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**THE MAIN TRENDS IN PUBLIC FINANCE  
DEVELOPMENTS IN PORTUGAL: 1986-2008**

Jorge Correia da Cunha  
Cláudia Braz

*November 2009*

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*The analyses, opinions and findings of these papers represent the views of the authors,  
they are not necessarily those of the Banco de Portugal or the Eurosystem.*

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# The main trends in public finance developments in Portugal: 1986-2008\*

Jorge Correia da Cunha and Cláudia Braz

November 2009

## Abstract

Public finance imbalances have been one of the main topics of public debate in Portugal, in the last decades. After the accession to the European Community their correction was always identified as a central issue in the context of successive medium-term macroeconomic and fiscal adjustment programmes. The Maastricht Treaty in 1992 stepped up the urgency of achieving sound public finances, as fiscal criteria played a key role in the decision on the participation of Member-states in the euro area. Later, in 1997, the Stability and Growth Pact established the multilateral fiscal supervision framework, focused on avoiding excessive deficits and achieving fiscal positions close to balance or in surplus, in the medium-term. Portugal fulfilled the convergence criteria in 1997, but showed some difficulty in complying with the discipline and objectives of the Pact afterwards. This paper uses the analytical framework currently underlying the multilateral supervision of national fiscal policies in the EU to explain the key features of budgetary developments in Portugal from 1986 to 2008.

*JEL classification:* H62, H20, H50

*Keywords:* Public finances, fiscal policy, deficit and debt.

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# 1 Overview<sup>1</sup>

In 1986, the year of Portugal's accession to the European Community, the general government deficit according to the accounting rules currently in force (ESA95, base year 2000) amounted to almost 8 per cent of GDP (for details on data compilation, see Box 1). In 2008, it reached a figure close to 2.5 per cent of GDP (Table 1, Figure 1). A remarkable feature is that it never fell significantly below the reference value of 3 per cent of GDP<sup>2</sup>, even after the coming into force of the Stability and Growth Pact in 1999.

Table 1: Main fiscal indicators

As a percentage of GDP												
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Overall balance	-7.7	-7.0	-3.6	-3.0	-6.2	-7.2	-4.5	-7.7	-7.3	-5.0	-4.5	-3.5
Primary balance	0.4	0.2	2.8	3.0	1.9	1.1	3.6	-0.3	-1.1	0.8	0.5	0.4
Structural overall balance <sup>(a)</sup>	-6.0	-6.6	-3.7	-3.1	-7.3	-8.9	-6.5	-8.1	-6.6	-3.7	-3.3	-3.1
Structural primary balance <sup>(a)</sup>	2.1	0.7	2.8	2.8	0.8	-0.6	1.6	-0.7	-0.4	2.1	1.7	0.8
Structural total revenue <sup>(a),(b)</sup>	32.5	31.6	33.4	34.7	34.0	35.1	38.6	37.2	36.2	38.4	39.7	39.4
Structural primary expenditure <sup>(a),(b)</sup>	30.5	30.9	30.7	31.9	33.1	35.8	37.0	37.9	36.6	36.4	38.1	38.6
Public debt	59.4	64.9	63.3	60.1	55.0	57.4	51.6	56.3	59.1	61.0	59.9	56.1
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	
Overall balance	-3.4	-2.8	-2.9	-4.3	-2.8	-2.9	-3.4	-6.1	-3.9	-2.6	-2.6	
Primary balance	-0.2	0.2	0.2	-1.3	0.0	-0.2	-0.7	-3.5	-1.2	0.2	0.3	
Structural overall balance <sup>(a)</sup>	-3.4	-3.5	-4.5	-5.1	-4.5	-4.6	-5.0	-5.4	-3.7	-3.2	-4.7	
Structural primary balance <sup>(a)</sup>	-0.2	-0.5	-1.4	-2.1	-1.7	-1.9	-2.3	-2.8	-1.0	-0.4	-1.8	
Structural total revenue <sup>(a),(b)</sup>	39.4	40.1	40.0	40.2	40.7	40.2	41.0	41.6	42.5	43.5	43.2	
Structural primary expenditure <sup>(a),(b)</sup>	39.6	40.6	41.4	42.3	42.4	42.1	43.3	44.5	43.5	43.9	45.1	
Public debt	52.1	51.4	50.5	52.9	55.6	56.9	58.3	63.6	64.7	63.5	66.4	

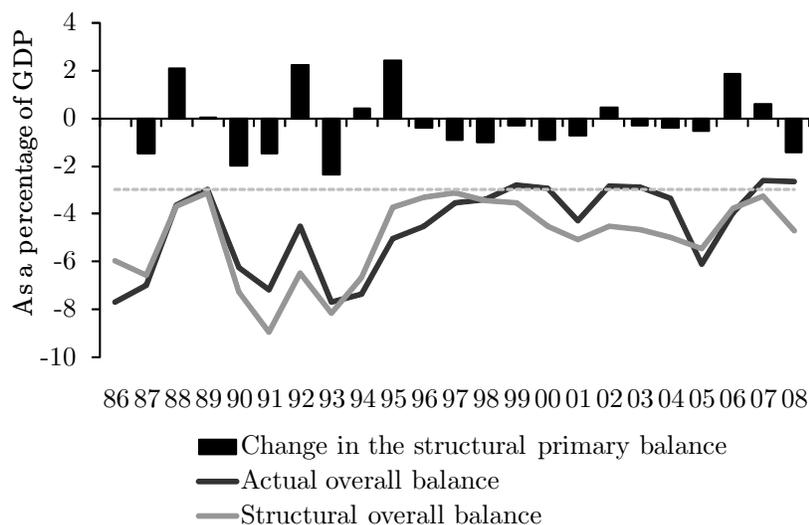
Sources: INE and authors' calculations.

Notes: <sup>(a)</sup> The structural values are cyclically adjusted and exclude the effects of temporary measures from 1997 onwards. The cyclical components and temporary measures are calculated by Banco de Portugal according to the ESCB methodologies. <sup>(b)</sup> As a percentage of nominal trend GDP.

<sup>1</sup>Previous papers of the authors are useful references, like Cunha and Neves (1995), Cunha and Braz (2003), Cunha and Braz (2006a) and Cunha and Braz (2006b).

<sup>2</sup>Reference value for the deficit in the context of the excessive deficit procedure. It is an important part of the criteria for accession to the euro and plays a key role in the framework of the Stability and Growth Pact.

Figure 1: Actual and structural overall balance and fiscal policy stance



Sources: INE and authors' calculations.

**Box 1. Data compilation**

This paper is based on the general government accounts compiled by the National Statistical Institute according to the 1995 European System of National and Regional Accounts (ESA95), which are presented in Annex 1. There is, however, a structural break in the data available from 1994 to 1995 as the accounts for the 1986-1994 period are only available according to the procedures of base year 1995 and in the following period (1995-2008) base year 2000 was used. As shown in the table below, this methodological change had a minor impact on the deficit, but implied an increase of both revenue and expenditure ratios by around 0.8 p.p. of GDP. The main modification affecting the deficit consists of the adoption of “cash-adjusted” recording for the receipts of Tax on Oil Products, Tax on Tobacco, Tax on Alcohol and Alcoholic Beverages and contributions to the Social Security subsystem. The effect of this new approach is, nevertheless, not very significant, as, in the national accounts, only the January collection of each year shifts to the previous year. Most of the other changes have no impact on the deficit as, for example, the recording of Financial Intermediation Services Indirectly Measured, which has a positive effect on interest received by general government and intermediate consumption and a negative effect on interest payments, or the consideration of the value of production to be used by general government itself, which increases sales of goods and services, on the revenue side, and intermediate consumption and investment, on the expenditure side.

**DIFFERENCES IN THE 1995 ACCOUNT:  
base year 2000-base year 1995**

Percentage points of GDP	
Total revenue	0.79
Tax revenue	0.17
Other current revenue	0.62
Capital revenue	0.00
Total expenditure	0.76
Social payments	0.19
Compensation of employees	-0.01
Intermediate consumption	0.52
Interest	-0.15
Other current expenditure	-0.16
Capital expenditure	0.37
Overall balance	0.04

Sources: INE and authors' calculations.

A different type of structural break may occur even while using the same base year in the compilation of national accounts. Indeed, the units classified in the general government sector are not necessarily the same over the entire period, as changes in the legal status, functions and/or financing often lead to the inclusion or exclusion of entities in the sector. In this regard, it is of utmost importance to mention the gradual transformation of public hospitals into corporations, which began at the end of 2002 and is still underway. For the hospitals involved, this change implies the adoption of a management model closer to the practice of the private sector and a funding scheme based on payments made by the State per medical act provided (instead of an annual overall transfer from the State Budget). In terms of the compilation of national accounts, corporate hospitals cease to be part of general government and are included in the non-financial corporations' sector. The fact that this process took place gradually over a number of years since 2002 (34 hospitals at the end of 2002, 2 by mid-2004, 5 at the end of 2005, 17 during the course of 2007 and 9 during the course of 2008) introduces several structural breaks in the recent past. The items most influenced by this process are compensation of employees and intermediate consumption, which decrease when the change takes place, and social payments in kind, which, in turn, increase.<sup>a</sup> In the period prior to the start of the transformation process (2001), expenditure associated with the hospitals converted between 2002 and 2008 included in general government accounts totalled approximately 2.3 per cent of GDP and was mostly related to compensation of employees (1.3, 0.8 and 0.2 per cent of GDP in compensation of employees, intermediate consumption and social payments in kind, respectively).

<sup>a</sup>The impact on social payments in kind reflects the amount paid on services provided by corporate hospitals, net of these hospitals spending with medicine co-payments and contracts with private health service providers when they were still included in general government.

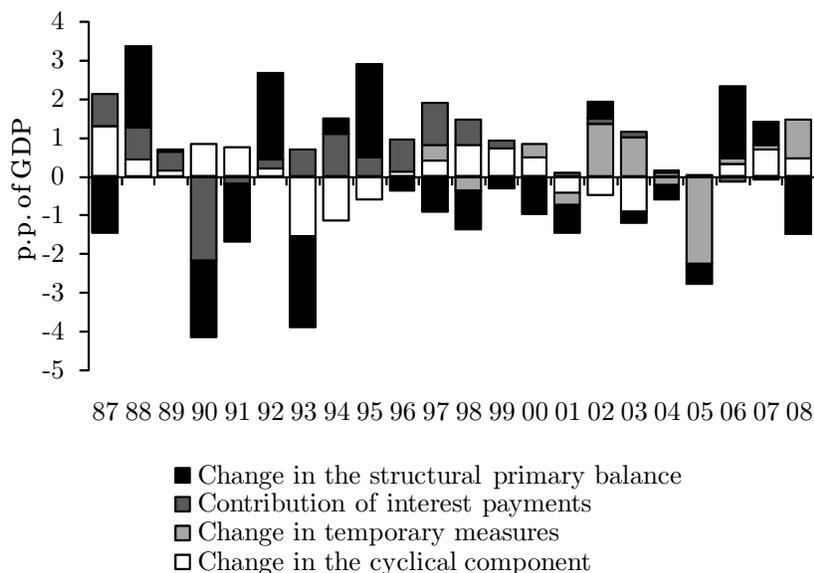
In terms of data compilation, it is also useful to highlight that the sequence of accounts of ESA95 does not provide all the details necessary for the analysis carried out in this paper. This occurs, for example, in the breakdown of several key variables: taxes on income and wealth (into taxes paid by households and by firms), taxes on production and imports (excluding VAT), and social payments in cash (into pensions, unemployment-related expenditure and other benefits). In these cases, other sources of information, such as Banco de Portugal's long-term historical series or public accounts data, were used.

Lastly, concerning the macroeconomic series, relevant not only for the calculation of ratios but also in the context of the cyclical adjustment methodology, the National Statistical Institute did not compile a retropolation for the period before 1995. As an alternative, the growth rates underlying Banco de Portugal's historical series were used.

The breakdown of the annual change in the overall balance into the contributions of the cyclical component, interest payments, temporary measures and the structural primary balance provides a useful insight into the dynamics of the Portuguese public finances in the last two decades (for details on the calculation of the cyclical component and the definition of temporary measures see Boxes 2 and 3). In the first years of the period, until 1989, there was a sharp decline in the deficit, explained to a large extent by a positive contribution of the cycle and the decline of interest payments (Figure 2). From 1990 to 1993 the trend reversed owing to an adverse conjunction of expansionary discretionary measures (with the exception of 1992, when a major change of VAT rates led to a substantial increase of tax receipts), a hike in interest expenditure in the first years and a sudden deterioration in cyclical conditions in 1993. From 1994 onwards the deficit again showed a declining trend as a consequence of a sustained fall in interest payments related with nominal convergence, enhanced in a first phase by discretionary measures and afterwards by particularly favourable cyclical effects, partially resulting from the composition of expenditure and income. This context, decisively marked by the impact of disinflation, allowed the fulfilment of the fiscal criteria for the accession to the euro area, according to the accounting rules then in force (ESA79), in spite of a continuous deterioration of the structural primary balance.

In 2001, already in the framework of the Stability and Growth Pact, as interest expenditure stabilised as a ratio to GDP and economic activity decelerated, the deficit exceeded 4 per cent of GDP. The policy package adopted in 2002 in order to correct the excessive deficit included a hike in the standard rate of VAT and several short-term measures, in particular a sizeable amount of temporary measures. The structural measures on the expendi-

Figure 2: Breakdown of the change in the overall balance



Sources: INE and authors' calculations.

ture side implemented from 2002 to 2004 were relevant in some major areas such as the public employees' pension system, the National Health Service and the financing of municipalities, but failed to tackle the reforms of public administration and the private sector social security system, instrumental to curb the growth of current primary expenditure. As a consequence, the accumulated change in the structural primary balance over this period was close to zero and in 2003 and 2004 even deteriorated. Portugal only avoided incurring on excessive deficit once again through an accrued recourse to temporary measures, which exceeded 2 per cent of GDP in both of these two years.

The political decision of not using temporary measures in 2005 unveiled the magnitude of the deterioration of the structural fiscal position. For the second time in a short period, Portugal was subject to an excessive deficit procedure. The fiscal adjustment programme delineated to correct it put a strong emphasis on structural reforms to dampen expenditure growth, in particular compensation of employees and pension outlays. In 2006 and 2007, however, the considerable improvement in the structural balance mostly relied on short-term measures on the expenditure side (which permanently affect the expenditure level, but only transitorily have an impact on its rate of change as, for example, the freezing of automatic progressions in careers,

the limitation of early retirements, changes in unemployment benefits procedures and reduction in the co-financing of medicines), several tax increases, in particular in indirect taxation, and the ongoing process of stepping up the effectiveness of tax administration. Following the 2007 fiscal outcome the excessive deficit procedure was closed, one year ahead of the deadline initially set down. The structural deficit was, however, still significantly above the medium-term objective (MTO), set at that time at 0.5 per cent of GDP.<sup>3</sup>

The most prominent features of 2008 fiscal developments were the return to the pattern of increasing structural primary current expenditure ratio to trend GDP, after a halt in 2006 and 2007, and the magnitude of temporary measures, which were decisive to avoid a deficit of more than 3 per cent of GDP. This evolution raises the issue of how important were the measures implemented in 2005-2007 in curbing expenditure growth, which is crucial to achieve a sound fiscal position.

**Box 2. The cyclical adjustment methodology**

In recent years, the cyclically adjusted budget balance has gained relevance as one of the indicators used in the assessment of the underlying position of public finances in European Union Member-states. Indeed, the reform of the Stability and Growth Pact increased the role of the balance adjusted for cyclical effects and temporary measures, when defining, at the “preventive arm” level, the medium-term fiscal objective based on this variable, as well as the annual minimum convergence required for the Member-states that have not yet reached it. As regards the “corrective arm”, the fiscal adjustment imposed on Member-states incurring excessive deficit situations in the recent period has also been measured in terms of the change in the structural balance, i.e. adjusted for cyclical effects and temporary measures.

