Achieving fiscal sustainability

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The Portuguese economy: dealing with the challenges of competitiveness and fiscal sustainability in the euro area

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These slides reflect the views of the author and do not necessarily reflect those of the ECB or the Eurosystem.

Outline

1. Introduction
2. The fiscal framework
3. Fiscal developments and the EDP
4. Sustainability issues
5. Financing fiscal imbalances
6. Achieving sounder public finances
   Conclusions

– There is a **problem of fiscal sustainability** when "**it has become clear that the claims of the bond-holders are more than the tax payers can support**" [Keynes, 1923, pp. 55].

– The State "**must come in due course to some compromise between increasing taxation, and diminishing expenditure**, and reducing what (…) [it] owe [s]" [Keynes, 1923, pp. 59].

– "Public expenditure ratios have steadily increased in the euro area since the 1960s […]. Public expenditure is nevertheless much higher than in most other industrialised countries. According to many observers, it exceeds the levels required for the efficient provision of essential public services." [ECB, 2006].

– "Portugal misused fiscal policy twice in the decade [the 1990s]" [Constâncio, 2005].

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- 1986, Portugal enters the European Union (EU).

- 1990 (1 July), 1st phase of the Economic and Monetary Union (EMU), free capital mobility.

- 1991, Maastricht/EU Treaty.

- 1992, joins the Exchange Rate Mechanism (ERM) of the European Monetary System (EMS), with a band of +/-6%.

- 1994, European Monetary Institute; 2nd phase of EMU.

- 1997, ERM II. Adoption of the Stability and Growth Pact.

- 1998 (June), ECB and ESCB are established.

- 1999 (January), single monetary policy, euro, 3rd phase of EMU.

- 2002 (January) euro cash changeover.

- 2005 (March), ECOFIN agrees the reform of the Stability and Growth Pact.

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2. The fiscal framework

The fiscal framework

- Single (centralized) Monetary Policy, conducted by a single entity (**ECB**), responsible for price stability;

- National governments no longer have the interest rate and exchange rate instruments to boost competitiveness and thus to promote cyclical adjustments (relevant notably for small open economies);

-Several (decentralized) Fiscal Policies, conducted by the Member States, making use of automatic stabilizers and discretionary measures.
- EU common fiscal framework, and **EC** fiscal surveillance [ECB, 2008a, b, c].

Fiscal framework and rules in the EMU (1)

Objectives:
• Coordinate fiscal policies to support stability, growth and cohesion;
• Support and promote fiscal discipline, preventing "excessive deficits";
• Support peer pressure.

> • Article 104: Excessive Deficit Procedure (EDP)
> • Protocol on the EDP: 3% and 60% reference values
> • Article 99: Co-ordination of economic policies
> • Other relevant provisions
> > - Article 101: no monetary ECB financing of governments;
> > - Article 102: no privileged government access to financial institutions;
> > - Article 103: no bail out of public entities by the Community.

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Fiscal framework and rules in the EMU (2)

Preventive arm – monitoring and surveillance
- Multilateral surveillance via Stability and Growth/Convergence Programmes;
- Country medium-term objective (MTO) (cyclically adjusted balance net of one-off measures), provide safety margins below 3% ceiling;
- Annual adjustment of 0.5% of GDP, more effort in good times;
- Account for structural reforms, under clearly defined conditions.

Corrective/dissuasive arm – Excessive Deficit Procedure (EDP)
- Severe economic downturn (continued negative growth, accumulated loss of output due to low growth);
- Other relevant factors (sustainability, investment, quality, solidarity financial contributions, EU unification);
- Deadlines for correcting excessive deficits;
- Unexpected adverse developments.

The SGP consists of a Resolution of the European Council of 17 June 1997, published on 2 August 1997, and of two Regulations of the European Council, N.º 1466/97 and N.º 1467/97, both from 7 July 1997, published on 2 August 1997, modified by Regulations N.º 1055/2005 and N.º 1056/2005 of 27 June 2005. See the EC site for additional information: **http://ec.europa.eu/economy_finance/sg_pact_fiscal_policy/**.

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3. Fiscal developments and the EDP

Fiscal developments

Public finances in Portugal (1/2):

• Boom in the run-up to the euro; low real interest rates; investment, consumption, and wages surged; fiscal policy loosened. [IMF (2008]

• Low productivity; competitiveness gap; big current account and fiscal deficits; high household, corporate, and government debt.

• Some issues when monitoring public finances:

  - A commission (under the aegis of the central bank) in 2002 determined the size of the 2001 budget deficit. A much higher deficit triggered the 1st EDP;

  - A similar revision in 2005 doubled the initial deficit, and set off the 2nd EDP.

• Overall spending shocks i) generate "crowding-out"; ii) have a persistent and positive impact on the price level and on the average cost of refinancing the debt. [Afonso and Sousa (2009a, b)]

• Government investment has exhibited crowding-in effects and positive macro-economic rates of return. [Afonso and St. Aubyn (2009)]

Public finances in Portugal (2/2):

• Fiscal stabilization responses have been biased towards increases in government revenue.
• Government spending is more persistent than revenue.
• Deficit bias, while repeated reversals of taxes made the budget procyclical [Afonso, Claeys, and Sousa (2009)].
• Economic booms have typically been used to relax tax pressure, especially during elections.

• One-off measures have been preferred over structural ones to contain the deficit during economic crises.
• Regime shift in 1988, fiscal policy becomes slightly more passive and countercyclical after 1988, but continued to be unsustainable.

• Spend-and tax causality until 1985; after the 2nd half of the 1980s, rather a tax-and-spend behaviour [Afonso, Rault, 2009a]. ▷

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Budget balance (% of GDP)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Belgium	-0.8	-0.5	0.1	0.6	0.0	0.1	0.0	-2.3	0.3	-0.2	-1.2	-5.9	-5.8	-5.8
Germany	-2.2	-1.5	1.3	-2.8	-3.7	-4.0	-3.7	-3.2	-1.6	0.2	0.0	-3.4	-5.0	-4.6
Ireland	2.4	2.7	4.6	0.8	-0.4	0.4	1.4	1.0	3.0	0.3	-7.2	-12.5	-14.7	-14.7
Greece	-4.3	-3.4	-4.0	-4.9	-5.2	-6.2	-7.9	-5.5	-2.6	-3.7	-7.7	-12.7	-12.2	-12.8
Spain	-3.1	-1.3	-0.9	-0.5	-0.3	0.0	-0.2	1.1	1.8	1.9	-4.1	-11.2	-10.1	-9.3
France	-2.6	-1.7	-1.5	-1.5	-3.2	-4.1	-3.6	-3.0	-2.4	-2.7	-3.4	-8.3	-8.2	-7.7
Italy	-2.8	-1.7	-0.8	-3.1	-2.9	-3.5	-3.5	-4.2	-3.4	-1.5	-2.7	-5.3	-5.3	-5.1
Cyprus	-4.1	-4.3	-2.3	-2.2	-4.4	-6.3	-4.1	-2.4	-1.2	3.4	0.9	-3.5	-5.7	-5.9
Luxembourg	3.4	3.4	6.0	6.1	2.1	0.4	-1.2	-0.3	1.3	3.7	2.5	-2.2	-4.2	-4.2
Malta	-9.8	-7.6	-6.2	-6.4	-5.5	-10.0	-4.9	-3.0	-2.5	-2.2	-4.7	-4.5	-4.4	-4.3
Netherlands	-0.9	0.4	2.0	-0.2	-2.0	-3.1	-1.8	-0.3	0.5	0.2	0.7	-4.7	-6.1	-5.6
Austria	-2.3	-2.2	-1.5	0.0	-0.5	-1.6	-1.2	-1.6	-1.5	-0.6	-0.4	-4.3	-5.5	-5.3
Portugal	-3.0	-2.7	-2.9	-4.3	-2.9	-2.9	-3.3	-6.1	-3.9	-2.6	-2.7	-8.0	-8.0	-8.7
Slovenia	-2.4	-2.0	-3.9	-4.3	-2.5	-2.8	-2.3	-1.5	-1.2	0.0	-1.8	-6.3	-7.0	-6.9
Slovakia	-4.8	-6.4	-11.8	-6.5	-7.7	-2.7	-2.4	-2.8	-3.6	-1.9	-2.3	-6.3	-6.0	-5.5
Finland	1.7	1.6	6.9	5.0	4.1	2.5	2.3	2.7	4.1	5.2	4.5	-2.8	-4.5	-4.3
Euro area	-2.3	-1.3	0.0	-1.8	-2.5	-3.1	-2.8	-2.5	-1.3	-0.6	-2.0	-6.4	-6.9	-6.5
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bulgaria	1.7	0.4	-0.5	0.2	-0.2	-0.9	2.2	1.8	3.0	0.1	1.8	-0.8	-1.2	-0.4
Czech Republic	-5.0	-3.7	-3.7	-5.7	-6.8	-6.6	-2.9	-3.6	-2.6	-0.7	-2.1	-6.6	-5.5	-5.7
Denmark	0.0	1.3	2.3	1.5	0.2	0.0	2.0	5.2	5.2	4.5	3.4	-2.0	-4.8	-3.4
Estonia	-0.3	-3.6	-0.2	-0.3	0.4	2.0	2.3	1.6	2.3	2.6	-2.7	-3.0	-3.2	-3.0
Latvia	-0.6	-4.3	-2.8	-2.1	-2.3	-1.6	-1.0	-0.4	-0.5	-0.3	-4.1	-9.0	-12.3	-12.2
Lithuania	-3.1	-2.8	-3.2	-2.1	-1.9	-1.3	-1.5	-0.5	-0.4	-1.0	-3.2	-9.8	-9.2	-9.7
Hungary	-8.0	-5.4	-2.9	-4.0	-8.9	-7.2	-6.5	-7.9	-9.3	-5.0	-3.8	-4.1	-4.2	-3.9
Poland	-4.3	-2.3	-3.0	-5.1	-5.0	-6.3	-5.7	-4.1	-3.6	-1.9	-3.6	-6.4	-7.5	-7.6
Romania	-3.2	-4.5	-4.6	-3.3	-2.0	-1.5	-1.5	-1.2	-2.2	-2.5	-5.1	-5.6	-6.8	-5.9
Sweden	1.1	1.4	3.8	1.6	-1.2	-0.9	0.8	2.3	2.5	3.8	2.5	-2.6	-3.9	-2.7
UK	0.1	1.2	4.0	1.0	-1.6	-3.2	-3.1	-3.4	-2.7	-2.7	-5.0	-12.1	-12.9	-11.1
EU27	-1.9	-1.0	0.6	-1.4	-2.5	-3.1	-2.8	-2.4	-1.4	-0.8	-2.3	-6.9	-7.5	-6.9

