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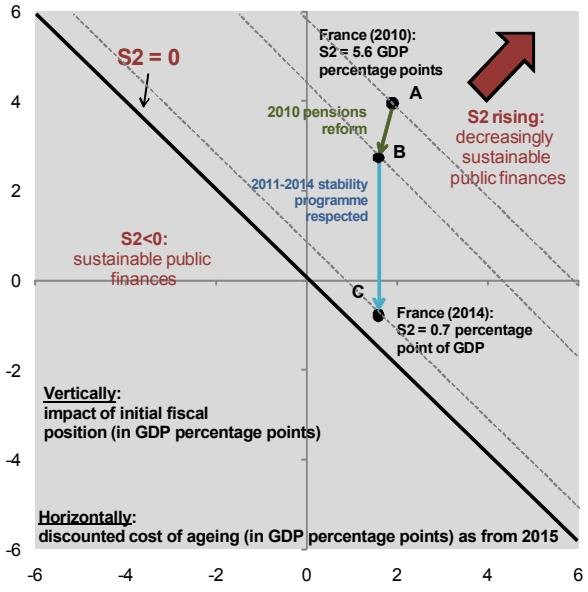
How will 2010 pensions reform contribute to the sustainability of public finances after the crisis?

This study was prepared under the authority of the Directorate General of the Treasury (DG Trésor) and does not necessarily reflect the position of the Ministry for the Economy, Finance and Industry.

- The economic crisis of 2008-2009 has increased pressure on the public finances of most developed countries, against a background of ageing populations, adding to doubts as to their sustainability.
- A country's public finances are considered to be sustainable when it is capable of funding its public debt over the very long term with no change of policy. Sustainability depends on both short and long-term factors. In the short term: is the public balance appropriated enough to prevent the debt ratio from rising out of bounds? In the long term: how will the effects of population ageing (pensions, health spending and long-term care or "dependency") affect the public balance in future decades?
- The sustainability gap at a given date represents the durable effort, in GDP percentage points, required from that date on in order to restore sustainability, either by cutting public spending or by increasing revenues. By measuring this we can assess the relative importance of short and long-term factors.
- For France, respecting the path for the public balance set forth in the April 2011 stability programme, which includes the pensions reform, spending cuts and reductions in tax expenditures and social welfare insurance loopholes, would start to bring down public debt as from 2013 and would close much of the sustainability gap: this would represent less than 1 percentage point of GDP in 2014, versus around 5½ percentage points in 2010.
- Of these 4¾ GDP percentage points improvement, nearly 1 point is reckoned to flow from the 2010 pensions reform, and especially from the raising on the retirement age. By phasing in this reform rapidly, much of the reform's effect would be concentrated in the years between now and 2014. The pensions reform would therefore improve the sustainability gap (S2) essentially through an improvement in the short-term balance.
- Once the public finances have been brought back into balance, France could find itself in a relatively favourable position relative to its main European partners, thanks to lower ageing-related costs.

France's sustainability gap (S2 Indicator) in 2010 and 2014



Sources: DG Trésor, authors' estimates.
Interpretation: In 2010, before the pensions reform, France was situated at point A. Its sustainability gap was 5.6 GDP percentage points.
The 2010 pensions reform (green arrow) should enable it to reach point B, by acting on both the initial fiscal position and the long-term cost of ageing.
The other measures contained the April 2011 stability programme (blue arrow) should allow France to move to point C and thus practically cancel the sustainability gap.

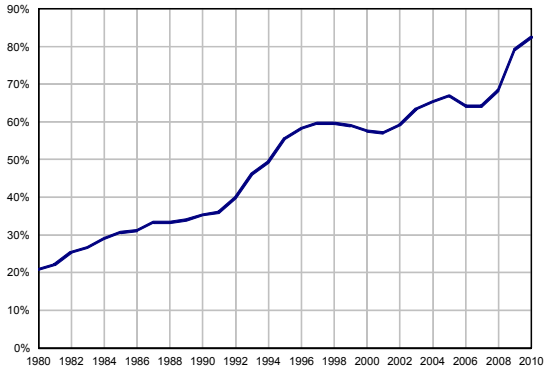
MINISTÈRE DE L'ÉCONOMIE
DES FINANCES ET DE L'INDUSTRIE

1. The 2008-2009 economic crisis has increased the pressure on the public finances, against a background of population ageing

1.1 France's public debt has trending clearly upwards since the beginning of the 1980s

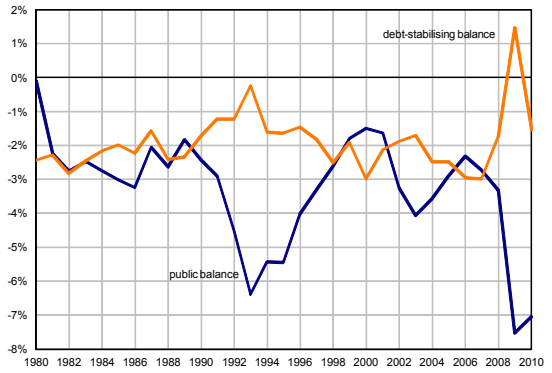
France's public debt was around 20% of GDP in 1980. It had risen up to 82% of GDP in 2010 (see chart 1)[1]. The public balance has consistently been in deficit over the period, leading to a steady rise in the debt, in billions of euros. Only rarely has it fallen below the balance that would have stabilized the debt ratio[2] (see chart 2).

