PUBLIC DEBT SIZE, COST AND LONG-TERM SUSTAINABILITY: PORTUGAL VS. EURO AREA PEERS

1. Introduction

This note discusses the strength of government finances in Portugal, and its relative position with respect to other euro area countries.

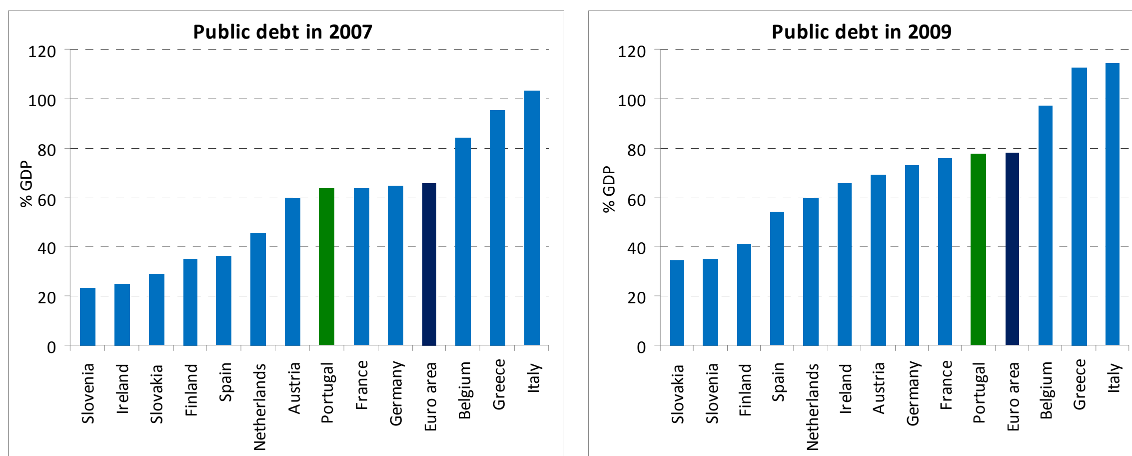
When assessing the capacity of a country to fulfill its debt responsibilities, several factors must be taken into account, from the strength of the country's economy, to the soundness of its institutions. This note focuses on the performance of government finances, which have been particularly challenged by the global financial and economic crisis faced in 2008-09. The analysis draws on the burden of the current size of public debt, but also on indicators of its long-term sustainability.

Even though the performance of the Portuguese economy in the past decade has been poor in terms of growth and external competitiveness, this note shows a favorable relative performance in most public finances indicators.

2. The size and the burden of public debt

The public debt level in Portugal has been similar to that observed in other euro area countries. Before the crisis (in 2007), it stood at 63.6% of GDP in Portugal, against an average of 66% in the euro area. For 2009, a deterioration of the public debt level is expected in all EU countries. The European Commission (EC) estimates a figure of 77.4% in Portugal, still below the euro area average of 78.2%.

Figure 1: Public debt in euro area countries (2007 vs. 2009)