Reasons for breaches in 2001/2002:
- expenditure rises in France and Portugal;
- large revenue reductions unmatched by expenditure cuts in Germany pushed the deficit beyond 3% [Afonso and Claeys (2008)].
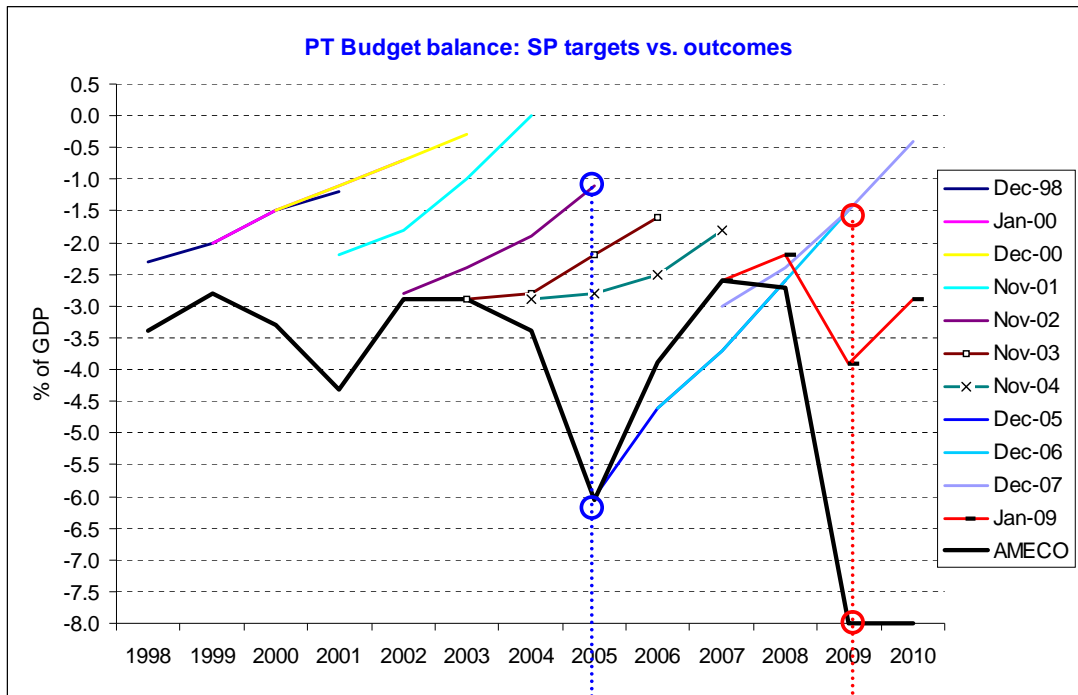
▷

Source: EC, Ameco and Autumn 2009 forecasts.

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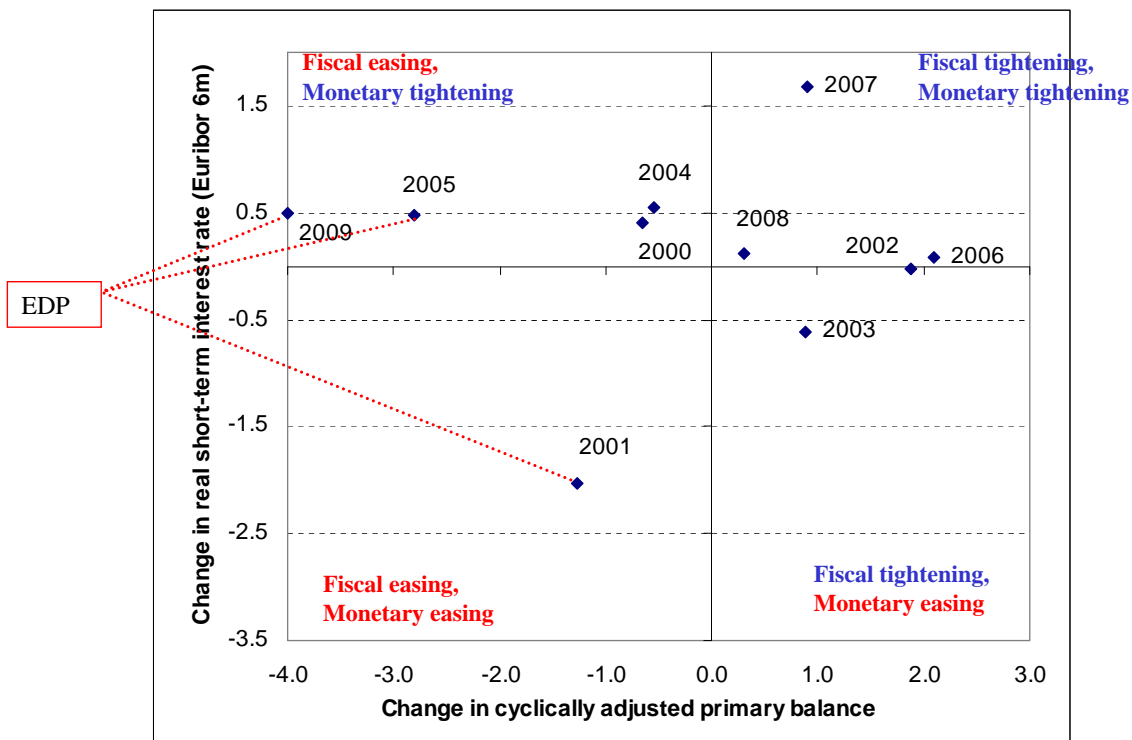António Afonso, 2009

Sliding fiscal targets

PT Budget balance: SP targets vs. outcomes

Source: Stability Programmes, EC autumn 2009.

Deviation of 5 pp for 2005 (vis-à-vis Nov02).

Deviation of 6.5 pp for 2009 (vis-à-vis Dec06).

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Monetary and fiscal conditions in Portugal , 2000-2009

Source: EC, autumn 2009 forecasts, Eurostat, Reuters, and own calculations.
Note: Euribor and CPI in 2009, average of Jan-Oct.

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4. Sustainability issues

Sidebar: Sustainability

Some considerations

– Generally, fiscal sustainability is considered on a country basis and can usually only be restored by changing national fiscal policies.