Chart 1: French public debt, Maastricht definition (% of GDP)



Source: Insee.

Chart 2: Public balance and debt-stabilising balance (% of GDP)

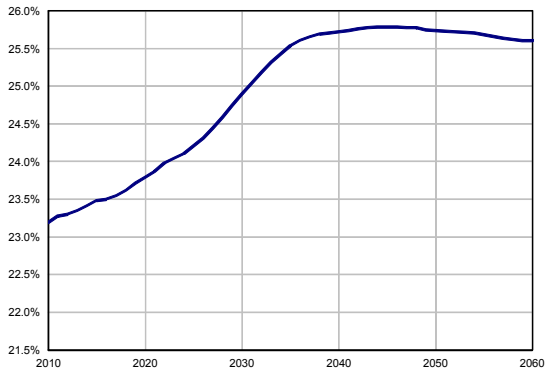


Sources: Insee, DG Trésor calculations.

The economic crisis of 2008-2009 accelerated the increase in the debt ratio, partly due to government revenue shortfalls and to additional spending resulting from automatic stabilisers during the recession, and partly due to the cost of measures taken to counter the crisis. Consequently, public debt went from 68.2% at the end of 2008 to 82.3% of GDP at the end of 2010.

In the longer run, population ageing too is putting pressure on the public finances. This is because the changing demographic structure resulting from increased life expectancy and, for a transitional period, the ageing of the bulging baby-boom generations, is expected to boost the share of pensions, healthcare and long-term spending in GDP (see chart 3).

Chart 3: Share of ageing-related spending (pensions, healthcare and long-term care) in GDP before the 2010 pensions reform



Sources: "2009 Ageing Report: Economic and budgetary projections for the EU-27 Member States (2008-2060)", European Economy no. 2/2009 (see box 2).

NB: These projections are made on a constant policy basis and reflect solely the impact of demographic changes on ageing-related spending.

1.2 Excessive public debt cramps economic growth and raises questions of inter-generational equity

High levels of debt can push up the cost of credit, penalising investment and hence productive supply[3]. They can also affect financial stability. Moreover, borrowing to finance current expenditure raises a problem of inter-generational equity, since it transfers to future generations the burden of spending from which they will not benefit[4].

Independently of the question of the optimal level of debt[5], there is the question of the sustainability (or viability) of public finances, i.e. a country's capacity to finance its public debt in the very long term while pursuing its current policies. More formally, sustainability can be defined as a country's capacity to respect its inter-temporal fiscal constraint to an infinite horizon (see box 1).

(1) The report of Messrs Champsaur and Cotis "Rapport sur la situation des finances publiques" (Report on the state of the public finances), April 2010) takes another look at the failure to control the public finances that produced this increase.

(2) The debt ratio stabilising balance is the public balance for which debt and GDP grow at the same rate and the ratio of debt to GDP is constant. This corresponds approximately to the opposite of the product of nominal GDP growth multiplied by the previous year's debt ratio. For example, for a debt ratio of 80% and a nominal GDP growth of 3.5%, the stabilizing balance is approximately equal to -3.5 % x 80% = -2.8% of GDP.

(3) For example, a study by Reinhart C. and Rogoff K. (2010), "Growth in a time of debt", *NBER Working Paper* no. 15639, January 2010, suggests that public debt in excess of 90% of GDP tends to cramp an economy's growth. A recent IMF study notably looks at the theoretical and empirical link between public debt and growth in activity, and at the extant literature on the subject (see "Strategies for fiscal consolidation in the post-crisis world", box 1 page 33, IMF, *Fiscal Affairs Department*, February 2010).

(4) Public debt can be justified, on the other hand, if it serves to finance investments whose socio-economic return is greater than its cost or if it represents expenditure from which future generations will also benefit.

(5) The question of optimal public debt and, more generally, of the optimal fiscal policy, which have been abundantly discussed in the literature (see for example Buiter W. (1989), "Macroeconomic Theory and Stabilization Policy", Chapter 13, *University of Michigan Press*), lies outside the framework of this study.

Box 1: **Formally defining the sustainability of public finances**

Sustainability can be defined as a country's capacity to respect its inter-temporal fiscal constraint to an infinite horizon, i.e. to finance its existing debt together with all future spending out of future revenues, *while leaving policy unchanged*, i.e. without raising taxes or cutting spending.