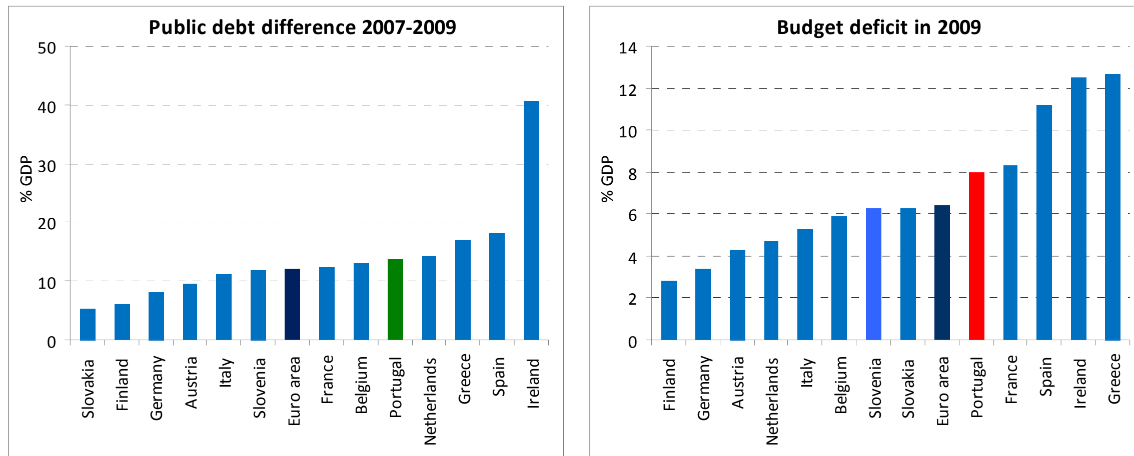


Source: European Commission, Autumn Forecasts, November 2009.

Hence, the magnitude of the increase in the public debt level between 2007 and 2009 is also similar to that observed in the euro area (13.8 p.p. and 12.2 p.p., respectively), and considerably lower than that experienced in Greece, Spain, and notably Ireland.

This idea can be also grasped by comparing the budget deficit in 2009 across euro area countries. In Portugal, the budget deficit is estimated at 8% of GDP, 1.6 p.p. above the euro area average, but considerably below the one observed in Greece, Ireland, or Spain.

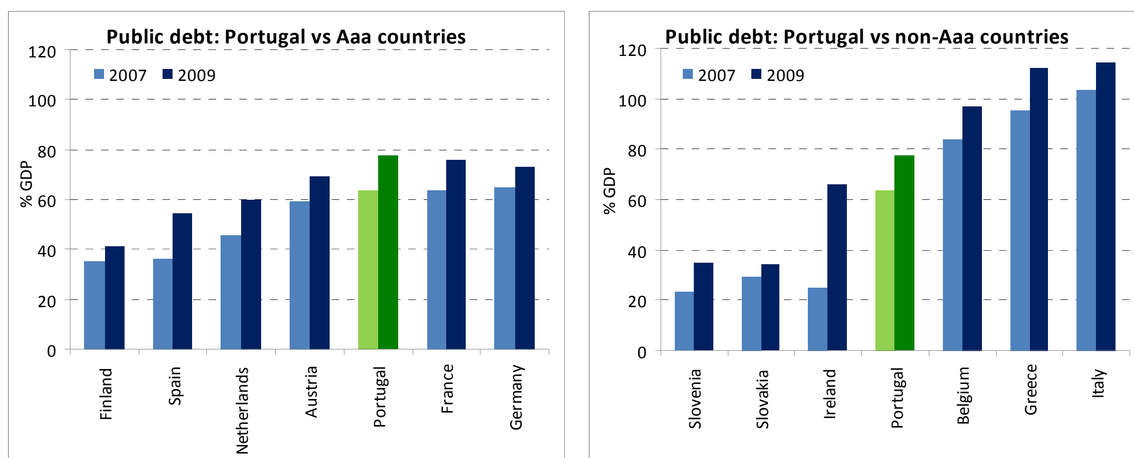
Figure 2: Public debt variation and budget deficit in euro area countries



Source: European Commission, Autumn Forecasts, November 2009.

The relative position of Portugal is better grasped by dividing the group of countries according to its rating.[1] This is shown in Figure 3.

Figure 3: Public debt in euro area countries (2007 vs. 2009)