There are several methodologies for cyclical adjustment of the budget balance, most of them implemented by international organizations, such as the European Commission, the OECD and the IMF. As far as the European System of Central Banks (ESCB) is concerned, a cyclical adjustment methodology was adopted in 2001, which has since then been followed by Banco de Portugal (see Bouthevillain, Cour-Thimann, Dool, Cos, Langenus, Mohr, Momigliano and Tujula (2001) and Neves and Sarmento (2001)).

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<sup>3</sup>The MTO's are currently under revision in the context of the establishment of the appropriate criteria and modalities to take into account implicit liabilities.

This methodology assumes that the fiscal variables influenced by the economic cycle have other-than GDP macroeconomic bases that better explain their development. The cyclical component of a specific budgetary category is calculated by applying a constant elasticity to the trend deviation of its macroeconomic base. The trend is estimated using a Hodrick-Prescott filter with a smoothing parameter of  $\lambda=30$ .<sup>a</sup> It should be highlighted that trend values obtained using this filtering technique become predominantly determined by observable values towards the end of the sample period (the so-called “end-point bias”). To overcome this problem, the series under consideration is further extended on the basis of projections and expert judgment. As such, trend values are affected by changes in growth prospects of the macroeconomic bases, which suggest some caution on the interpretation of cyclically adjusted figures.<sup>b</sup>

On the revenue side, taxes and social contributions are adjusted, while on the expenditure side, generally only unemployment-related expenditure is corrected. In the standard implementation the following categories are adjusted (with corresponding macroeconomic bases in brackets): taxes on income and wealth paid by households (private sector wage bill), taxes on income and wealth paid by firms (operating surplus<sup>c</sup>), taxes on production and imports (private consumption), social contributions paid by the private sector (private sector wage bill) and unemployment-related expenditure (number of unemployed).

In this framework, the semi-elasticity of the budget balance to GDP can be obtained indirectly from the following formula:

$$\frac{\Delta BB}{\frac{\Delta GDP_r}{GDP_r}} = \sum_j \left[ \xi_{B_j, M_j} * \xi_{M_j, GDP_r} * \frac{B_j}{GDP_n} \right] \quad (1)$$

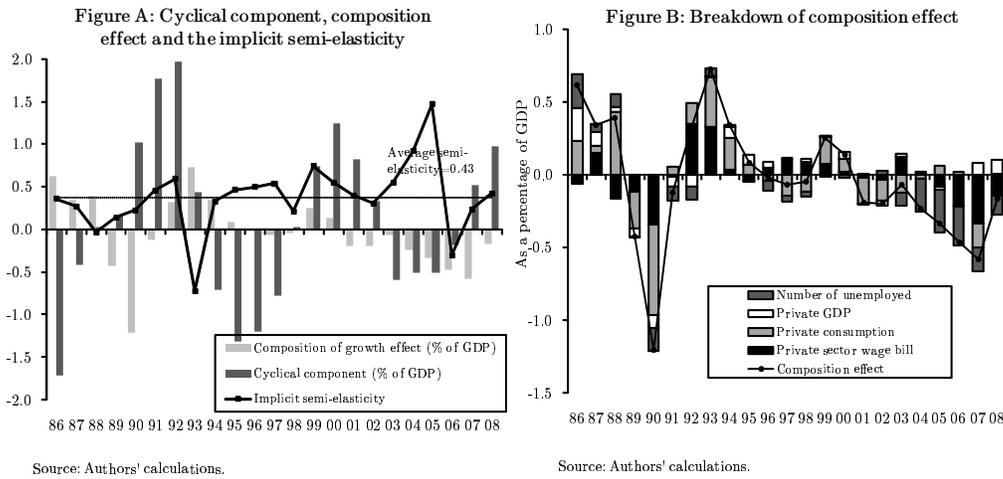
The last estimate of this elasticity for Portugal, carried out at the end of 2006, pointed to a semi-elasticity equal to 0.50, calculated on the basis of 1995-2005 data (see Braz (2006)). Given that the analysis developed in this paper covers the period from 1986 to 2008, an update based on data for the same time span would have been advisable. This exercise, however, is not possible for the elasticities of the fiscal variables with respect to the macroeconomic bases ( $\xi_{B_j, M_j}$ ), as it would be necessary to have the impacts of discretionary measures affecting these fiscal variables for the period before 1995, which are not available. Additionally, the most recent information is influenced by significant revenue windfalls that would incorrectly affect the estimates. The elasticities of the macroeconomic bases vis-à-vis GDP ( $\xi_{M_j, GDP_r}$ ) and the weights of the fiscal variables on GDP ( $\frac{B_j}{GDP_n}$ ) were updated but, overall, the final result was similar to the previous one (0.49).

<sup>a</sup>In order to calculate ratios, trend nominal GDP is consistently defined as the real trend GDP, estimated using the same procedure, multiplied by the actual GDP deflator.

<sup>b</sup>In particular at the current juncture, given the sharp decline in economic activity projected for 2009 and the still very low or negative growth foreseen for the next years.

<sup>c</sup>Currently, private GDP in the case of Portugal.

This 0.49 value is the theoretical semi-elasticity that would occur in each year if the composition of growth was balanced. As presented in Figure A below, the implicit semi-elasticity may differ significantly from that value in each year, but on average over the whole period it will not be the case. The difference between the cyclical component calculated using the ESCB methodology and the one that would be obtained if the 0.49 semi-elasticity was used is called the composition of growth effect and has been quite small in the recent period, although quite significant in several years, such as 1990 or 1993.<sup>d</sup> Figure B shows the contribution of each macroeconomic base to the composition effect. As an example, the 1993 composition effect is explained by the fact that while the output gap was already negative in that year, the gaps of private consumption and the private sector wage bill were still positive, and the gap of the number of unemployed was much more negative than the output gap.

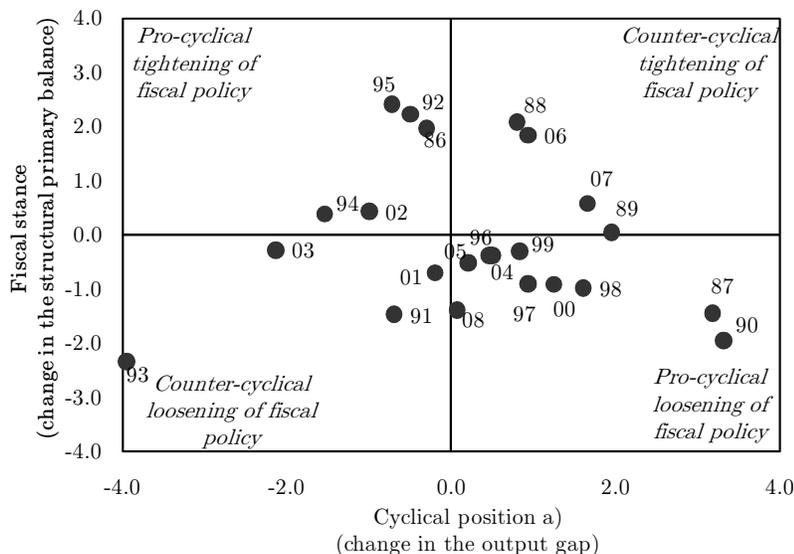


<sup>d</sup>The relation between the implicit semi-elasticity and the composition effect is given by the following formula:  $Implicit\ semi - elasticity = 0.49 + \frac{Composition\ effect}{Output - gap}$ . This particularly explains the high implicit semi-elasticity and low composition effect in 2005, as in that year the output-gap was close to zero.

Looking at the fiscal outcomes over the period 1986-2008, it should be highlighted that the fiscal stance, measured by the change in the cyclically adjusted primary balance excluding the impact of temporary measures, loosened in most years, in general pro-cyclically (Figure 3). In these conditions, it would have been possible to achieve a much sounder fiscal position without major strains. Additionally, it appears that the implementation of fiscal policy was far from optimal in terms of macroeconomic stabilization. Figure 4 shows the contributions of structural revenue and primary expenditure ratios to the annual change in the structural primary balance. In the years

represented above the 45 degree line a loosening of the fiscal stance occurred, while the years below the line correspond to periods of tightening. The most common outcome was a simultaneous increase in both structural revenue and structural primary expenditure. For the period as a whole structural revenue and structural primary expenditure increased by 10.7 and 14.6 percentage points (p.p.) of nominal trend GDP.

Figure 3: Fiscal policy and cyclical position



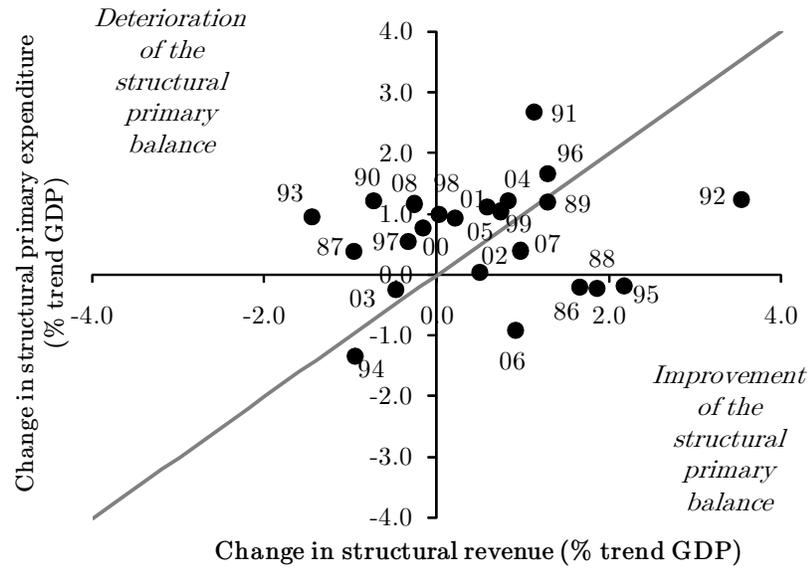
Sources: INE and authors' calculations.

Note: a) The cyclical position of the economy is assessed by the change in the output gap which approximately represents the difference between the growth rates of GDP and trend GDP.

The sizeable rise of the structural revenue and structural primary expenditure ratios appears as a peculiar feature of public finance developments in Portugal, contrasting with the general trends in the euro area (12).<sup>4</sup> Table 2 clearly highlights that point for the years from 1995 to 2008, using the AMECO database. Indeed, while in this period cyclically adjusted revenue and primary expenditure increased by 3.7 and 5.4 p.p. of GDP in Portugal, they declined by 2.1 and 1.2 p.p. in the euro area (12). Figure 5 shows the gradual convergence of the cyclically adjusted primary current expenditure ratio in Portugal to the euro area (12) average from 1997 to 2005. It also

<sup>4</sup>Comprising the first 12 participating countries, i.e., Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal and Spain.

Figure 4: Change in structural revenue and structural primary expenditure



Sources: INE and authors' calculations.

Note: See Box 1.

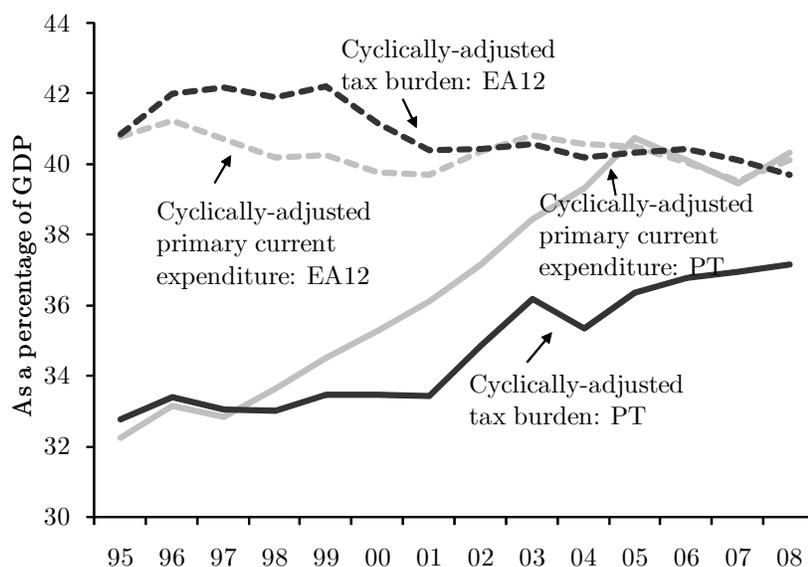
illustrates the upward trend of the cyclically adjusted tax burden after 2001, approaching but staying below the euro area (12) average.

Table 2: Change in the main fiscal indicators in the 1995-2008 period: comparison with euro area developments)

	1995-2008	
	Portugal	Euro area (12)
<b>Overall balance</b>	<b>2.4</b>	<b>3.1</b>
Cyclical component	1.3	1.5
<b>Cyclically adjusted overall balance</b>	<b>1.2</b>	<b>1.6</b>
Interest expenditure	-2.9	-2.4
<b>Cyclically adjusted primary balance</b>	<b>-1.7</b>	<b>-0.9</b>
Cyclically adjusted total revenue	3.7	-2.1
Cyclically adjusted primary expenditure	5.4	-1.2
<b>Public debt</b>	<b>5.3</b>	<b>-2.6</b>

Source: European Commission (AMECO database).

Figure 5: Cyclically adjusted tax burden and primary current expenditure: comparison with euro area developments



Source: European Commission (AMECO database).

Note: The concept of tax burden used by the European Commission includes taxes on production and imports paid to the EU budget and excludes imputed social contributions.

**Box 3. Temporary measures**

Temporary measures affecting the general government balance and/or debt have been implemented in a number of EU Member-states in the past few years. They can be defined as policy decisions that change the level of general government revenue and/or expenditure during a very limited period of time, possibly only one year (one-off measures, e.g. sales of non-financial assets), or which basically modify their time profile in the medium to long run (self-reversing measures, e.g. transfers of companies to public pension systems, in exchange for the assumption of future liabilities with pension payments). Governments may implement temporary measures with a view to responding to exceptional circumstances or to facilitate gradual fiscal adjustments. In the latter case, they create room for implementing permanent measures regarding structural problems affecting public accounts. Recourse to temporary measures, however, may also signal the governments failure to take appropriate measures to correct structural imbalances.

In the framework of the original version of the Stability and Growth Pact (SGP), whose implementation was focused on the actual balance, temporary measures were very appealing to countries with higher deficits, given that they made it possible to comply with the benchmark value without the need to enforce permanent measures. In the revised SGP, this type of incentives is mitigated, as part of the focus on sustainability is obtained by excluding temporary measures when assessing compliance with the medium-term objective or convergence towards it. In conceptual terms, temporary measures can be easily characterised. Their identification and the quantification of their effects, in the context of fiscal policy assessment, however, have significant limitations and warrant particular caution. In this regard, several aspects should be highlighted. Firstly, these measures should not be mistaken for other short-term measures or effects, which also do not have a lasting impact on rates of change of revenue or expenditure items, but permanently influence their level (e.g. the freeze of automatic wage progressions for one or two years). Secondly, their assessment may require very detailed information, which is not publicly available, and/or depend crucially on the treatment of certain operations in national accounts. Thirdly, these temporary measures should, in any case, be restricted to large transactions, in order to prevent the increasing complexity of fiscal developments assessment (0.1 per cent of GDP is frequently used as threshold). Finally, the calculation of structural adjustment should include the impact of deficit-increasing discretionary decisions, so as not to create incentives to their presentation as temporary measures, with a subsequent loss of transparency.

