

# The sustainability of public finances in the context of population ageing

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## Introduction

In the decades ahead, the size and age structure of the European population will change dramatically. The declining birth rate and constant rise in life expectancy are creating an ageing population in Europe, where the post-war baby-boom generation has reached or is approaching the statutory retirement age.

These demographic changes will obviously have a significant impact on society. According to the forecasts, economic growth will slow down following the reduction in the population of working age. In addition, there will be strong upward pressure on public expenditure on pensions, health care and long-term care for the elderly. Population ageing will therefore pose major economic, fiscal and social challenges.

It will thus not be easy to maintain sound public finances in the long term. It is in that context that questions arise regarding the long-term sustainability of public finances. Are public finances currently sufficiently sound to meet these challenges with total confidence? Or are these developments likely to cause a problem of sustainability, with accumulating deficits and a steep rise in the public debt? If so, what adjustments are needed to cope with the budgetary effects of population ageing?

This article aims to explain the challenges inherent in population ageing for public finances, and how the authorities can respond with an appropriate fiscal policy. The first chapter examines the demographic trends.

Chapter 2 deals with the consequences of population ageing for public expenditure. Chapter 3 explains what is meant by sustainable public finances and how that concept can be made operational. The sustainability of public finances is a key element in the process of budgetary surveillance organised at European Union level. Chapter 4 describes how that budgetary surveillance is carried out and the European strategy designed to meet the challenges of population ageing. The question of the sustainability of public finances was also a key aspect of the recent opinion issued by the "Public Sector Borrowing Requirement" section of the High Council of Finance. The main points of that opinion are described in chapter 5. A summary of the principal observations concludes this article.

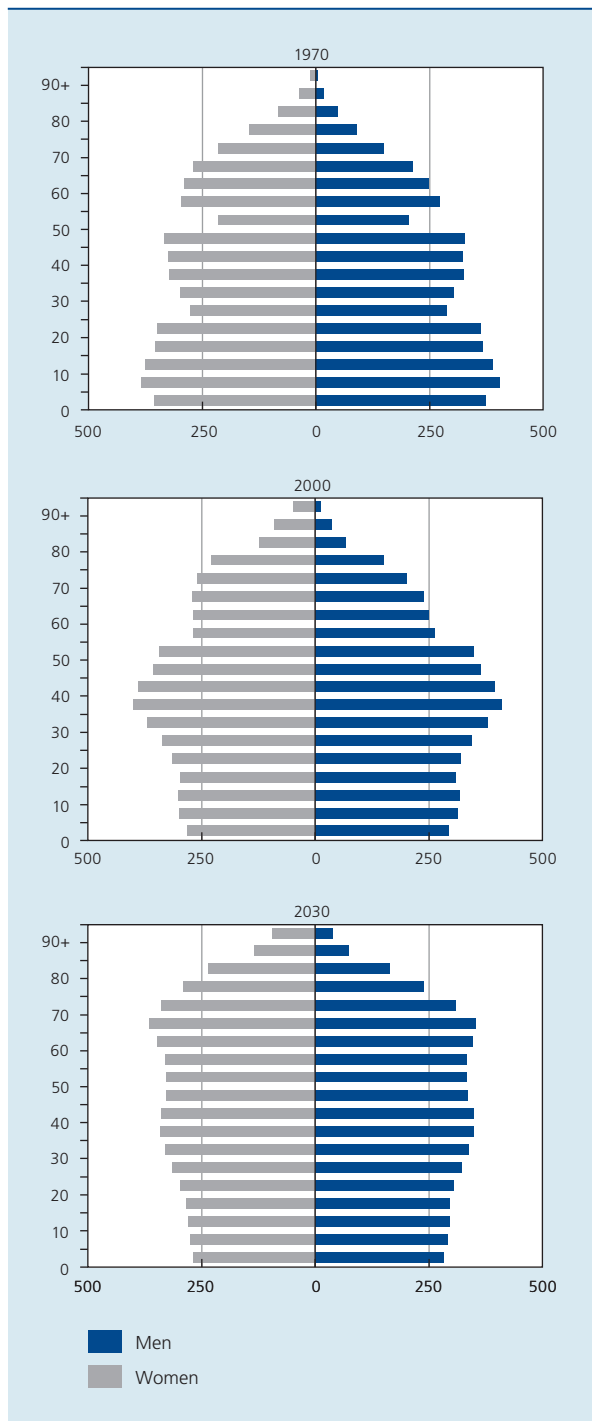
## 1. Demographic developments

In 2001, the National Statistical Institute (NSI), working jointly with the Federal Planning Bureau and demographic experts, published its latest report on the population outlook for Belgium for the period 2000-2050. The report predicts a slight increase in the Belgian population to almost 11 million people in 2050. However, there will be major changes in the population structure.

Like most other European countries, Belgium has a rapidly ageing population. The Belgian population aged 65 years and over will increase by 1.2 million persons in the period 2000-2050. The effects of ageing will be most apparent in the period 2010-2030, during which the number of persons aged over 65 years is expected to increase by almost 800,000. As a result, this group will account for

<sup>(1)</sup> The authors wish to thank Bruno Eugène, Hugues Famerée, Geert Langenus and Kris Van Cauwer for their contributions.

**CHART 1** BELGIAN POPULATION AGE PYRAMID IN 1970, 2000 AND 2030  
(in thousands of persons, per five-year age band)



Sources: EC, NSI.

24 p.c. of the total Belgian population in 2030, and 26 p.c. in 2050, compared to 17 p.c. in 2000. Population ageing is also evident in the age structure of the 65+ category. By the year 2050, the share of those aged over 80 in this group will have almost doubled.

Conversely, the 15 to 64 age group – the potential labour force – is expected to decline by almost 350,000 persons in the first half of the 21st century, cutting their share in the total population from 66 p.c. in 2000 to 58 p.c. in 2050. However, that fall will not begin until 2011, which means that the potential labour force will continue to expand until 2010 – to a level of 7 million people – before declining by almost 550,000 persons over a 40-year period.

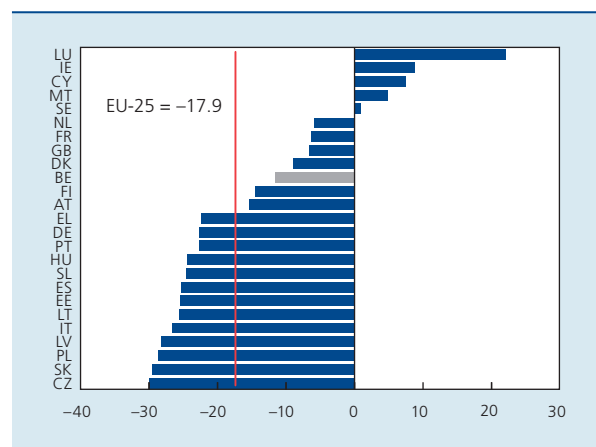
These demographic developments are due to the cumulative effects of the declining birth rate in recent decades and the substantial increase in life expectancy at birth. Further significant increases in life expectancy are forecast for the future: for men, it is estimated to increase from 75.1 years in 2000 to 83.9 years in 2050, and for women from 81.6 years in 2000 to 88.9 years in 2050.

This changing population structure is naturally reflected in the elderly persons' dependency ratio, i.e. the ratio between the population aged 65 or over and the population of working age (15 to 64 years). That ratio will almost double from 26 p.c. in 2000 to 45 p.c. in 2050.

