / GDP (%)	3.1	(0.3)	(0.4)	(0.4)	(0.3)	0.0	0.0	0.0
DSPB / GDP (%)	5.7	9.6	11.3	5.0	4.6	4.3	3.7	3.6
Single-Stress								
Effective rate	5.0	5.0	5.0	5.1	5.2	5.3	5.3	5.3
GG balance / GDP (%)	(13.6)	(9.8)	(8.1)	(6.3)	(5.2)	(5.0)	(4.6)	(4.5)
GG debt / GDP (%)	116.3	135.3	154.1	161.6	163.5	164.9	165.1	165.3
Growth (% change)	(2.0)	(5.5)	(4.0)	(0.7)	1.0	1.2	1.5	1.5
Primary Balance / GDP (%)	(8.5)	(3.7)	(1.0)	1.7	3.0	3.5	4.0	4.0
Deflator (% change)	1.0	(0.0)	(2.0)	(0.3)	0.9	1.0	1.2	1.2
Off-balance sheet items / GDP (%)	3.1	2.3	2.2	(0.4)	(0.3)	0.0	0.0	0.0
DSPB / GDP (%)	5.7	12.9	15.8	9.5	5.2	5.0	4.2	4.1
Double-Stress								
Effective rate	5.0	5.0	5.0	5.1	5.2	5.3	5.3	5.3
GG balance / GDP (%)	(13.6)	(10.7)	(9.4)	(8.0)	(6.3)	(6.1)	(5.7)	(5.7)
GG debt / GDP (%)	116.3	142.0	169.3	183.0	185.6	187.7	188.5	189.2
Growth (% change)	(2.0)	(7.0)	(5.5)	(2.2)	1.0	1.2	1.5	1.5
Primary Balance / GDP (%)	(8.5)	(4.4)	(1.7)	0.9	3.0	3.5	4.0	4.0
Deflator (% change)	1.0	(1.0)	(3.0)	(1.3)	0.9	1.0	1.2	1.2
Off-balance sheet items / GDP (%)	3.1	5.0	4.9	(0.4)	(0.3)	0.0	0.0	0.0
DSPB / GDP (%)	5.7	16.4	20.9	15.1	5.9	5.6	4.8	4.7

Mild shock: real growth -150bps; deflator -100bps; primary balance -75bps for 2010-2012. Deep shock: real growth - 300bps; deflator -200bps; primary balance -150bps for 2010-2012. DSPB--Debt-stabilizing primary balance. GG--General government.

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Chart 1

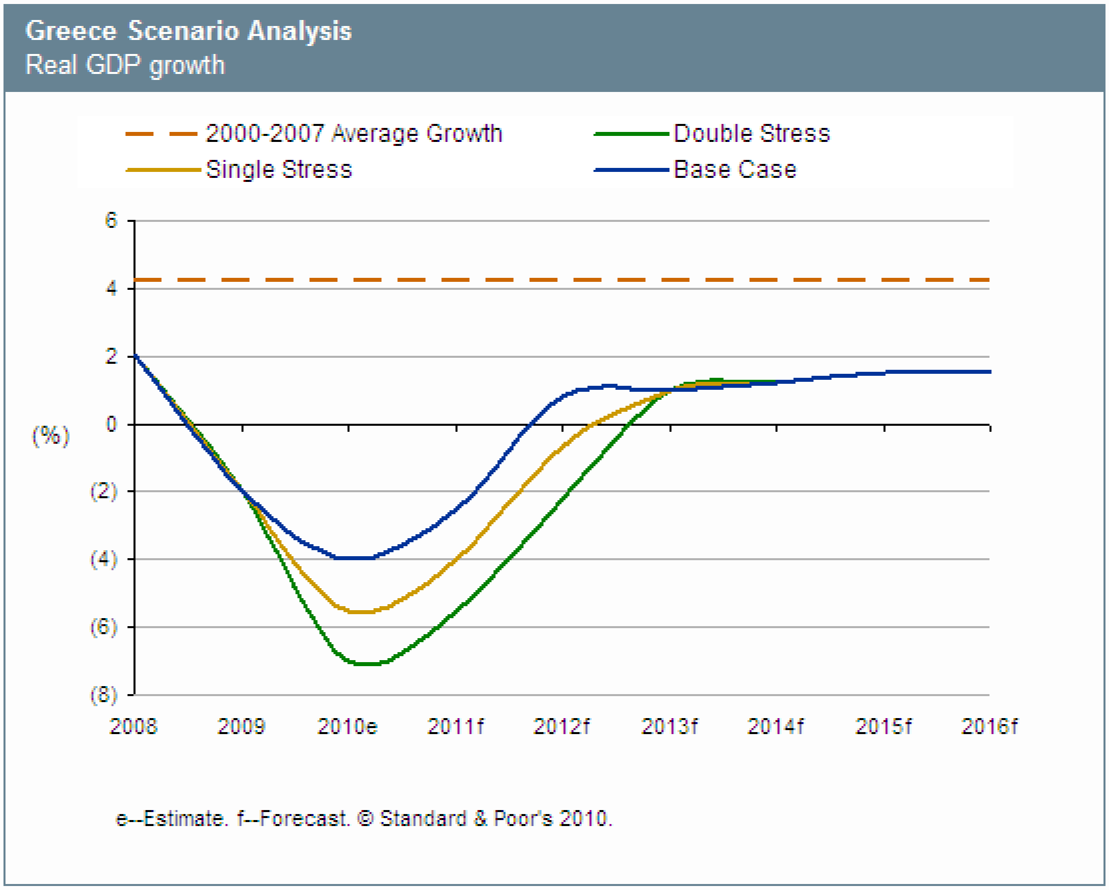
Greece Scenario Analysis
Real GDP growth
2000-2007 Average Growth
Double Stress
Single Stress
Base Case
6
4
2
0
(2)
(4)
(6)
(8)
(%)
2008
2009
2010e
2011f
2012f
2013f
2014f
2015f
2016f
e--Estimate. f--Forecast. © Standard & Poor's 2010.