– The sustainability of public finances is a key policy issue for the EU as an important support for the implementation of monetary policy.

– It is not possible to discard adverse responses from the financial markets when a country's fiscal behaviour is deemed to be unsustainable.

– Implicit liabilities, aging, and unfunded public pensions may further undermine sustainability.

– Several studies confirm non-sustainable path for government debt in Portugal. [Afonso, 2005; Marinheiro, 2006; Guichard and Leibfritz, 2006, Afonso and Rault, 2008a, 2009b]

– Worse current initial position, with lagging growth and tax revenues in 2009. [BP (2009a, b), MF (2009), OECD (2009)]

Government budget constraint: $G_t + (1+r_t)B_{t-1} = R_t + B_t$

Present value borrowing constraint (PVBC), may be written as

$$GG_t - R_t = \sum_{s=0}^{\infty} \frac{1}{(1+r)^{s-1}} (\Delta R_{t+s} - \Delta E_{t+s}) + \lim_{s \to \infty} \frac{B_{t+s}}{(1+r)^{s+1}}$$

$$GG_t = G_t + r_t B_{t-1} \qquad E_t = G_t + (r_t - r)B_{t-1}$$

• If *GG* and *R* are I(1), they should be cointegrated with cointegration vector (1,-1) for the left-hand side of the PVBC to be stationary.

Cointegration regression:
$$R_t = a + bGG_t + u_t$$

b = 1, the debt-to-GDP ratio does not diverge in an infinite horizon.

G - primary government expenditures, *R* - government revenues,
B - public debt, *r* - real interest rate.

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Country			t-Stat.	Prob.	Country			t-Stat.	Prob.
Austria	*a*	9.260	12.0	0.000	Latvia	*a*	12.149	2.9	0.000
	b	0.770	48.0	0.000		*b*	0.657	5.6	0.000
Belgium	*a*	9.423	7.4	0.000	Lithuania	*a*	20.856	12.8	0.000
	b	0.705	28.3	0.000		*b*	0.362	8.4	0.000
Cyprus	*a*	-3.815	-0.8	0.369	Luxembourg	*a*	3.747	3.3	0.001
	b	1.004	9.7	0.000		***b***	**0.941**	30.5	0.000
Czech Republic	*a*	32.744	13.3	0.000	Malta	*a*	-11.073	-1.1	0.242
	b	0.155	2.9	0.000		*b*	1.105	5.2	0.000
Denmark	*a*	6.893	5.4	0.000	Netherlands	*a*	5.105	6.7	0.000
	b	**0.863**	34.2	0.000		***b***	**0.845**	55.1	0.000
Finland	*a*	9.453	8.1	0.000	**Portugal**	***a***	**6.103**	**9.0**	**0.000**
	b	**0.834**	32.8	0.000		***b***	**0.713**	**38.7**	**0.000**
France	*a*	7.711	13.4	0.000	Romania	*a*	13.027	3.9	0.000
	b	0.792	64.9	0.000		*b*	0.611	7.5	0.000
Germany	*a*	14.360	15.5	0.000	Spain	*a*	5.273	10.1	0.000
	b	0.639	30.9	0.000		*b*	0.780	53.8	0.000
Greece	*a*	8.129	10.6	0.000	Sweden	*a*	23.497	16.5	0.000
	b	0.644	36.7	0.000		*b*	0.580	22.8	0.000
Ireland	*a*	8.283	5.4	0.000	UK	*a*	12.935	5.8	0.000
	b	0.674	17.9	0.000		*b*	0.628	11.6	0.000
Italy	*a*	6.499	4.7	0.000					
	b	0.698	23.0	0.000					

SUR cointegration (1960-2006)
[Afonso and Rault, 2008a]

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Some evidence:

– **Fiscal policy broadly sustainable for a EU15 panel** in 1970-2006 (**more clearly in 1992-2006**), but a problem in several countries.

– Panel cointegration **shows a long-run relationship between revenue and expenditure ratios** particularly after 1992 (at the 10% level), both using conventional (asymptotic) critical values and bootstrap panel cointegration);

– SUR cointegration analysis (allowing for cross-sectional dependency) identifies **countries with less sustainable public finances** [Portugal included].

[Afonso (2005), Afonso and Rault (2008a, 2009b)]

Sustainability

Implicit sustainability (sustainability gaps, debt level)

• **High risk**, 13 countries (euro area: Ireland, Greece, Spain, Cyprus, Malta, Netherlands, Slovenia and Slovakia);
• **Medium risk**, 9 countries (euro area: Belgium, Germany, France, Italy, Luxembourg, Austria, **Portugal**);
• **Low risk**, Finland;
• Compared to 2006, 10 EU countries have a higher risk category (euro area: Ireland, Spain, Malta, Netherlands, Austria and Slovakia), due to deterioration in the budgetary position. [EC, 2009]

• No-change scenario, the debt ratio in Portugal can reach 156% in 2030 and 390% in 2060.
• Structural primary balance needs to improve by 5.5% of GDP to close sustainability gap.

Sustainability

5. Financing fiscal imbalances

Long-term interest rates and debt

The change in interest payments (*I*) can be decomposed:

$$\Delta I = \underbrace{\Delta B \times i}_{\substack{\text{Effect via} \\ \text{change in} \\ \text{debt}}} + \underbrace{\Delta i \times B}_{\substack{\text{Effect via} \\ \text{change in} \\ \text{interest rate}}} + \underbrace{\Delta B \times \Delta i}_{\substack{\text{Cross effect} \\ \text{(residual)}}}$$

I – interest payments (general government);
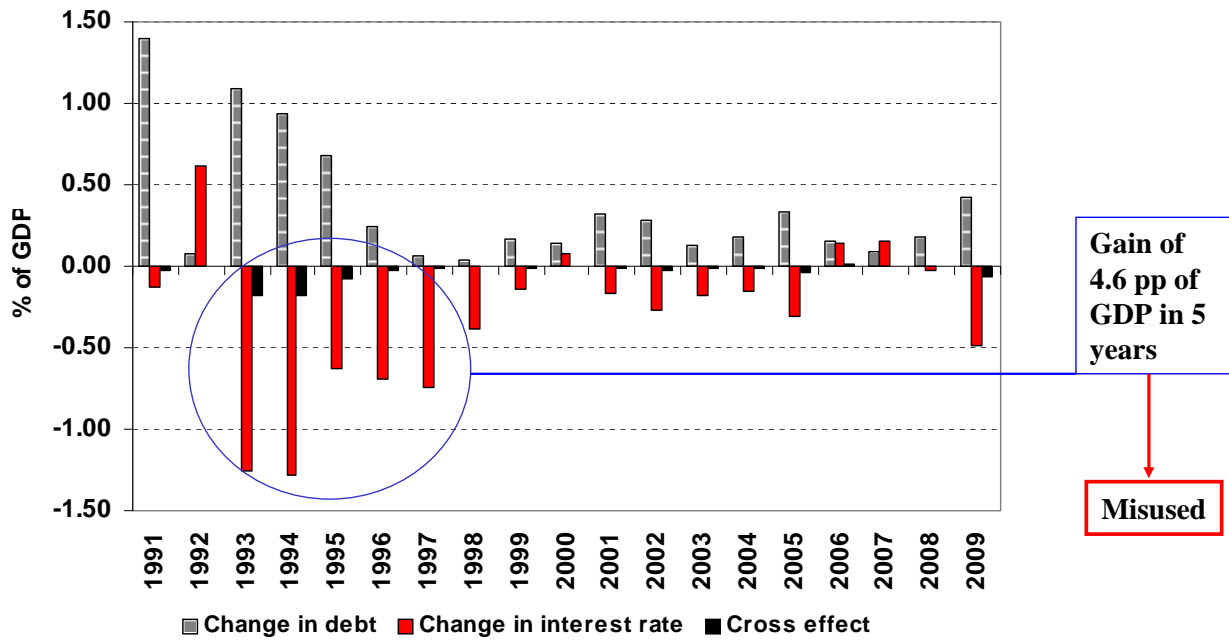*B* – general government debt;
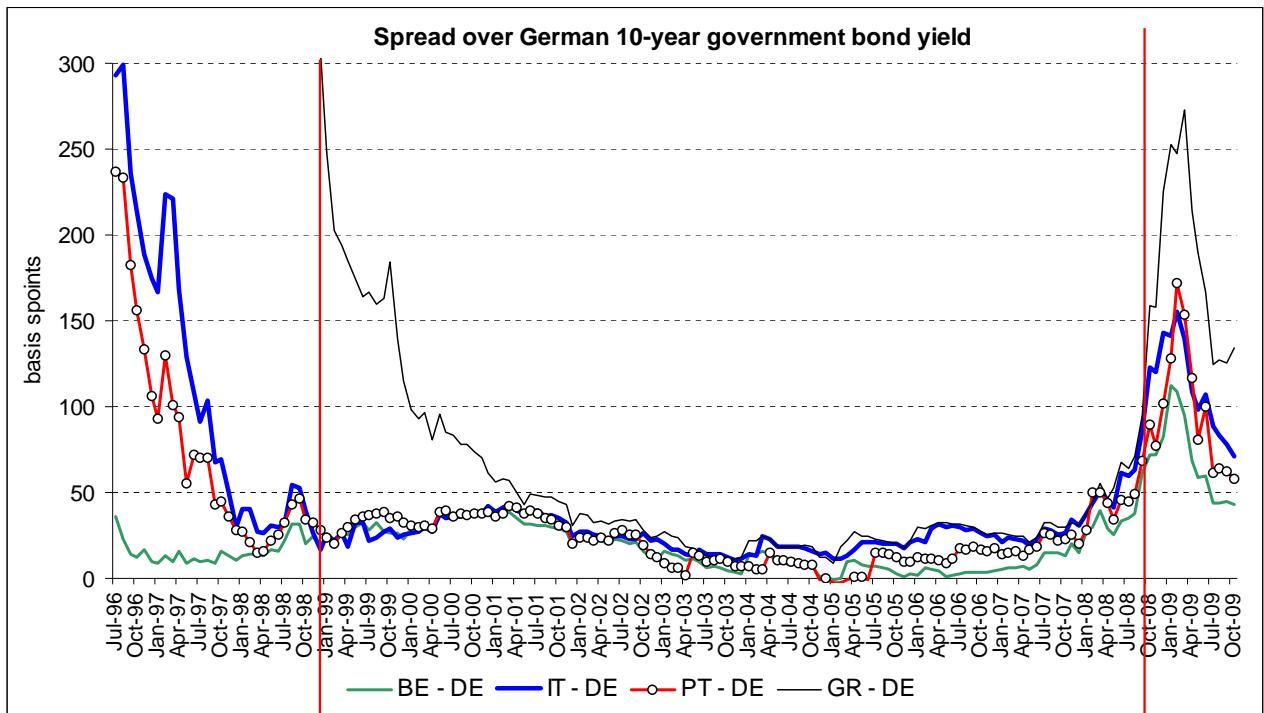*i* – average implicit interest rate (*I/B*).