Although the changes in the Belgian population structure are substantial, they cannot be considered exceptional from a European perspective. Over the period 2010-2050, the population of working age will decline by almost 12 p.c. in Belgium, whereas estimates suggest an average decline of just under 18 p.c. in the EU-25<sup>(1)</sup>. The expansion of the

(1) These figures are based on the Eurostat demographic projections. According to the NSI's population forecasts, the Belgian population of working age (15 to 64 years) will decline by around 8 p.c. over the period 2010-2050.

**CHART 2** TREND IN THE POPULATION OF WORKING AGE (15 TO 64 YEARS) IN THE PERIOD 2010-2050  
(percentage changes)



Source: EC.

Belgian population aged 65 and over is also not expected to exceed the European average.

These changes in the population of working age have significant implications for an economy's growth potential. Combined with the rise in the European employment rate expected by the European Commission – from 63 p.c. in 2004 to 67 p.c. in 2010 and 70 p.c. in 2020 – this development means that the total working population in the EU-25 will expand by around 20 million persons in the period 2004-2017. However, in the ensuing period up to 2050, employment will fall by around 30 million persons. The European Commission therefore estimates that the annual potential GDP growth by volume in the EU-25 will fall from an average of 2.4 p.c. in the years 2004 to 2010 to just 1.2 p.c. in the period 2031-2050. At first, employment will continue to make a positive contribution to growth, but in the long run, productivity gains will be the only source of growth.

## 2. Budgetary costs of ageing

This chapter examines the budgetary costs of ageing, which are usually defined as the increase in the percentage of GDP represented by public expenditure related to demographic trends or age. For Belgium, it is the Study Group on Ageing (SGA) that produces estimates on that subject. For the EU, similar projections are produced

by the Economic Policy Committee's working group on ageing population (AWG).

### 2.1 Estimates by the Study Group on Ageing for Belgium

The law of 5 September 2001<sup>(1)</sup> set up the Study Group on Ageing under the aegis of the High Council of Finance with the task of examining the budgetary and social costs of ageing. The Study Group produces an annual report presenting a future projection of age-related public expenditure.

According to the latest estimates from the Study Group on Ageing, dating from June 2007, demographic trends would be likely to make age-related public expenditure respectively 4.4 and 6.2 p.c. of GDP higher in 2030 and 2050 than its level in 2006. Assuming that social benefits are adjusted in line with prosperity by 0.5 p.c. per annum, pension costs would increase by 4.5 p.c. of GDP over the period as a whole, thus representing the primary factor behind the expansion. Employees' pensions are expected to rise by 2.8 percentage points, while public sector pensions will increase by 1.7 percentage points. The pensions of self-employed persons are expected to remain more or less unchanged as a percentage of GDP. Health care is

(1) Law of 5 September 2001 guaranteeing a continuous reduction in the public debt and establishing an Ageing Fund.

**TABLE 1** BUDGETARY COSTS OF AGEING  
(percentages of GDP)

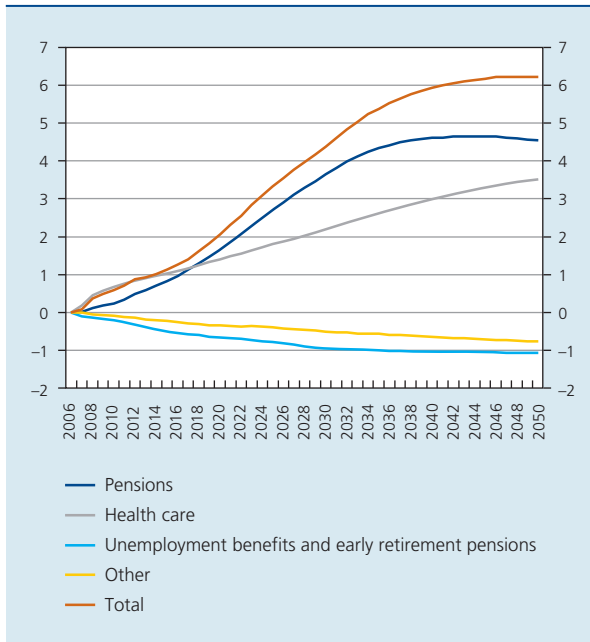
	2006	2010	2030	2050	2006-2030	2006-2050
Pensions .....	8.9	9.1	12.5	13.4	3.6	4.5
Employees .....	5.0	5.0	7.3	7.7	2.3	2.8
Self-employed .....	0.7	0.7	0.9	0.8	0.2	0.1
Public sector .....	3.2	3.4	4.4	4.8	1.2	1.7
Health care .....	7.0	7.7	9.2	10.5	2.2	3.5
Disability benefits .....	1.2	1.3	1.1	1.0	-0.1	-0.2
Unemployment benefits .....	2.1	1.9	1.2	1.1	-0.9	-1.0
Early retirement pensions .....	0.4	0.4	0.4	0.4	-0.0	-0.0
Family allowances .....	1.6	1.5	1.3	1.1	-0.4	-0.5
Other .....	1.6	1.6	1.6	1.6	-0.0	-0.0
<b>Total .....</b>	<b>22.9</b>	<b>23.5</b>	<b>27.3</b>	<b>29.1</b>	<b>4.4</b>	<b>6.2</b>
<i>p.m. Remuneration of teaching staff .....</i>	<i>4.0</i>	<i>3.9</i>	<i>3.6</i>	<i>3.7</i>	<i>-0.3</i>	<i>-0.3</i>

Source: SGA.

**CHART 3**

**BUDGETARY COSTS OF AGEING**

(change in age-related public expenditure as a percentage of GDP compared to 2006)



Source : SGA.

also likely to cause a steep increase in the cost of ageing, amounting to 3.5 percentage points of GDP<sup>(1)</sup>. In contrast to expenditure on pensions and health care, other social spending is likely to moderate the budgetary costs of ageing. Unemployment benefits are projected to fall by 1 percentage point, while family allowances will be down by 0.5 percentage point. Finally, it should be noted that the Study Group does not expect the budgetary costs of ageing to be affected by any reduction in the remuneration of teaching staff resulting from the downward impact of demographic changes. It mentions that factor merely pro memoria, as it considers it unlikely that there will actually be any reduction in education spending, in view of the growing need for education and training.

However, these estimates are merely a guide since they are highly sensitive to changes concerning the assumptions made. One crucial assumption is that the volume of

(1) The projection relating to health care spending takes account not only of the influence of population ageing – via the age-related expenditure profiles – but also of the expected developments in the case of an unchanged demographic structure.  
 (2) Workers as a percentage of the population of working age (15 to 64 years).  
 (3) The unemployment concept used in the reports of the Study Group on Ageing is based on administrative data. It includes all persons registered as unemployed and seeking work, and older unemployed persons not seeking work. This concept is different from the harmonised unemployment rate which is based on the “labour force survey” data. That survey uses a stricter definition of unemployment which does not include older unemployed persons not seeking work. The harmonised unemployment rate, which came to 8.2 p.c. in 2006, is therefore considerably lower than the unemployment rate indicated in the Study Group reports.