Chart 2

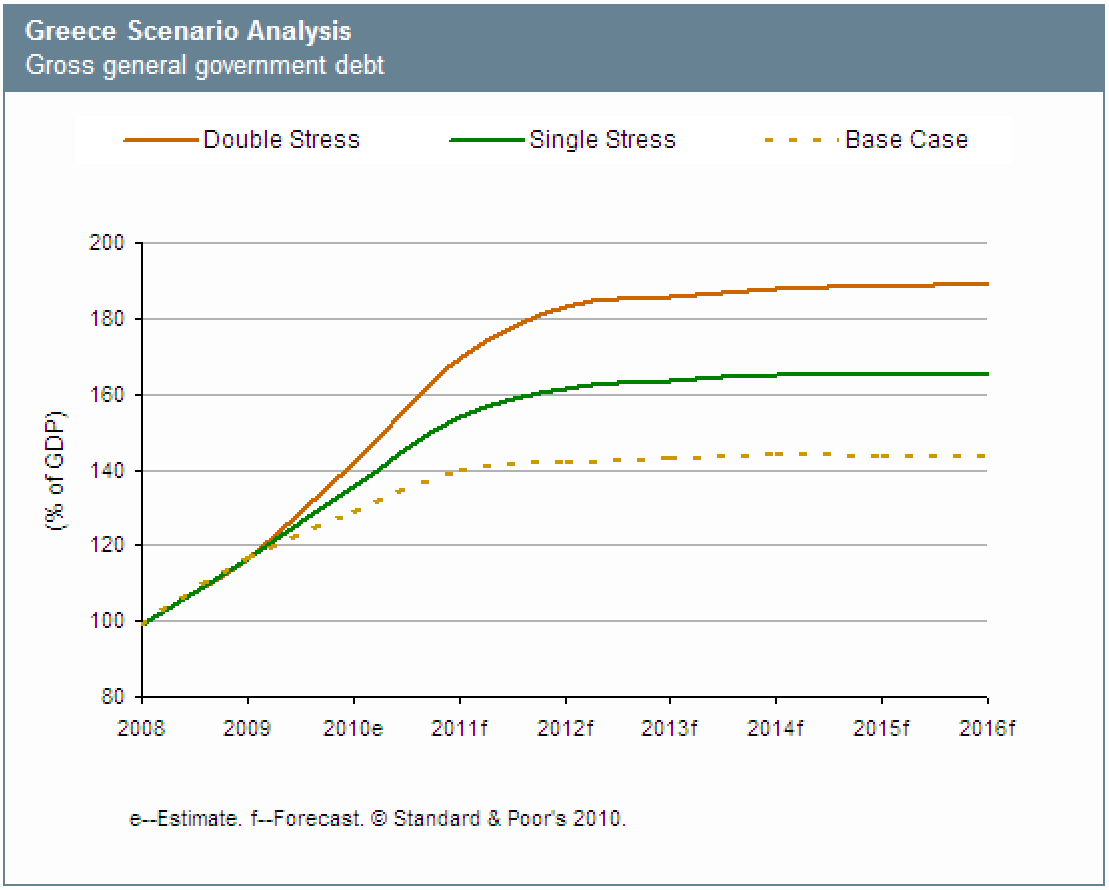

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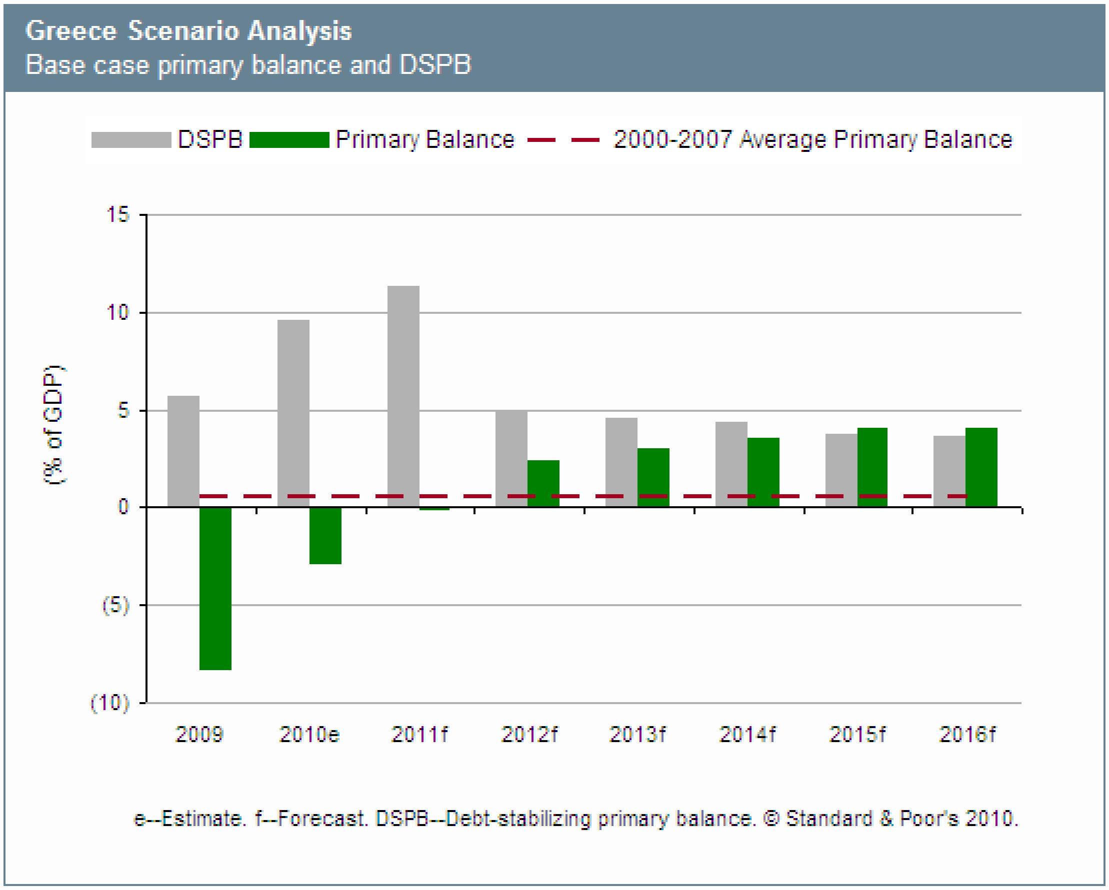
Chart 3