Decomposition of the change in interest payments, 1991-2009

Gain of
4.6 pp of
GDP in 5
years

Misused

■ Change in debt   ■ Change in interest rate   ■ Cross effect

Source: EC, Ameco 22/10/2009, and own calculations.

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Spread over German 10-year government bond yield

BE - DE   IT - DE   PT - DE   GR - DE

Sources: Reuters.

Jan. 1999, launch of the euro.

Lehman Brothers filed for bankruptcy protection
on September 15, 2008.

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Sovereign credit ratings for euro area countries (November 2009)

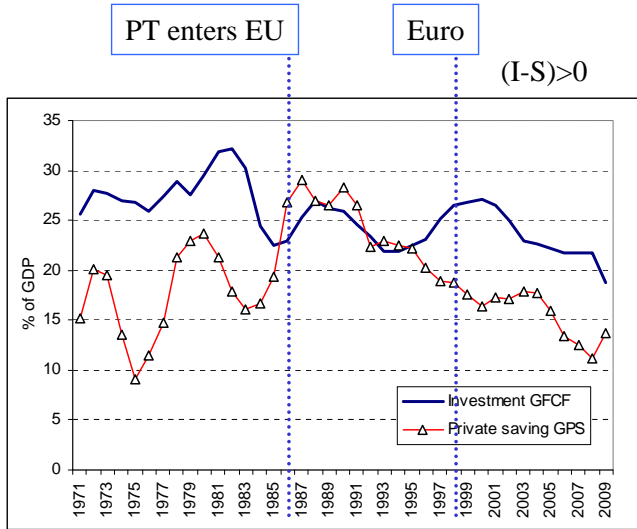| Characterization of debt and issuer	Ratings					
	S&P	**Countries**	**Moody's**	**Countries**	**Fitch**	**Countries**
Highest quality	AAA	AT, DE, FI, FR, LU, NL	Aaa	AT, DE, ES, FI, FR, LU, NL	AAA	AT, DE, ES, FI, FR, LU, NL
High quality	AA+	BE, ES	Aa1	BE, IR	AA+	BE
	AA	IR, SL	Aa2	SL, IT, PT	AA	SL, PT
	AA-		Aa3	CY	AA-	IR, IT, CY
Strong payment capacity	A +	IT, CY, PT, SK	A1	GR, MT, SK	A+	MT, SK
	A	MT	A2		A	
	A-	GR	A3		A-	GR

Sources: S&P, Moody's, and Fitch.

- Capital <u>markets are differentiating issuers (not in the past</u>, Afonso and Strauch, 2007);
- <u>Fiscal performance does matter</u> both for ratings and for long-term interest rates
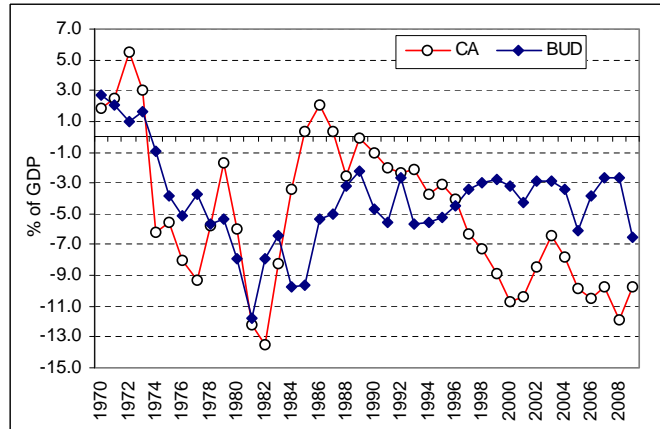[Afonso, Gomes and Rother (2007); Afonso (2009)].

▷

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"A smaller federal budget deficit would mean more national saving, less reliance on foreign capital flows, and a smaller trade deficit. The trade deficit and the budget deficit are not twins, but they are cousins." [Mankiw (2006)]

• The relationship between budget balances and current account balances, positive in 1970-1989, became negative in the period 1990-2007, for Belgium, France, Greece, and Portugal. [Afonso and Rault (2008b, c)]

• Decline in private-sector saving rates in several OECD countries in the late 1990s, while fiscal consolidation efforts also occurred during that period in several EU countries.

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PT enters EU   Euro

(I-S)>0

CA<0

Source: EC.

Source: EC.

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6. Achieving sounder public finances

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Change in the **cyclically adjusted primary budget balance** is at least 2 pp of GDP in one year or at least 1.5 pp points on average in the last two years.

	Expansions	Contractions		Expansions	Contractions
AU	76	84, 97, 01	IT		77, 83, 91-93
BE		82-83, 85, 95	LU	86-87, 02-04	83-85, 01
DK	76, 82, 94	83-86, 95-96	NL		91, 93, 95-96
FI	78-79, 87	76-77, 95-96, 00-01	**PT**	**80-81, 05**	**82-83, 86, 92**
FR		95-96	SP		95-96
GE	75, 90-91	82-83	SW	74, 79, 91-93, 01-02	76, 83-84, 87, 95-97
GR	75, 81, 85, 88-89, 01-02, 04	82-83, 86-87, 91-92, 94-97, 05	UK	72-73, 92-93, 02-03	81, 95-98
IR	74-75, 78-79, 95, 99, 01-02	76-77, 83-84, 88-89, 04			

Source: adapted from Afonso (2008).