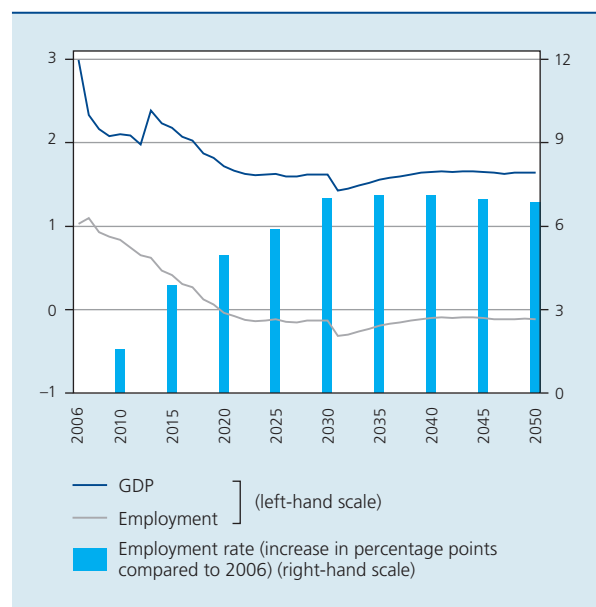
GDP will increase by an average of 1.8 p.c. per annum in the period 2006-2050, as the Study Group is expecting labour productivity to rise by 1.75 p.c. in the long term, while employment should expand by an annual average of 0.1 p.c. over the same period. That average nevertheless conceals significant variations between sub-periods. For instance, employment is projected to increase by 300,000 persons from 2006 to 2019, before declining by almost 200,000 persons up to 2050.

These employment assumptions are dependent on the continuation of an active employment policy, particularly to increase the employment rate<sup>(2)</sup> by 7 percentage points between now and 2030 and to reduce the level of structural unemployment. The Study Group’s basic scenario assumes an increase in employment bringing the structural unemployment rate down to 8 p.c. by 2030, a significant reduction compared to the 13.9 p.c. unemployment rate recorded in 2006<sup>(3)</sup>. In an alternative scenario, the Study Group examines the impact of an even steeper increase in employment, causing the unemployment rate to fall to 4 p.c. in 2030 and remain at that level until 2050. At the same time, the number of persons drawing early retirement pensions would be half the figure assumed in the basic scenario. In this alternative scenario, the budgetary costs of ageing would be 1.4 p.c. of GDP lower. In the opposite scenario, in which the structural unemployment rate only declines to

**CHART 4**

**ASSUMPTIONS RELATING TO GDP AND EMPLOYMENT FOR THE PERIOD 2006-2050**

(percentage changes compared to the previous year, unless otherwise stated)



Source : SGA.

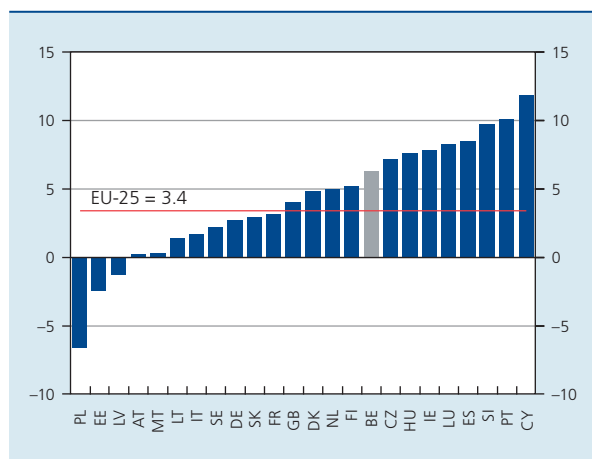
12 p.c. by 2030 and the numbers drawing early retirement pensions is 50 p.c. higher than in the basic scenario, the budgetary costs of ageing would increase by a further 1.5 p.c. of GDP. The budgetary costs of ageing therefore appear to be particularly sensitive to the employment projections.

## 2.2 Estimates produced by the Ageing Working Group for the EU

The budgetary impact of ageing is also estimated at European level. For that purpose, the European Commission and the Member States jointly produce long-term projections in the Economic Policy Committee's Ageing Working Group. The first projections of this technical working group, set up in 1999, date from 2001 and cover only expenditure on pensions and health care. In 2003, these data were supplemented by projections concerning education spending and unemployment benefits. Updated estimates were submitted to the Ecofin Council and published in February 2006<sup>(1)</sup>.

It is evident from these projections that almost all the EU Member States will face a substantial increase in age-related public expenditure, primarily as a result of higher spending on pensions, but also because of increased expenditure on health care and care for the elderly. The impact of possible savings on education spending and unemployment benefits is likely to be modest overall. The annual age-related public expenditure for the EU-25 as a

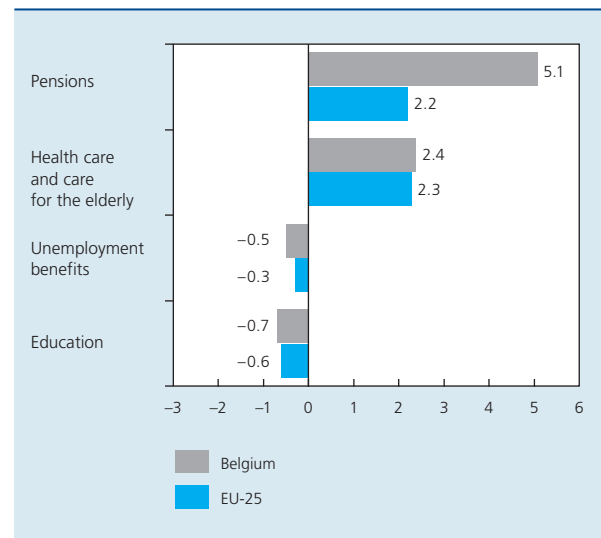
**CHART 5** EXPECTED CHANGE IN AGE-RELATED PUBLIC EXPENDITURE BETWEEN 2004 AND 2050<sup>(1)</sup>  
(percentage points of GDP)



Sources : AWG, EC.

(1) Greece is not included because there are no available estimates for pensions and spending on care for the elderly. In the case of Cyprus, there are no estimates for spending on care for the elderly.

**CHART 6** AGE-RELATED PUBLIC EXPENDITURE IN THE EU-25 AND IN BELGIUM  
(changes in percentages of GDP during the period 2004-2050)



Sources : AWG, EC.

whole is projected to be 3.4 p.c. of GDP higher in 2050 than in 2004.

However, this EU average masks wide variations between Member States: Cyprus, Portugal, Slovenia, Spain, Luxembourg, Ireland, Hungary and the Czech Republic are likely to see age-related public expenditure exceed 2004 levels by more than 7 p.c. of GDP by the year 2050, while Lithuania, Estonia and, above all, Poland should record a decline in such spending over the same period. In Belgium, according to the estimates of the Ageing Working Group, age-related public expenditure is expected to rise by 6.3 p.c. of GDP between 2004 and 2050.

Belgium is thus among the countries where the budgetary costs of ageing are above the average; that is due almost exclusively to the fact that the expected increase in expenditure on pensions in Belgium is substantially higher than the average for the EU-25. It should be noted that the projections produced by the Economic Policy Committee's Ageing Working Group point to a higher increase than the estimates of the Study Group on Ageing. This discrepancy is due partly to the fact that the two projections are based on slightly different migration assumptions, e.g. as regards the age profile of immigrants<sup>(2)</sup>.

(1) The Ecofin Council asked the Economic Policy Group to produce new projections for age-related public spending by the end of 2009, on the basis of new Eurostat population forecasts.

(2) In its 2006 annual report, the Study Group on Ageing gives a detailed account of the differences between its estimates of the budgetary costs of ageing and those of the Economic Policy Committee's Ageing Working Group.

However, the differences between the EU Member States in terms of the budgetary costs of ageing should be interpreted with due caution, since they are based on the assumption that policy remains unchanged. This implies that some countries will adjust their social benefits wholly or partly in line with prosperity, while other countries make little or no adjustment<sup>(1)</sup>. In many EU-25 Member States, the benefit ratio, which is the ratio between the average pension benefit and the average wage, will therefore be well below its current level by 2050. Furthermore, Sweden, Estonia, Latvia, Lithuania, Hungary, Poland and Slovakia have recently effected a partial conversion of their public pension schemes into pre-funded schemes outside the public sector, so that public spending will eventually decline.