Public debt and the primary balance (the public balance excluding interest expense) are written D_t and SP_t respectively at date t, expressed as a percentage of GDP. We start from the accounting relationship for debt accumulation $D_{t+1} = D_t \times (1 + r_{t+1}) - SP_{t+1}$ where r_t corresponds to the difference between the interest rate R_t [a] and the rate of growth in activity g_t and is defined by the relationship $1 + r_t = \frac{1 + R_t}{1 + g_t}$.

We then show that the infinite horizon inter-temporal fiscal constraint expressed at $t = 0$ can be written

$$D_0 - \sum_{t=1}^{\infty} \frac{SP_t}{(1+r)^t} \leq 0$$

on the assumption that r_t is constant over time (equal to *r*) and positive (under the dynamic efficiency CHECK hypothesis[b]).

The sustainability gap (S2) corresponds to the durable improvement in the primary balance necessary in order to respect this inter-temporal fiscal constant with no change in policy. At instant $t = 0$, it is equal to:

$$S2_{t=0} = \underbrace{r \times D_0 - SP_0}_{\substack{\text{difference between initial primary} \\ \text{balance and stabilising primary balance}}} - \underbrace{r \times \sum_{t=1}^{\infty} \frac{\Delta SP_t}{(1+r)^t}}_{\substack{\text{discounted cost of ageing} \\ \text{(future variations in the primary)}}}$$

where ΔSP_t corresponds to the gap between the primary balance at instant $t = 0$ and at any instant t.

The sustainability gap is calculated at a given date $t = 0$ (and then 2010 and 2014), with an infinite time horizon. It may be analysed as the sum of two terms, i.e. the difference between the debt ratio at the point of departure and the stabilising primary balance, and the infinite horizon impact of future variations in the primary balance on a constant policy basis. This second effect reflects the discounted cost of ageing as defined in paragraph 2.3. In the special case where the primary balance is constant throughout the period ($\Delta SP_t = 0$ for any strictly positive *t*), the sustainability gap corresponds solely to the difference between the initial primary balance[c] and the debt-stabilising primary balance: $r \times D_0 - SP_0$. Thus, the higher the initial debt ratio or the weaker future economic growth, the wider the sustainability gap will be.

a. Here we make the conventional assumption, also used in the harmonised estimations of the sustainability of the public finances of European Union member states, that the real interest rate is constant and equal to 3%.
b. This amounts to assuming that the economy's capital stock is less than the figure that would maximise long-term per capita consumption in Diamond's model (1965), "National Debt in a Neoclassical Growth Model", *American Economic Review*, 55, pp. 1125-1158).
c. We generally reason in terms of the structural primary balance, not the actual primary balance, since the cyclical balance is assumed to be absorbed within a relatively short time horizon (sees §2.2).

1.3 For public finances to be sustainable, public debt has merely to be on a non-explosive long-term path

Contrary to households, a country has an infinite life expectancy, *a priori*: consequently its finances may be sustainable even though it remains indebted at each future instant in time. Moreover, the State has its own leverage enabling it to improve the position of its public finances. It can raise taxes and amend its tax legislation to boost future receipts (these potential tax receipts can be seen as a kind of implicit asset). It can also rein in public spending, by changing its legislation if necessary, through pensions reform for example.

While a **study of the sustainability of the public finances** can shed light on medium to long-term public finance challenges, it does not in itself supply the tools needed to analyse the difficulties a country may experience in financing its short-term debt. This is because a country's ability to attract investors also depends on the how latter view various other factors such as the country's credibility, or the existence of explicit or implicit off-balance sheet liabilities, vis-à-vis its financial sector for instance.

2. Once the "constant policy" has been defined, the sustainability gap depends upon the gap between the debt-stabilising balance and the long-term cost of ageing

The sustainability gap or tax gap[6] represents the effort to reduce the public deficit (via lower spending or additional revenues) that needs to be made today, and durably so, in order to restore the public finances to sustainability while pursuing a constant policy thereafter.

2.1 To measure this gap, we first need to define the notion of "constant policy"

For some public spending such as welfare benefits, and for most public revenues, at first sight we can take the existing state of legislation as our starting point, equating constant policy with "constant legislation". For example, when looking at variations in tax receipts we generally distinguish between spontaneous trends and the effects of changes in tax legislation. However, this is not always relevant in the long term, as the example of personal income tax shows. If we assume that its rate changes each year solely in response to inflation and that household incomes tend to rise faster than prices, all households would ultimately end up paying the top tax rate in the very long run. That would imply both an increase in the total tax burden and that the tax system becomes less redistributive. In that case, changes made on a constant legislation basis would result a major change of economic policy in the long run.

Further, any change in a portion of public spending is fundamentally discretionary by nature, and therefore cannot be covered by this approach. This is the case, for example, with public investment or with certain components of changes in the public-sector wage bill (e.g. net new hirings or civil service pay rises). There is no single definition of what might constitute a constant policy where this type of spending is concerned.