Banco de Portugal has adopted the definition of temporary measures used in the European System of Central Banks. This includes both deficit decreasing and deficit increasing measures. But, to avoid contributing to political incentives for window dressing, a cautious approach is called for with respect to measures or effects which give rise to a deterioration of the budget balance.

In this regard, in principle, effects related to court rulings and natural disasters are considered as temporary, while other selected deficit increasing measures may be considered on a case-by-case basis, but only if they are outside the control of the government. Based on this definition, the table below presents the temporary measures, and their respective impacts on the budget balance, considered in the analysis carried out in this paper.

	Impact on the budget balance (% of GDP)
<b>1997</b>	<b>0.38</b>
Transfer of assets to general government as the counterpart for the future payment of pensions ( <i>BNU</i> and <i>Macau</i> )	0.38
<b>2000</b>	<b>0.38</b>
Sale of UMTS licences	0.38
<b>2002</b>	<b>1.35</b>
Extraordinary settlement of tax arrears	0.86
Sale of the rights to use the fixed telecommunications network	0.27
Sale of the rights of restauring tolls on the <i>CREL</i> motorway	0.21
<b>2003</b>	<b>2.35</b>
Remaining effect of the extraordinary settlement of tax arrears	0.14
Sale of tax credits (securitisation) to a non-financial institution ( <i>Sagres</i> )	1.27
Transfer of assets to general government as the counterpart for the future payment of pensions ( <i>CTT</i> )	0.94
<b>2004</b>	<b>2.12</b>
Transfer of assets to general government as the counterpart for the future payment of pensions ( <i>CGD</i> , <i>NAV</i> , <i>ANA</i> and <i>INCM</i> )	2.12
<b>2005</b>	<b>-0.14</b>
Adjustment in contributions to the EU, following the revision of national accounts	-0.14
<b>2007</b>	<b>0.12</b>
Granting of the concession for the exploitation of a dam ( <i>Alqueva</i> )	0.12
<b>2008</b>	<b>1.12</b>
Proceeds from the granting of concessions (dams and roads)	1.12

Source: Authors' calculations.

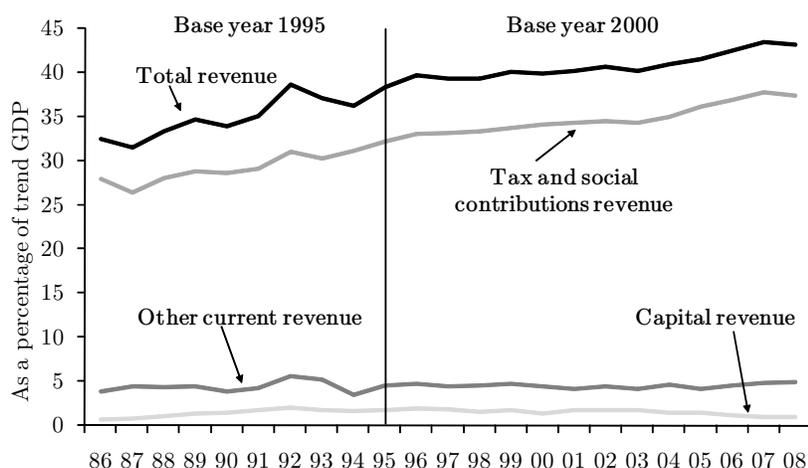
## 2 Revenue

As already highlighted, the increase of the structural revenue ratio to trend GDP was one of the driving forces of Portuguese public finances from 1986 to 2008, reaching a peak of 43.5 per cent in 2007 (Figure 6). It predominantly reflected the rise in the tax burden.<sup>5</sup> In the last years, tax and social contributions receipts exceeded 85 per cent of overall revenue. The sustained growth of the tax burden was possible after the reforms of direct taxation in

<sup>5</sup>Includes receipts from taxes on income and wealth, taxes on production and imports and social contributions.

1989 and indirect taxation in 1986 (see Boxes 4 and 5).<sup>6</sup> Indeed, they laid down the foundation of a modern tax system, broadening the tax base and decreasing tax rates. As a consequence, tax-induced distortions in several key areas were reduced and the ability to raise revenue increased. Further, the system became potentially less vulnerable to tax evasion and fraud. After the reforms of direct and indirect taxation several other discretionary measures were adopted in order to fine tune the existing structure or execute active tax policy.

Figure 6: Breakdown of the structural revenue



Sources: INE and authors' calculations.

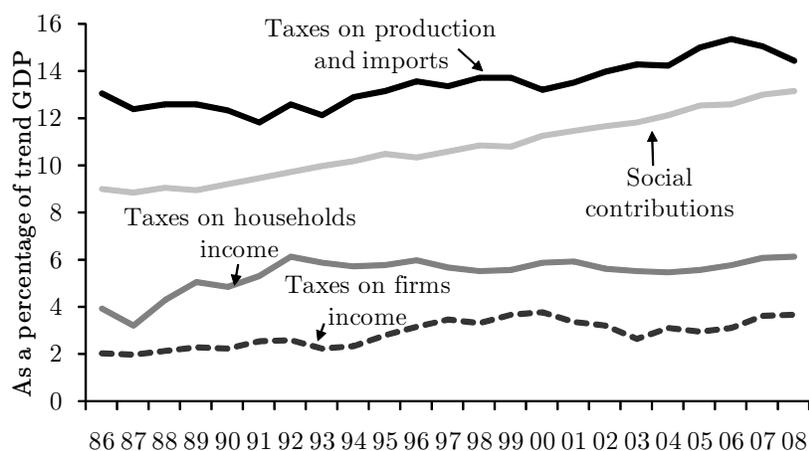
Note: All the values are cyclically adjusted and exclude the impact of temporary measures.

The increase of structural tax revenue from 1986 to 2008 was explained not only by discretionary measures, but also by several structural trends. The most relevant are: the long-term trend of consumption patterns towards a larger share of goods and services taxed at the standard rate of VAT; the structural evolution of the economy, in particular in the distribution sector, which led to a growing weight of medium and large companies more prone to fulfil tax obligations; the fast expansion of the general government wage bill;

<sup>6</sup>The taxonomy of taxes in public accounts (direct or indirect) does not exactly match the national accounts categories (taxes on income and wealth and taxes on production and imports). For example, the taxes on real-estate and real-estate transactions are direct taxes in the public accounts, but in the national accounts are included in taxes on production and imports.

the sharp growth of pension expenditure of the public employees' subsystem, implying a parallel increase of the contributions required to finance it<sup>7</sup>; and the improvement in the effectiveness of tax administration, in particular in the more recent period. On the contrary, the decline in nominal interest rates had a sizeable negative impact on the receipts of taxes on income. Overall, all main categories of the tax burden contributed to the rise of structural tax revenue (Figure 7).

Figure 7: Breakdown of the structural tax burden



Sources: INE and authors' calculations.

Note: All the values are cyclically adjusted and exclude the impact of temporary measures.

The national accounts data show that as short a time ago as 1995, the tax burden in Portugal was much lower than the average for the euro area (12) (Table 3).<sup>8</sup> In 2008, it still appears as a relatively low tax country when

<sup>7</sup>Actual contributions of general government entities as employers include not only the amounts resulting from the application of the rates defined in law to gross wages, whose scope and value has been gradually increased, but also the State transfer necessary to balance the system. As such, the growth of expenditure of former public employees pensions in the past few years has contributed somewhat artificially to the increase in the tax burden in Portugal.

<sup>8</sup>Comparisons of the tax burden between countries may be distorted by several legal or institutional features. In this regard three issues should be highlighted. Firstly, the government may choose to pursue a certain goal through explicit expenditure, tax benefits or a combination of both. The first option will show a higher tax burden, everything else constant. Secondly, several items of expenditure, such as social transfers or interest on

compared with the same group of countries although the gap has narrowed substantially, partly as a result of the rise in all major categories of taxes and social contributions in Portugal, as already mentioned. In terms of the composition of the tax burden, Portugal has a relatively high ratio of taxes on production and imports to GDP. The revenue from taxes on income and wealth and social contributions is, on its turn, lower than the average in the context of the euro area.

Table 3: Tax burden: comparison with euro area developments

As a percentage of GDP				
	Portugal		Euro area (12)	
	1995	2008	1995	2008
<b>Tax burden</b>	<b>31.9</b>	<b>37.5</b>	<b>40.4</b>	<b>40.5</b>
Taxes on income and wealth	8.4	9.9	11.1	12.3
Taxes on production and imports	13.0	14.6	12.2	12.9
Social contributions	10.5	13.0	17.0	15.3
<i>of which: actual social contributions to the CGA subsystem</i>	1.7	3.0	-	-
<i>of which: imputed social contributions</i>	0.8	1.0	1.4	1.1

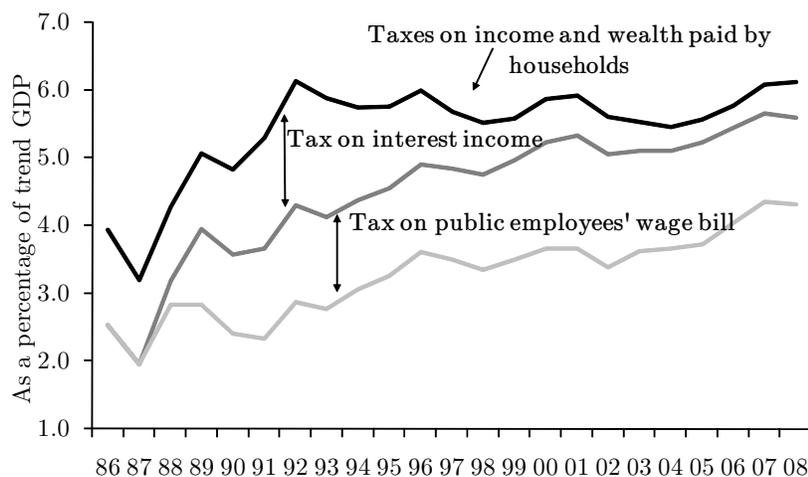
Sources: European Commission (AMECO database) and authors' calculations.

Since 1989, most receipts from taxes on income and wealth paid by households are raised through personal income tax withholding schemes on labour income, pensions and interest. The net reimbursements related with the final settlement of the tax on the previous year's income are also an important factor behind yearly developments. Figure 8 shows the structural evolution of this type of taxes from 1986 to 2008. The hike in its ratio to GDP in the first years after the 1989 reforms and its relative stability afterwards are noticeable. Four other points are worth mentioning. Firstly, final withholding tax on interest income declined substantially, in particular from 1992 to 1999. Secondly, the receipts from the taxation of public employees' wages recorded a buoyant growth until 2002 paralleling the swift expansion of the general government wage bill. Thirdly, discretionary tax measures had a significantly positive impact on revenue in 1995-1996, but afterwards do not appear to have had a major effect on the ratio of the amounts collected to

public debt may or may not be subject to taxation. For instance, in Portugal, unemployment benefits are exempt from income taxation, decreasing the tax burden recorded in national accounts relative to alternative arrangements. Finally, the treatment of social contributions in national accounts is not fully comparable between different countries, in particular in matters related to the public employees' pension system (see footnote 7).

trend GDP. Finally, the increased effectiveness of tax administration is the main factor underlying the slightly upward trend recorded in the last years.

Figure 8: Structural receipts of taxes on income and wealth paid by households



Sources: INE, Ministry of Finance and authors' calculations.

**Box 4. Direct taxes in Portugal: 1986-2008**

The reform of direct taxation implemented in 1989, consisted, basically, in the replacement of several taxes structured on the basis of the sources of income, which did not take into account the information on taxpayers' personal characteristics, by taxes on income structured according to the nature of different groups of taxpayers: the personal income tax and the corporate income tax. A tax on the value of real-estate was also introduced. This reform followed the main trends underlying the changes in the design of direct taxation in the OECD countries in the eighties: base broadening of the taxes on income, partly due to the elimination or reduction of tax benefits; decrease of marginal rates, in particular the top ones, and the number of tax brackets; reduction of the tax rate on firms' profits; and partial integration of personal and corporate income taxes. The introduction of the new taxes led, in many cases, to an anticipation of receipts, due to the increase in the number and importance of situations where withholding schemes or pre-payments are mandatory. Specifically concerning the personal income tax, three additional features are worth mentioning. Firstly, several types of income are subject to final withholding schemes, in spite of the predominantly unified nature of the tax. Secondly, several incomes, previously exempted, such as public employees' wages and interest on public debt started to be taxed, implying a simultaneous increase of some items of expenditure.

Finally, although an automatic scheme for the indexation of tax brackets, allowances and credits was not initially contemplated, it was implicit that an annual update close to expected inflation would take place, limiting the fiscal drag.<sup>a</sup> Since its inception in 1989, the personal income tax has been subject to many changes, almost every year, though keeping the main features of its architecture. Most of them concerned the definition of tax benefits, in particular those related with the treatment of expenditure with some long-term saving instruments and home purchases, and the choice between the enlargement of tax benefits and the reduction of the tax burden on labour income, given the constraint of having a minor impact on revenue growth. The marginal tax rate for the highest incomes, set down initially at 40 per cent, was kept unchanged until 2005, increasing in 2006 to 42 per cent, with the creation of a new tax bracket. Beyond the level of marginal rates, the distortions in the labour market deriving from the personal income tax also depend on the number of tax brackets and the amount of specific deductions for employment income. The number of tax brackets, five at the outset, was firstly reduced to four (1991), to increase afterwards to the present seven (1999, 2001 and 2006), on the basis of equity concerns.

Still having in mind the promotion of equity, the substitution of deductions to net income related with tax benefits, for tax credits, in 1998, should be highlighted. This change meant that any expenditure with a privileged treatment in the context of the personal income tax allows the same reduction in the tax liability, independently of the level of income. Also designed to enhance equity, but mostly explained by the need to increase revenue, reference should be made to the partial convergence of the taxation of pensions to taxation of employment income, in 2006-2007.

The main changes to the corporate income tax implemented between 1990 and 2008 stemmed from arguments of tax competition, the incorporation of rules approved at the EC/EU level, the general goal of promoting investment and the fight against tax evasion and fraud, widespread in particular among small and medium sized firms. Concerns over tax competition justified successive reductions in the tax rate from 36.5 per cent in 1990, to 36 per cent in 1991, 32 per cent in 2000, 30 per cent in 2002 and 25 per cent in 2004 and currently in force. The rules approved in the context of the EC/EU relative to corporate income tax focus on aspects considered crucial for the proper functioning of the single market. Particular reference should be made to the transposition of the parent-subsidiary directive into Portuguese legislation, in 1992, which aims at reducing the differences between taxation rules for nationally organised groups of companies and taxation rules for EU-wide groups.

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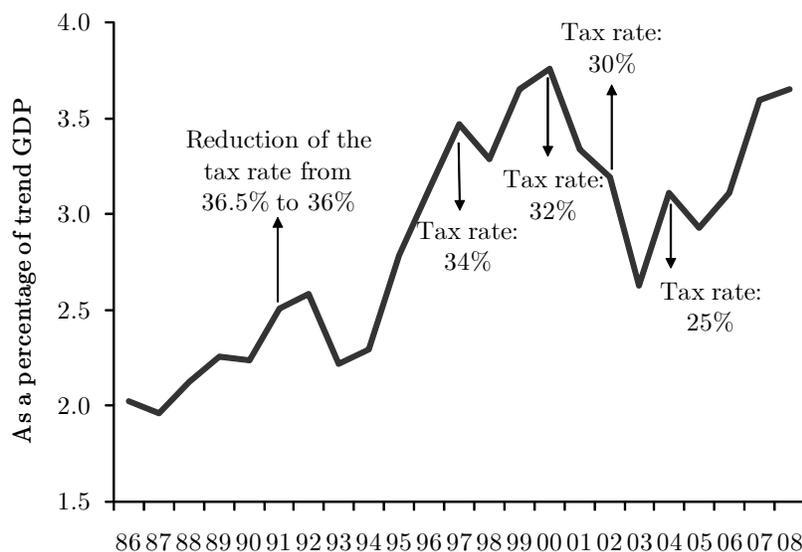
<sup>a</sup>Refers to the process where tax brackets are either not adjusted for inflation or fail to keep pace with earnings growth, causing in either case an automatic rise in tax revenues.