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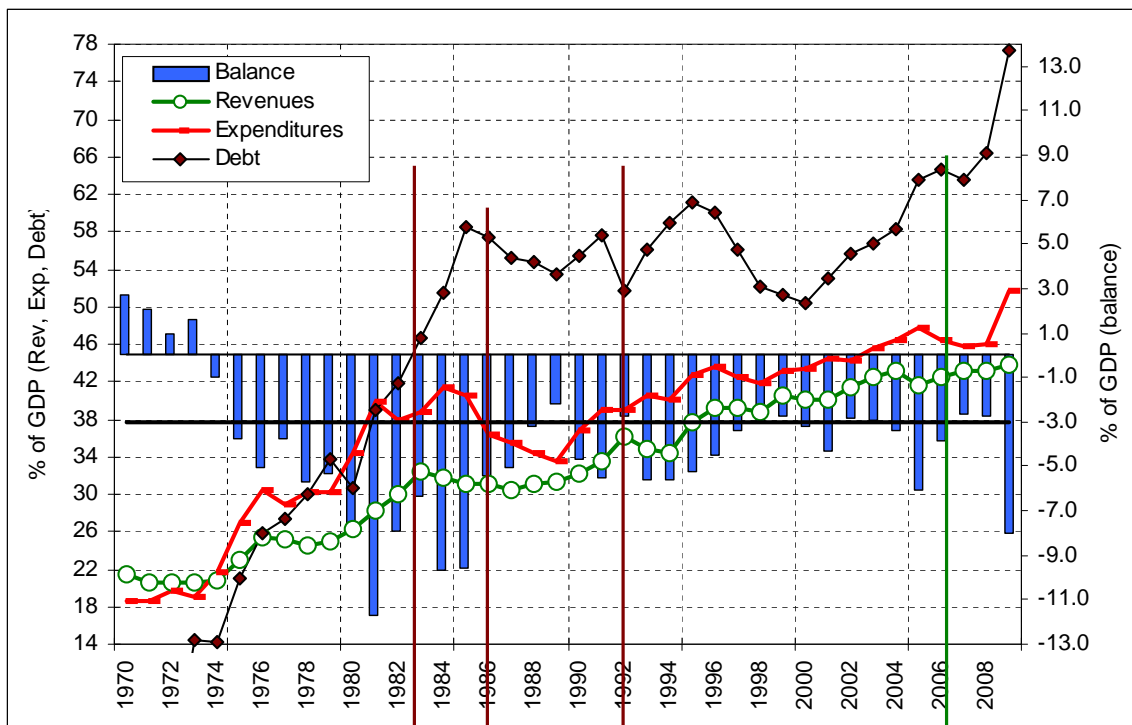
82-83: + Rev, + Exp, + Debt (after)

86: - Exp, - Debt (after)

92: + Rev, + Exp, + Debt (after)

06-07: + Rev, - Exp, + Debt (after)

Source: EC, AMECO and Autumn 2009 forecasts; Afonso (2008).

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- **Compensation of employees** diverged vis-à-vis the EU15/euro area, impinging adversely on competitiveness.
- Evidence for the OECD shows public sector wage growth positively affecting private sector wage growth. [Afonso and Gomes, 2008]

Compensation of employees (General government)
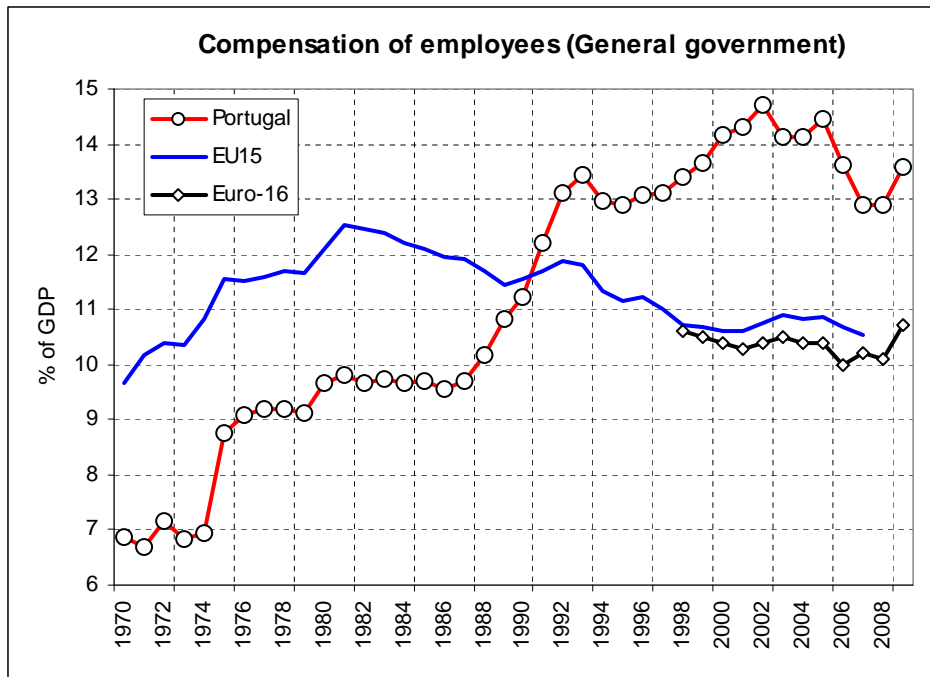
Source: EC, AMECO and Autumn 2009 forecasts.

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Better budgetary institutions

• Numerical fiscal rules: balanced budget rule; expenditure ceilings.
• Independent fiscal institutions:
    - ex-post assessment of compliance with budgetary targets;
    - independent fiscal council to provide technical input.
• Medium-term budgetary framework: extend the budgetary horizon beyond the current year.

Evidence [EC (2006), Debrun et al. (2009), Afonso and Hauptmeier (2009)]:

• "Stronger" fiscal rules are conducive to sounder public finances.
• Stricter and broader fiscal rules are associated with higher cyclically adjusted primary balances.
• High decentralization of government spending increases total primary spending-to-GDP ratio.

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Government reform, performance, efficiency

• Pension reforms helped increasing long-term fiscal sustainability.

• OECD points to shortcomings in the budget process in Portugal and in the planning and control of public spending. [(Bronchi, (2003)]

• In recent years, several steps have been taken to improve budget making in Portugal. [Curristine et al. (2008)]

• Better performance and efficiency of government spending is key. [Afonso et al. (2005), OECD (2009)]   ▷

• Since 2002, some public hospitals were transformed into public corporations. Still, no significant efficiency differences between the 2 types of hospitals. [Afonso, Fernandes (2008)]

• Indirect cost of public sector provision inefficiency: increase in the excess burden of taxation. [Afonso, Gaspar (2007)]

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High debt ratios lead to:
  • Weak growth;
  • Less flexibility to address economic shocks;
  • Higher long-term interest rates.

Debt-deficit simulation (1)
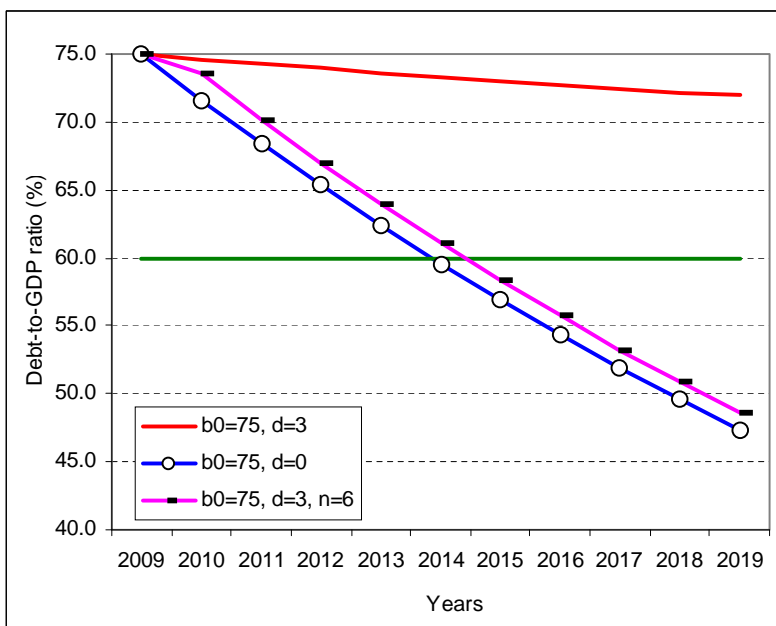
$$\Delta b_t = d_t - nb_t$$
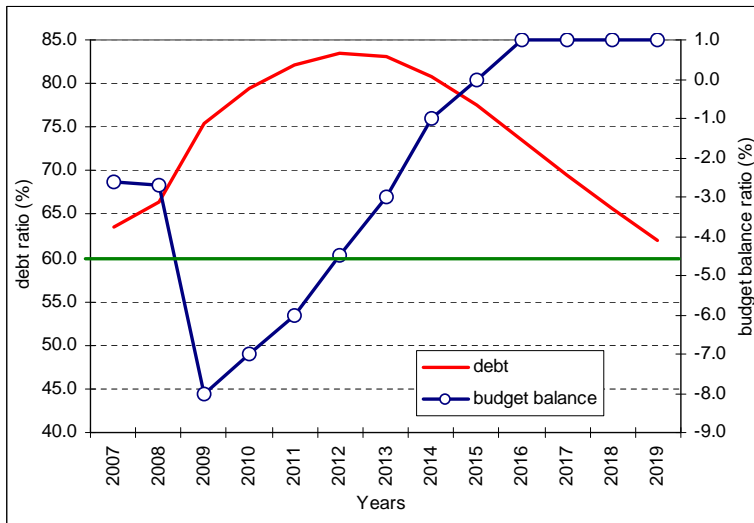
GDP nominal growth: n=4.5%

Balanced budget (d)

⬇

Debt ratio (b) goes to 60% in 5 years.