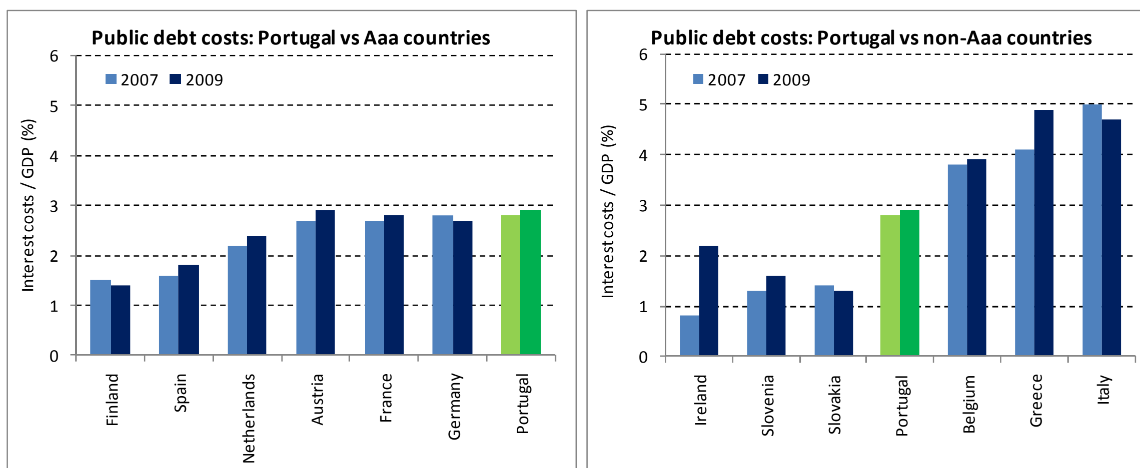
Source: European Commission, Autumn Forecasts, November 2009.

[1] The division is done according to Moody's ratings in December 2009.

As one may notice, the public debt level is similar to that observed in most Aaa countries, and is considerably lower than other non-Aaa countries.

Another important aspect is to understand how the burden of the public debt has evolved in the past couple of years. Figure 4 shows the level of debt service costs as a percentage of GDP.

Figure 4: Public debt costs in euro area countries (2007 vs. 2009)



Source: European Commission, Autumn Forecasts, November 2009.

Again, the same picture emerges: public debt costs in Portugal are similar to those observed in most Aaa countries, and considerably lower than in some non-Aaa countries. Importantly, it is striking that this figure has not increased significantly in Portugal (only +0.1p.p., from 2.8 to 2.9%), which compares favorably with the increase observed in Ireland (+1.4p.p.), or Greece (+0.8p.p.).

The picture does not change if one uses a different measure of public debt costs. For instance, Moody's preferred measure of *debt affordability* is the amount of interest payments as a percentage of the annual collected tax revenues.[2] For a country to belong to the Aaa category Moody's requires, among other factors, an interest-costs/tax-revenues ratio below 10%.[3]

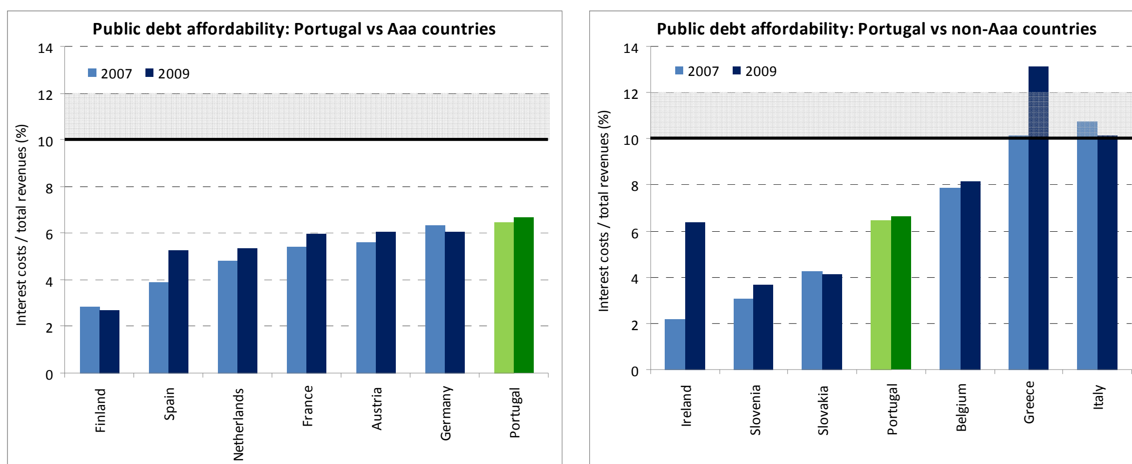
As one may observe in Figure 5, Portugal is clearly below the 10% threshold, both in 2007 and 2009, when this ratio increased from 6.5 to 6.6%. Again, this marginal increase is substantially lower than that observed in Spain (+1.4p.p.), Greece (+3p.p.), or Ireland (+4.2p.p.).