As already mentioned, the 1989 reform implied a decrease of tax benefits on corporate income. In the following years, however, several new benefits were introduced with the aim of promoting investment and the restructuring and expansion abroad of companies based in Portugal. The growth, over the last few years, of tax expenditure in the corporate income tax led to the introduction of an overall limit on tax benefits in the Budget for 2005. Accordingly, the amount of corporate income tax to be paid cannot fall short of 60 per cent of what would have been due if the tax benefits had not been used. For the purpose of curbing tax evasion and fraud in corporate income tax a special pre-payment was introduced in 1998, which is based on the preceding year's turnover with minimum and maximum values (1250 and 70000 euros, respectively, in the Budget for 2006). Having in mind the same objective, in the Budget for 2005, several items of the firms' costs became liable to autonomous taxation.

After the 1989 reform, most revenue from the taxation of firms' income took the form of prepayments and the final settlement of the tax on the previous year income, in the context of the corporate income tax. The structural evolution of taxes on income and wealth paid by firms is presented in Figure 9. Three points should be highlighted. Firstly, the sharp rise of the receipts until 1997, partly explained by the evolution in profits of some of the main taxpayers and the growth of final withholding taxation. Secondly, successive rate reductions occurred whose impact on revenue has essentially materialised with a one year time lag. Finally, the upward trend in receipts over the last few years results predominantly from the stepping up of tax administration.

As in the other Member-states of the EU, VAT is a major source of tax revenue. In the case of Portugal, as Figure 10 shows, other taxes on specific items of expenditure are also an important part of taxes on production and imports receipts. Looking at the developments in the 1986-2008 period, the most noticeable feature is that the rising trend of this item of revenue is basically explained by VAT, as a consequence of changes of rates, several structural developments in the economy and the stepping up of the effectiveness of tax administration. Whenever it was necessary to increase tax revenue, VAT was a key instrument. On the contrary, both the Tax on Oil Products and, to a lesser extent, the Tax on Vehicles Sales have since the last years of the nineties evidenced declining trends. In the first case, it is predominantly due to the increasing number of diesel cars, as the tax on diesel is lower than the tax on petrol, and the move to more fuel-efficient vehicles. These long-term trends are enhanced in periods of high fuel prices, through behavioural changes. Regarding the Tax on Vehicles Sales, the explanation relies, to a major extent, on the gradual deceleration of car sales,

Figure 9: Structural receipts of taxes on income and wealth paid by firms



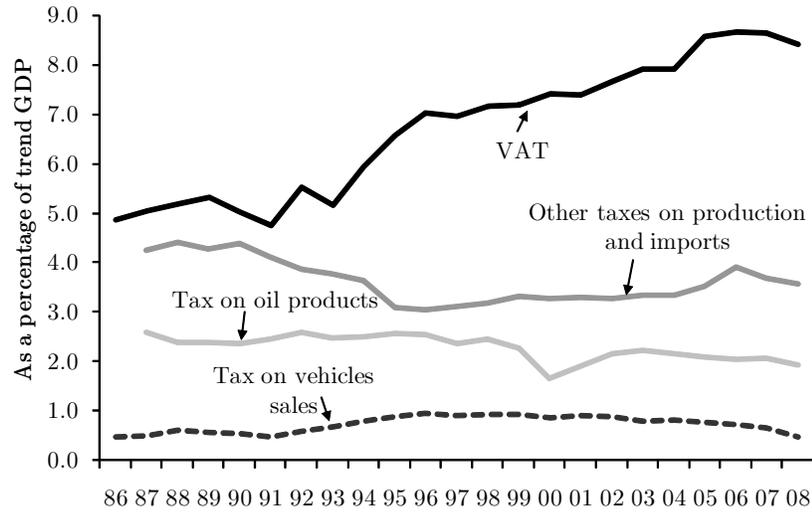
Sources: INE and authors' calculations.

only partially offset by an upside quality effect.<sup>9</sup> The relative reduction of other taxes on production and imports until 1994 is basically explained by the decrease in customs duties.

After the creation of a unified scheme in 1986, up to 2008 the contributions of the Social Security subsystem only recorded minor adjustments: regarding employment income, the employers' rate was reduced from 24.5 to 23.75 per cent in 1995, and self-employment contributions were increased in several steps. In the *Caixa Geral de Aposentações* (CGA) subsystem, the rate of employers' contributions was increased from 8 to 10 per cent of gross wages in 1994, and contributions of general government entities as employers were gradually introduced and increased. Figure 11 shows the evolution of the structural actual social contributions by subsystem in the period under analysis. The upward trend in the Social Security subsystem recorded since the second half of the nineties may be explained by an increase in self-employment contributions and more effective collection procedures. The sustained growth of overall CGA contributions basically mirrors the evolution of pension expenditure in this subsystem (see footnote 7).

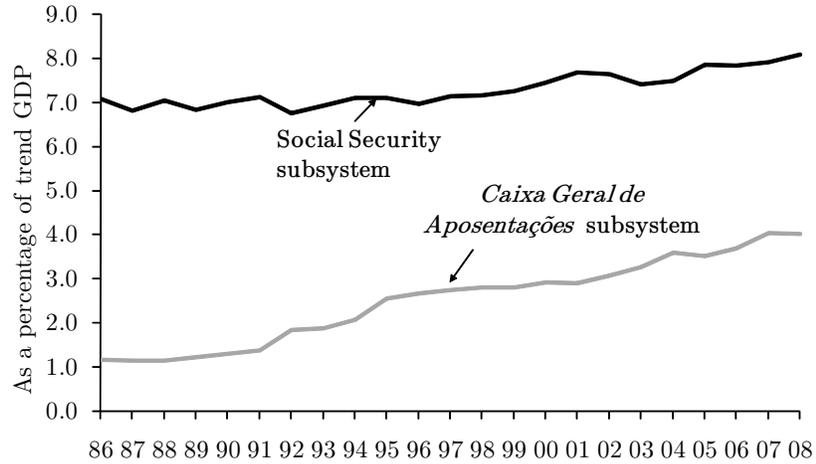
<sup>9</sup>The quality effect stems from the sale of vehicles belonging to different ranges concerning engine capacity and, more recently, pollution emissions subject, as such, to different rates in the context of this tax.

Figure 10: Structural receipts of taxes on production and imports



Sources: INE and authors' calculations.

Figure 11: Structural actual social contributions by subsystem



Sources: INE, Caixa Geral de Aposentações and authors' calculations.

**Box 5. Indirect taxes in Portugal: 1986-2008**

The reform of taxation on goods and services was essentially implemented in 1986, involving the introduction of VAT, while other indirect taxes were abolished or modified. This change was a consequence of Portugal's participation in the European Community. The VAT required by the Community directives is a general tax on consumption of goods and services, applied in all phases of the economic circuit, from production to retail. Its tax base is however, limited to the value added at each phase. Exports are not subject to VAT and are only taxed in the country of destination. Imports are taxed by their overall amount. Its introduction implied an increase in the tax burden, as a combined result of base broadening and curtailing tax evasion and fraud. The decision of not adopting a single rate was mostly related with equity concerns. In parallel, benefiting from the decline of international oil prices, the Tax on Oil Products was created in 1986. Community membership also had a decisive influence on other areas of indirect taxation, in particular the sharp reduction in import duties. In the cases of car sales and consumption of oil products and tobacco, VAT coexists with specific taxes.

VAT rates were changed several times since its introduction, in order to expand receipts, implement decisions approved at the EC/EU level and enhance the competitiveness of some sectors. Initially, they were set at zero and 8 per cent (reduced rates), 16 per cent (standard rate) and 30 per cent (increased rate).

In 1988, the standard rate of VAT increased from 16 to 17 per cent. Later, in 1992, fulfilling in advance the rules approved at the Community level on the harmonisation of indirect taxation, a substantial change in VAT rates was implemented. Thus, the zero rate was abolished and the goods and services that benefited from that rate were included in the list of goods and services taxed at a new reduced rate of 5 per cent. The former reduced rate of 8 per cent was eliminated and the goods previously taxed at that rate were split between the new 5 per cent rate and the standard rate, which was reduced from 17 to 16 per cent. The abolition of the zero rate implied an important base broadening, with a significant increase in receipts. This was further enhanced by the taxation at the standard rate of many goods and services that previously benefited from the reduced rate. The decrease of the standard rate had the opposite effect. The standard rate of VAT returned again to 17 per cent in 1995 and the additional revenue was allocated to Social Security in order to offset the effect of the decrease of employer's social contribution rate. In 1996, an intermediate rate of 12 per cent was introduced, benefiting restaurants services and some foodstuffs, previously taxed at the standard rate. In 2002 and 2005, in the context of packages of measures aiming at the reduction of the fiscal deficit, the standard rate of VAT was increased, firstly, to 19 per cent and then to 21 per cent. In July 2008, it was reduced to 20 per cent.

As regards the VAT administration the main change occurred in 1993 as a consequence of the inception of the single market. Indeed, the abolition of tax borders in intra-Community transactions made necessary an adaptation of VAT returns, for which the tax administration was not fully prepared. In this framework, beyond the inevitable creation of a time lag in VAT collection as far as imports from other Member-states are concerned, further opportunities for tax fraud emerged temporarily, amplifying the impact of the 1993 recession. These opportunities of tax fraud were curtailed through changes to the tax returns and closer cooperation between national tax administrations.

Beyond VAT, three areas of taxation on goods and services recorded major changes from 1986 to 2008. Firstly, the unit rates of the Tax on Oil Products were set at fixed amounts simultaneously with the liberalisation of the prices of petrol and diesel at the end of 2003. This scheme replaced a system based on administrative prices, where the unit amounts of the tax appeared as a residual. Secondly, the taxation on car sales was modified in 1988, with the creation of the Car Tax, which was levied in accordance with the engine size. In 2006, the Car Tax also became dependent on carbon dioxide emissions. This policy guideline was gradually enhanced, in particular in the context of the 2007 reform of the taxation on vehicles, in which the Tax on Motor Vehicles sales replaced the Car Tax. On average, this reform also decreased the taxation on the acquisition of new cars, rising at the same time the annual tax on the use/ownership of the cars. Finally, at the end of 2003/beginning of 2004 a reform of taxation of real-estate was implemented. The main innovation of the new Municipal Tax on Real-Estate relied on the revaluation of the taxable value of property, which will approach market value, re-establishing some equity in the treatment of property built in different periods. At the same time the limits of the ranges for the rates set down by municipalities were reduced. The new Municipal Tax on Real-Estate transactions has lower rates, while the calculation of the taxable value was changed in order to take into account the characteristics of properties and not stated values, which were in general much lower than the actual amounts of the transactions.

A useful approach to the analysis of tax developments consists of the breakdown of the change in the structural tax burden into: the effect of legislative changes, the decoupling of the macroeconomic bases from GDP, the impact of tax elasticities and a residual. Figure 12 summarizes the results of this exercise for the period 2000-2008 using the ESCB methodology described in Kremer, Braz, Brosens, Langenus, Momigliano and Spolander (2006). One of the more striking features is the magnitude of the residuals in almost all years from 2000 to 2008. Its explanation may to some extent be associated with the drawbacks of the cyclical adjustment methodology, an inaccurate quantification of the effects of policy measures and the change in items that affect simultaneously general government revenue and expenditure. Indeed, the positive residual in 2000 is mostly related with social

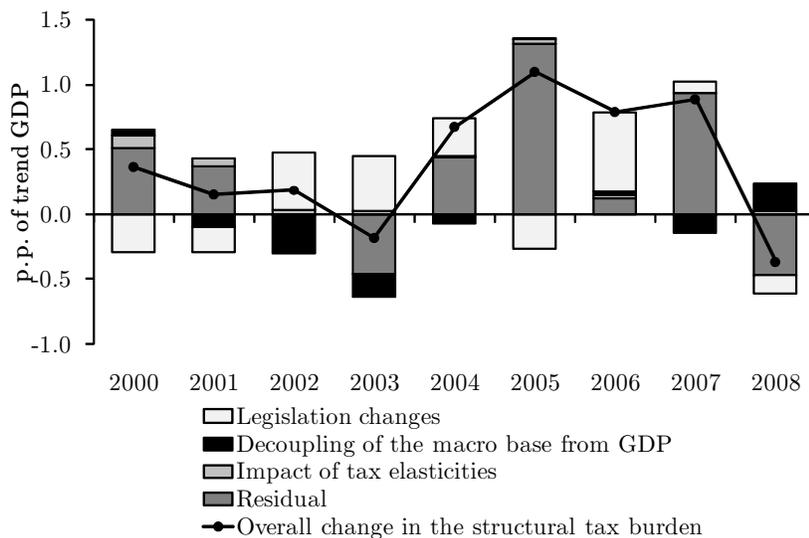
contributions, due to the increase of the State subsidy to the CGA subsystem also recorded on the expenditure side, while the negative residual in 2003 is mainly concentrated on corporate income tax and might be explained by a poorer evolution of profits than the one of its macroeconomic base. The major factor behind the positive residuals in the period 2004-2007 is the enhancement of the effectiveness of tax administration, based on a wider use of information technology and stepped up human resources. It is worth noting that the improvement in administrative procedures has a permanent nature, but that a part of the revenue windfalls recorded in this period also stemmed from the collection of overdue amounts, which will tend to vanish in time. In 2008, the sign of the residual reversed but apparently not yet as a result of the decrease in the transitory part of effectiveness gains, once it is essentially associated with the specific behaviour of several taxes on production and imports. Regarding procedures, five main areas are worth mentioning. Firstly, at the preventive level, an effort has been made to identify taxpayers who belong to risk groups in terms of fraud and evasion in order to alert them to their tax obligations. Secondly, at the corrective level, taxpayers who do not fill in their tax returns are notified. Thirdly, the cross-checking of databases became a common practice. Fourthly, recourse to the administrative derogation of bank secrecy increased substantially. Lastly, an automatic system for the seizure of moveable and immoveable goods and financial assets was implemented.

### 3 Expenditure

As already mentioned, the evolution of public expenditure is crucial for understanding Portuguese fiscal developments in the period under analysis. Indeed, structural expenditure as a ratio to trend GDP grew in more than half of the years from 1986 to 2008. As a whole, the increase totalled 9.8 p.p. of trend GDP (around 10.6 p.p. of trend GDP corrected for the impact of the 1995 structural break in the data - see Box 1) (Figure 13). This outcome was driven by structural primary current expenditure, whose ratio to trend GDP went up by 15.1 p.p. On the contrary, interest payments declined significantly (-4.8 p.p. of trend GDP), while investment decreased only slightly between 1986 and 2008. Social payments and, to a minor extent, compensation of employees were the items of primary current expenditure that contributed the most to this evolution (Figure 14).