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Debt-deficit simulation (2)

GDP nominal growth: 4.0% (avg. 1999-2009)

	bud. bal.	debt
2007	-2.6	63.5
2008	-2.7	66.4
2009	-8.0	75.4
2010	-7.0	79.4
2011	-6.0	82.2
2012	-4.5	83.4
2013	-3.0	83.1
2014	-1.0	80.8
2015	0.0	77.5
2016	1.0	73.4
2017	1.0	69.5
2018	1.0	65.7
2019	1.0	62.1

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Behind the deficit

- 4/5 of projected fiscal deficits in 2009-2011 are structural (blue).
- Reversing the cyclical component (yellow) is not enough.

Source: EC, AMECO and Autumn 2009 forecasts.

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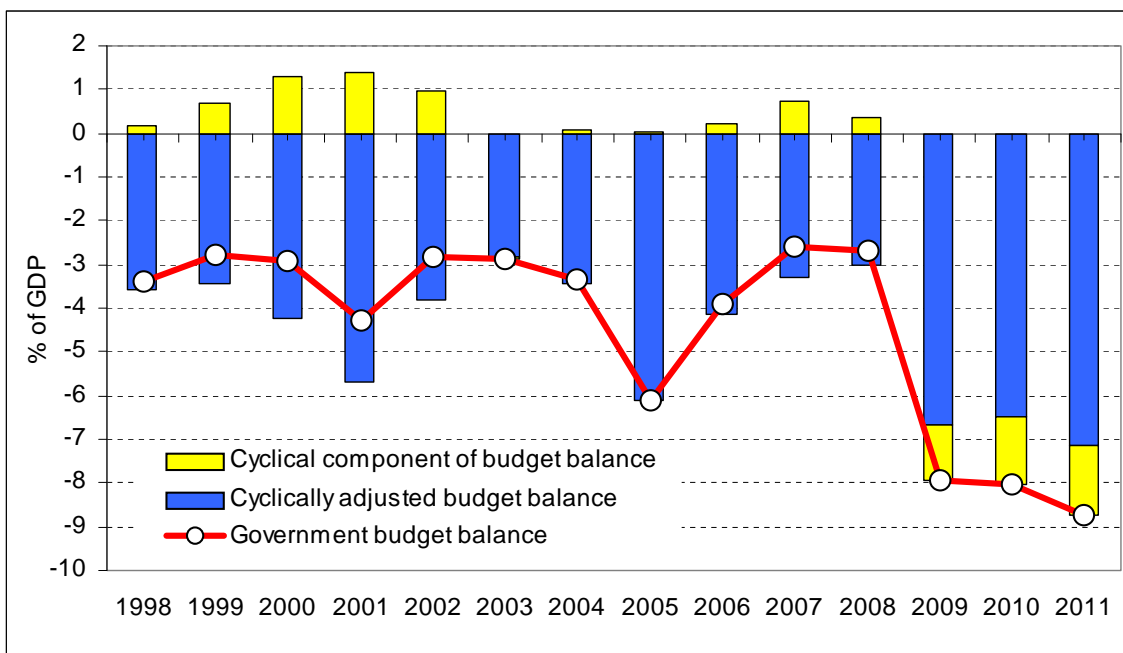
1. In the past <u>public spending control has been a problem in Portugal</u> with increasing primary spending.
2. The gains from <u>low interest rates</u> (4.6 pp of GDP in 1993-1997) were not used to consolidate public finances.
3. The episodes of fiscal improvement in the 1980s and in the 1990s have been short-termed and mostly not successful.
4. <u>Compensation of government employees diverged</u> vis-à-vis the EU15 average after 1987-88.
5. Debt ratio rose quickly in the early 1980s, then stabilised around 60% of GDP, but has drifted upward again since 1999.
6. <u>Public finances have been lacking sustainability</u>.
7. Since 1978 only in 7 years did the general government budget deficit not exceed 3% of GDP (EDPs in 2002, 2005, and 2009).
8. <u>Capital markets have started differentiating more sovereign issuers</u>.
9. It is important to take into account the imbalances of the public entities outside the Administrative Public Sector.

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10. Public administration reform and the reform of contributory pension schemes <u>have helped long-term fiscal sustainability</u>.
11. The large <u>persistence of government spending</u> makes it more difficult to act in a timely and temporary manner.
12. Government <u>spending efficiency is an issue</u>, and tackling it would improve performance and reduce spending.

Way forward:

1. Balance the budget in 5(?) years, but the debt ratio remains above 60% in 10 years.
2. Zero nominal annual growth of current primary spending (excluding health and education) in 2010-…
3. Strengthen the role of the Finance Minister (veto power over ministries' spending); top-down budgeting (overall ceiling for spending).
4. Put in place an independent council/fiscal institution, sufficiently staffed and with resources, not linked to the political cycle.

"**The question we ask today is not whether our government is too big or too small, but whether it works** (…). Where the answer is yes, we intend to move forward. Where the answer is no, programs will end. And those of us who manage the public's dollars will be held to account – to **spend wisely, reform bad habits, and do our business in the light of day** – because only then can we restore the vital trust between a people and their government." [Barack Obama inaugural speech, 20 January 2009]

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Background material

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A chronology for the EMU (1)

| 1952	Germany, France, Italy, Belgium, Luxembourg and Netherlands create the Economic Community of Carbon and (CECA).
1957	Treaty of Rome, launch of the European and Economic Community (EEC).
1960	European Association of Free Trade: Austria, Denmark, Norway, Portugal, Sweden, Switzerland and UK.
1967	Launch of the European Community (EC), from CECA, EEC and European Atomic Agency.
1972	Exchange rate parity system ("snake"), exchange rate fluctuations for each currency have a band of +/-2.25% around the central parity.
1973	UK, Ireland, and Denmark adhere to the exchange rate parity system.
1974	Free Trade agreement between the EC and EFTA.
1979	March, European and Monetary System (EMS), ECU and Exchange Rate Mechanism (ERM). Exchange rates have bands of +/-2.25%, and +/-6% for Italy. UK does not adhere.
1981	Greece enters the EC.
1986	Portugal and Spain enter the EC.
1987	The European Single Act modifies the Treaty of Rome, to create a a single European market of goods, services, labour and capital until the end of 1992.
1989	June, Spain enters ERM, +/-6% band.
1990	October, UK enters ERM, +/-6% band. 1 July, 1st phase of Economic and Monetary Union (EMU), free capital mobility.
1991	December, European Council meeting in Maastricht, EU Treaty, start of the European Union (EU).

Source: updated from Pereira et al. (2009).

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A chronology for the EMU (2)

1992	Portugal enters the ERM, +/-6% band. September, speculative movements in the capital markets force Italy and the UK to leave the ERM.
1993	August, +/-15% band for all currencies except for the Dutch florim that kept the +/-2.25% band.
1994	European Monetary Institute, 2nd phase of EMU.
1995	Austria, Finland and Sweden join the EU.
1996	Italy returns to the ERM.
1997	ERM II. Adoption of the Stability and Growth Pact.
1998	1 June, ECB and ESCB are established.
1999	Launch of the euro, 3rd phase of EMU.
2001	Greece joins the euro area. July ECOFIN, rules for the Stability and Growth Programmes.
2002	Euro cash changeover.
2004	Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovak, and Slovenia join the UE.
2005	March ECOFIN, reform of the Stability and Growth Pact.
2007	Slovenia joins the euro area, national central banks of Bulgaria and Romania join the ESCB.
2008	Malta and Cyprus join the euro area.
2009	Slovakia joins the euro area.

Source: updated from Pereira et al. (2009).