[2] See "Rating Methodology", *Moody's Global Sovereign – Sovereign Bond Ratings*, September 2008, or "Aaa-Sovereign Monitor", *Quarterly Monitor*, September 2009.

[3] This threshold is raised for those countries that show a high level of *debt reversibility*, which is defined as the capacity to reduce the government financial statement through higher economic growth and/or fiscal adjustment. Moody's defines a country-specific "debt reversibility band" based on the historical experience of each country: e.g. 4% for the US, 2% for Spain, and 3% for most other Aaa countries.

Moreover, these figures are not significantly different from those observed in most euro area Aaa countries. Portugal shows a better relative position when compared with non-Aaa countries, performing better than Greece, Italy (both standing above the 10% threshold), and Belgium.

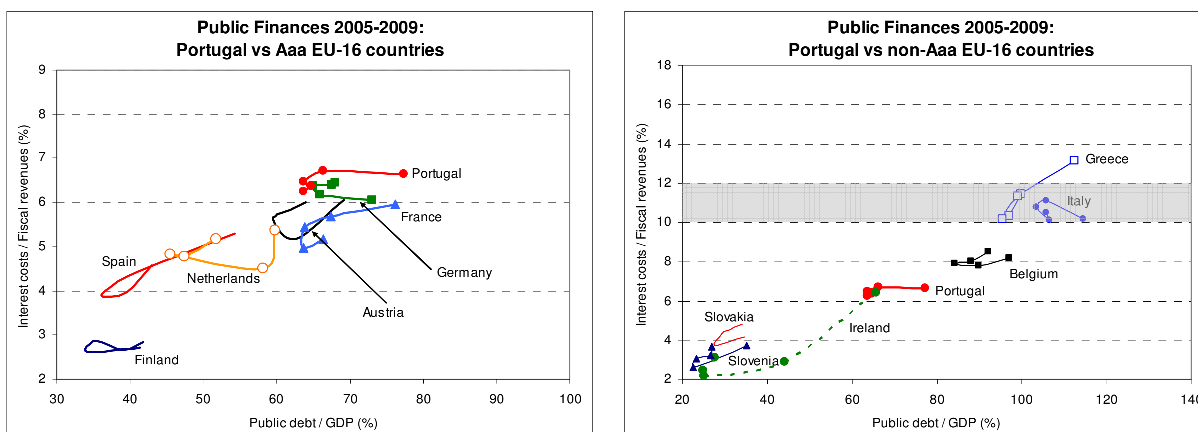
Figure 5: Public debt affordability in euro area countries (2007 vs. 2009)



Note: The grey area corresponds to a debt reversibility band of 2% (the minimum considered by Moody's for a Aaa country).
Source: European Commission, Autumn Forecasts, November 2009.

Together with this measure, Moody's considers the concept of *debt finance-ability*, defined as the ability of a country to contract a large amount of debt, at an affordable cost, to react to a negative event. This is generally measured by the sensitivity of interest rates to the debt trajectory: the lower this elasticity, the higher is debt finance-ability. Figure 6 shows the path of public debt size and debt affordability, in the past 5 years.

Figure 6: Public debt trajectories in euro area countries (2005-2009)