Portugal

Our baseline projections for Portugal reflect the recently announced second round of fiscal consolidation measures, which we estimate will improve the 2010 and 2011 general government consolidated deficit by another 0.9% of GDP and 1.7% of GDP, respectively, relative to our previous deficit expectations based on the government's stability program. Under our baseline scenario (see chart 6), the projected PB exceeds the DSPB in 2015. Looking forward, Portuguese projected real GDP growth rates appear only slightly below already quite low historical averages. The single- and double-stress scenarios increase general government debt levels in 2016 by 20% of GDP and 42% of GDP, respectively, under GDP and deflator assumptions considerably below our projections.

Table 2

Portugal Scenarios

	2009	2010e	2011f	2012f	2013f	2014f	2015f	2016f
Base case								
Effective rate	4.2	4.9	5.0	5.0	5.0	4.9	4.8	4.7
GG balance / GDP (%)	(9.4)	(7.7)	(5.4)	(4.2)	(3.2)	(2.6)	(2.2)	(2.1)
GG debt / GDP (%)	76.8	84.6	88.4	90.2	90.8	91.3	91.1	90.7
Growth (% change)	(2.7)	0.0	0.5	1.0	1.2	1.2	1.2	1.2
Primary Balance / GDP (%)	(6.6)	(3.9)	(1.2)	0.1	1.2	1.7	2.1	2.1
Deflator (% change)	1.2	0.0	0.5	0.9	0.9	1.2	1.5	1.5

Table 2

Portugal Scenarios (cont.)								
Off-balance sheet items / GDP (%)	0.1	0.1	(0.8)	(0.7)	(0.7)	0.0	0.0	0.0
DSPB / GDP (%)	3.9	3.8	3.4	2.7	2.6	2.2	1.9	1.8
Single Stress								
Effective rate	4.2	4.9	5.0	5.0	5.0	4.9	4.8	4.7
GG balance / GDP (%)	(9.4)	(8.5)	(6.6)	(5.8)	(4.1)	(3.6)	(3.1)	(3.0)
GG debt / GDP (%)	76.8	91.7	103.2	108.9	110.0	111.0	111.1	111.2
Growth (% change)	(2.7)	(1.5)	(1.0)	(0.5)	1.2	1.2	1.2	1.2
Primary Balance / GDP (%)	(6.6)	(4.7)	(2.0)	(0.6)	1.2	1.7	2.1	2.1
Deflator (% change)	1.2	(1.0)	(0.5)	(0.1)	0.9	1.2	1.5	1.5
Off-balance sheet items / GDP (%)	0.1	4.4	3.5	(0.7)	(0.7)	0.0	0.0	0.0
DSPB / GDP (%)	3.9	5.8	6.1	5.8	3.1	2.7	2.3	2.2
Double Stress								
Effective rate	4.2	4.9	5.0	5.0	5.0	4.9	4.8	4.7
GG balance / GDP (%)	(9.4)	(9.4)	(7.9)	(7.5)	(5.1)	(4.6)	(4.1)	(4.0)
GG debt / GDP (%)	76.8	98.9	118.5	129.0	130.7	132.2	132.8	133.2
Growth (% change)	(2.7)	(3.0)	(2.5)	(2.0)	1.2	1.2	1.2	1.2
Primary Balance / GDP (%)	(6.6)	(5.4)	(2.7)	(1.4)	1.2	1.7	2.1	2.1
Deflator (% change)	0.0	(2.0)	(1.5)	(1.1)	0.9	1.2	1.5	1.5
Off-balance sheet items / GDP (%)	0.1	8.7	7.7	(0.7)	(0.7)	0.0	0.0	0.0
DSPB / GDP (%)	3.9	8.0	9.3	9.9	3.7	3.2	2.7	2.6

Mild shock: real growth -150bps; deflator -100bps; primary balance -75bps for 2010-2012. Deep shock: real growth - 300bps; deflator -200bps; primary balance -150bps for 2010-2012. DSPB--Debt-stabilizing primary balance. GG--General government.