### 3. Meaning of the concept of sustainable public finances

In the context of growing awareness of the significant influence that population ageing will have on public finances, the assessment of budgetary situations is increasingly focusing on long-term sustainability.

The idea behind the concept of sustainable public finances is clear: in principle, a sustainable fiscal policy can be continued indefinitely, whereas unsustainable public finances require adjustment sooner or later. In other words, sustainability is a reference to a government's ability to remain solvent both now and in the future, without needing any major adjustments to fiscal policy. The concept of sustainable public finances has multiple facets: apart from avoiding excessive public deficits and an ever-growing debt ratio, it is also essential to maintain the burden of taxation at an acceptable level and not to neglect public spending. The economic literature puts forward various definitions of a sustainable fiscal policy, and various ways of putting these theoretical stipulations into practice<sup>(2)</sup>.

Obviously, the movement in the public debt is a key element in the assessment of the sustainability of public finances. The easiest way of pinpointing any sustainability problems is therefore to produce long-term projections of the budget balance and the public debt ratio, assuming no change of policy and taking account of the impact of population ageing. In most cases, an unchanged policy is defined as a situation in which, leaving aside the expected movement in age-related public spending, the primary balance remains steady.

(1) With a presumed adjustment for wealth of 0.5 p.c., Belgium features among the countries that have social benefits partly adjusted for wealth.

(2) For a summary of the operational definitions used in the economic literature, see Ballassone and Franco (2000), and Langenus (2006).

(3) The intertemporal budget constraint was presented in Blanchard et al. (1990).

To gain a full appreciation of the situation regarding public finances, it is also necessary to have an idea of the size of any adjustment which may be needed to arrive at a sustainable policy. For that purpose, it is usual to calculate a sustainability indicator which records the difference between the current structural primary balance and the primary balance needed to ensure the sustainability of public finances, taking account of the budgetary impact of population ageing and the assumptions concerning interest rates and economic growth. If there is a sustainability deficit, this indicator shows the permanent budgetary adjustment required, which may be achieved, for example, via an increase in the income ratio or a reduction in the expenditure ratio.

However, there are various ways of determining the primary balance required for sustainability, and two different approaches are possible. In the first variant, it is assumed that the government has to achieve a specific target for the debt ratio or the budget balance at a specific date in the future. The second variant is derived from the "intertemporal budget constraint" whereby the current value of the public debt must correspond to the discounted value of all future primary balances over an infinite time horizon<sup>(3)</sup>. A heavily indebted government will therefore have to achieve sufficiently high primary surpluses in the future. Technical notes on this intertemporal budget constraint may be found in the annex.

Finally, it should be noted that studies on generational accounting introduce an additional criterion. They examine not only the sustainability of public finances, but also the implications concerning the intergenerational fairness of any budget adjustments required.

## 4. Sustainability of public finances in the European Union

### 4.1 A key element in budgetary surveillance at European Union level

Agreements have been concluded at EU level to ensure sound public finances. Thus, in connection with the convergence criteria which must be satisfied in order to qualify for membership of the monetary union, the Treaty on European Union specifies reference values for the budget balance and the public debt. In principle, the budget deficit must not be more than 3 p.c. of GDP, and the public debt must not exceed 60 p.c. of GDP unless the debt ratio is declining sufficiently to approach that reference value at a satisfactory pace. These criteria are also the cornerstones of the excessive deficit procedure which, after the creation

of the monetary union, is intended to ensure permanent budget discipline. The stability and growth pact, agreed at the Dublin European Summit in December 1996, clarified and tightened up the budget rules.

These agreements were based on concern to ensure that one country's unsound fiscal policy should not undermine the union's stability, because in a monetary union with a fragmented fiscal policy, derailment of the budget in one or more member countries would have adverse consequences for the entire union, e.g. via an increase in interest rates. Moreover, a lack of budget discipline could significantly impair the effectiveness of monetary policy.

The impending impact of population ageing on the budget has focused more attention on long-term considerations. Thus, the March 2001 European Council called for regular assessment of the sustainability of public finances, partly on account of the likely future demographic changes. Since then, in the course of the assessment of the stability and convergence programmes, the European Commission has conducted sustainability checks based on the data and forecasts supplied in those programmes and on long-term projections produced jointly by the Member States and the European Commission in the Economic Policy Committee's Ageing Working Group. On the basis of the latest projections – dating from February 2006 – the European Commission conducted a detailed assessment of sustainability in the Member States. Its report was published in October 2006.

The importance of sustainable public finances was also strongly emphasised in the reform of the stability and growth pact in March 2005. Thus, budgetary surveillance must include sufficient attention to the public debt and sustainability. In addition, the aim is to strengthen the link between the sustainability analyses and the national medium-term budget targets. Better account is also being taken of pension reforms.

Assessment of the long-term sustainability of public finances is therefore currently an essential aspect of the regular budgetary surveillance organised in the EU.

#### 4.2 Approach adopted by the EU to assess the long-term sustainability of public finances

To assess the sustainability of public finances in the longer term, it is necessary to take account of both the current budget situation and the projections relating to the expected age-related public spending and macroeconomic developments. On the basis of that information, the European Commission calculates two quantitative indicators which

play a key role in its assessment of the sustainability of public finances in the EU Member States:

- the S1 indicator measures the size of the permanent adjustment to the primary balance required in order to achieve a debt ratio of 60 p.c. by 2050. In other words, this means that if this fiscal policy adjustment is made now, no further policy adjustments will be needed later on, when population ageing has its greatest impact on the budget;
- the S2 indicator measures the permanent adjustment required – without any further policy adjustments being needed later on – in order to bring the budget balance to a level where the intertemporal budget constraint is respected.

These indicators give a clear idea of the budget imbalances and shed light on the challenge which policy-makers must address in order to achieve a sustainable policy. Total elimination of the difference between the current structural primary balance and the required primary balance as measured by the said sustainability indicators amounts to full pre-financing of the costs of population ageing. If a permanent budget adjustment proves necessary, that could be achieved by cutting the non-age-related public spending or increasing public revenues as a percentage of GDP. However, this could also be done by means of structural measures aimed at limiting age-related public spending.

Nevertheless, the sustainability indicators S1 and S2 must be interpreted with due caution, as they are based on a specific operational definition of the concept of sustainability. Moreover, they constitute a partial approach which does not include the potential effects of fiscal policy on growth or interest rates, for example.

In order to give a general opinion on the sustainability of public finances in the various EU Member States, the European Commission also takes other factors into consideration, such as the current size of the public debt. Countries with a high debt ratio are more sensitive to growth shocks and interest rate fluctuations. They also need to record primary surpluses for a considerable period of time in order to reduce the debt level, and that may prove difficult. Another factor taken into account is the adequacy of pensions. If the average pensions become much smaller than at present in comparison with average incomes, and if inadequate pensions lead to a greater risk of poverty for the elderly, then the government may need to act in order to rectify that situation. Public revenues are also considered, because a high current tax ratio leaves less scope than a lower tax ratio for increasing taxation to finance additional expenditure. In that connection, a check



is also conducted on whether there could be a change in public revenues as a percentage of GDP in the long term, e.g. in a situation where pension funds are built up and the pension contributions are tax exempt, while the benefits will be taxable.