(6) More precisely, the term tax gap, introduced notably by Blanchard O. (1990) "Suggestions for a new set of fiscal indicators", OECD *Working Paper* no. 79, April, measures the increase in total taxes and social security contributions needed in order to restore sustainability. The "sustainability gap" designates an equivalent concept, albeit without prejudging the composition of the adjustment needed (in terms of spending and revenues).

2.2 A simple, conventional definition of a constant policy consists in assuming a constant primary structural balance

This definition is the one used, notably, to arrive at a harmonised estimation of the sustainability of public finances in the European Union member countries. For example, it amounts to assuming that the tax burden remains constant (i.e. that the ratio of tax to income for households and businesses remains constant) and that the share of primary spending in GDP remains constant. This last assumption reflects a constant rate of public investment, for example, or the stable purchasing power of welfare benefits relative to income from work (barring distortions in the structure of the economy and the population).

We reason here in terms of the primary structural balance: structural, because corrected for cyclical effects (and exceptional measures, if any)[7] ; primary, because interest expense on the debt is not taken into account. This is because the cyclical balance and interest expense on the debt can vary even when policy is constant, depending on macroeconomic factors such as growth and interest rates and on the momentum of public debt. The cyclical balance is assumed to be absorbed over a much shorter time horizon than the one considered in analyses of sustainability.

Based on these assumptions, the sustainability gap corresponds to the gap between the primary structural balance and the long-term public debt-stabilising balance (see box 1).

2.3 Population ageing requires a modification of this definition of constant policy

As people live longer and the baby-boom generations reach retirement age, the share of pensions, healthcare and long-term care spending in GDP is expected to rise, thus altering the path of the primary balance in the coming years. This will result not from any policy change, but simply from a change of the age structure. Consequently, we have refined our constant primary balance assumption by allowing the share of ageing-related spending to vary, while holding the other components of the primary balance constant.

In order to respect the constant policy assumption as closely as possible, only the effect of the change in the demographic structure is taken into account here. For example, this implies that the impact of technical progress on healthcare spending is not explicitly taken into account[8]. That is because, if the share of healthcare spending in GDP were to rise in the future as a result of technical progress, for example following the development of new, more effective but also more expensive treatments, this would lead to a better public health service for the people concerned, on the face of things. Including this additional cost would therefore be inconsistent with the constant policy assumption[9].

2.4 The sustainability gap therefore depends on the level of the primary structural deficit and the effects of ageing

It corresponds to the minimum durable improvement in the primary structural balance (in GDP percentage points) that would have to be made at the initial date, while at the same time maintaining a constant policy, in order to satisfy the infinite horizon inter-temporal fiscal constraint (and thereby avoid an explosion of the debt ratio in the long run), taking population ageing into account. **The sustainability gap can be analysed as the sum of two terms** (see chart 4):

- **the gap between the primary structural balance and the long-term debt-stabilising primary balance**, which reflects the effect of the initial fiscal position;
- **the effect of population ageing** on future changes in the primary balance assuming no policy change, henceforward referred to as the discounted cost of ageing.

This definition of the sustainability gap squares with that of the "S2" sustainability indicator, which is the one used for European fiscal surveillance purposes (see box 2). The "S1" indicator is the finite time horizon version of this[10]. Consistent with this approach, it is also possible to define implicit public debt as the discounted sum of future primary structural deficits. Implicit debt, here, is thus the concept of "stock" that corresponds to the concept of "flow", i.e. the sustainability gap[11].

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(7) On the definition and measurement of the structural public balance, see Lévy D. and Duchêne S. (2003), "Solde structurel et effort structurel: un essai d'évaluation de la composante 'discrétionnaire' de la politique budgétaire" (Structural Balance and Structural Effort: An Attempt to Evaluate the 'Discretionary' Component of Fiscal Policy), *DPAE* no. 18, November, and Guyon T. and Sorbe S. (2009), "Solde structurel et effort structurel: vers une décomposition par sous-secteur des administrations publiques" (Structural Balance and Structural Effort: Towards a Breakdown of General Government Departments by Sub-Sector), *Document de travail de la DG-Trésor* (DG-Trésor working paper) no. 2009/13, December.

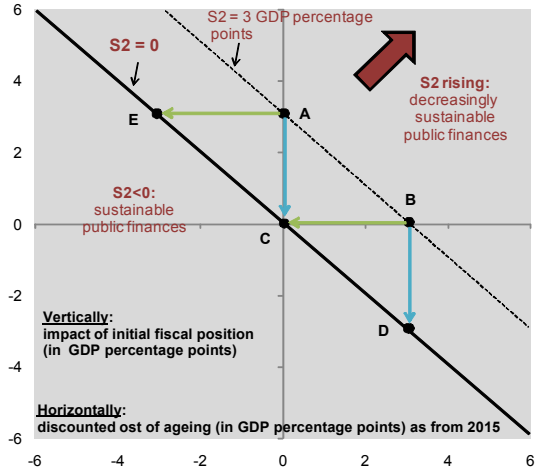
(8) The evolution of healthcare spending depends on several factors, and it is hard to isolate precisely the contribution of demographic factors among these. As a result, projecting healthcare spending on a "constant policy" basis depends on a number of conventional choices, both as to whether the population ages in more or less good health, and as to the elasticity of healthcare demand to household incomes. In the projections made by the *Ageing Working Group* (AWG - see box 2), the elasticity is assumed to be slightly greater than unity, and the healthcare supply side counterpart to this increase in demand could be interpreted as the implicit inclusion of a certain technical progress effect. For more on these questions, see Albouy et al. (2009), "Les dépenses de santé en France: déterminants et impact du ageing à l'horizon 2050" (Healthcare spending in France: determinants and impact of ageing looking to 2050), *Document de travail de la DG-Trésor* (DG Trésor working paper) no. 2009/11, July.

