

Box 10

**EXPERIENCE WITH GOVERNMENT DEBT REDUCTION IN EURO AREA COUNTRIES**

The financial crisis and the severe economic downturn are contributing to a substantial increase in the government debt-to-GDP ratio in many euro area countries. As this situation is creating serious risks for the sustainability of public finances and will urgently need to be addressed, this box examines past experience with debt reductions in the euro area.

The rising government debt ratios in the euro area countries raise the question of what factors will help to stabilise these ratios and then put them on a steadily declining path. An analysis of successful past experience in various countries provides valuable insights when considering potential policy options for debt reduction in the future. The table below summarises government debt developments

in the 11 EU countries that adopted the euro when Monetary Union was established in 1999 and in Greece, which joined in 2001. The table compares the debt ratios for 1991 (the year that the Maastricht Treaty was signed), 1998 (the year before the start of Stage Three of EMU) and 2008, and lists the countries that recorded sizeable reductions in their debt ratios, defined as a total decline of more than 20 percentage points from their peak in the mid-1990s to their most recent trough.

As can be seen from the first three columns of the table, debt ratios followed a different path in the individual countries. Some countries, such as Germany and France, did not manage to fully reverse the rise in their debt ratios during the period under consideration and, as a result, recorded debt ratios in 2008 that were higher than those in 1998. By contrast, other countries, such as Ireland and Belgium, experienced a significant decline in their debt ratios as compared with both 1991 and 1998, albeit from a high starting level.

Five (out of 12) countries – namely Belgium, Ireland, Spain, the Netherlands and Finland – recorded sizeable reductions in their debt ratios, all of which were spread over more than ten years. The first year ( $t_0$ ) and the last year ( $t_n$ ) of the debt reduction period are presented in parentheses. Moreover, the peak in the debt ratio in the year prior to the start of the debt reduction period ( $t_1$ ), the trough in the debt ratio in the year at the end of the debt reduction period ( $t_n$ ) and the cumulative decline in the debt ratio are listed for these countries. As can be seen, sizeable reductions in the debt ratio range from a decline of around 24 percentage points over a period of 14 years from 1995 to 2008 in Finland to a decline of more than 69 percentage points over the period from 1994 to 2006 in Ireland.

The last three columns of the table provide a breakdown of the total decline in the government debt ratio from peak to trough into three components. First, the primary balance, which

#### The development of debt in selected euro area countries and sizeable government debt reduction

(as a percentage of GDP)

Country/Period of sizeable debt reduction ( $t_0 - t_n$ )	Debt ratio			Debt ratio		Change in debt ratio ( $t_n - t_1$ ) 1=-2+3+4 (1)	Contribution		
	1991	1998	2008	Peak ( $t_1$ )	Trough ( $t_n$ )		Primary balance (2)	Snowball effect (3)	Stock-flow adjustment (4)
<b>Belgium (1994-2007)</b>	127.0	117.1	89.6	134.2	84.0	-50.2	69.4	27.7	-8.5
Germany	39.5	60.3	65.9						
<b>Ireland (1994-2006)</b>	94.5	53.1	43.2	94.1	24.9	-69.2	48.7	-38.1	17.5
Greece	75.0	102.6	97.6						
<b>Spain (1997-2007)</b>	43.4	63.2	39.5	66.8	36.2	-30.6	25.3	-11.2	5.9
France	36.0	59.4	68.0						
Italy	98.0	114.9	105.8						
Luxembourg	4.1	7.4	14.7						
<b>Netherlands (1994-2007)</b>	76.6	65.7	58.2	78.5	45.6	-32.9	35.8	8.0	-5.1
Austria	56.3	64.8	62.5						
Portugal	57.7	52.1	66.4						
<b>Finland (1995-2008)</b>	22.2	48.2	33.4	57.8	33.4	-24.4	64.8	0.8	39.7

Source: ECB calculations based on European Commission AMECO database.