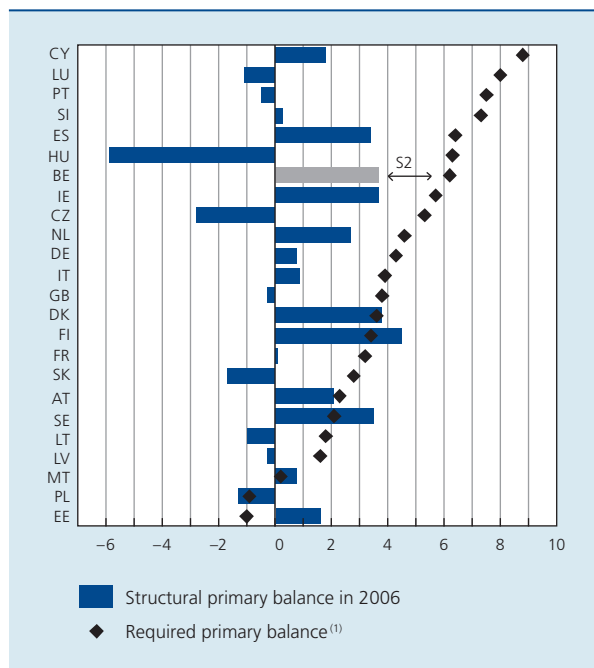
On the basis of the sustainability indicators and these other factors, the European Commission divides the Member States into three categories, according to whether the countries present a high, medium or low sustainability risk.

### 4.3 Assessment of the long-term risks to the sustainability of public finances

#### 4.3.1 Assessment based on the sustainability indicators

On the basis of the structural budget situation recorded in the EU in 2006, the public debt can be expected to fall below 60 p.c. of GDP in the next decade. However, if the fiscal policy remains unchanged, the debt ratio could rise again in the period after 2020. In 2050, the debt ratio in the EU would even reach 160 p.c. of GDP. It is therefore clear that the present fiscal policy must be considered unsustainable and needs to be adjusted. The European Commission

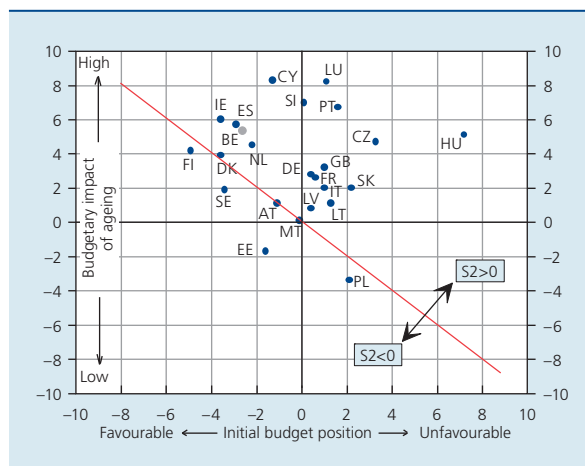
**CHART 7** REQUIRED PRIMARY BALANCE AND STRUCTURAL PRIMARY BALANCE IN 2006  
(percentages of GDP)



Source : EC.

(1) The European Commission calculates this required primary balance according to the S2 indicator as the average over the five years following the last year of the stability and convergence programmes.

**CHART 8** IMPACT OF THE INITIAL BUDGET POSITION AND THE BUDGETARY COSTS OF AGEING ON THE SUSTAINABILITY INDICATOR S2  
(percentages of GDP)



Source : EC.

has calculated that the sustainability deficit in the EU, which corresponds to the difference between the structural primary balance in 2006 and the primary balance required for sustainability, is about 2 p.c. of GDP according to the S1 indicator and all of 3 p.c. according to the S2 indicator.

It should be noted that the sustainability risk would decline significantly if the Member States were to achieve the targets which they set themselves in their latest stability and convergence programmes. In that case, according to the S2 indicator, the sustainability deficit in the EU would decline by around 1.5 p.c. of GDP. It is therefore essential to respect those targets.

However, these EU averages mask significant variations between Member States. In only a quarter of the Member States is the current primary balance sufficient to absorb the budgetary cost of ageing while at the same time respecting the intertemporal budget constraint without needing any adjustment to fiscal policy. In three-quarters of the Member States, there are sustainability deficits, which in some cases are actually considerable.

Belgium also still has a significant sustainability deficit, although the situation is somewhat better than the EU average. On the basis of the structural budget situation in 2006, the sustainability indicator would be 1.3 p.c. of GDP according to the S1 indicator, and 2.7 p.c. of GDP according to the S2 indicator. On the basis of the latter indicator, the average primary balance required in Belgium in the period 2011-2015 to respect the intergenerational budget constraint is 6.2 p.c.



of GDP. That is considerably larger than the structural primary balance of 3.7 p.c. of GDP recorded in 2006.

The sustainability indicator S2 can be divided into two components, distinguishing between the effect of the initial budget situation and the long-term effect of ageing on the budget. On the basis of that analysis, it is evident that, even if no account is taken of the budgetary impact of ageing, the current budget situation must be considered unsustainable in about half of the EU Member States. In roughly a quarter of the Member States, the sustainability deficit is purely the result of the expected increase in age-related public spending. That also applies to Belgium. In the remaining quarter of the Member States, there is no sustainability deficit. Poland is in a very special position here, since the expected decline in age-related public spending as a percentage of GDP neutralises the impact of the weak initial budget position.

#### 4.3.2 Overall assessment of the Member States

On the basis of the information from the latest stability and convergence programmes, the European Commission divided the Member States of the EU-25 into three categories. Six Member States are regarded as high risk countries, ten as medium risk and nine as low risk. In general, the level of the sustainability indicator S2 closely reflects the division into risk categories. The European Commission's opinion was confirmed by the Ecofin Council in the course of the assessment of the latest stability and convergence programmes.

#### High risk countries

The countries presenting a high risk are Hungary, Portugal, the Czech Republic, Cyprus, Slovenia and Greece. They are characterised by a very steep rise in age-related public spending. With the exception of Slovenia and Cyprus, these countries also have substantial budget deficits, and in Greece's case there is a substantial debt as well. There is therefore an urgent need for those countries to make an effort to consolidate their budgets and take measures to limit the rise in the budgetary cost of ageing.

#### Medium risk countries

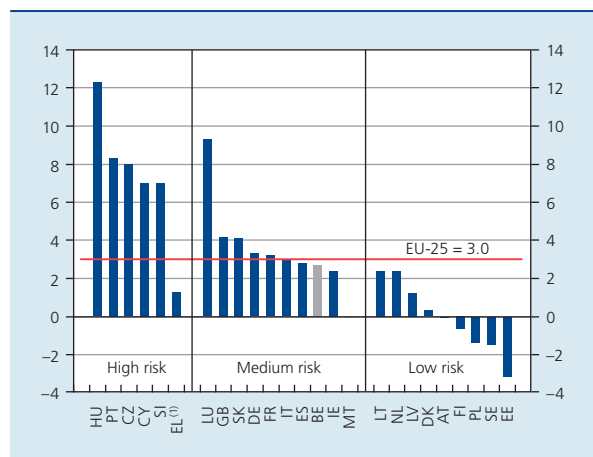
The intermediate group comprises countries with widely varying characteristics. Luxembourg, Spain and Ireland currently have a fairly sound budget position, but population ageing entails high costs so that measures are needed to keep them in check. In the United Kingdom, Germany, France, Italy, Slovakia and Malta, the costs of ageing are not such a serious problem – in many cases because those countries have already reformed their pension systems – but public finances need to be consolidated in the medium term. The situation in Italy merits particular attention: that country needs to ensure that it achieves a sustained reduction in its current very high debt.