(9) The decision not to take account of the impact of changes in the demographic structure is justified by the fact that, in Europe for example, the cost of ageing will most likely be pre-financed, if only for the sake of inter-generational equity. However, while it seems fair to pre-finance spending resulting from a change in the demographic structure and for a given "quality of public service", it should be up to future generations to finance spending that would give them with a higher standard of public service.

(10) The S1 indicator corresponds to the minimum durable improvement in the structural balance that would have be achieved in order to bring the debt ratio to a specified level (e.g. 60% of GDP) at a given time horizon (2060, for example). When this horizon tends to infinity, the S1 indicator converges towards S2, independently of the debt ratio target chosen in the definition of S1.

(11) We refer to implicit debt in the sense of the sustainability of public finances. There are other notions, that have no direct bearing on sustainability, such as implicit pension schemes' liabilities in the sense of vested rights (see, for example, European Commission (2007), "Public Finance in the EMU, 2007", *European Economy* 2007/3, box II.2.2, page 109). Like the sustainability gap, the implicit public debt depends on both the initial primary structural balance and the impact, if any, of ageing on the future primary balance.

Chart 4: The sustainability gap (the S2 indicator): illustration of the breakdown between the initial position and the cost of ageing



Source: DG Trésor.

Interpretation: At points A and B, the public finances are unsustainable, with an identical sustainability gap (3 GDP percentage points). At A, the cause is a weak initial fiscal position, the discounted cost of ageing being nul. At B the reverse is the case: the primary structural balance allows a country to stabilise its debt ratio today, but ageing will lead to a deterioration of this balance in the future in the absence of policy change.

In each case, there are two ways to improve sustainability: either by improving the primary structural balance today (blue arrows) or by bringing down the future cost of ageing (green arrows), for example by reforming pensions.

Sustainability is restored (with a nul sustainability gap) at each of the end points C, D and E, albeit differently:

- at C, the primary structural balance can stabilise the debt ratio, and the cost of ageing is nul;

- at D, the primary structural balance is greater than the stabilising balance: the public debt ratio falls in the short to medium-term, enabling a country to pre-finance precisely the future rise in ageing-related spending, by reducing the interest expense;

- point E corresponds to a case not frequently seen in practice, where the cost of ageing is negative, enabling a country to offset a weak initial fiscal position.

Box 2: **The role of sustainability in Europe's fiscal surveillance**

The stability and convergence programmes that the European Union member states submit to Brussels each year contain a chapter devoted to the sustainability of their public finances. This notably allows each country to spell out its measurement of its sustainability gap (the S2 indicator) and its strategy for guaranteeing or restoring the sustainability of its public finances.

The European Commission assesses each member state's sustainability risk (low, medium, or high) on two occasions: annually, when reviewing the stability and convergence programmes, and every 3 to 4 years, in a more comprehensive report on the sustainability of public finances, the most recent of which dates from 2009. By way of illustration, table 1 presents the estimates of the main European countries' sustainability gaps contained in this report. Caution is needed in interpreting them, however, since they are based on forecasts for the primary structural balance for 2009 dating from spring 2009, which have been revised substantially since then. Moreover, they do not take account of reforms implemented since that date. Whatever the case, these are the most recent estimates made on a comparable basis for the countries concerned.

Table 1: The sustainability gap of the main European countries in 2009, according to European Commission estimates (in GDP percentage points)

	Sustainability gap in 2009, European Commission estimates	of which: impact of initial position	of which: cost of ageing
Germany	4.2	0.9	3.3
Spain	11.8	6.1	5.7
France	5.6	3.8	1.8
Italy	1.4	–0.1	1.5
Netherlands	6.9	1.9	5.0
United Kingdom	12.4	8.8	3.6
Euro area	5.8	2.3	3.5
European Union	6.5	3.3	3.2

Source: European Commission (2009), "Sustainability Report 2009", European Economy no. 9/2009.

Member states and the European Commission utilise an estimate of the impact of population ageing, carried out regularly, and harmonised across Europe, by the Ageing Working Group (AWG). This estimate is based on projections to 2060 of potential GDP and of the different spending items on which ageing has an impact, i.e. mainly pensions, health and long-term care spending. These projections are published in a public report, the most recent of which dates from 2009[a]. These projections are not forecasts of the most likely scenario, since they deliberately ignore change factors unrelated to ageing and future policy changes.