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The fiscal framework
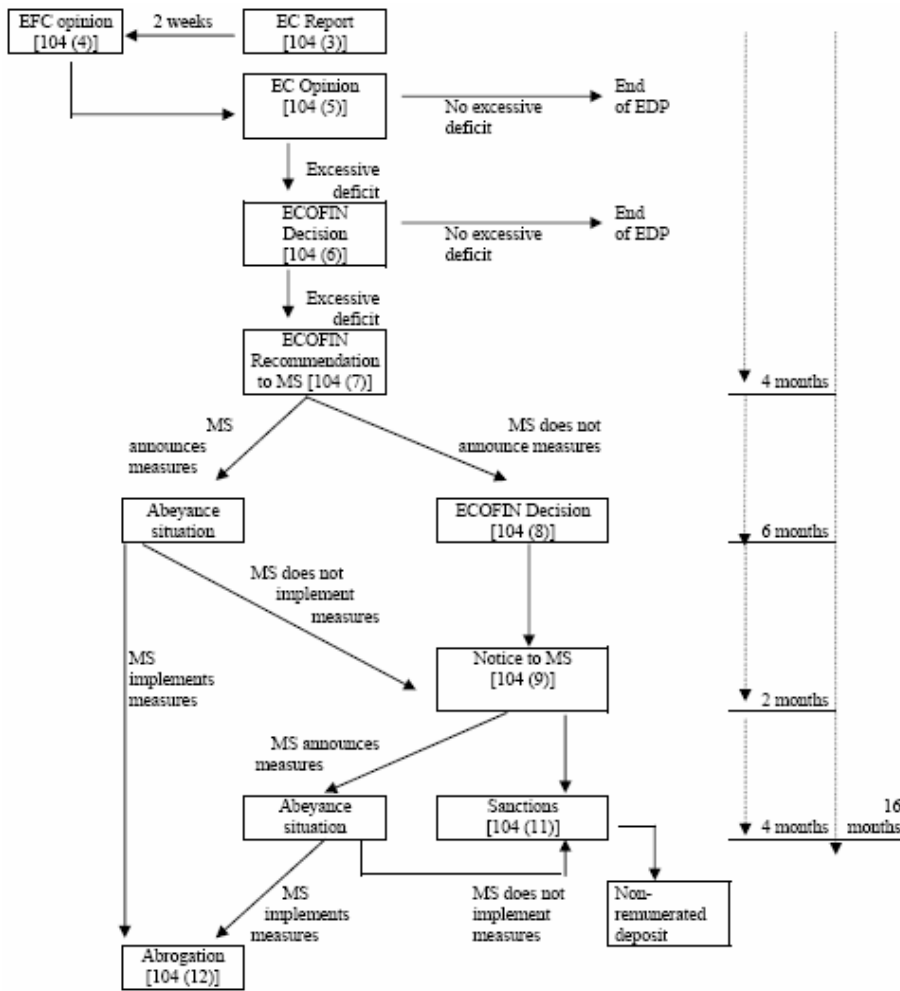
Excessive Deficit Procedure

Source: Pereira, P.; Afonso, A.; Arcanjo, M. and Santos, J. (2009).

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Public finances in Portugal

Fiscal developments

• Spend-and tax causality until 1985;

• After the 2nd half of the 1980s, rather a tax-and-spend behaviour.

Panel	Revenue ⇒ Spending		Spending ⇒ Revenue (spend-and-tax)
	$\Delta R \Rightarrow \Delta G$ (tax-and-spend)	$\Delta R \Rightarrow \nabla G$	
EU15, 1960-2006	Germany	Ireland	Austria, Italy, France, Spain, Greece, Sweden
EU15, 1960-1985	Belgium, Germany, Spain, Sweden, Luxembourg, UK		Greece, Italy, Portugal
EU15, 1986-2006	Austria, Finland, Portugal	Belgium, Denmark, Italy, Sweden	France, Ireland
EU25, 1960-2006; NMS, 1998-2006	Czech Republic, Estonia, Lithuania, Poland, Slovakia Germany, Luxembourg	Ireland	Slovakia, Austria, France, Greece, Ireland, Italy, Spain

Source: Afonso, Rault (2009a).

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Ongoing excessive deficit procedures

◁

Country	Date of the Commission report (Article 104.3)	Council Decision on existence of excessive deficit (Art. 104.6)	Initial deadline for correction	Deadlines proposed in October 2009
Belgium	07-Oct-09			2012
Czech Republic	07-Oct-09			2013
Germany	07-Oct-09			2013
Italy	07-Oct-09			2012
Netherlands	07-Oct-09			2013
Austria	07-Oct-09			2013
Portugal	**07-Oct-09**			**2013**
Slovenia	07-Oct-09			2013
Slovakia	07-Oct-09			2013
Poland	13-May-09	07-Jul-09	2012	
Romania	13-May-09	07-Jul-09	2011	
Lithuania	13-May-09	07-Jul-09	2011	
Malta	13-May-09	07-Jul-09	2010	
France	18-Feb-09	27-Apr-09	2012	2013
Latvia	18-Feb-09	07-Jul-09	2012	
Ireland	18-Feb-09	27-Apr-09	2013	2014
Greece	18-Feb-09	27-Apr-09	2010	
Spain	18-Feb-09	27-Apr-09	2012	2013
UK	11-Jun-08	08-Jul-08	financial year 2013/14	financial year 2014/15
Hungary	12-May-04	05-Jul-04	2011	

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Current account and budget balance

GDP (Y) in an open economy,

$$Y = C + I + G + X - M \qquad (1)$$

C - private consumption, I - private investment, G - government expenditure, X - exports of goods and services, M - imports of goods and services.

Private saving S is given by disposable income net of consumption expenditure, and taxes, T

$$S = Y - C - T \qquad (2)$$

(1) and (2) relate the current account balance ($CA = X - M$) to the difference between national investment and national saving, the sum of private and public saving, government balance ($BUD = T - G$):

$$(X - M) = (S - I) + (T - G) \qquad (3)$$
$$CA = (S - I) + BUD. \qquad (4)$$

◁

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The message of sovereign ratings

		Portugal			Spain			Greece			Italy			Ireland		
		1998		2005	1998		2005	1998		2005	1998		2005	1998		2005
Rating	Moody's	Aa2 (15)		Aa2 (15)	Aa2 (15)		Aaa (17)	Baa1 (10)		A1 (13)	Aa3 (14)		Aa2 (15)	Aaa (17)		Aaa (17)
	S&P	AA (15)		AA- (14)	AA (15)		AAA (17)	BBB (9)		A (12)	AA (15)		AA- (14)	AA+ (16)		AAA (17)
	Fitch	AA (15)		AA (15)	AA (15)		AAA (17)	BBB (9)		A (12)	AA- (14)		AA (15)	AAA (17)		AAA (17)
Moody's	Macro contribution	0.53	0.73	0.93	1.69	1.98	2.28	1.33	1.52	1.70	0.91	1.08	1.26	1.46	1.83	2.20
	Gov. contribution	-0.69	-0.46	-0.23	0.27	0.65	1.03	-0.05	-0.01	0.02	-0.03	0.14	0.31	0.20	0.39	0.58
	External contribution	0.09	0.12	0.15	0.22	0.31	0.39	0.18	0.24	0.31	0.17	0.24	0.30	0.15	0.21	0.26
	Overall change	**-0.07**	**0.39**	**0.86**	**2.19**	**2.95**	**3.70**	**1.46**	**1.75**	**2.03**	**1.05**	**1.46**	**1.87**	**1.81**	**2.43**	**3.05**
S&P	Macro contribution	0.42	0.57	0.73	0.94	1.07	1.20	0.99	1.13	1.27	0.56	0.67	0.77	0.91	1.15	1.38
	Gov. contribution	-1.06	-0.88	-0.70	0.48	0.77	1.06	-0.13	-0.10	-0.08	0.07	0.21	0.34	0.83	0.98	1.14
	External contribution	0.03	0.05	0.08	0.07	0.14	0.21	0.06	0.11	0.16	0.05	0.11	0.16	0.05	0.09	0.14
	Overall change	**-0.61**	**-0.25**	**0.11**	**1.49**	**1.98**	**2.47**	**0.91**	**1.14**	**1.36**	**0.69**	**0.98**	**1.26**	**1.78**	**2.22**	**2.66**
Fitch	Macro contribution	0.90	0.99	1.08	1.78	2.01	2.25	1.43	1.56	1.69	1.06	1.18	1.30	1.92	2.14	2.35
	Gov. contribution	-1.26	-1.05	-0.85	-0.46	-0.13	0.19	-0.11	-0.08	-0.06	-0.45	-0.29	-0.14	0.15	0.31	0.47
	External contribution	-0.06	-0.03	-0.01	-0.16	-0.09	-0.02	-0.13	-0.07	-0.01	-0.12	-0.07	-0.01	-0.11	-0.06	-0.01
	Overall change	**-0.42**	**-0.10**	**0.23**	**1.16**	**1.79**	**2.42**	**1.19**	**1.40**	**1.62**	**0.49**	**0.81**	**1.14**	**1.97**	**2.39**	**2.81**

Note: The upper and lower bounds where calculated using plus and minus one standard deviation.