Belgium shares a number of characteristics with both subgroups. The government's primary surplus needs to be maintained at a relatively high level in order to continue reducing the debt while also absorbing the sharp rise in age-related spending. The increase in that expenditure is expected to be considerably above the EU average in Belgium. Even if the current large primary surplus is maintained over a long period, that will still not be enough to cover all the costs of ageing in the long term. Measures designed to curb the expected increase in pension expenditure would therefore undoubtedly help to reduce the risks to the sustainability of public finances.

#### Low risk countries

Lithuania, the Netherlands, Latvia, Denmark, Austria, Finland, Poland, Sweden and Estonia are regarded as countries with a low sustainability risk. They have made the most progress in tackling the challenge of population ageing. The reason is that they have a sound budget position and/or have implemented radical pension reforms, sometimes involving a switch to private pension schemes. However, a low risk does not mean that there is no longer any risk at all to the sustainability of public finances in the long term. In practice, their situation depends on the successful implementation of the reforms, and on the maintenance or in some cases strengthening of their budget position.

**CHART 9** SUSTAINABILITY INDICATOR S2 AND THE DIVISION OF THE EU MEMBER STATES INTO RISK CATEGORIES  
(percentages of GDP)



Source: EC.

(1) In Greece's case, the sustainability indicator S2 is calculated on the basis of the budgetary cost of ageing excluding pensions and spending on care for the elderly, so that this indicator underestimates the sustainability deficit.

#### 4.4 A three-pronged strategy

The above analysis shows that addressing the issue of population ageing must be high on the economic policy agenda. Although the scale of the sustainability risks varies from one country to another, three-quarters of the EU Member States need to make – sometimes major – adjustments to their fiscal policy. At the Stockholm European Council in March 2001, a three-pronged strategy was formulated for that purpose, and put forward as a guiding principle. That strategy entails a rapid reduction in the public debt, an increase in the employment rate and productivity, and the reform of the existing pension systems, health care and long-term care for the elderly.

First, the Member States must achieve and maintain sound budget positions, and a faster reduction in their public debt. That is essential to create the necessary scope in the budget before the effect of ageing has a major impact on their public finances. A low public debt and sound public finances can also be conducive to price stability and lower interest rates, thus creating a favourable climate for high and stable economic growth, which would in turn benefit the sustainability of public finances.

Second, the Member States must increase the labour market participation rate, particularly in the case of women and older workers, and boost labour productivity. In 2006, the employment rate in the EU was 64.3 p.c., compared to 62.1 p.c. in 2000. The 70 p.c. target agreed by the Member States is therefore still a long way off. Measures aimed at substantially increasing the participation rate and cutting the structural unemployment rate could offer great advantages. Successful implementation of such measures and an improvement in productivity would augment potential GDP, and that would also expand the scope in the budget. Education is regarded as a decisive factor here.

Third, the Member States need to consider appropriate reforms in their pension, health care and long-term care systems, in order to ensure financial viability, and at the same time guarantee adequate, accessible provision. The budgetary costs of ageing, estimated on the assumption that policy remains unchanged, therefore should not be regarded as fixed. The recent pension reforms in almost half the EU-15 Member States – the European Commission refers to Germany, France, Austria, Italy, the United Kingdom and Sweden – and in many of the countries which joined the EU recently will, in principle, weaken the budgetary impact of ageing and make a significant contribution towards improving the sustainability of public finances.

## 5. Budget recommendations of the High Council of Finance

The High Council of Finance is an important advisory body in Belgium. Its “Public Sector Borrowing Requirement” section analyses fiscal policy and makes recommendations on the subject. In the past, the Section’s opinions have always formed the basis of the medium-term budget programmes and of the corresponding agreements concluded between the federal government and the governments of the communities and regions.

The long-term sustainability of public finances is a key aspect of these opinions. Indeed, the Section’s latest recommendations are based on the conclusions of the Study Group on Ageing in regard to the budgetary impact of demographic trends<sup>(1)</sup>.

This chapter comments on the main points of the March 2007 opinion entitled “Towards sustainable public finances with a neutral intertemporal impact in the context of population ageing”.

### 5.1 Basic principles

The “Public Sector Borrowing Requirement” section was influenced by two important considerations in its choice of budget strategy. First, the budget plan must be sustainable in the sense that the public debt must tend towards a low and stable level in the long term. Second, the budget plan must do everything possible to ensure the intertemporal neutrality of fiscal policy, which implies that the burden of any budget adjustments needed to ensure sustainability must not be transferred to future generations.

### 5.2 Description of the recommended budget plan

In formulating its opinion the Section endeavoured to comply with the above two criteria simultaneously and as well as possible. It disregarded two extreme scenarios, namely a scenario of full pre-financing and a scenario in which the budget is kept in balance.

A scenario in which the whole budgetary cost of ageing up to 2050 is fully pre-financed from 2010 would demand a substantial budget effort – at least 2 p.c. of GDP – concentrated entirely on the federal parliamentary term 2007-2011. That would cause a break in the continuity

(1) The Section’s March 2007 opinion is based on the 2006 report of the Study Group on Ageing. Since then, the Study Group has produced new estimates, published in its 2007 report, in which the budgetary costs of ageing in the period 2006-2050 have been revised upwards by 0.4 p.c. of GDP.

of fiscal policy. The Section also considers that there could then be a risk of insufficient resources being left to continue an active employment policy and support the growth potential, both of which are part of the second pillar of the overall strategy needed in the light of population ageing. In addition, such a scenario would imply the creation of financial assets in the long term, and the Section considers that it would not be easy to arrange the allocation among the various entities of the federal Belgian state.

A second, far less ambitious scenario which falls well short of Belgium's current European commitments would be based purely on constant maintenance of a balanced budget. If that budget plan were adopted, the pressure on the budget caused by population ageing would ultimately necessitate either a substantial increase in compulsory contributions or a drastic cut in public expenditure. That would be out of line with the principle of intertemporal neutrality, so that this scenario is not considered desirable.

In view of these findings, the Section decided to opt for a third scenario, consistent with the two crucial principles of sustainability and intertemporal neutrality. In this scenario, which starts from a structural budget surplus of 0.3 p.c. of GDP in 2007, the budget balance would have to improve by 0.2 p.c. of GDP per annum to reach 1.3 p.c.

of GDP in 2012. This plan corresponds to the budget targets for the period to 2010 under Belgium's December 2006 stability programme. However, the Section remarks that in the medium term this plan should be regarded as the minimum effort. After 2012, the budget surplus must be further increased to around 2 p.c. of GDP over the period 2017-2019. After 2019, the surplus could be gradually reduced, to attain a balanced budget in 2035 and a deficit of just under 1 p.c. of GDP in 2050.