This estimate of the discounted cost of population ageing to the public finances also plays a part in determining the minimum medium-term budgetary objective (MTO) for the public deficit set by member states. The MTO is central to the preventive arm of the Stability and Growth Pact. This is what is supposed to guide member countries' medium-term fiscal policies: as long as it has not been fulfilled, countries are supposed to carry out a structural adjustment their public finances of at least 0.5 GDP percentage points annually. Since the reform of the Stability and Growth Pact in 2005, the more public debt exceeds the Maastricht Treaty reference value (60% of GDP) and the greater the discounted cost of ageing, the more ambitious the MTO needs to be, obliging the most exposed member states to pre-finance part of this cost.Two possibilities are available to States with unsustainable public finances to bring their public balance closer to their MTO and hence restore their sustainability. The first solution consists in improving their current fiscal position to reduce debt and pre-finance the cost of ageing. The second is to implement reforms to curb the future rise in ageing-related spending, pension reforms in particular, enabling them to choose a less ambitious MTO at some future date.

a. See European Commission (2009), "2009 Ageing Report: Economic and budgetary projections for the EU-27 Member States (2008-2060)", *European Economy* no. 2/2009.

3. The 2010 pensions reform would reduce the sustainability gap by nearly a percentage point of GDP

3.1 In 2010, before the implementation of fiscal consolidation measures and before the pensions reform, the French sustainability gap was estimated to be 5.6 GDP percentage points.

Of this gap, 3.8 GDP percentage points can be explained by a primary structural balance below the long-term debt stabilising balance (however, part of the structural deficit in 2010 stemmed from temporary factors, i.e. over-reaction to the drop in revenues during the crisis, delayed effects of certain variables, employment especially, relative to GDP, and the cost of the stimulus measures); 1.8 percentage point of the gap can be explained by the long-term cost of population ageing. This estimate, by the DG-Trésor, of the adjustment needed in order to restore sustainability is consistent with those made by the OECD and the IMF. These bodies employ similar concepts but they work with a finite horizon and assume that adjustment is gradual[12].

Faced with this situation, governments have pursued a strategy of reforms to restore the sustainability of public finances both by:

- **reducing the public deficit in the post-crisis stage** by reining-in public spending in all sectors of government, and by progressively lowering the cost of tax expenditures and cutting down on reduced-rate social insurance contributions. Accordingly, public spending grew by 0.6% in volume terms in 2010, and nearly €10 billion in cuts in tax expenditures and reduced-rate social insurance contributions were implemented in 2011. These savings are described in detail in France's 2011-2014 stability programme, which was laid before Parliament in mid-April 2011 and then submitted to the European institutions at the beginning of May;
- **and by reforming the pensions system**, thanks to the reform enacted at the end of 2010, which took effect in July 2011, additional to earlier reforms such as that of 2003 in particular.

3.2 The 2010 pensions reform should improve the sustainability of public finances by 0.9 percentage point of GDP

The impact of the pensions reform (see box 3) on sustainability derives mainly from the effect of the raising of the retirement age (see table 2). By raising the legal retirement age and the age at which workers automatically qualify for a full pension by two years, the reform has raised the average age at which people start receiving their pension. This serves to rein-in the growth in pensions spending, on the one hand; at the same time it is gradually expanding the size of the work force and hence the level of potential activity, leading to a positive impact on public revenues in the long run. The raising of the retirement age explains two-thirds of the improvement in the sustainability gap (0.6 percentage point of GDP out of 0.9). Another factor contributing to the narrowing of the sustainability gap, by 0.1 and 0.2 percentage point of GDP respectively, is the progressive alignment of public-sector employees' contribution rates on those of private sector workers.

Table 2: Impact of pensions reform on the sustainability gap in 2014

(in GDP percentage points)	Total impact	of which: impact on the primary structural balance in 2014	of which: impact on the discounted cost of ageing from 2015
Total impact of pensions reform	**0.9**	**0.8**	**0.1**
Slower growth in spending (higher retirement age, after inclusion of cost of adjustments for "long careers" and harsh working conditions, and convergence between pension schemes)	**0.3**	0.3	0.0
Impact of higher retirement age on potential GDP growth	**0.3**	0.2	0.1
Higher pension contributions (public-private convergence)	**0.1**	0.1	0.0
Targeted new revenues	**0.2**	0.2	0.0

Source: DG Trésor, authors' calculations.

(12) Taking 2010 as the reference year, the OECD estimates the improvement in the primary structural balance needed to stabilise the debt ratio by 2025 at 4.3 GDP percentage points, based on a gradual adjustment scenario, see OECD (2010), "Fiscal consolidation: requirements, timing, instruments and institutional arrangements", OECD Economic Outlook, volume 2010/2, November. Achieving this improvement will be complicated by the impact of ageing, which on a constant policy basis would tend to aggravate the primary balance by 1.8 percentage point of GDP between now and 2015, before allowing for the 2010 pensions reform (the OECD bases itself on the AWG's projections on this subject).