Table 4 presents the comparison of public expenditure ratios to GDP between Portugal and the euro area (12) for the longest period available in

Figure 12: Breakdown of the change in the structural tax burden <sup>a)</sup>



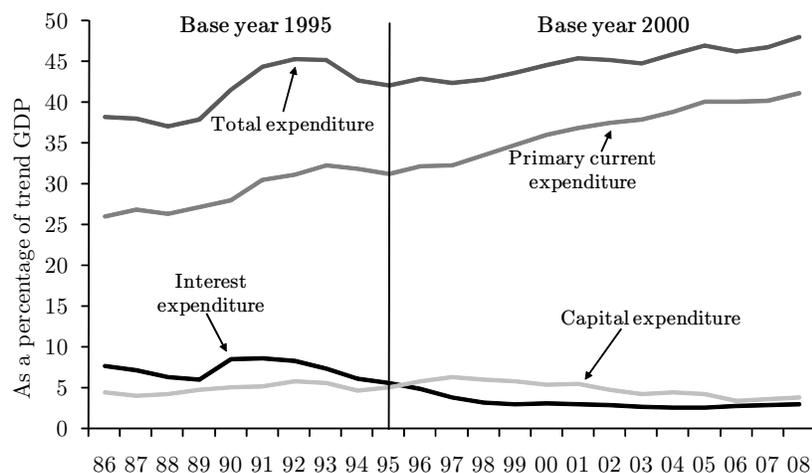
Sources: INE and authors' calculations.

Note: <sup>a)</sup> For further details on the methodology used to calculate these contributions, see Kremer et al. (2006) and Braz (2006).

terms of data, which is the 1995-2008 period.<sup>10</sup> As shown, the strong growth of total expenditure in Portugal contrasts with a decline in this variable as a percentage of GDP at the euro area level. In spite of this evolution, public expenditure in the economy was still slightly below the euro area (12) av-

<sup>10</sup>International comparisons between levels and developments in public expenditure may prove useful but should be made with caution. Three points should be highlighted in this respect. Firstly, the comparisons with other countries are often influenced by the delimitation of the general government sector. Indeed, it is important to know for each country the degree of outsourcing in the supply of several goods and services usually provided publicly, in particular in the areas of health and education. The differences in the general government perimeter may only have an effect on the composition of public expenditure, for example in the case of health services financed publicly but provided by entities classified outside the general government sector, or, alternatively, may also have an impact on the time pattern of government expenditure (and, as such, on its level in each period), as it is the case of public-private partnerships. Secondly, differences in the tax system concerning the taxation of social benefits and the existence of tax allowances and tax credits instead of explicit expenditure might have a non-negligible impact on the level of overall public expenditure as measured in national accounts. Finally, other country-specific factors, such as the recording of expenditure related with the public employees' pension system in Portugal, might also distort international comparisons relating to public expenditure.

Figure 13: Breakdown of structural expenditure

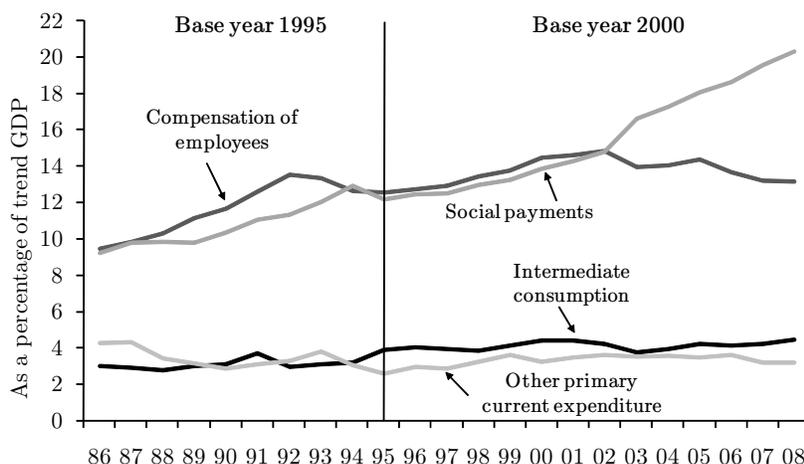


Sources: INE and authors' calculations.

Note: All the values are cyclically adjusted and exclude the impact of temporary measures.

erage in 2008, but this is not the case for current expenditure. Concerning social payments in cash, the relatively low value of this item in Portugal in 1995, and the strong rise thereafter, suggests that the degree of maturation of the social security system was then lower than in other euro area countries (or that the Portuguese system became relatively more generous, which was not the case). On the contrary, the relatively high ratio of compensation of employees vis-à-vis the euro area average was explained, in addition to the high average relative wage of public employees, by the fact that most health and education services were provided by entities classified inside the general government sector in Portugal. Indeed, according to the functional classification of expenditure, in 1995, education and health represented 55.6 per cent of compensation of public employees in Portugal, to be compared with 45.4 per cent in the euro area. As mentioned in Box 1, the gradual transformation of public hospitals into corporations affects the analysis of public finance developments, in particular as regards expenditure composition, as it results in an increase in social payments in kind and a decline in compensation of employees and intermediate consumption in the general government accounts. Correcting for this effect, compensation of employees as a ratio to GDP would have increased by around 1.3 p.p. of GDP in the period from 1995 to 2008 (the offsetting effect is on other current expenditure).

Figure 14: Breakdown of structural primary current expenditure



Sources: INE and authors' calculations.

Note: All the values are cyclically adjusted and exclude the impact of temporary measures.

In addition, it should be noted that this expenditure item is influenced by the fact that, in Portugal, only part of actual social contributions of general government entities as employers is calculated as a fixed rate on wages, as it also includes the amount required to ensure the financial balance of the public employees' pension system. As in the last few years expenditure on pensions of former public employees has been increasing substantially, the figures for compensation of employees are affected by this recording scheme. Lastly, it should be mentioned that developments between 1995 and 2008 in interest expenditure in Portugal and the euro area (12) were broadly similar.

The evolution of social payments stemmed, mostly, from the behaviour of pension expenditure. Indeed, from the 11.1 p.p. of trend GDP increase in structural social payments in the period from 1986 to 2008, 6.7 p.p. are related to pensions (Figure 15). The remaining increase in social payments results predominantly from social payments in kind (3.5 p.p. of trend GDP) and is explained by both a strong growth in spending on medicines co-payments and contracts with private health-care providers, as well as the already mentioned transformation of public hospitals into corporations (which occurred at the end of 2002, mid-2004, end-2005 and during the course of 2007 and 2008, and implied an increase in this item by approximately 2.0 p.p. of trend GDP).

Table 4: Expenditure: comparison with euro area developments

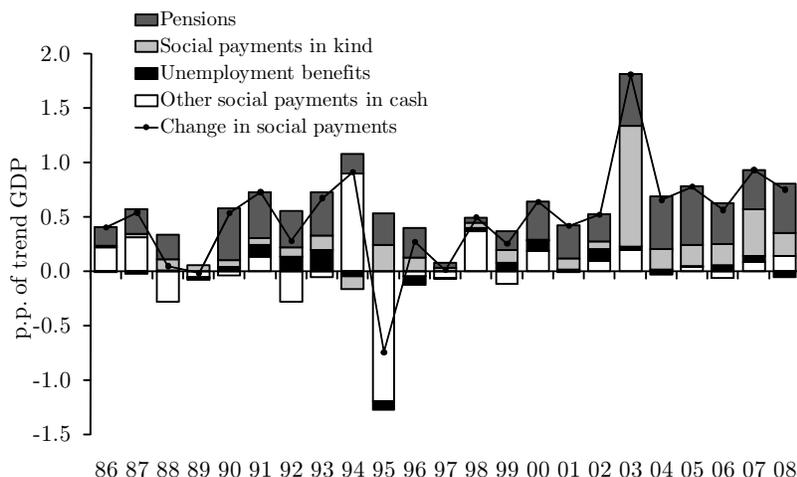
As a percentage of GDP

	Portugal		Euro area (12)	
	1995	2008	1995	2008
<b>Total expenditure</b>	<b>43.4</b>	<b>45.9</b>	<b>50.6</b>	<b>46.7</b>
Current expenditure	38.1	43.2	46.3	43.0
Social payments (except in kind)	11.2	15.6	16.9	16.1
Compensation of employees	12.9	12.9	10.9	10.1
Interest	5.8	3.0	5.4	3.0
Other current expenditure	8.3	11.8	13.1	13.8
Capital expenditure	5.3	2.7	4.3	3.8
Investment	3.8	2.1	2.6	2.5
Other capital expenditure	1.5	0.6	1.7	1.3

Source: European Commission (AMECO database).

As in Portugal there are two main public social security subsystems, comprising private sector workers (Social Security subsystem) and public employees (CGA subsystem), they are analysed separately. The strong increase in expenditure on old-age, disability and survivors' pensions of the Social Security subsystem between 1986 and 2008 (reaching 3.6 p.p. of trend GDP) can be explained by three factors: (i) the annual updates of pensions; (ii) the increase in the number of pensioners; (iii) the additional change in the average pension, reflecting, essentially the impact of a composition effect and discretionary measures. Concerning the former, the pensions of this subsystem were updated above expected inflation in most years under consideration (Figure 16). Among the three factors underlying pension growth in the Social Security subsystem, this has definitely been the least important over the last few years. The strong rise in the number of pensioners, particularly relevant in the case of old-age pensions, stemmed mainly from the ageing of population and contributed by 2.0 p.p. to the annual average growth rate of old-age pension expenditure, which stood at 13.2 per cent (Figure 17). It is worth mentioning that between 1994 and 1999 the slowdown in the growth rate of the number of pensioners was explained by the gradual increase in the retirement age for women from 62 to 65 years old, six months per year. Finally, the hike in the average pension, excluding the annual update, was also very significant from 1986 to 2008: 4.0 p.p. of the annual growth rate of old-age pensions, on average. This effect was a consequence of the higher wages the new retirees received during their contributory careers, but it is also due to the fact that, on average, they contributed more years to the system. In addition, in 1990, it incorporates the effect of the introduction of

Figure 15: Breakdown of the change in structural social payments

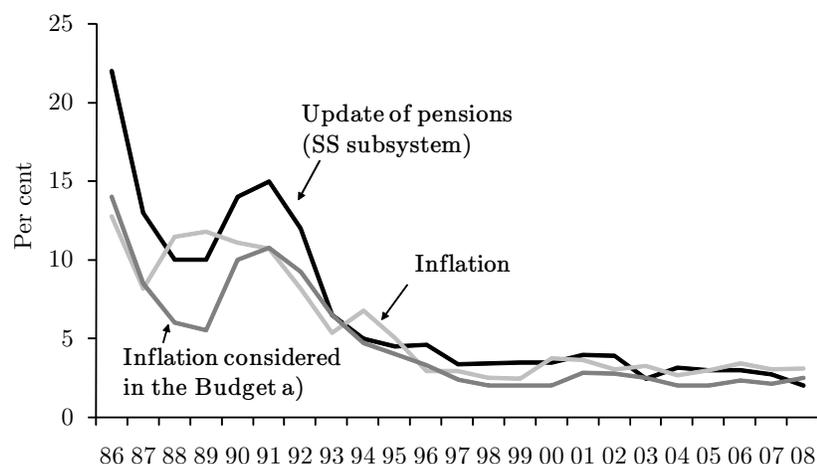


Sources: INE and authors' calculations.

the 14th month in the payment of pensions.

Pension expenditure in the public employees' subsystem increased by 3.1 p.p. of trend GDP in the period from 1986 to 2008. Figure 18 illustrates the breakdown of the rate of change of this item according to the same explanatory factors as in the case of the Social Security subsystem. Concerning the update of former public employees' pensions, it is worth referring to the fact that in general they were annually adjusted in line with the update of the wage scale, which has followed inflation quite closely. Pensions were, however, nearly frozen in 2003 and 2004. As far as the number of pensioners is concerned, a strong growth can be observed in all years of the period from 1986 to 2008 (around 4.6 per cent on average in this period). It is worth mentioning that the substantial increase in the number of pensioners in 2003 is mainly the result of an extraordinary rise in requests for retirement before the entry into force of new rules from January 1 2004 onwards, which involved a new definition of the initial pension - formerly the average gross wage of the last three months, afterwards the average wage of public employees net of social contributions of the last three months - and the introduction of penalties for those who retire before reaching the age of 60: - 4.5 per cent for each year below the age of 60. Further, there was an additional effect in 2003 and 2004, related with the inclusion of pensions of former employees of several public corporations in general government expenditure, following the transfer of pension funds to the public employees' subsystem. Again, in

Figure 16: Update of pensions of the SS subsystem and inflation (observed and budgeted)



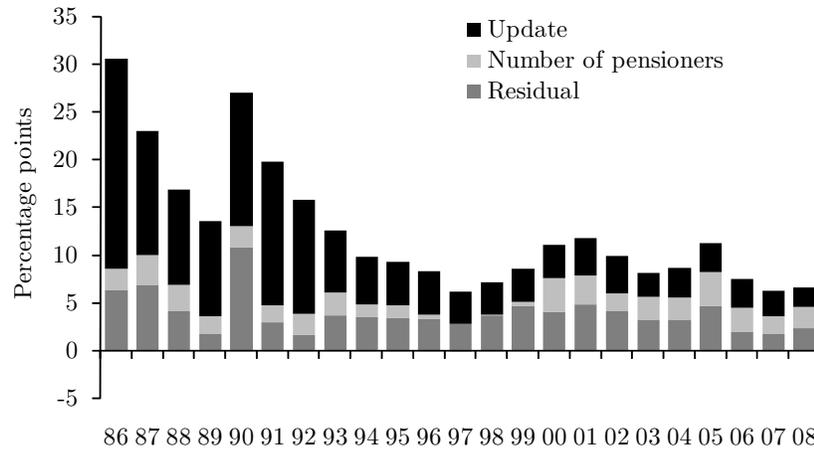
Sources: Authors' calculations.

Note: a) Measured by the private consumption deflator.

2006-2007 and to a lesser extent in 2008, a significant rise in the retirement requests delayed the deceleration of pension expenditure in the context of the reform of the Retirement Statute introduced at the beginning of 2006. The magnitude of the increase in the average pension (not explained by the annual update), which usually follows quite closely the change in the number of pensioners, has also been very significant in almost all years of the 1986-2008 period due, essentially, to higher wages just before retirement. The latter was particularly significant in the years after the approval of the New Public Employees Pay System. Occasionally, several discretionary measures contributed considerably to the growth of pension expenditure in the public employees' subsystem, as the compensation for taxation in the context of the personal income tax, the adjustment of pensions initiated before the New Public Employees Pay System and the introduction of the 14th month in the payment of pensions.

In the absence of the recent reforms of Social Security and CGA pension subsystems, public expenditure on pensions would have continued to grow much above nominal GDP, offsetting any consolidation effort carried out by fiscal authorities. In the first case, population ageing and maturation of the system were the main explanatory factors. In the CGA case, the unsustainable evolution of expenditure would have stemmed from the gen-

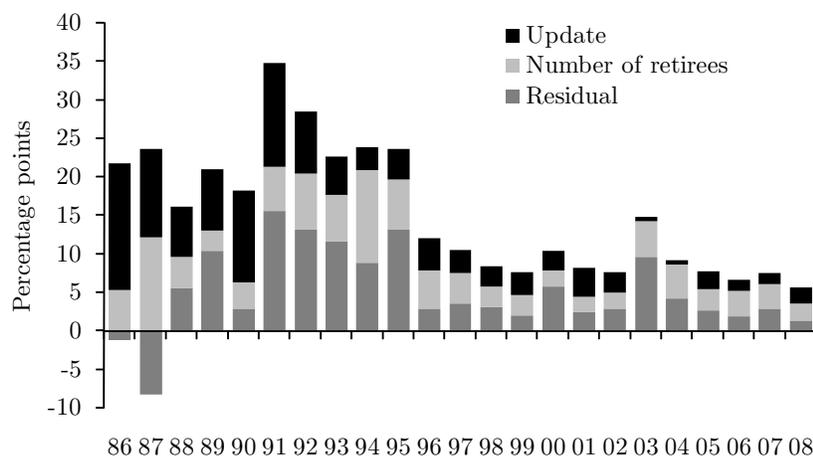
Figure 17: Breakdown of the growth rate of old-age pension expenditure of the SS subsystem



Sources: Social Security statistics and authors' calculations.  
 Note: a) Measured by the private consumption deflator.

erosity in the calculation of the initial pension and eligibility conditions, in conjunction with the age structure of general government employees. It is also worth referring that the fact that CGA paid higher pensions for similar contributory careers raised equity concerns (see Box 6).