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Chart 4

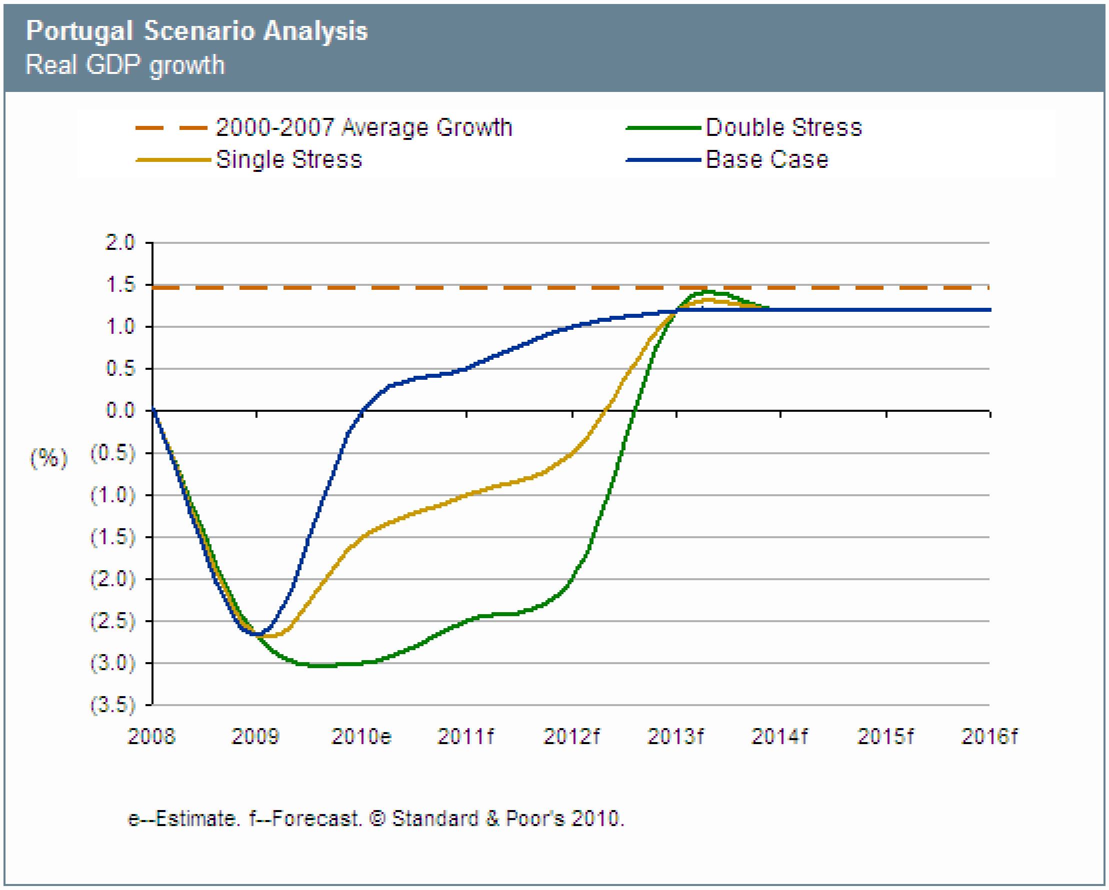

Portugal Scenario Analysis
Real GDP growth
2000-2007 Average Growth
Double Stress
Single Stress
Base Case
(%)
2.0
1.5
1.0
0.5
0.0
(0.5)
(1.0)
(1.5)
(2.0)
(2.5)
(3.0)
(3.5)
2008
2009
2010e
2011f
2012f
2013f
2014f
2015f
2016f
e--Estimate. f--Forecast. © Standard & Poor's 2010.