Also taking 2010 as its reference, a study by the IMF Department of Fiscal Affairs in February 2010 estimated that a 6.0 GDP percentage points adjustment in the primary structural balance, made gradually over the period 2010-2020, was necessary in order to bring the debt ratio to 60% of GDP by 2030, see IMF (2010), "Strategies for fiscal consolidation in the post-crisis world", IMF *Fiscal Affairs Department*, February. However, this estimate was based on a forecast public deficit for 2010 of around 8.5 GDP percentage points, against 7.0 today. Without taking it into account explicitly, the study also pointed out the size of the impact of ageing on pensions spending, referring back to the AWG's estimates.

Box 3: **Main measures in the 2010 pensions reform**

The lynchpin of the reform consists in the **progressive raising of the age at which entitlement begins from 60 to 62, for all workers, and the age at which they automatically qualify for a full pension from 65 to 67**. This will be phased in at a rate of 4 months by year of birth. The new qualifying ages will be reached for workers born in 1956, who will have to wait until 2018, when they reach 62, to collect their pension, and who will automatically quality for their full pension at 67, in 2023. This raising of the age parameters leaves untouched the principle **of increasing the number of years during which workers are required to contribute in line with rising life expectancy**, as laid down in the 2003 reform. For example, the number of years over which people born in 1953 and 1954 will have to contribute has been increased to 41.25.

To **allow for the specific nature of certain careers**, the possibility of retiring earlier, introduced in the 2003 reform for employees with "long careers" (i.e. who began work early) has been maintained and extended to employees who started work before the age of 18. The minimum qualifying age for this measure has also been raised by two years. Moreover, employees suffering from a 10% permanent disability due to occupational disease or workplace accident will be eligible to retire on full pension at 60.

The reform continues with the efforts to **achieve greater equity between the public and private sectors** by harmonising certain rules. For example, the possibility of taking early retirement for the parents with three children has been abolished; the system allowing people to retire progressively has been closed down; civil servants' contribution rates are progressively being aligned with those of private sector employees; and minimum pension rules are being aligned.

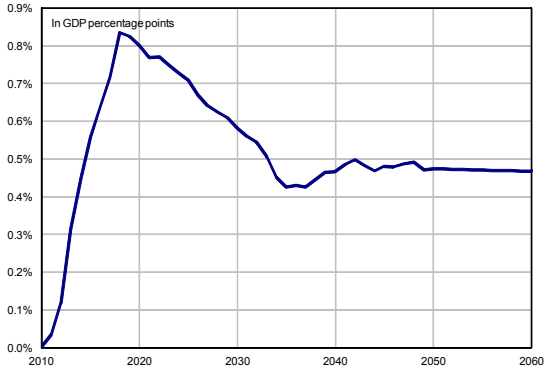
Finally, thanks to the reform the pension schemes will receive t**argeted new revenues, in particular by taxing high-income earners and income from capital** (interest and dividends), with the burden split between households and business.

3.3 Thanks to its very rapid phasing-in, the 2010 pensions reform is expected to have more of an impact on the medium-term fiscal position than on the discounted cost of ageing after 2015

As opposed to the reference scenario resulting from the latest projections of the AWG[13] (see box 2), the 2010 pensions reform would reduce the share of pensions spending in potential GDP by 0.4 percentage point as early as 2014[14], and by 0.5 percentage point of GDP in the very long term (see chart 5). This time distribution of the impact can be explained by the very rapid phasing-in on the reform:

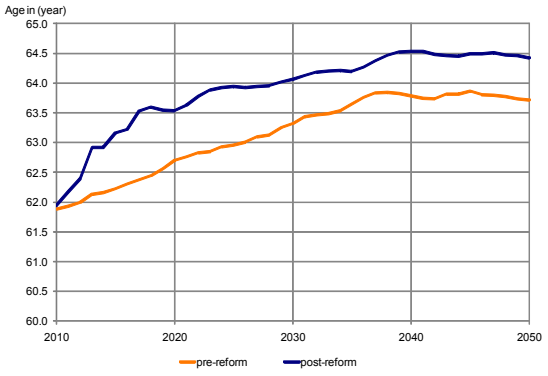
- **as the age parameters are progressively raised (until around 2020), the average age at which people become eligible to draw their pension will rise faster with the reform than without it (see chart 6)**. This is because people born in 1951 and after will be obliged progressively to delay the age at which they draw their pension, in the wake of the raising of the legal retirement age and the age of eligibility for full pension-by 4 months for people born in 1951 to 2 years for those born in 1956 and after. The number of pensioners and, consequently, the level of pensions spending, will decline rapidly;
- **thereafter, until around the 2030s, the actual age at which people retire (the actual age of retirement) will continue to rise, albeit less rapidly than in the absence of reform.** The specific effect of the reform would thus diminish in relation to the central scenario. This is because the rise in the average age of retirement stems mainly from the fall in the number people qualifying for a pension at 60, not having contributed for a sufficient length of time due to late entry into the work force or to career interruptions for the age groups concerned. The legal age of eligibility for a pension would therefore have relatively less effect on the age at which people retire since, even in the absence of reform, more and more workers would have to wait till age 62, 63 or 64 before having contributed for the requisite number of years. The reform would therefore have no impact for them;
- **in the very long term, the ages of at which people retire pre- and post-reform are expected to rise at the same pace**, assuming career lengths stabilise: the reform would have no additional impact on the age of actual retirement.