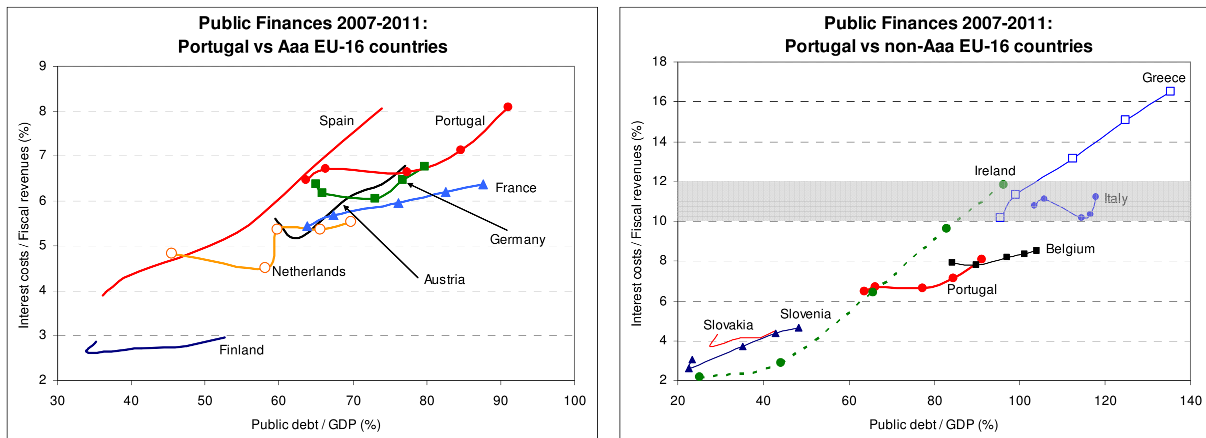
Note: The grey area corresponds to a debt reversibility band of 2% (the minimum considered by Moody's for a Aaa country).
Source: European Commission, Autumn Forecasts, November 2009.

As one may observe, the debt affordability measure for Portugal has hardly increased in this period, even though the EC estimates an increase of the public debt by more than 10p.p., from 66.3 to 77.4%, which reflects a high level of debt finance-ability (low slope of the debt trajectory).

Again, the debt trajectories are not significantly different from those observed in most euro area Aaa countries, and are considerably less damaging than those observed in Ireland, Spain or Greece.

If the analysis is extended to 2011 (figure 7), using EC's November 2009 forecasts, the absolute position of Portugal deteriorates, just as happens with most euro area countries. However, in relative terms, Portugal improves vis-à-vis Spain and by 2011 performs better than Ireland in absolute terms (in addition to Greece, Italy and Belgium).

Figure 7: Public debt trajectories in euro area countries (2007-2011)



Source: European Commission, Autumn Forecasts, November 2009.

These figures show that, while the picture is indeed deteriorating, when compared with other euro area countries Portugal government finances are not too gloomy.

This can be also contrasted with Moody's own perception of the risks involving the Portuguese case. In fact, among the 4 factors considered by Moody's, Portugal ranks better than most non-Aaa countries, especially in what concerns government finances (see table 1).

In the following section this analysis is weighted against the long-term prospects for public debt sustainability, drawing from the results presented by the European Commission in its recent update of the Sustainability Report.

Table 1: Moody's Sovereign Ratings Analysis

Sovereign Ratings Snapshot
Ratings Snapshot as of 8 January, 2009*

	RATINGS			RATING FACTORS			
	COUNTRY	FC / LC	OUTLOOK	ECONOMIC STRENGTH	INSTITUTIONAL STRENGTH	GOVERNMENT FINANCES	EVENT RISK
Investment Grade	Austria	Aaa / Aaa	Stable	very high	very high	very high	low
	Denmark	Aaa / Aaa	Stable	very high	very high	very high	low
	Finland	Aaa / Aaa	Stable	very high	very high	very high	very low
	France	Aaa / Aaa	Stable	very high	very high	very high	very low
	Germany	Aaa / Aaa	Stable	very high	very high	very high	very low
	Luxembourg	Aaa / Aaa	Stable	very high	very high	very high	very low
	Netherlands	Aaa / Aaa	Stable	very high	very high	very high	very low
	Norway	Aaa / Aaa	Stable	very high	very high	very high	very low
	Spain	Aaa / Aaa	Stable	very high	very high	very high	very low
	Sweden	Aaa / Aaa	Stable	very high	very high	very high	low
	Switzerland	Aaa / Aaa	Stable	very high	very high	very high	low
	United Kingdom	Aaa / Aaa	Stable	very high	very high	very high	very low
	Belgium	Aa1 / Aa1	Stable	very high	very high	very high	low
	Ireland	Aa1 / Aa1	Negative	very high	very high	high	low
	Italy	Aa2 / Aa2	Stable	very high	high	high	low
	Portugal	Aa2 / Aa2	Negative	high	high	very high	very low
	Slovenia	Aa2 / Aa2	Stable	high	high	high	very low
	Cyprus	Aa3 / Aa3	Stable	high	high	high	low
	Czech Republic	A1 / A1	Stable	high	high	high	very low
	Estonia	A1 / A1	Negative	high	high	high	medium
	Israel	A1 / A1	Stable	high	high	high	medium
	Malta	A1 / A1	Stable	high	high	high	very low
	Slovakia	A1 / A1	Stable	high	high	very high	very low
	Greece	A2 / A2	Negative	high	medium	low	medium

Source: Moody's, European Sovereign Outlook, January 2010.