Chart 5

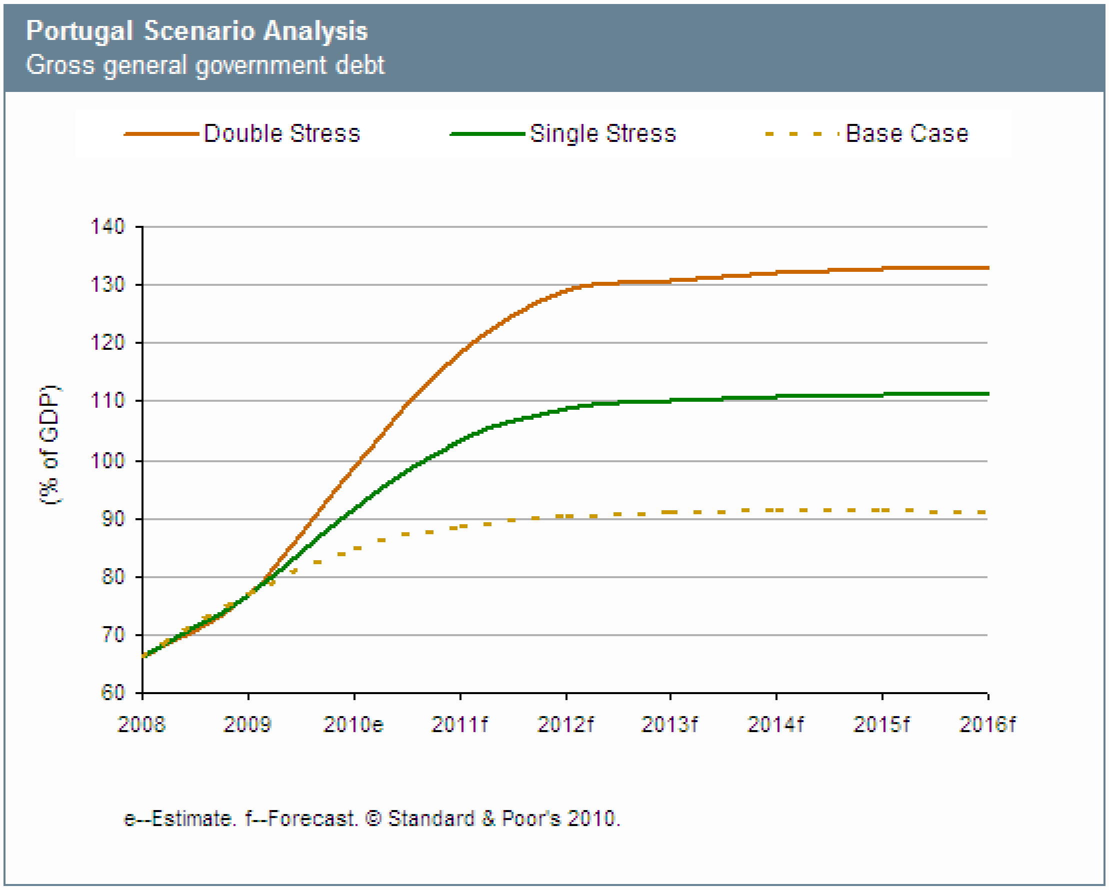
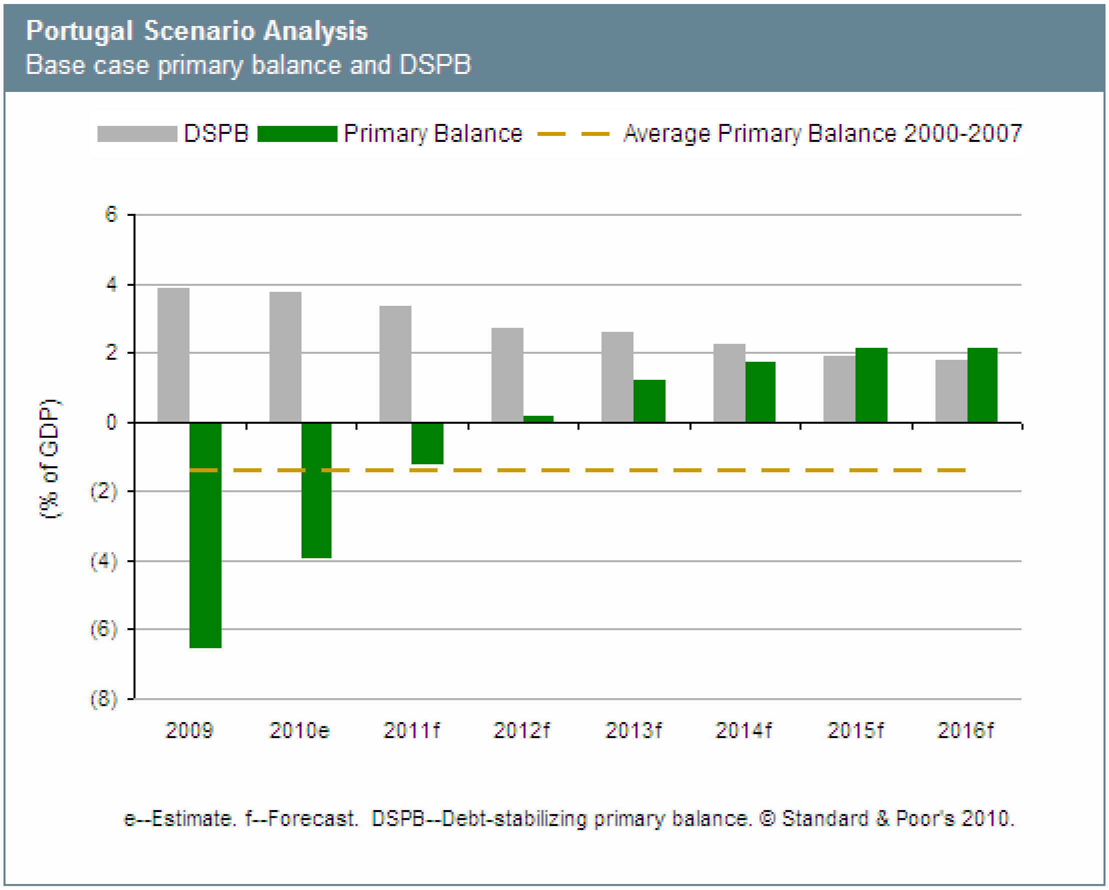

Portugal Scenario Analysis
Gross general government debt
Double Stress
Single Stress
Base Case
140
130
120
110
100
90
80
70
60
(% of GDP)
2008
2009
2010e
2011f
2012f
2013f
2014f
2015f
2016f
e--Estimate. f--Forecast. © Standard & Poor's 2010.

Chart 6



Spain

As in the case of Greece and Portugal, in Spain the single- and double-stress scenarios appear to drive gross debt of GDP to considerably higher levels, but even under our double-stress scenario on nominal growth, Spanish general government debt-to-GDP does not rise above 130%.