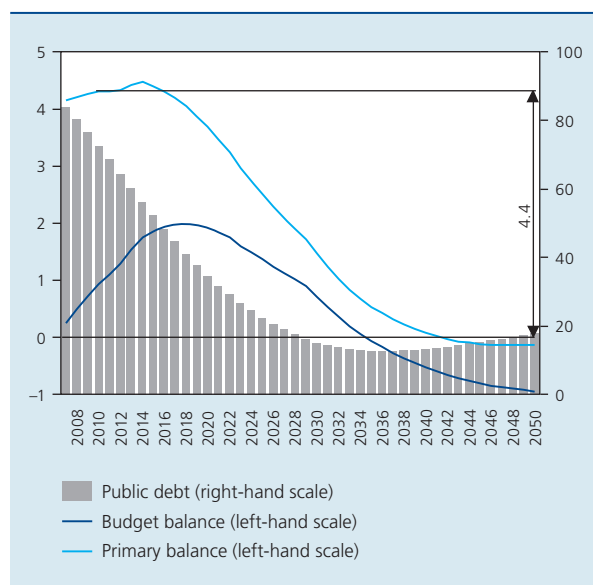
This would give public finances a dual margin to cope with the budgetary costs of ageing. This dual margin results, on the one hand, from the reduction in interest charges resulting from the contraction of the public debt, and, on the other, from the gradual fall after 2019 in the budget balance from a surplus of around 2 p.c. of GDP to a deficit of nearly 1 p.c. of GDP. It then becomes possible to allow the primary balance to decline by 4.4 p.c. of GDP between 2010 and 2050. Since the increase in age-related public spending in this period is estimated at 5.6 p.c. of GDP<sup>(1)</sup>, in this scenario roughly four-fifths of the budgetary costs of ageing are pre-financed. Consequently, the remaining one-fifth has to be covered by limiting the room for manoeuvre on primary expenditure.

### 5.3 Implications in regard to the room for manoeuvre on primary expenditure

The Section's opinion on a budget plan which is sustainable and neutral in its intertemporal impact is based on the technical assumption of an unchanged revenue ratio. Since Belgium has one of the highest tax burdens in comparison with other countries, the Section does not see any possibility of making a further increase in compulsory levies.

Since the budgetary costs of ageing are only partially pre-financed, an unchanged revenue ratio implies that additional scope has to be created by keeping the growth of non-age-related spending down to a level below the real GDP growth rate. The real growth of that spending would have to be limited to an average of 1.6 p.c. per annum during the period 2007-2050<sup>(2)</sup>. The gap in relation to the volume growth of GDP would thus be 0.1 to 0.2 p.c. per annum. The real annual increase in age-related social

**CHART 10** BUDGET PLAN ADVOCATED BY THE HIGH COUNCIL OF FINANCE (percentages of GDP)

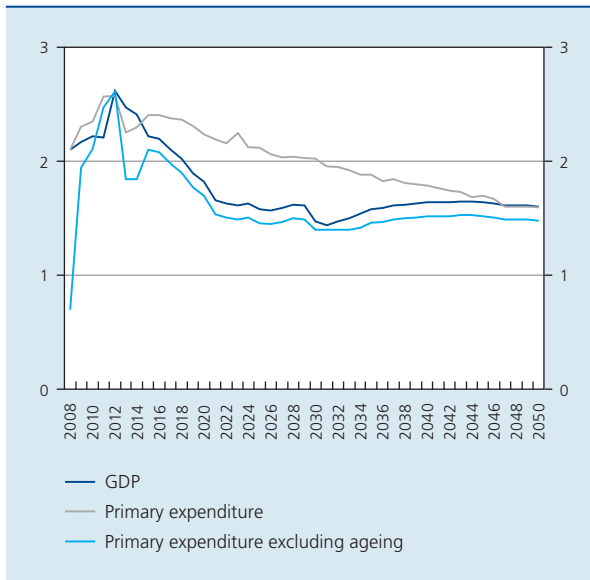


Source: HCF.

(1) This figure is taken from the 2007 report of the Study Group on Ageing. The 2006 report of the Study Group, which forms the basis of the opinion of the "Public Sector Borrowing Requirement" section of the High Council of Finance, estimated the budgetary costs of ageing in the period 2010-2050 at 5.5 p.c. of GDP. Since the new projection differs only very slightly from that figure, the assumptions on which that opinion was based can still be regarded as valid.

(2) On the basis of the new data in the July 2007 report of the High Council of Finance, real growth in non-age-related expenditure over the period from 2007 to 2050 would be around 1.5 p.c. a year, according to our own calculations, rather than 1.6 p.c.

**CHART 11** MARGINS IN RELATION TO PRIMARY EXPENDITURE<sup>(1)</sup>  
(real percentage changes compared to the previous year)



Source: HCF.

(1) These figures are taken from the March 2007 report of the High Council of Finance. In its July 2007 report, the margins in relation to primary expenditure excluding ageing for the period from 2007 to 2015 have been revised downwards by about 0.6 p.c. per year.

spending over the same period would come to 2.3 p.c., with the real growth of total primary expenditure running at 2 p.c.

Over the period 2010-2050, the expenditure restrictions will result in a reduction in non-age-related primary expenditure of 1 p.c. of GDP, or one quarter of a percentage point per decade, which is sufficient to cover the part of the budgetary cost of ageing which is not pre-financed from 2010.

The Section stresses that the degree of difficulty in order to achieve these objectives should not be underestimated. In this connection, it points out that the recommended budget plan is based on the assumed general government budget surplus of 0.3 p.c. of GDP in 2007. However, the federal budget for 2007 includes a significant amount of non-recurring measures. These non-recurring factors must therefore be eliminated and replaced by structural measures.

The Section also stressed that the distinction between age-related social benefits and other primary expenditure is made primarily for technical reasons, as this is a way of clearly showing the scope in the budget for primary expenditure if the influence of ageing is disregarded. If measures were taken to reduce the revenue ratio, tighter spending restrictions would be needed.

Finally, the Section also examined the implications of its proposed budget plan for the various government entities, noting that in the current institutional context in Belgium, over 90 p.c. of the budgetary cost of ageing is borne by the federal government and social security.

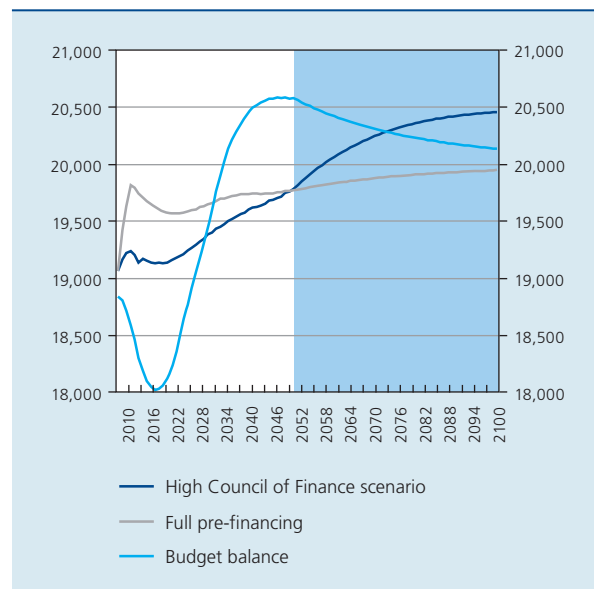
#### 5.4 Assessment against set criteria

The budget plan recommended by the Section satisfies the criterion of long-term sustainability, provided the non-pre-financed part of the budgetary costs of ageing is covered by additional scope obtainable, for example, by keeping the growth of non-age-related spending sufficiently below GDP growth. On the one hand, this budget plan would cause the government's financing requirement to stabilise at almost 1 p.c. of GDP by 2050. On the other hand, the debt would fall to a low level of around 13 p.c. of GDP in 2035. After that, the debt ratio would edge upwards but would still be only 17 p.c. in 2050, converging towards 25 p.c. in the very long term.

The criterion of intertemporal neutrality also seems to be largely respected, when measured against the stability of the average contribution of each working person to the government's primary balance deflated by nominal wage growth<sup>(1)</sup>. Overall, the increase in that contribution will be small during the period 2007-2050.

(1) Cf. Langenus (2006) for a more detailed presentation of this indicator of intergenerational fairness.