3. The prospects for long-term sustainability

In its 2009 Sustainability Report, the EC uses two indicators to evaluate the sustainability of the Member States' public finances: S1 and S2. The S1 indicator shows the permanent adjustment to the current primary balance required to reach a target of 60% for the public debt as a percentage of GDP in 2060, taking into account the payment relative to any additional expenditure resulting from the ageing of the population. It is computed as the sum of the *required adjustment given the initial budgetary position* (IBP), which refers to the gap between the initial structural primary balance and the debt-stabilizing primary surplus, the *required adjustment to reach the target debt by 2060* (DR) and the *required adjustment due to the long-term changes in government expenditure* (LTC). On the other hand, the S2 indicator gives the permanent adjustment to the current primary balance required to

respect the infinite horizon intertemporal budget constraint, taking also into account the additional expenditure resulting from the ageing of the population. This indicator can be decomposed in only two components: IBP and LTC.

Applying the changes in age-related fiscal expenditure predicted in the Economic Policy Committee's 2009 Ageing Report, and assuming unchanged policies for the relevant period, the EC projected the evolution of public finances starting from the 2009 fiscal position, from which the two sustainability gap indicators presented in Table 2 were calculated.

Table 2: Results of the sustainability gap calculations for the euro area countries (% of GDP)

	Structural primary balance 2008	Structural primary balance 2009	Change in age-related expenditure	S1 Total	S1 IBP*	S1 DR*	S1 LTC*	S2 Total	S2 IBP*	S2 LTC*
Belgium	1,5	0,7	5,9	4,5	0,5	0,6	3,5	5,3	0,6	4,8
Germany	1,6	0,6	5,1	3,1	0,8	0,2	2,1	4,2	0,9	3,3
Ireland	-6,4	-7,6	8,7	12,1	8,2	0,2	3,7	15,0	8,3	6,7
Greece	-2,1	-0,9	16,0	10,8	2,4	0,7	7,7	14,1	2,6	11,5
Spain	-2,4	-5,2	8,0	9,5	5,9	-0,1	3,6	11,8	6,1	5,7
France	-1,5	-2,7	2,1	5,5	3,8	0,4	1,4	5,6	3,8	1,8
Italy	1,7	2,0	1,6	1,9	-0,2	0,7	1,4	1,4	-0,1	1,5
Cyprus	2,9	0,2	10,7	4,6	0,2	-0,3	4,7	8,8	0,5	8,3
Luxembourg	2,3	1,2	16,2	6,2	-0,6	-0,8	7,5	12,5	-0,4	12,9
Malta	-1,6	-0,2	9,2	4,7	1,1	0,2	3,4	7,0	1,4	5,7
Netherlands	1,7	0,0	6,7	5,2	1,6	0,0	3,7	6,9	1,9	5,0
Austria	0,8	-0,2	4,0	3,8	1,5	0,2	2,2	4,7	1,6	3,1
Portugal	**-0,9**	**-2,4**	**2,8**	**4,7**	**3,4**	**0,3**	**1,0**	**5,5**	**3,7**	**1,9**
Slovenia	-1,3	-3,3	12,5	9,2	3,8	-0,3	5,7	12,2	3,9	8,3
Slovakia	-3,5	-3,7	5,5	5,7	4,3	-0,3	1,6	7,4	4,5	2,9
Finland	4,3	2,1	5,4	2,6	-0,8	-0,3	3,7	4,0	-0,5	4,5
Euro Area	**0,2**	**-0,9**	**4,8**	**4,8**	**2,1**	**0,3**	**2,4**	**5,8**	**2,3**	**3,5**

* IBP = required adjustment given the initial budgetary position, DR = adjustmentto reach the debt requirement (60% of GDP) in 2060, LTC=required adjustment given the long-term change in the primary balance due demographic ageing

Source: European Commission, 2009 Sustainability Report.