Macro – GDP, per capita GDP, inflation, unemployment; Gov – debt and deficit, government effectiveness; External – current account, external position.
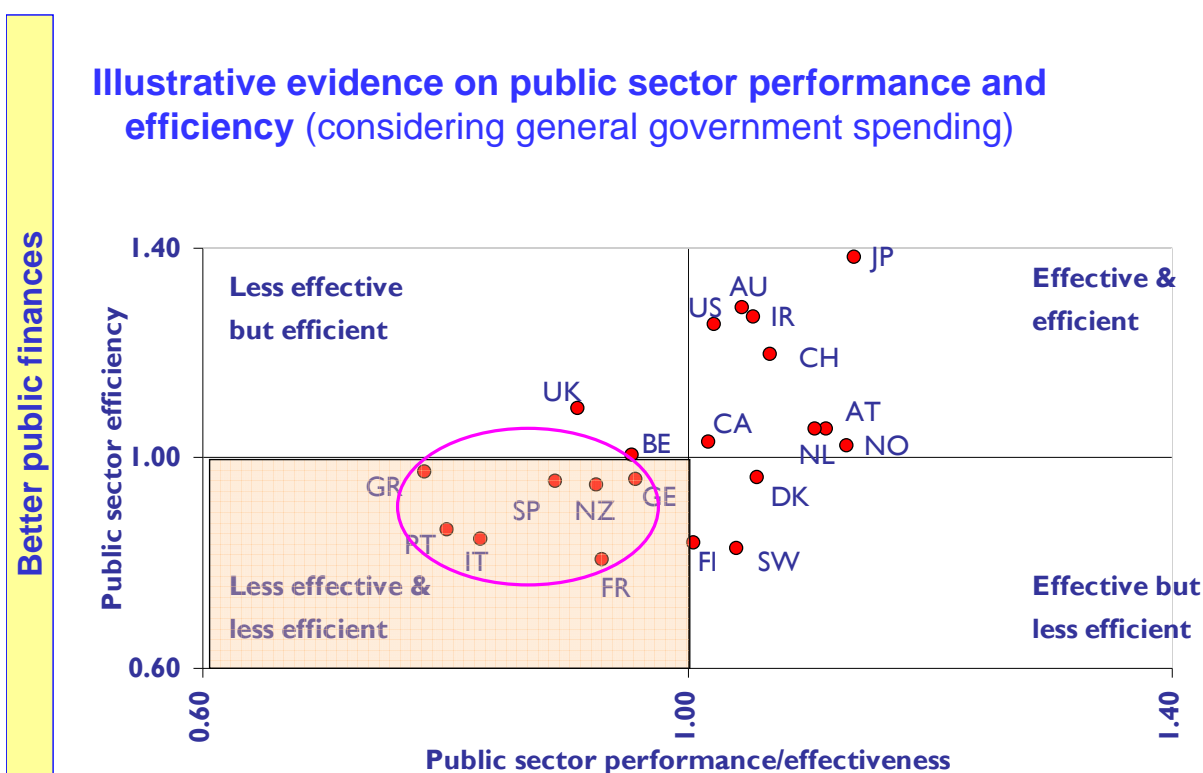
Source: Afonso, Gomes and Rother (2007).

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Illustrative evidence on public sector performance and efficiency (considering general government spending)

Good performance (two right-hand side quadrants), include
lower efficiency/higher spending (Finland, Sweden, and Denmark) and
higher efficiency/lower spending (Austria, Japan, Ireland, US).

Source: Adapted from Afonso, Schuknecht and Tanzi (2005).

Some evidence on education efficiency (2000)

Better public finances

Country	Input oriented	
	Efficiency score	Rank
Australia	0.788	13
Belgium	0.689	17
Czech Republic	0.879	6
Denmark	0.857	11
Finland	**1.000**	**1**
France	0.761	14
Germany	0.893	5
Greece	0.716	16
Hungary	0.801	12
Italy	0.727	15
Japan	**1.000**	**1**
Korea	**1.000**	**1**
New Zealand	0.877	8
Portugal	0.879	7
Spain	0.876	9
Sweden	**1.000**	**1**
UK	0.860	10
Average	0.859	

• Average input efficiency score: 0.859.

• Compared to the "best performers" (score of 1) the average country could have achieved the same output using about 14% less resources.

• Portugal could have achieved the same output using about 12% less resources.

Source: adapted from Afonso and St. Aubyn (2005). Inputs – hours per year in school (2000) and teachers per 100 students (2000); output – PISA 2000 survey indicator (simple average of OECD PISA sub-indicators).

Table 3 – Results for education efficiency (n=25)
2 inputs (teachers-students ratio, hours in school) and 1 output (PISA 2003 indicator)

Better public finances

Country	DEA Output oriented		Peers
	VRS TE	Rank	
Australia	1.038	7	Finland
Austria	1.095	14	Finland
Belgium	1.055	8	Finland
Czech Republic	1.068	9	Finland
Denmark	1.093	13	Finland
Finland	1.000	1	Finland
France	1.072	10	Finland
Germany	1.083	12	Finland, Korea
Greece	1.182	21	Finland
Hungary	1.105	15	Finland
Indonesia	1.447	25	Finland, Korea
Ireland	1.079	11	Finland, Korea
Italy	1.151	19	Finland
Japan	1.024	4	Finland, Korea
Korea	1.000	1	Korea
Netherlands	1.037	6	Finland, Korea
New Zealand	1.036	5	Finland, Korea
Norway	1.109	16	Finland
Portugal	1.161	20	Finland
Slovak Republic	1.118	17	Finland
Spain	1.129	18	Finland
Sweden	1.000	1	Sweden
Thailand	1.283	24	Finland, Korea
Turkey	1.260	22	Finland, Korea, Sweden
Uruguay	1.278	23	Finland, Korea
Average	1.116		

DEA results

Note: in this example inefficient values are higher than unity.

With the same inputs, it would be possible to increase the output.

Source: Afonso and St. Aubyn (2006).

Health output efficiency results – DEA

Table 5 – DEA output efficiency results for health efficiency in OECD countries, 3 inputs (PCA on doctors, nurses, beds and MRI) and 1 output (PCA on life expectancy, infant survival rate, and potential number of years of life not lost)

Country	VRS TE	Rank	Peers	Rank 2
Australia	1.101	10	Canada, Sweden, Korea, Finland	10
Austria	1.304	15	Sweden, Japan	15
Canada	1.000	1	Canada	6
Czech Republic	1.592	18	Japan, Sweden	18
Denmark	1.368	16	Korea, Japan, Sweden, Finland	16
Finland	1.000	1	Finland	4
France	1.106	11	Sweden, Spain	11
Germany	1.282	14	Sweden, Japan	14
Hungary	4.386	21	Sweden, Japan, Korea	21
Italy	1.143	12	Sweden, Japan	12
Japan	1.000	1	Japan	2
Korea	1.000	1	Korea	3
Luxembourg	1.372	17	Korea, Japan, Sweden	17
Poland	1.876	19	Spain, Korea	19
Portugal	1.083	9	Korea, Spain	9
Slovak Republic	2.667	20	Korea, Sweden, Japan	20
Spain	1.000	1	Spain	4
Sweden	1.000	1	Sweden	1
Switzerland	1.166	13	Sweden, Japan	13
United Kingdom	1.070	8	Canada, Sweden, Korea, Finland	8
United States	1.000	1	United States	7
Average	1.406			

Note: VRS TE - variable returns to scale technical efficiency. Rank 2 – ranking taking into account the number of times the efficient countries are peers of inefficient countries.

Source: Afonso and St. Aubyn (2007).

Note: in this example inefficient values are higher than unity.

With the same inputs, on average, output could increase.

Better public finances

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