Chart 5: The reduction in the share of pensions spending in potential GDP made possible by the 2010 pensions reform



Source: DG Trésor, authors' estimates; the reference scenario is the AWG's central scenario ("2009 Ageing Report: Economic and budgetary projections for the EU-27 Member States (2008-2060)", European Economy no. 2/2009)

Chart 6: Average of actual retirement pre- and post-reform ("General" pensions system)



Sources: DG Trésor, authors' estimates using the Vénus model.

Scope: French general pension system, new legal age parameters excluding hardship factors and extension of early-retirement entitlements.

(13) This variant of the AWG's 2009 projections remains based on the demographic and macroeconomic framework set forth in the AWG's 2009 projections, which differ from that of the Pensions Steering Council (COR) published in 2010. It consists solely in taking into account the effect of the 2010 reform on pensions spending and on potential growth. The 2003 reform, and especially the planned increase in the requisite number years of pension contributions in line with increasing life expectancy, was already incorporated into the COR's 2010 and the AWG's 2009 projections.

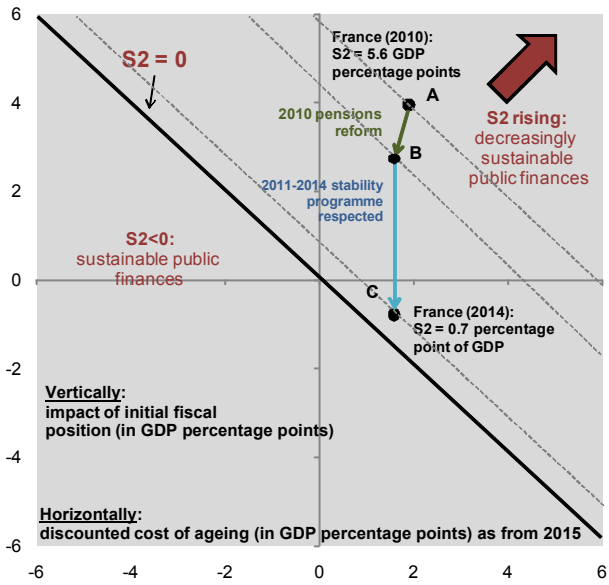
(14) The impact of raising the legal retirement age on the sustainability gap (see table 2) is greater than its effect on the ratio of pensions spending to GDP. This is because the increase in growth potential stemming from the rise in the age at which people are eligible to retire boosts both pension schemes' revenues and the other tax receipts, which in turn has an impact on the primary structural balance (non-pensions spending being assumed to given, here, until 2014, and to vary in line with GDP thereafter) and hence on the sustainability gap.

3.4 With the 2010 pensions reform, and if the public deficit path laid down in the April 2011 stability programme is respected, the public debt ratio would start coming down in 2013 and the sustainability gap would be largely filled

The sustainability gap would narrow to 0.7 percentage point of GDP in 2014 (see chart 7). In that case, the primary structural balance would fall below the long-term debt stabilising balance. That would serve to reduce the medium-term debt and thus to pre-finance part of the long-term cost associated with population ageing. This long-term cost would itself be reduced thanks to the pensions reform, much of whose effect is expected to become apparent between now and 2014.

At the European level, and equivalent, harmonised analysis is in progress for all countries. This will involve in particular the updating of ageing-related spending projections, incorporating the most recent pensions reforms. This study will give rise to the publication of a report on the sustainability of public finances in the European Union, at the end of 2012. Once it has brought its public finances back into balance, it is likely that France will find itself in a relatively favourable position in comparison with its main European partners, thanks to its lower cost of ageing (see table 1).

Chart 7: France's sustainability gap (S2 indicator) in 2010 and 2014



Sources: DG Trésor, eauthors' estimates.

Interpretation: In 2010, before the pensions reform, France was at point A. The sustainability gap was 5.6 percentage points de GDP.
The 2010 pensions reform (green arrow) should enable France to reach point B in 2014, i.e. to reduce this gap by nearly 1 percentage point of GDP. This would have an impact on both the short-term public balance, i.e. between now and 2014 (ordinates), and on the long-term cost of ageing, i.e. after 2015 (abscissa).
The other measures enabling France to respect the 2011-2014 stability programme public deficit path (blue arrow), implemented starting in 2011, should bring the sustainability gap back down to 0.7 percentage point of GDP in 2014 (point C).

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