Figure 18: Breakdown of the growth rate of pension expenditure of the CGA subsystem



Sources: *Caixa Geral de Aposentações* and authors' calculations.

Note: a) Measured by the private consumption deflator.

### Box 6. The reforms of public pension systems

In 2005, in a context of severe public finances imbalances, it was already consensual that structural reforms in key areas were essential to curb the upward trend of expenditure and ensure fiscal sustainability.<sup>a</sup> As such, during 2006, the discussions with the social partners on a reform of the Social Security subsystem started, resulting in a new Social Security Framework Law published at the beginning of 2007.<sup>b</sup> This aimed at implementing a package of measures to face the population ageing challenge. The main changes introduced by this reform were the following:

- New rule for the annual update of pensions based on inflation, real GDP growth and the amount of the pension (see table below).
- Increase in the financial penalty for early old-age retirement from 4.5 to 6 per cent per each year relative to the statutory age of retirement (only possible for contributors with at least 30 years of contributory career and 55 years old).

<sup>a</sup>Indeed, in 2000 and 2002, two revisions of the Social Security Framework Law were approved (Law no. 17/2000 of 8 August and Law no. 32/2002 of 20 December). These ones, however, led to a worsening of the system's sustainability in spite of introducing the calculation of the initial pension based on the wages of all the years of the contributory career, as accrual rates were higher on average.

<sup>b</sup>Law no. 4/2007 of 16 January and Decree-Law no. 187/2007 of 10 May, for specific regulations.

- Introduction, from 2008 onwards, of a 'sustainability factor' which will reduce new pensions in accordance with the increase in life expectancy at 65 years old. If beneficiaries intend to counteract the financial penalty of the sustainability factor, they may opt to postpone the retirement age or contribute, on a voluntary basis, to a new supplementary public system of individual accounts.
- The transition to the new formula for the calculation of the initial pension based on the wages of all the years of contributory career, introduced in 2002<sup>c</sup>, will be faster.
- Reinforcement of the incentives for the postponement of the retirement beyond the statutory age.

Similarly to the private sector subsystem, the expenditure on pensions of the CGA subsystem would follow a structural growth trend over the next years, in the absence of a reform, which would be mitigated in about 25 years time, when the new retirees would have their pensions calculated according to the Social Security subsystem rules, which are less favourable.<sup>d</sup> Thus, by mid-2005, it was decided to anticipate the convergence to the private sector rules. The new legislation came into force at the beginning of 2006 and essentially included a gradual increase (by six months in each year) of the retirement age from 60 to 65 years old and of the contributory career for a full pension from 36 to 40 years.<sup>e</sup> In addition, with the reform of the Retirement Statute, the system became a closed one as the new public employees hired from January 2006 onwards have started to contribute to the Social Security subsystem. At mid-2007, additional changes in the public employees' pension system were implemented, in order to ensure full compatibility with the new Social Security Framework Law (for more details on the impact of the recent reform of the Portuguese public employees' pension system see Campos and Pereira (2008)).<sup>f</sup>

<sup>c</sup>Decree-Law no. 35/2002 of 19 February.

<sup>d</sup>For subscribers joining the CGA subsystem after September 1993, the rules for the calculation of their initial pension would be those of the private sector subsystem. This means that, in general terms, their contributory careers would have to be 40 years instead of 36 years to have access to a full pension and the replacement rate would also be lower.

<sup>e</sup>Law no. 60/2005 of December 29.

<sup>f</sup>Law no. 52/2007 of August 31.

The new rule for pension indexation			
	GDP < 2%	2% ≤ GDP < 3%	GDP ≥ 3%
Pension < 1.5 IAS	CPI	CPI+20% GDP (min. CPI+0.5 p.p.)	CPI+20% GDP
1.5 IAS ≤ Pension < 6 IAS	CPI-0.5 p.p.	CPI	CPI+12.5% GDP
6 IAS ≤ Pension ≤ 12 IAS	CPI-0.75 p.p.	CPI-0.25 p.p.	CPI

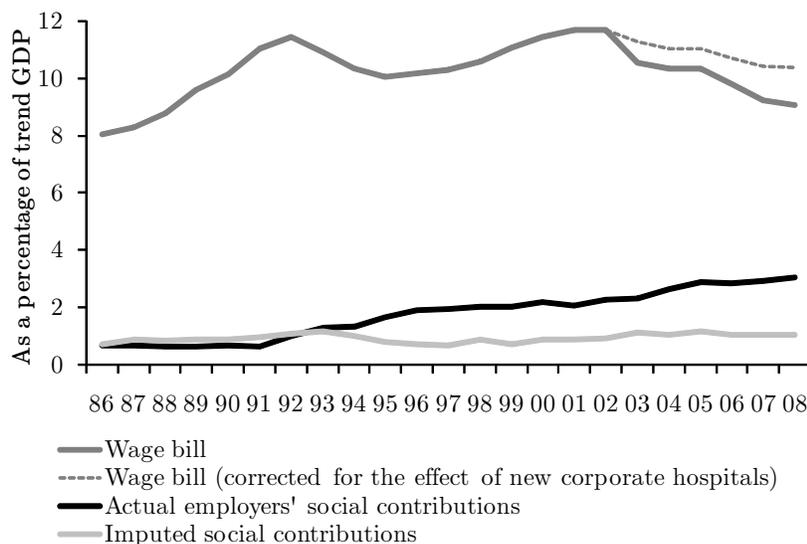
Note: The "IAS" is the reference index for the update of social support benefits (*Indexante de Apoios Sociais*). For 2007, it was defined as the 2006 mandatory minimum wage updated by the consumer price inflation of that year (Law no.53-B/2006).

In the European context, this reform of the public pension systems justified an update of the official projections of pension expenditure, which were approved at the Economic Policy Committee in October 2007. Accordingly, pension expenditure in Portugal was foreseen to increase by 5.5 p.p. of GDP from 2004 to 2050, instead of the 9.7 p.p. rise previously projected, allowing the reclassification of Portugal from the high risk group of countries in terms of sustainability to the medium risk group of countries. More recently, the Economic Policy Committee and the European Commission made public updated projections for pension expenditure in the European Union Member-states for the period from 2007 to 2060. The increase in pension expenditure as a ratio to GDP is expected to reach only 2.1 p.p. for this period in Portugal, below the euro area and European Union averages. The downward revision vis-à-vis the previous update is mainly due to different projection assumptions, in particular those concerning migration flows. In any case, this reform, if implemented consistently in conjunction with the attainment of a sound fiscal position, will significantly decrease the risk of unsustainability of public finances in Portugal.

Concerning compensation of employees, an increase in its ratio to trend GDP can be observed in most years until 2005. As already mentioned, part of this evolution stems from the current procedure of recording as actual social contributions of general government the amounts transferred by the State in order to ensure the financial balance of the public employees' pension system. Figure 19 presents the breakdown of compensation of employees into three components: the wage bill, actual employer social contributions and imputed social contributions. The part of the evolution of compensation of employees in the last decade to be explained by actual social contributions is more than half of the overall change observed in this item (2.3 out of 3.7 p.p. of trend GDP) and results, to a large extent, from the rise in expenditure on the pensions of former public employees, which has already been analysed in more detail. Imputed social contributions, which mainly encompass general government expenditure with health care subsystems benefiting public em-

ployees, were reasonably stable as a ratio to trend GDP in the period under analysis.

Figure 19: Breakdown of compensation of employees



Sources: INE and authors' calculations.

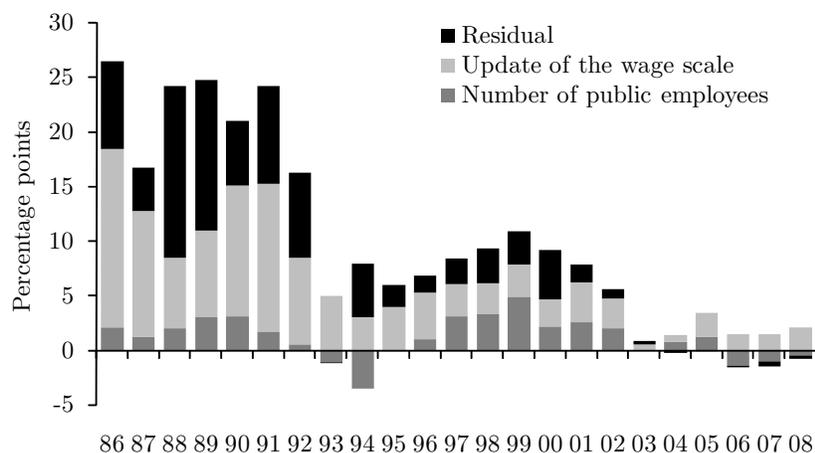
Regarding the wage bill, corrected for the effect of new corporate hospitals classified outside the general government sector, there was a 2.3 p.p. of trend GDP increase in the period under analysis. This rise was quite significant in the 1986-1992 and 1996-2002 periods. Figure 20 shows the breakdown of the growth rate of the wage bill into three explanatory factors: the update of the wage scale, the number of public employees and a residual. This residual essentially incorporates the wage 'drift', which corresponds to the increase in wages due to normal promotions and progressions in careers and the rise of the average wage resulting from the renewal of the population of public employees, and the effect of extraordinary revisions of careers. The relative rise in the wage bill does not stem from annual updates of the public employees' wage scale above inflation, as those were broadly in line with expected inflation as assumed in the budgets, in reasonable anticipation of the disinflation process (Figure 21). In addition, it is worth mentioning that in both 2003 and 2004 there was a quasi-freezing of the update of the public sector wage scale in the context of the measures undertaken to control the growth of public expenditure. Regarding the number of general government employees, the period from 1986 to 2002 witnessed a strong rise, in particular until 1991

and after 1997. In 2003, correcting for the impact of the transformation of several hospitals into public corporations, the number of public employees remained more or less constant and showed a slower growth in 2004-2005. In the 2006-2008 period it declined, mostly as a result of the control of hiring, in particular the implementation of the rule of only one employee hired for each two that leave service from mid-2005 until 2008. The residual effect was also very significant in almost every year from 1986 until 2002. Part of this evolution stemmed from an automatic scheme of promotions and progressions in careers, essentially based on tenure, which was basically frozen from mid-2002 onwards. In 2008, new rules for promotions were already in force but the amounts involved were still not representative of the new steady state. In addition, the residual also incorporates the impact of discretionary measures such as making public employees' incomes liable to taxation in 1988-1989 (simultaneously increasing gross wages), the introduction of the New Public Employees Pay System in 1989-1993, and extraordinary revisions to several specific careers namely between 1997 and 2002. The New Public Employees Pay System was designed with two main objectives: the public employees pay system needed to regain internal fairness and public sector salaries needed to become more competitive in relation to those paid by other sectors for the same job or the same qualifications. Its implementation, however, resulted in a substantial across the board increase in wages of public administration careers, distorting to a certain extent the initial purposes of the reform. These developments contributed to a significant wage premium associated with working in the public sector vis-à-vis the private sector, which, according to estimates produced by Campos and Pereira (2009) has been increasing. These authors also conclude that this wage premium is particularly high in several occupations, in particular those related with the provision of education and health care services, where general government is the main employer.

The dynamics of pension expenditure and compensation of employees in the period from 1986 to 2008 analysed above, although different in their nature, involved in most years a substantial rise in the average pension of the public systems and, to a lesser extent, in the average public wage, both defined in real terms: on average, 4.7 per cent per year in the former case and 3.2 per cent in the latter (Figure 22).

The other items of primary expenditure as a ratio to trend GDP show diverse patterns in the 1986-2008 period (Figure 12). Indeed, while intermediate consumption increased by 1.4 p.p. of trend GDP (slightly more when corrected for the impact of new corporate hospitals net of the effect of the 1995 structural break in data), investment and other primary expenditure (encompassing subsidies, other current expenditure and other capital expen-

Figure 20: Breakdown of the rate of change of public employees wage bill (corrected for the effect of new corporate hospitals)

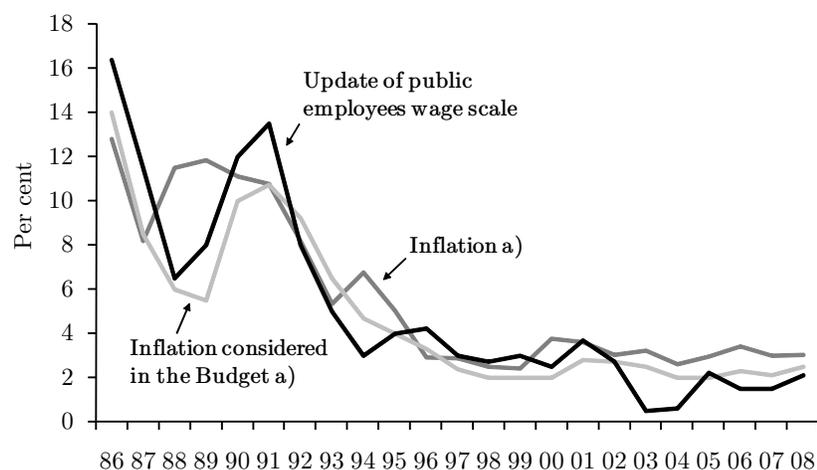


Sources: *Caixa Geral de Aposentações* and authors' calculations.

diture) declined by 0.7 and 0.9 p.p. of trend GDP, respectively. Regarding intermediate consumption, it is worth highlighting that the rise observed in this item over the entire period is, nevertheless, considerable given that on average intermediate consumption represented only 10 per cent of primary expenditure. In the case of investment a rising trend is noticeable up to 1997, though not very pronounced. This one can be partly explained by accession to the European Community and the use of structural funds. The decline observed thereafter can, to some extent, be justified by the use of public-private partnerships, in particular as far as the construction and exploitation of toll-free motorways is concerned. Lastly, it should be noted that the reduction in other primary expenditure stemmed almost entirely from the developments concerning subsidies.

As already mentioned, interest expenditure as a ratio to trend GDP showed a clear declining trend in almost every year of the period under analysis, with the exception of 1990-1991, 2000 and 2006-2008. These developments followed quite closely those of the implicit interest rate on public debt, as illustrated in Figure 23. The disinflation process contributed significantly to the reduction of the public debt interest rates, in particular at the beginning of the nineties, since public debt was then predominantly composed of short-term instruments, such as Treasury bills, and by floating-rate instruments such as saving certificates and most bond issues and loans

Figure 21: Update of the public employees wage scale and inflation (observed and budgeted)

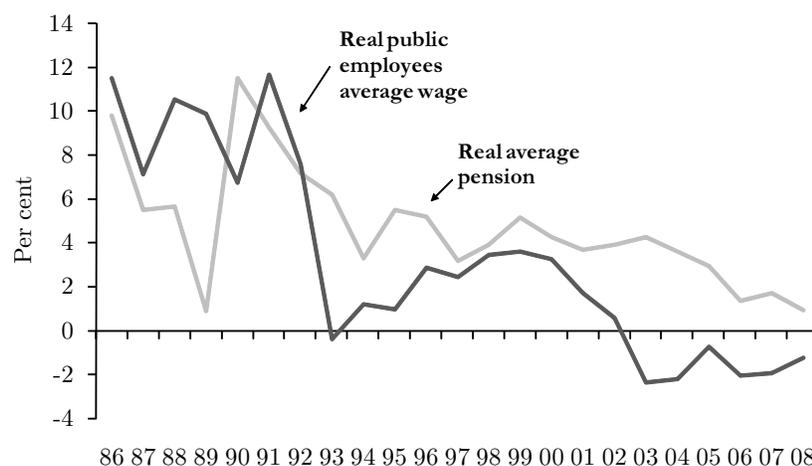


Source: Authors' calculations.