From the value of the two indicators, S1 and S2, one can conclude that the sustainability gap in Portugal is below the average in the euro area, pointing towards a more sustainable debt path in Portugal. Nevertheless, the required adjustment in the primary balance is equal to 4.7% of GDP, by the S1 indicator, and to 5.5% of GDP by the S2.

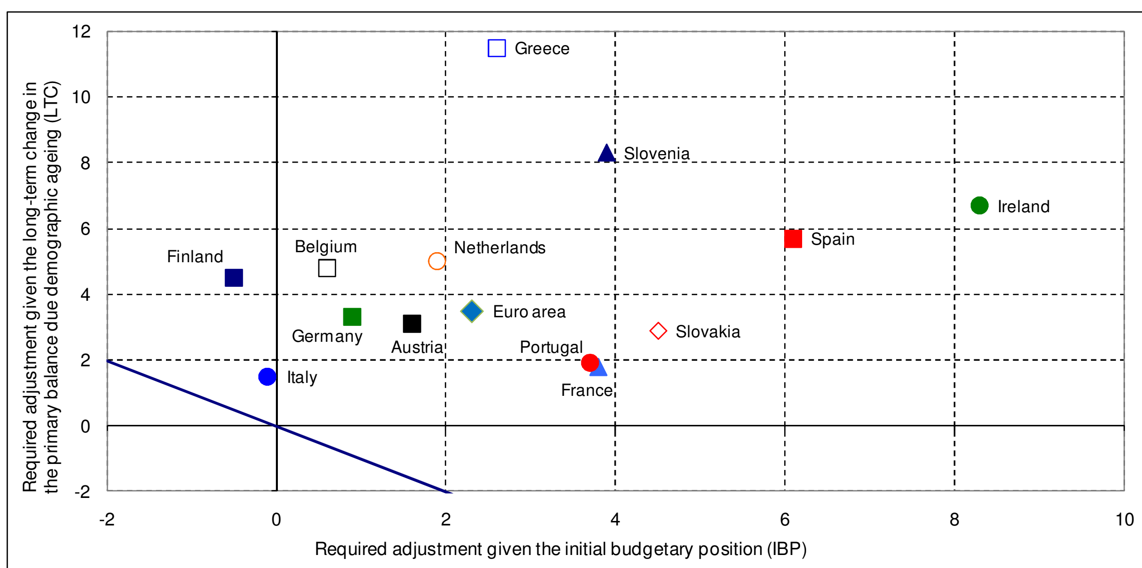
The decomposition of the indicators reveals that the favorable position of Portugal relative to the euro area results from the much lower projected budgetary cost of demographic ageing. It is expected that age-related expenditures increase by 2.8% of GDP between 2009 and 2060 in Portugal and by 4,8% in the euro area. Portugal benefited from a significant downward revision of the projected long term budgetary cost of ageing due to the effects of the successful 2006 Social Security Reform. In the 2006 Sustainability Report, this cost was expected to equal 9.7% of GDP between 2009 and 2050. The

projection for the euro area[4] was slightly revised upwards from 4.4% of GDP in the 2006's report. However, the IBP component shows that the Portuguese starting budgetary position is less favorable than the euro area position, although it has improved since the former Sustainability Report (the IBP component of the S1 and S2 indicators was equal to 3.6 and 3.8% of GDP, respectively). This difference relative to the euro area has resulted from an imbalance in public finances that, in spite of having been on a correction path during the past years, was aggravated by the current economic recession.

This implies, as pointed out in the 2009 Report, that the Portuguese sustainability gap might be easier to rectify politically, than if it was mainly due to the costs of demographic ageing.

The contribution of the IBP and LTC components for the S2 indicator is depicted in Figure 3.

Figure 8: Decomposition of the S2 indicator



Source: European Commission, 2009 Sustainability Report.