Nevertheless, under our baseline projections we view Spain's GDP performance as underperforming 2000-2007 averages by over 350bps, which increases the level of the PB Spain must operate to stabilize public debt levels. We have also revised down our 2011 real GDP forecast from 0.8% to 0.3% to reflect the estimated impact of government expenditure cuts announced last week (including multiplier effects). Spain's 2009 primary deficit of 9.4% of GDP would in our view take six years to convert into surplus, given growth constraints. Nor do we currently project that Spain's PB will exceed its DSPB by 2016. In our view, Spain's track record of operating consistently high primary surpluses is a strong one. However, the 2000-2007 track record was established during a period of benign Spanish and global growth conditions that we believe are unlikely to recur.

Table 3

Spain Scenarios

	2009	2010e	2011f	2012f	2013f	2014f	2015f	2016f
Base case								
Effective rate	4.5	4.7	4.7	4.7	4.7	4.7	4.7	4.7

Table 3

Spain Scenarios (cont.)								
GG balance / GDP (%)	(11.2)	(9.6)	(7.1)	(5.8)	(4.9)	(4.0)	(3.2)	(2.2)
GG debt / GDP (%)	54.3	66.2	73.2	78.0	81.8	84.2	85.7	86.3
Growth (% change)	(3.6)	(0.6)	0.3	1.0	1.0	1.0	1.0	1.0
Primary Balance / GDP (%)	(9.4)	(7.6)	(4.5)	(2.9)	(1.7)	(0.7)	0.2	1.3
Deflator (% change)	0.2	0.5	0.5	1.0	1.0	1.0	1.0	1.0
Off-balance sheet items / GDP (%)	1.1	2.6	0.5	0.5	0.5	0.0	0.0	0.0
DSPB / GDP (%)	3.5	2.6	2.6	1.9	2.1	2.2	2.2	2.3
Single Stress								
Effective rate	4.5	4.7	4.7	4.7	4.7	4.7	4.7	4.7
GG balance / GDP (%)	(11.2)	(10.4)	(8.2)	(7.2)	(5.6)	(4.7)	(4.0)	(3.0)
GG debt / GDP (%)	54.3	72.6	86.5	94.6	98.8	101.6	103.6	104.5
Growth (% change)	(3.6)	(2.1)	(1.2)	(0.5)	1.0	1.0	1.0	1.0
Primary Balance / GDP (%)	(9.4)	(8.4)	(5.3)	(3.6)	(1.7)	(0.7)	0.2	1.3
Deflator (% change)	0.2	(0.5)	(0.5)	0.0	1.0	1.0	1.0	1.0
Off-balance sheet items / GDP (%)	1.1	6.8	4.5	0.5	0.5	0.0	0.0	0.0
DSPB / GDP (%)	3.5	4.0	4.7	4.5	2.5	2.6	2.7	2.7
Double Stress								
Effective rate	4.5	4.7	4.7	4.7	4.7	4.7	4.7	4.7
GG balance / GDP (%)	(11.2)	(11.2)	(9.3)	(8.7)	(6.4)	(5.5)	(4.8)	(3.9)
GG debt / GDP (%)	54.3	79.0	100.3	112.5	117.1	120.3	122.8	124.2
Growth (% change)	(3.6)	(3.6)	(2.7)	(2.0)	1.0	1.0	1.0	1.0
Primary Balance / GDP (%)	(9.4)	(9.1)	(6.0)	(4.4)	(1.7)	(0.7)	0.2	1.3
Deflator (% change)	0.2	(1.5)	(1.5)	(1.0)	1.0	1.0	1.0	1.0
Off-balance sheet items / GDP (%)	1.1	11.0	8.5	0.5	0.5	0.0	0.0	0.0
DSPB / GDP (%)	3.5	5.6	7.3	8.0	3.0	3.1	3.2	3.2

Mild shock: real growth -150bps; deflator -100bps; primary balance -75bps for 2010-2012. Deep shock: real growth - 300bps; deflator -200bps; primary balance -150bps for 2010-2012. DSPB--Debt-stabilizing primary balance. GG--General government.