Note: a) Measured by the private consumption deflator.

provided by the domestic banks. From 1992-1993 onwards, the nominal convergence required to ensure the participation of Portugal, from the outset, in the euro area became the key objective of economic policy. Until 1993 there were still increases in the “real” implicit interest rate of public debt mainly explained by three factors. Firstly, the gradual substitution of tax exempt public debt by public debt subject to income tax from 1989 onwards. Secondly, the substitution of public debt at below market interest rates held by the central bank and financial institutions, on a compulsory basis, by public debt with market interest rates. In this respect, reference should be made to an important operation, amounting to more than 12 per cent of GDP, geared to absorbing the excess banking liquidity deposited with Banco de Portugal, which took place at the end of 1990. Finally, the tightening of monetary and exchange rate policies. As nominal convergence progressed, the level of interest rates, as well as their differentials with other countries, recorded a sharp reduction, mainly as a result of the decline in the currency risk premium. Overall, the implicit interest rate on public debt reached a minimum of 4.3 per cent in 2005, in comparison to 15.0 per cent at the beginning of the period.

Figure 22: Growth rates of real average pension and public employees' wage



Source: Authors' calculations.

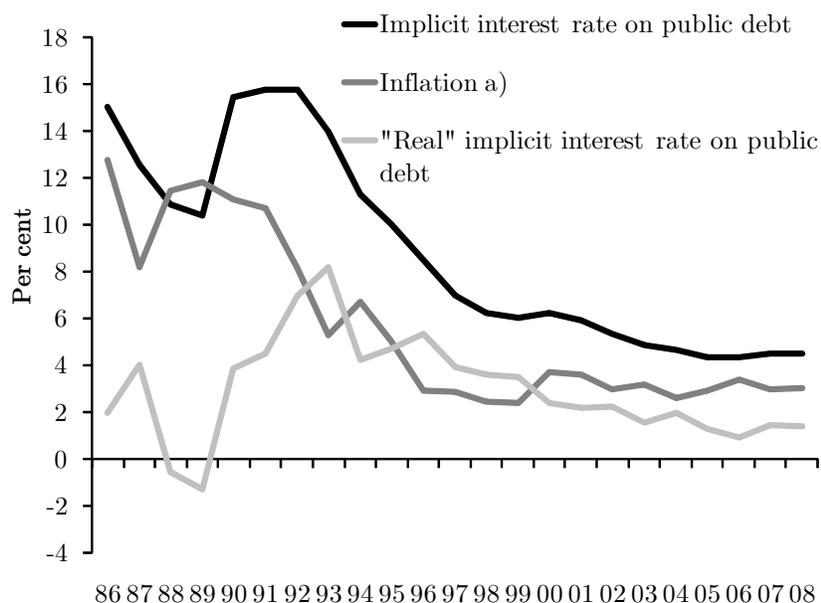
## 4 Public debt

In the framework of the Maastricht Treaty and the Stability and Growth Pact, the relevant concept of public debt is total gross debt at nominal value outstanding at the end of the year and consolidated between and within the sub-sectors of general government. Figure 24 presents the evolution of this variable in Portugal for the period between 1986 and 2008. In 1986, the debt ratio was very close to 60 per cent and at the end of the period under analysis was above that threshold, reaching 66.4 per cent.<sup>11</sup> According to the data now available, in the year relevant for the participation in the euro area, public debt as a ratio to GDP was clearly below the 60 per cent reference value (56.1 per cent in 1997). The debt ratio ended up by not playing an important role in the initial stage of the fiscal surveillance mechanism at the European level. The revised Stability and Growth Pact, however, increased the importance of this variable, in particular by making it relevant to the definition of each Member-state's medium-term fiscal objective.

The impact of the increased integration of financial markets was crucial in this period, not only reducing, in particular, the currency risk premium, which, as already mentioned, benefited the implicit interest rate on public debt, but also creating the conditions for a growing role of non-residents in

<sup>11</sup>Since data is only available from 1990 onwards, a retropolation was made based on the work by Sousa (1998).

Figure 23: Implicit interest rate on public debt



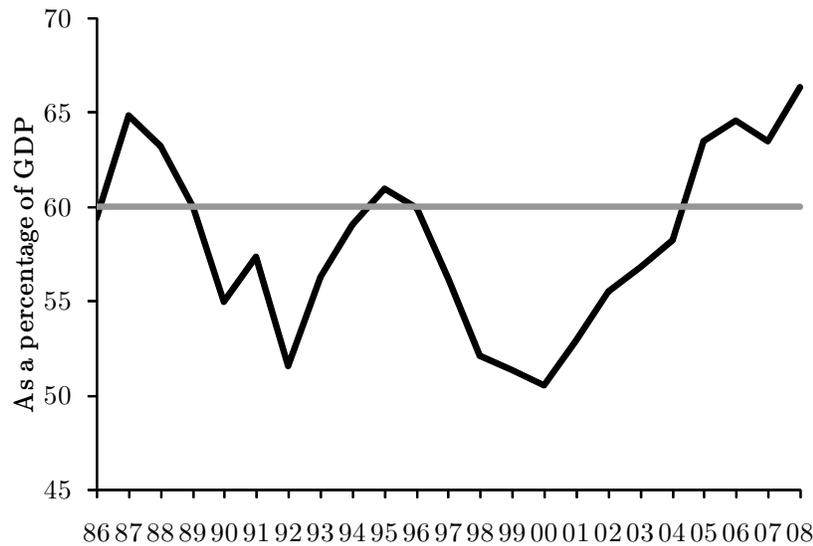
Sources: INE and authors' calculations.

Note: a) Measured by the private consumption deflator.

general government financing. Indeed, the share of Portuguese government debt held by non-residents rose from around 7 per cent at the beginning of the nineties, to around 78 per cent in 2008. In fact, with the elimination of the exchange rate risk as a consequence of the participation in the euro area, government debt securities of euro area countries became virtually perfect substitutes and until the end of 2007 there was no significant market discrimination on the basis of sovereign risk. This situation changed in 2008 in a context of high uncertainty stemming from the international economic and financial crisis.

The evolution of the debt ratio can be broken down into three factors: the contribution of the primary balance, interest expenditure net of the effect of economic growth ("snowball effect") and deficit debt-adjustments. Over the period as a whole, the 7.0 p.p. rise in the debt ratio results from a debt increasing contribution of deficit-debt adjustments of 10.4 p.p. and the effect of interest expenditure net of economic growth, which reached 3.3 p.p. in cumulative terms. These effects were partially offset by the debt decreasing impact of the primary balance that amounted to 6.7 p.p. (Figure 25). In the period after the outset of the euro area, up to 2008, the debt ratio rose

Figure 24: Evolution of the public debt ratio



Sources: INE and authors' calculations.

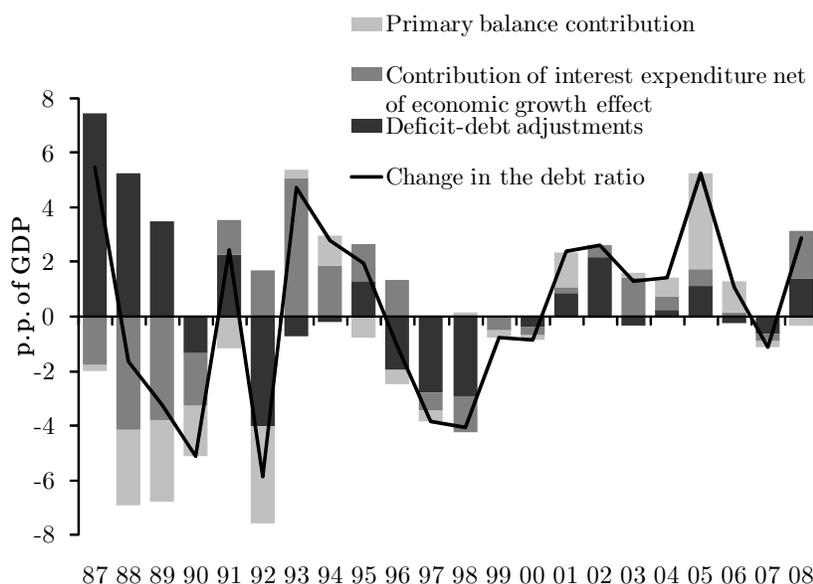
by 14.3 p.p. as a result of primary deficits (5.9 p.p.), “snowball effect” (4.1 p.p.) and deficit-debt adjustments (4.3 p.p.).

The favourable impact of the primary surpluses was clearly concentrated in the years from 1988 to 1992, while 2005 was the most unfavourable year due to a significant primary deficit. In this respect it is worth highlighting that, in the absence of temporary measures, the primary deficits in the years from 2002 to 2004 and 2008 would have had a more important contribution to the debt ratio increase.

Concerning the “snowball effect”, the impact of strong nominal economic growth surpassed the high level of interest expenditure up to the economic downturn in 1991. This situation was reversed afterwards, until 1996, in spite of the declining trend in interest payments. After 1998, with interest outlays broadly stabilised, the contribution of this item to the evolution of the debt ratio was not very important and was broadly in line with the economic cycle.

Lastly, regarding deficit-debt adjustments, two points are worth highlighting. Firstly, the important amount of deficit-debt adjustments at the beginning of the period, in particular between 1987 and 1989, may partly arise from data inconsistencies (see footnote 11). Secondly, in 1992 and between 1996 and 1998, privatisation receipts contributed significantly to the reduction of the debt ratio. In the remaining years, several factors were be-

Figure 25: Breakdown of the change in the debt ratio



Sources: INE and authors' calculations.

hind the quite erratic evolution of deficit-debt adjustments. These included changes in general government deposits, equity injections not reclassified as capital transfers, debt settlements by the Treasury, the difference between accrual and cash recording of taxes and social contributions, EU transfers and several expenditure items, *inter alia*.

## 5 Concluding remarks

One of the key features of public finances in Portugal since accession to the European Community has been the creation of a modern tax system, very similar to those of most advanced economies. During this period, fiscal developments were also characterised by a sustained growth of current primary expenditure, essentially related with the dynamics of public pension systems and the expansion of compensation of employees, partly related to the provision of education and health services. Overall, consolidation efforts were minimalist, hampering the achievement of a sound fiscal position. At its best, the structural deficit hovered around 3 per cent of GDP.

From 1993 up to the end of the nineties, the decrease in interest payments stemming from nominal convergence and the prospect of participation

in the euro allowed an expansionary stance of fiscal policy in most years. The unsustainability of this approach became evident in 2001, when interest expenditure ceased to decline and economic activity decelerated, leading to an excessive deficit. The policy package adopted then, though correcting the excessive deficit, basically failed as it relied too little on structural measures on the expenditure side and too much on VAT increase and short-term measures, in particular temporary measures.

In 2005, in the absence of sizeable temporary measures, Portugal once again incurred an excessive deficit. The programme approved to correct it presented some similarities but also major differences vis-à-vis the 2002-2004 policy. On the one hand, it relied heavily in a first stage on tax increases and short-term measures on the expenditure side. On the other hand, in addition to the distinct stance on temporary measures, the programme placed stronger emphasis on major reforms on the expenditure side, in particular regarding public pension systems and public administration. Further, its implementation benefited from the ongoing stepping up of tax administration. In the short-term, it was a success as it allowed the closure of the excessive deficit procedure in 2007, one year ahead of the deadline initially set down, and changed to some extent the views on the sustainability of Portuguese public finances. The structural deficit was, however, still significantly above the MTO, set at that time at 0.5 per cent of GDP.

Since 2008, fiscal developments in the euro area Member-states have been affected by the economic crisis, particularly in the last months of the year. In Portugal, the recent budgetary evolution has not differed substantially from that observed in this group of countries. A critical assessment of medium-term fiscal prospects in Portugal is, however, not clear cut. Four aspects are crucial in this respect. Firstly, the quantification of the impact of measures taken in 2006 and 2007 that have a permanent effect on the revenue and expenditure levels, but only a transitory impact on the rates of change (as, for example, the freezing of automatic progressions in careers, the limitation of early retirements, changes to unemployment benefit rules and the reduction in medicines co-payments). Secondly, an evaluation of the additional effect that can be expected from the reforms launched over the last years taking into account the likelihood of their consistent implementation. Thirdly, the confirmation of the reversible nature of the fiscal stimulus measures approved and put into practice since mid-2008. Fourthly, the strictness of the constraints resulting from the Stability and Growth Pact and market reactions. The 2008 and 2009 developments, much influenced by the international crisis, point to a high level of uncertainty and leave many scenarios open. In this context, the definition of a medium term fiscal consolidation programme is crucial.