**CHART 12** AVERAGE CONTRIBUTION TO THE PRIMARY BALANCE PER WORKER<sup>(1)</sup>  
(euro, deflated by nominal wage growth)



Sources: HCF, NBB.

(1) For comparability, it is assumed that the debt ratio in the three scenarios will converge towards zero by 2100.

## Conclusion

As in the majority of European countries, public finances in Belgium will be confronted by the effects of population ageing. According to the Study Group on Ageing, age-related government expenditure in Belgium will increase by no less than 6.2 percentage points of GDP between 2006 and 2050. It is particularly from 2010 onwards that government spending will feel the impact of ageing.

Ageing is therefore a major challenge both for Belgium and for the EU as a whole. In order to meet that challenge, it is necessary to continue working on a coherent strategy targeting particular fiscal, economic and social aspects of policy. Reducing the public debt, increasing the labour market participation rate and boosting productivity while simultaneously reforming the pension, health and long-term care systems are key elements in that strategy.

Some EU Member States already have sound and sustainable public finances, and many others have reformed their pension schemes and other systems in order to meet the challenge. Those countries can face the future with confidence. However, the great majority still have a long way to go. On the basis of the current budget position and the expected increase in age-related government expenditure, the EU Member States are divided into three

groups according to the risk to the sustainability of their public finances in the long term. Belgium is in the group of countries facing a medium risk. Despite the steady debt reduction in preceding years, the debt ratio is still very high and the budgetary costs of ageing are above the EU average. Constant budget discipline is therefore essential to sustain high primary surpluses for quite a long time to come, and to continue steadfastly reducing the burden of the public debt.

On the basis of the projections of the Study Group on Ageing, the "Public Sector Borrowing Requirement" section of the High Council of Finance has devised a budget plan for coping with the budgetary costs of ageing. According to that plan, structural budget surpluses must be gradually built up in the years ahead. This plan is fully in line with the course mapped out in the December 2006 stability programme. The Section rightly points out that these targets should be regarded as a minimum in the medium term, as the favourable progress of public finances could be threatened if the targets are not met. In the event of major discrepancies – e.g. if the government fails to build up budget surpluses in the coming years – there will be insufficient scope to finance the budgetary costs of ageing, and in the long run there is a danger that the public debt snowball effect might recur.

## Annex: The intertemporal budget constraint

The debt at the end of a given period ( $D_t$ ) is the outcome of the sum of the debt at the end of the previous period ( $D_{t-1}$ ) and of the difference between the interest charges on the outstanding debt ( $r_t \cdot D_{t-1}$ ) and the primary budget balance ( $PB_t$ )<sup>(1)</sup>.

$$D_t = D_{t-1} + r_t \cdot D_{t-1} - PB_t$$

This equation can be rewritten by dividing the variables by GDP, nominal GDP growth in year t being expressed as  $g_t$ . The lower case letters d and pb respectively represent the public debt and the primary budget balance as percentages of GDP.

$$d_t = \frac{(1 + r_t)}{(1 + g_t)} \cdot d_{t-1} - pb_t$$

The debt ratio in any period is thus determined by three factors, namely the debt ratio in the preceding period, the ratio between the nominal interest rate and the nominal GDP growth rate, and the primary balance as a ratio of GDP.

This finding can be extended to the long term by systematic substitution of the debt ratio up to the final period T, starting from the reference period (t=0). In order to avoid an excessively complicated notation, the nominal interest rate (r) and the nominal GDP growth rate (g) are assumed to be constant over time. However, the reasoning below is still valid under the more realistic assumption in which these variables change from one period to another.

$$d_0 = \left[ \frac{(1 + g)}{(1 + r)} \right] \cdot pb_1 + \dots + \left[ \frac{(1 + g)}{(1 + r)} \right]^T \cdot pb_T + \left[ \frac{(1 + g)}{(1 + r)} \right]^T \cdot d_T$$

At an infinite time horizon, the equation becomes:

$$d_0 = \sum_{i=1}^{+\infty} \left[ \frac{(1 + g)}{(1 + r)} \right]^i \cdot pb_i + \lim_{T \rightarrow +\infty} \left[ \frac{(1 + g)}{(1 + r)} \right]^T \cdot d_T$$

Assuming that this last term, which gives the discounted value of the public debt at an infinite time horizon, tends towards zero<sup>(2)</sup>, the equation becomes:

$$d_0 = \sum_{i=1}^{+\infty} \left[ \frac{(1 + g)}{(1 + r)} \right]^i \cdot pb_i$$

This equation, commonly known in the economic literature as the intertemporal budget constraint, shows that the discounted value of the future primary balances corresponds to the current value of the public debt.

(1) This is a simplification of the real movement in the public debt, as interest payments relate to the debt outstanding during the year. The debt pattern is also influenced by what are known as deficit/debt adjustments, e.g. as a result of financial transactions (such as loans, participating interests and privatisations) or the impact of exchange rate fluctuations.

(2) This assumption is based on two conditions:

- first, the debt ratio must converge towards a finite value (or, if the debt ratio is rising, its increase must not exceed the difference between the interest rate and the GDP growth rate). From an economic point of view, however, a situation in which the debt ratio is constantly increasing can be ruled out, since in that situation rational agents would not be prepared to continuing holding public debt securities (in the economic literature, this is called the “No-Ponzi condition”);
- second, the difference between the nominal interest rate and the nominal GDP growth rate must be positive. That condition can be considered to be met in the medium and long term, since otherwise – according to economic theory – the result would be a situation of dynamic inefficiency (excess accumulation of capital).

## Bibliography

Balassone F. and D. Franco (2000), "Assessing fiscal sustainability: a review of methods with a view to EMU", in Banca d'Italia, *Fiscal Sustainability: essays presented at the Bank of Italy workshop held in Perugia, 20-22 January 2000*, 21-60.

Blanchard O., J.C. Chouraqui, R.P. Hagemann and N. Santor (1990), *The sustainability of fiscal policy: new answers to old questions*, OECD Economic Studies, 15.

Chalk N. and R. Hemming (2000), "Assessing fiscal sustainability in theory and practice", in Banca d'Italia, *Fiscal Sustainability: essays presented at the Bank of Italy workshop held in Perugia, 20-22 January 2000*, 61-93.

Economic Policy Committee and European Commission (2006), *The impact of ageing on public expenditure: projections for the EU-25 Member States on pensions, health-care, long-term care, education and long-term transfers (2004-2050)*, European Economy, Special Reports no. 1.

European Central Bank (2007), "Challenges to fiscal sustainability in the euro area", in *ECB Monthly Bulletin*, February, 59-72.

European Commission (2005), *Public finances in EMU – 2005*, European Economy, 3.

European Commission (2006a), *The long-term sustainability of public finances in the European Union*, European Economy, 4.

European Commission (2006b), *The long-term sustainability of public finances in the EU*, COM (2006) 574.

European Commission (2007), *Public finances in EMU – 2007*, European Economy, 3.

High Council of Finance, "Public Sector Financing Requirements" section (2007), *Vers des finances publiques soutenables et neutres sur le plan intertemporel dans le contexte du vieillissement*.

High Council of Finance, Study Group on Ageing (2006), *Annual Report*.

High Council of Finance, Study Group on Ageing (2007), *Annual Report*.

Langenus G. (2006), *Fiscal policy indicators and policy design in the face of ageing*, NBB, working paper, 102.

National Statistical Institute and Federal Planning Bureau (2001), *Démographie mathématique: Perspectives de population 2000-2050 par arrondissement*, National Statistical Institute.