Chart 7

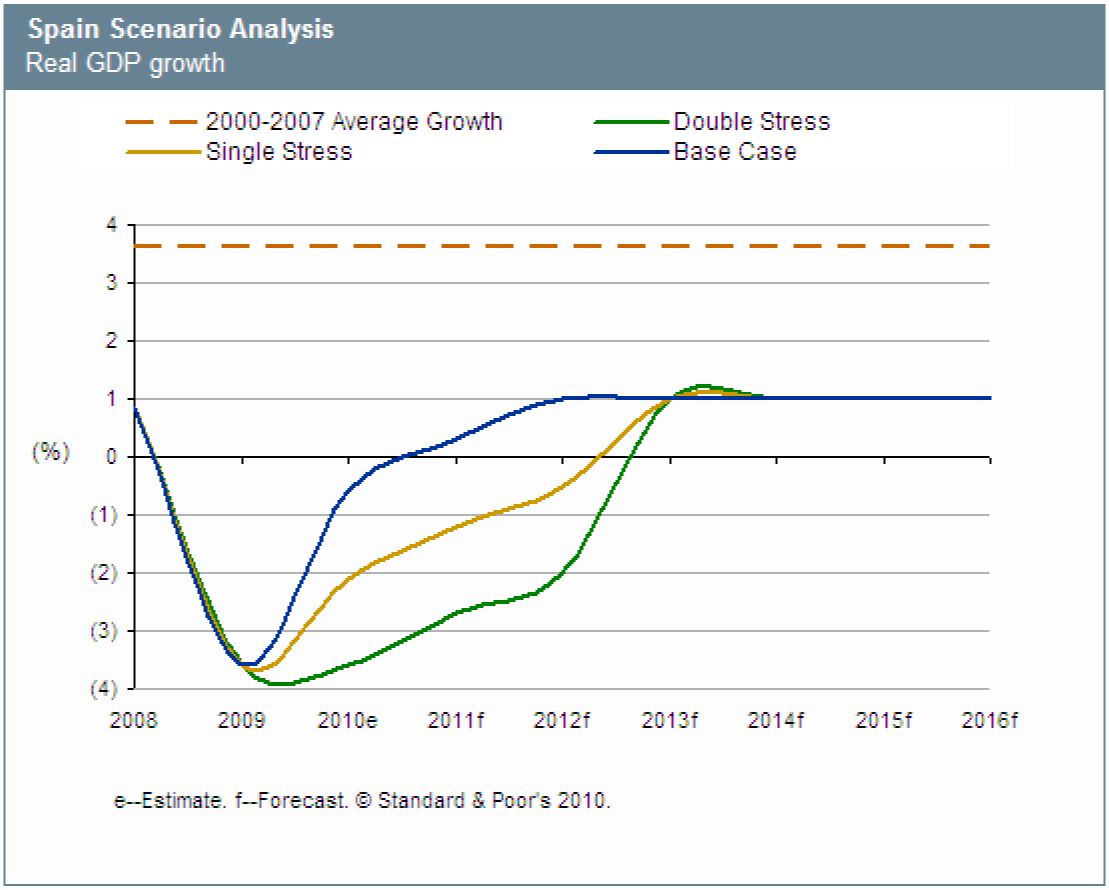

Spain Scenario Analysis
Real GDP growth
2000-2007 Average Growth
Double Stress
Single Stress
Base Case
4
3
2
1
0
(1)
(2)
(3)
(4)
(%)
2008
2009
2010e
2011f
2012f
2013f
2014f
2015f
2016f
e--Estimate. f--Forecast. © Standard & Poor's 2010.

Chart 8

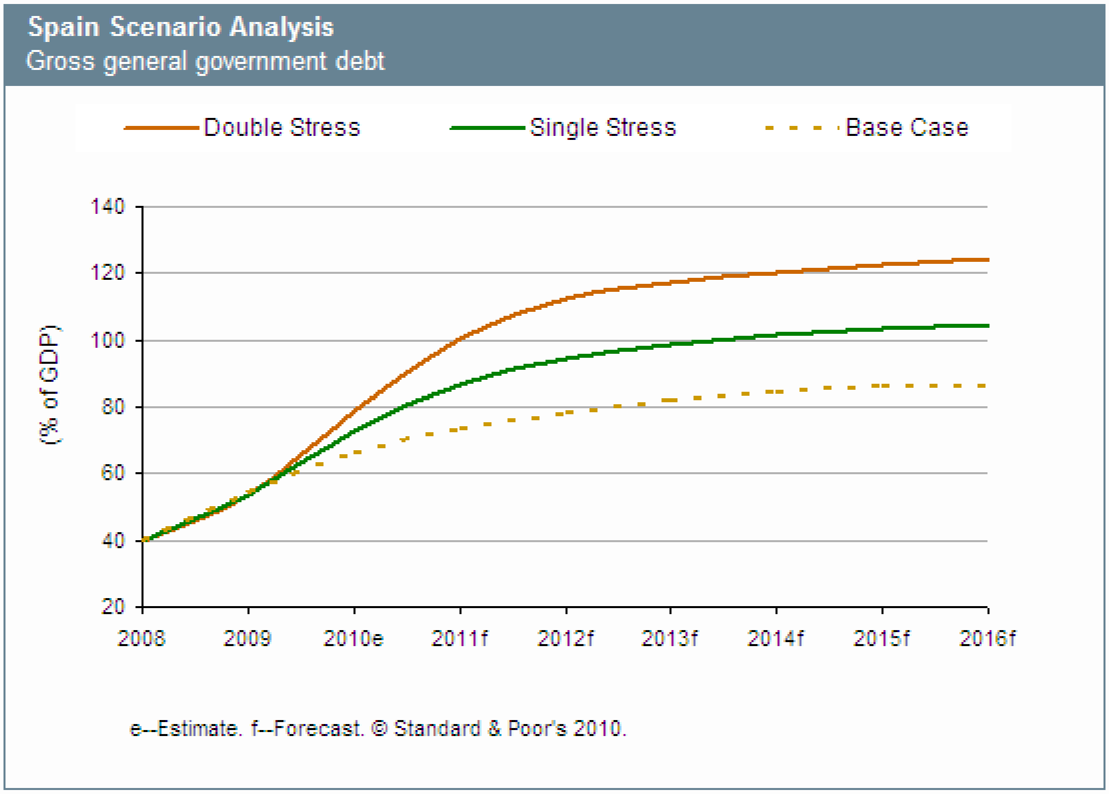
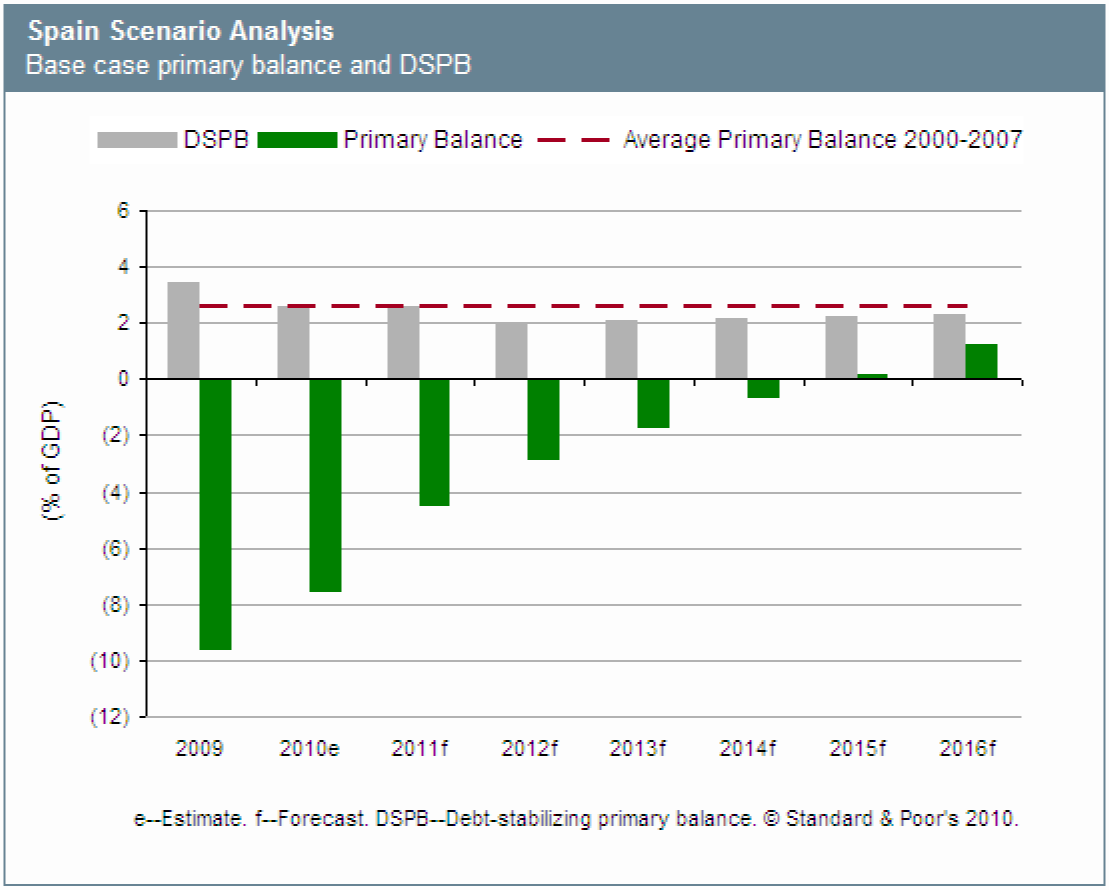