Note: The change in the government gross debt-to-GDP ratio can be decomposed as follows:

$$\Delta b_t = -pb_t + \left( \frac{r_t - g_t}{1 + g_t} \right) b_{t-1} + sf_t$$

where  $t$  is a time subscript;  $b$  is the general government gross debt as a percentage of GDP;  $pb$  is the primary balance as a percentage of GDP (fiscal balance excluding interest payments);  $r$  is the real interest rate;  $g$  is the real GDP growth rate; and  $sf$  is the stock-flow adjustment as a percentage of GDP.

in the case of a surplus tends to decrease the debt ratio. Second, the interest rate growth rate differential, known as the snowball effect, indicating that a debt ratio tends to rise (decline) if the GDP growth rate is lower (higher) than the interest rate paid on government debt. Third, the stock-flow adjustment, capturing the effects of the accumulation or sale of financial assets, changes in the value of foreign debt owing to exchange rate changes and remaining statistical adjustments, as well as other residuals.<sup>1</sup>

The following findings emerge from the last three columns in the table. First, primary surpluses contributed significantly to debt reduction in all five countries that recorded a sizeable reduction in their debt ratios. The contribution of primary surpluses was, on average, close to 5 percentage points of GDP per year for Belgium and Finland, around 3.5 percentage points for Ireland and around 2.5 percentage points for the Netherlands and Spain (computed as the total contribution of the primary balance divided by the number of years in the debt reduction period). Second, all five countries benefited from a marked decline in the real interest rate. In Ireland and Spain, real GDP growth was even high enough, on average, to generate a negative snowball effect, which contributed significantly to the reduction of their debt ratios. The strong output growth performance of these countries also contributed to higher primary balances than would otherwise have been achieved. Third, stock-flow adjustments contributed significantly to a higher debt ratio in Finland and Ireland. In the case of Finland, the debt-increasing effect of the stock-flow adjustment can be traced back to financial investments of the general government, including the accumulation of assets in social security funds. In the case of Ireland, equity injections related mainly to the financing of infrastructure (e.g. transport, telecommunications and energy) played an important role. In the remaining countries, the impact of stock-flow adjustments on government debt developments was more limited.

### Lessons from the past, lessons for the future

The experience of the past suggests that a reduction in the very high debt ratios that are currently projected for many countries will require substantial fiscal consolidation efforts. Since real GDP growth rates may be relatively subdued in the years to come, the probability of a substantial debt-reducing contribution from the interest rate growth rate differential is low. In addition, the proceeds from the future sale of financial assets acquired by governments during the financial crisis are highly uncertain. Thus, creating significant primary surpluses through fiscal consolidation will be vital. In this regard, the literature shows that expenditure-based consolidations tend to be more durable and growth-friendly than those that are revenue-based.<sup>2</sup> With tax burdens already high, revenue-based consolidation may lack credibility, as economic agents may anticipate that additional tax increases will have to be reversed owing to, for example, their adverse impact on economic incentives, international competitiveness and potential growth.<sup>3</sup> By contrast, expenditure reductions may convince agents that the structural adjustment effort is serious and will produce a lasting improvement in fiscal sustainability. Ambitious expenditure reforms comprising lower government consumption and significant reforms in transfers to households

1 For an overview of approaches to fiscal sustainability, see N. Giammarioli, C. Nickel, P. Rother and J.-P. Vidal, "Assessing fiscal soundness – theory and practice", ECB Occasional Paper No 56, 2007. For an overview of the composition of the stock-flow adjustment, see the article entitled "From government deficit to debt: bridging the gap" in the April 2007 issue of the Monthly Bulletin.

2 See also A. Afonso, "Expansionary fiscal consolidations in Europe: new evidence", ECB Working Paper No 675, 2006, and G. Giudice, A. Turrini and J. in't Veld, "Non-Keynesian Fiscal Adjustments? A Close Look at Expansionary Fiscal Consolidations in the EU", *Open Economies Review*, Vol. 18 (5), pp. 613-630, 2007.

3 See, for example, Task Force of the Monetary Policy Committee of the European System of Central Banks, "Labour supply and employment in the euro area countries – developments and challenges", ECB Occasional Paper No 87, 2008.

helped Finland, Ireland and the Netherlands, in particular, to reduce their primary expenditure ratios relative to revenue ratios and to create significant primary surpluses which underpinned the steady decline in their high debt ratios.<sup>4</sup> In addition, expenditure-based consolidation strategies may affect macroeconomic developments via wages and investment. In particular, if expenditure cuts in the area of public employment lead to a reduction in overall wage pressures in the economy, this may induce firms to hire more workers and raise investment spending, thus supporting long-term growth. This in turn will help debt reduction indirectly via the above-mentioned snowball effect and additional revenue and lower transfer spending.

<sup>4</sup> See also S. Hauptmeier, M. Heipertz and L. Schuknecht, "Expenditure Reform in Industrialised Countries – A Case-Study Approach", *Fiscal Studies*, Vol. 28 (3), pp. 293-342, 2007.