# Annex 1.a)

## GENERAL GOVERNMENT ACCOUNTS (on a national accounts basis) <sup>(a)</sup>

Millions of euros

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>TOTAL REVENUE</b>	<b>8 760</b>	<b>10 074</b>	<b>12 779</b>	<b>15 440</b>	<b>18 020</b>	<b>21 918</b>	<b>27 283</b>	<b>27 472</b>	<b>28 680</b>	<b>32 668</b>	<b>35 901</b>	<b>38 834</b>	<b>41 958</b>	<b>46 192</b>	<b>49 202</b>	<b>51 844</b>	<b>56 032</b>	<b>58 964</b>	<b>62 164</b>	<b>61 986</b>	<b>65 817</b>	<b>70 372</b>	<b>71 873</b>
<b>Current revenue</b>	<b>8 573</b>	<b>9 843</b>	<b>12 390</b>	<b>14 827</b>	<b>17 284</b>	<b>20 877</b>	<b>25 927</b>	<b>26 183</b>	<b>27 392</b>	<b>31 163</b>	<b>34 120</b>	<b>36 660</b>	<b>40 369</b>	<b>44 271</b>	<b>47 545</b>	<b>49 665</b>	<b>53 693</b>	<b>55 204</b>	<b>57 040</b>	<b>59 838</b>	<b>64 048</b>	<b>68 910</b>	<b>70 323</b>
Tax revenue	7 474	8 411	10 724	12 844	15 259	18 353	22 157	22 382	21 565	27 191	29 745	32 221	35 537	38 952	42 188	44 336	47 669	49 342	50 289	53 655	57 027	61 157	62 335
Taxes on income and wealth	1 560	1 644	2 394	3 280	3 892	4 952	6 269	5 974	6 303	7 169	8 194	8 936	9 436	10 662	12 016	12 130	12 574	11 954	12 316	12 574	13 719	15 905	16 524
Taxes on households	1 063	1 033	1 598	2 241	2 520	3 242	4 336	4 391	4 576	4 934	5 480	5 626	5 902	6 406	7 161	7 605	7 761	7 965	7 893	8 277	8 816	9 641	10 008
Taxes on firms	497	611	796	1 040	1 372	1 710	1 933	1 584	1 728	2 235	2 714	3 310	3 534	4 256	4 855	4 525	4 813	3 989	4 423	4 297	4 904	6 264	6 516
Taxes on production and imports	3 485	3 920	4 926	5 586	6 557	7 584	9 065	9 004	10 171	11 043	12 081	12 815	14 509	15 962	16 490	17 469	19 223	20 466	20 400	22 384	23 947	24 535	24 265
<i>of which:</i>																							
Value added tax (VAT)	1 283	1 589	2 025	2 365	2 694	3 118	4 029	3 871	4 686	5 507	6 221	6 651	7 542	8 335	9 228	9 583	10 597	11 681	11 347	12 788	13 507	14 069	14 173
Tax on oil products	n.a.	826	917	1 057	1 247	1 543	1 808	1 844	1 991	2 214	2 315	2 302	2 578	2 567	2 011	2 456	2 922	3 105	3 125	3 134	3 187	3 328	3 191
Tax on vehicles sales <sup>(b)</sup>	114	151	274	267	302	334	500	496	604	676	791	835	1 028	1 237	1 233	1 193	1 150	985	1 121	1 173	1 166	1 195	959
Social contributions	2 429	2 847	3 404	3 978	4 810	5 817	6 823	7 404	8 091	8 979	9 470	10 470	11 592	12 328	13 682	14 738	15 872	16 922	17 573	18 697	19 360	20 717	21 546
Actual	2 228	2 570	3 081	3 597	4 364	5 251	6 092	6 546	7 270	8 271	8 826	9 812	10 676	11 531	12 636	13 609	14 613	15 340	16 029	16 954	17 712	19 077	19 853
Social security subsystem	1 897	2 197	2 639	3 048	3 686	4 427	4 847	5 162	5 601	5 967	6 223	6 972	7 560	8 192	8 935	9 748	10 287	10 606	10 655	11 230	11 807	12 582	13 187
CGA subsystem	331	373	442	550	678	824	1 245	1 384	1 669	2 304	2 603	2 840	3 116	3 339	3 701	3 861	4 326	4 734	5 374	5 663	5 905	6 495	6 666
Imputed	201	277	324	381	446	566	731	859	821	708	645	659	916	797	1 047	1 129	1 259	1 582	1 544	1 743	1 648	1 640	1 693
Sales	461	582	688	840	918	991	1 194	1 280	1 400	1 845	2 054	2 276	2 500	2 899	3 199	3 155	3 293	3 205	3 379	3 569	3 773	4 138	4 162
Other current revenue	639	850	977	1 143	1 107	1 534	2 575	2 521	1 427	2 126	2 321	2 163	2 333	2 420	2 157	2 173	2 732	2 657	3 371	2 614	3 248	3 615	3 825
<b>Capital revenue</b>	<b>187</b>	<b>231</b>	<b>389</b>	<b>613</b>	<b>737</b>	<b>1041</b>	<b>1356</b>	<b>1289</b>	<b>1288</b>	<b>1505</b>	<b>1781</b>	<b>2174</b>	<b>1589</b>	<b>1921</b>	<b>1657</b>	<b>2180</b>	<b>2338</b>	<b>3700</b>	<b>5124</b>	<b>2148</b>	<b>1769</b>	<b>1462</b>	<b>1549</b>
Taxes on capital	65	68	62	34	74	101	54	50	50	57	60	71	84	94	103	91	105	105	27	69	23	10	11
Transfers from the EU	80	137	279	555	644	924	1 286	1 210	1 212	1 273	1 612	1 641	1 424	1 633	1 396	1 829	1 948	1 931	1 584	1 870	1 647	1 388	1 347
Other capital transfers	41	26	47	23	19	17	16	29	26	175	110	461	80	194	158	259	286	1 724	3 513	209	100	64	192
<b>TOTAL EXPENDITURE</b>	<b>10 833</b>	<b>12 300</b>	<b>14 158</b>	<b>16 764</b>	<b>21 384</b>	<b>26 349</b>	<b>30 412</b>	<b>33 055</b>	<b>34 465</b>	<b>36 959</b>	<b>39 959</b>	<b>42 265</b>	<b>45 579</b>	<b>49 353</b>	<b>52 770</b>	<b>57 363</b>	<b>59 877</b>	<b>62 958</b>	<b>66 995</b>	<b>71 069</b>	<b>71 909</b>	<b>74 590</b>	<b>76 213</b>
<b>Current expenditure</b>	<b>9 566</b>	<b>10 995</b>	<b>12 514</b>	<b>14 668</b>	<b>18 775</b>	<b>23 234</b>	<b>26 504</b>	<b>28 984</b>	<b>30 691</b>	<b>32 470</b>	<b>34 577</b>	<b>36 970</b>	<b>39 204</b>	<b>42 787</b>	<b>46 766</b>	<b>50 432</b>	<b>54 098</b>	<b>57 049</b>	<b>60 494</b>	<b>64 673</b>	<b>66 611</b>	<b>68 900</b>	<b>71 742</b>
Compensation of employees	2 680	3 175	3 937	4 932	6 012	7 505	9 087	9 759	10 184	10 984	11 829	12 842	14 311	15 600	17 329	18 516	19 907	19 568	20 342	21 541	21 174	21 059	21 377
Intermediate consumption	863	939	1 067	1 346	1 608	2 209	2 004	2 270	2 579	3 447	3 742	3 947	4 421	4 679	5 295	5 606	5 709	5 251	5 728	6 316	6 392	6 755	7 265
Interest expenditure	2 182	2 305	2 435	2 657	4 365	5 131	5 611	5 360	4 949	4 931	4 505	3 808	3 447	3 446	3 767	3 853	3 849	3 740	3 807	3 887	4 267	4 592	4 817
<b>Current transfers</b>	<b>3 842</b>	<b>4 577</b>	<b>5 075</b>	<b>5 733</b>	<b>6 790</b>	<b>8 390</b>	<b>9 801</b>	<b>11 594</b>	<b>12 979</b>	<b>13 108</b>	<b>14 501</b>	<b>15 373</b>	<b>17 326</b>	<b>19 062</b>	<b>20 376</b>	<b>22 457</b>	<b>24 633</b>	<b>28 490</b>	<b>30 616</b>	<b>32 929</b>	<b>34 778</b>	<b>36 494</b>	<b>38 283</b>
to households	2 624	3 172	3 748	4 332	5 308	6 546	7 591	8 786	10 503	10 830	11 747	12 528	13 850	14 945	16 500	18 001	19 772	23 508	25 438	27 516	29 181	31 334	33 040
in cash	2 381	2 884	3 367	3 866	4 734	5 849	6 741	7 764	9 471	9 494	10 217	10 862	12 016	12 855	14 278	15 517	17 043	19 110	20 617	22 250	23 433	24 713	25 969
in kind	243	288	381	467	574	698	850	1 022	1 032	1 336	1 529	1 666	1 834	2 090	2 222	2 485	2 729	4 398	4 821	5 265	5 748	6 621	7 071
to firms (subsidies)	891	826	889	911	878	957	1 272	1 662	1 288	1 096	1 275	1 150	1 495	2 027	1 519	1 781	2 092	2 506	2 170	2 339	2 231	1 901	1 931
other transfers	328	578	439	490	604	887	938	1 147	1 188	1 182	1 480	1 695	1 981	2 091	2 357	2 674	2 769	2 475	3 008	3 075	3 366	3 260	3 313
<b>Capital expenditure</b>	<b>1 266</b>	<b>1 305</b>	<b>1 645</b>	<b>2 097</b>	<b>2 609</b>	<b>3 115</b>	<b>3 908</b>	<b>4 072</b>	<b>3 774</b>	<b>4 489</b>	<b>5 382</b>	<b>6 296</b>	<b>6 375</b>	<b>6 567</b>	<b>6 005</b>	<b>6 931</b>	<b>5 780</b>	<b>5 909</b>	<b>6 501</b>	<b>6 396</b>	<b>5 298</b>	<b>5 690</b>	<b>4 471</b>
Investment	831	1 023	1 308	1 445	1 695	2 042	2 553	2 793	2 766	3 223	3 794	4 430	4 303	4 628	4 586	4 992	4 793	4 309	4 532	4 380	3 700	3 767	3 550
Other capital expenditure	435	282	337	651	914	1 072	1 355	1 279	1 008	1 266	1 587	1 866	2 072	1 939	1 419	1 938	986	1 600	1 969	2 016	1 598	1 923	922
<b>OVERALL BALANCE</b>	<b>-2 073</b>	<b>-2 226</b>	<b>-1 380</b>	<b>-1 325</b>	<b>-3 364</b>	<b>-4 430</b>	<b>-3 129</b>	<b>-5 583</b>	<b>-5 785</b>	<b>-4 291</b>	<b>-4 058</b>	<b>-3 431</b>	<b>-3 621</b>	<b>-3 162</b>	<b>-3 569</b>	<b>-5 518</b>	<b>-3 845</b>	<b>-3 994</b>	<b>-4 831</b>	<b>-9 083</b>	<b>-6 092</b>	<b>-4 218</b>	<b>-4 341</b>
Overall balance excl. temp. measures	-2 073	-2 226	-1 380	-1 325	-3 364	-4 430	-3 129	-5 583	-5 785	-4 291	-4 058	-3 404	-3 621	-3 162	-3 968	-5 518	-5 667	-7 251	-7 883	-8 881	-6 092	-4 413	-6 195
<i>Memo items:</i>																							
Primary current expenditure	7 385	8 690	10 079	12 011	14 410	18 103	20 893	23 623	25 742	27 539	30 073	32 162	35 757	39 341	42 999	46 579	50 248	53 308	56 687	60 786	62 344	64 309	66 925
Primary balance	109	79	1 055	1 332	1 001	701	2 481	-223	-836	640	447	377	-174	284	198	-1 665	4	-253	-1 024	-5 196	-1 825	374	476
Public debt	16 056	20 690	21 044	26 956	29 614	35 468	35 815	40 903	46 543	51 962	54 259	54 964	55 489	58 657	61 793	68 431	75 248	78 798	84 033	94 792	100 522	103 702	110 377
Nominal GDP	27 011	31 826	37 989	44 880	53 888	61 792	69 470	72 653	78 772														

# Annex 1.b)

## CYCLICAL COMPONENT OF THE BUDGET BALANCE

Millions of euros

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>TOTAL REVENUE</b>	-461	-126	-10	52	513	1 035	1 313	295	-486	-995	-913	-654	65	813	1 410	932	340	-617	-364	-292	98	948	1 653
<b>Current revenue</b>	-461	-126	-10	52	513	1 035	1 313	295	-486	-995	-913	-654	65	813	1 410	932	340	-617	-364	-292	98	948	1 653
Tax revenue	-461	-126	-10	52	513	1 035	1 313	295	-486	-995	-913	-654	65	813	1 410	932	340	-617	-364	-292	98	948	1 653
Taxes on income and wealth	-133	-24	-56	31	246	303	406	45	-178	-326	-274	-163	74	228	499	397	133	-123	-105	-155	-10	456	645
Taxes on households	-54	0	-38	-5	29	88	209	88	-54	-119	-82	-25	34	98	139	101	30	0	-21	-66	-99	-71	62
Taxes on firms	-79	-24	-18	37	217	215	196	-43	-124	-207	-193	-138	40	130	360	296	104	-122	-85	-88	90	527	583
Taxes on production and imports	-213	-92	103	4	193	548	605	152	-193	-468	-507	-147	-86	465	702	345	113	-490	-215	-23	226	528	846
<i>of which:</i>																							
Value added tax (VAT)	-97	-46	41	-2	100	284	311	85	-100	-258	-290	-261	-77	218	380	211	89	-276	-119	-20	135	290	512
Tax on oil products	n.a.	-11	2	-3	28	82	64	28	-17	-44	-49	-42	-32	5	25	32	28	-14	-5	-6	15	14	42
Tax on vehicles sales <sup>(b)</sup>	-22	-11	39	10	15	43	105	3	-39	-93	-92	-74	43	183	199	47	-26	-129	-61	7	40	151	165
Social contributions	-114	-10	-58	17	74	184	303	99	-115	-201	-132	-43	77	120	209	189	93	-5	-43	-115	-118	-37	162
Actual	-114	-10	-58	17	74	184	303	99	-115	-201	-132	-43	77	120	209	189	93	-5	-43	-115	-118	-37	162
Social security subsystem	-114	-10	-58	17	74	184	303	99	-115	-201	-132	-43	77	120	209	189	93	-5	-43	-115	-118	-37	162
CGA subsystem	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Imputed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other current revenue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Capital revenue</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Taxes on capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transfers from the EU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other capital transfers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL EXPENDITURE</b>	-1	6	-20	-25	-35	-55	-54	-20	70	122	165	108	29	-39	-112	-129	-105	195	366	464	374	95	27
<b>Current expenditure</b>	-1	6	-20	-25	-35	-55	-54	-20	70	122	165	108	29	-39	-112	-129	-105	195	366	464	374	95	27
Compensation of employees	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intermediate consumption	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Current transfers	-1	6	-20	-25	-35	-55	-54	-20	70	122	165	108	29	-39	-112	-129	-105	195	366	464	374	95	27
to households	-1	6	-20	-25	-35	-55	-54	-20	70	122	165	108	29	-39	-112	-129	-105	195	366	464	374	95	27
in cash	-1	6	-20	-25	-35	-55	-54	-20	70	122	165	108	29	-39	-112	-129	-105	195	366	464	374	95	27
in kind	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to firms (subsidies)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
other transfers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>OVERALL BALANCE</b>	-460	-132	9	77	549	1 090	1 368	315	-556	-1 117	-1 078	-762	36	852	1 522	1 061	445	-812	-730	-756	-276	852	1 626
<i>Memo items:</i>																							
Nominal trend GDP	28 355	32 328	38 274	44 342	51 549	59 503	67 216	73 091	80 491	87 640	92 723	99 339	106 325	113 062	119 573	126 693	133 998	140 071	144 931	149 641	154 530	159 590	162 411

Source: Authors' calculations.

Note: (a) In 2007, includes the receipts of the Tax on Motor Vehicles and part of the receipts of the Single Tax on Vehicles.

# Annex 1.c)

## TEMPORARY MEASURES

Millions of euros

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	
<b>TOTAL REVENUE</b>	0	0	0	0	0	0	0	0	0	0	0	373	0	0	0	0	1 175	3 257	3 052	0	0	0	0	
<b>Current revenue</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1 175	1 957	0	0	0	0	0	
Tax revenue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1 175	1 957	0	0	0	0	0	
Taxes on income and wealth	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	634	641	0	0	0	0	0	
Taxes on households	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	206	214	0	0	0	0	0	
Taxes on firms	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	428	427	0	0	0	0	0	
Taxes on production and imports	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	392	963	0	0	0	0	0	
<i>of which:</i>																								
Value added tax (VAT)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	243	894	0	0	0	0	0	
Tax on oil products	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tax on vehicles sales <sup>(b)</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Social contributions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149	353	0	0	0	0	0	
Actual	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149	353	0	0	0	0	0	
Social security subsystem	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149	353	0	0	0	0	0	
CGA subsystem	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Imputed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other current revenue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Capital revenue</b>	0	0	0	0	0	0	0	0	0	0	0	373	0	0	0	0	0	1 300	3 052	0	0	0	0	
Taxes on capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Transfers from the EU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other capital transfers	0	0	0	0	0	0	0	0	0	0	0	373	0	0	0	0	0	1 300	3 052	0	0	0	0	
<b>TOTAL EXPENDITURE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-399	0	-653	0	0	202	0	-195	-1 854	
<b>Current expenditure</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	202	0	0	0	
Compensation of employees	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Intermediate consumption	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Interest expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Current transfers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	202	0	0	0	
to households	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
in cash	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
in kind	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
to firms (subsidies)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
other transfers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	202	0	0	0	
<b>Capital expenditure</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-399	0	-653	0	0	0	0	-195	-1 854	
Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-399	0	-653	0	0	0	0	-195	-1 854	
<b>OVERALL BALANCE</b>	0	0	0	0	0	0	0	0	0	0	0	373	0	0	399	0	1 828	3 257	3 052	-202	0	195	1 854	

Source: Authors' calculations.

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