Spain Scenario Analysis
Gross general government debt
Double Stress
Single Stress
Base Case
(% of GDP)
140
120
100
80
60
40
20
2008
2009
2010e
2011f
2012f
2013f
2014f
2015f
2016f
e--Estimate. f--Forecast. © Standard & Poor's 2010.

Chart 9



Footnotes

(1) On top of off-balance sheet items already reflected in historical gross general government debt levels, we calculate hypothetical recapitalization needs of financial systems under our stressed nominal GDP scenarios based on multiples of 0.25x and 0.50x our estimates of gross problematic assets (GPAs) during the full course of a recession. GPAs are defined as cumulative nonperforming loans, restructured loans, and repossessed collateral. Our estimates of total credit losses under highly stressed growth conditions are accrued over two years, 2010 and 2011. Under far weaker than baseline nominal growth projections, the proportion of problematic assets that would likely be written off would increase. Current estimates for GPA ranges in Greece, Portugal, and Spain are 15%-30%, 10%-20%, and 10%-20% of the domestic loan books, respectively. Under the single-stress scenario, our calculations show an increase of 4.5%, 7.9%, and 11.3% of GDP to gross general government debt in Greece, Portugal, and Spain, respectively, during 2010 and 2011, on top of our base-line estimate of government off-balance sheet items. Under the double-stress scenario, our calculations show that gross general government debt would increase by twice that amount (plus an added denominator effect due to weaker growth). These assumptions are not designed to constitute precise forecasts, but rather to express a scenario in quantitative terms as part of our assessment of a financial system's ability to withstand such losses under macroeconomic conditions that are considerably weaker than our baseline projections.

Related Criteria And Research

- Sovereign Ratings And The Eurozone, May 10, 2010
- Spain Downgraded To 'AA' On Protracted Economic Adjustment And Risks To Budgetary Position; Outlook Negative, April 28, 2010
- Republic of Portugal Ratings Lowered To 'A-/A-2' On Weak Macroeconomic Structure; Outlook Negative, April 27, 2010
- Greece Long- And Short-Term Ratings Lowered To 'BB+/B'; Outlook Negative; '4' Recovery Rating Assigned To Sovereign Debt, April 27, 2010
- Sovereign Defaults And Rating Transition Data, 2009 Update, March 17, 2010
- S&P European Sovereign Issuance Survey Predicts Record Borrowing Of €1,446 Billion In 2010 On Large Budget Deficits, March 9, 2010
- A Short History Of Sovereign Rating Trends Among Southern Members Of The European Monetary Union, Feb. 9, 2010
- Sovereign Credit Ratings: A Primer, May 29, 2008
- Hellenic Republic Long-Term Ratings Lowered To 'A' on Fiscal Weakness; Outlook Stable, Nov. 17, 2004

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