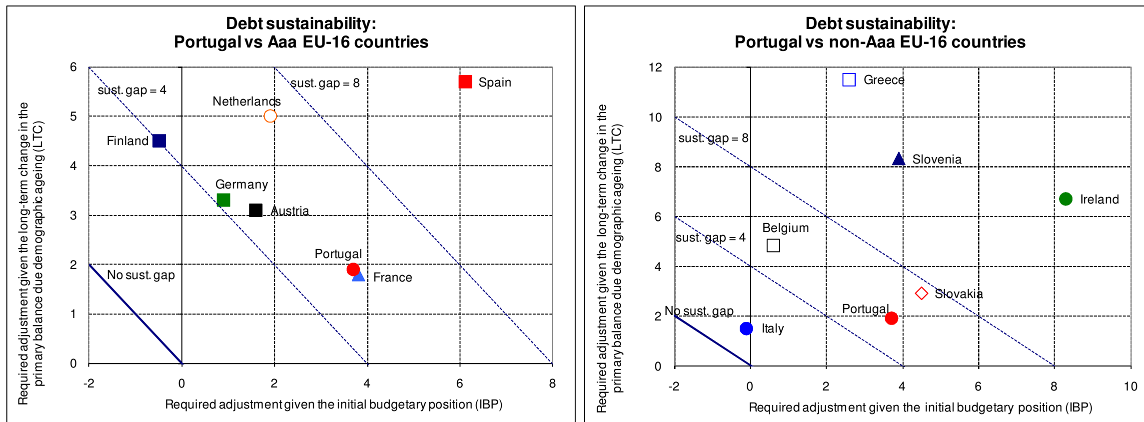
The horizontal axis measures the required adjustment to stabilize the public debt as a % of GDP given the starting budgetary position (IBP), while the vertical axis measures the required adjustment due to the long-term costs of ageing. The S2 indicator is given by the sum of the two, and is proportional to the distance from each point to the diagonal line. Dots on the northeast of that line represent countries with a sustainability gap and the further away they stay from that line, the larger the gap. Points on the southwest of the line represent countries with sustainable public finances.

[4] Euro area 12, excluding Greece.

The only two countries from the European Union 27 that have sustainable public finances, according to the S2 indicator, are Hungary and Denmark. The one facing the largest sustainability gap is Ireland. As one may observe, Portugal lies more to the southwest than several euro area countries.

The relative position of Portugal is better grasped by dividing the group of countries according to its rating. This is shown in Figure 4, where again the contribution of the IBP and LTC components to the gap is specified.

Figure 9: Decomposition of the S2 indicator of the European Union 16 countries by group of current sovereign ratings



Source: European Commission, 2009 Sustainability Report.

When compared to Aaa countries, the performance of Portugal is not disappointing. In fact, Spain and the Netherlands have higher sustainability gaps, and France has a gap smaller by only 0,1% of GDP. Again, the relative position of Portugal is due to the smaller predicted long-term budgetary cost of the ageing of the population, the second lowest in the figure.

Amongst the non-Aaa EU-16 countries, Portugal has a below average sustainability gap. It is again the country with the second lowest required adjustment due to demographic ageing but, in relation to the initial budgetary position, Portugal is in the centre of the distribution.

4. Conclusions

Overall, since the beginning of the decade public debt in Portugal has been increasing. Although fiscal imbalances were on a correction path since 2005, this has been interrupted in 2008.

The recent financial crisis has put government finances under pressure all around the globe. Portugal is not an exception: the European Commission forecasts a budget deficit of 8% for this year, and a public debt rising to around 90% of GDP by 2011.

This note highlights that, while the picture is indeed deteriorating, when compared with other euro area countries it is not too bleak. Interest payments as a percentage of tax revenues have not increased until 2009, and the prospects for the next two years place this measure below the levels in Belgium, Greece, Italy and Ireland.

In terms of long-term sustainability, the recent EC report pointed out the positive effects of the Portuguese Social Security reform, which placed Portugal in the group of countries with the lowest required adjustment to fulfill its long-term obligations related with an ageing population.