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Public Deficit on Target in 2022 Despite the Energy Crisis

Victor Prieur, Jean Sol Macher, Elsa Trezeguet

- The 2022 public deficit published by the National Institute of Statistics and Economic Studies (INSEE) on 31 May 2023 stood at 4.7% of GDP. This figure is close to the 5.0% of GDP target set out in the 2022 Budget Bill, as revised on 22 October 2021, and upheld in the two 2022 Supplementary Budget Acts.

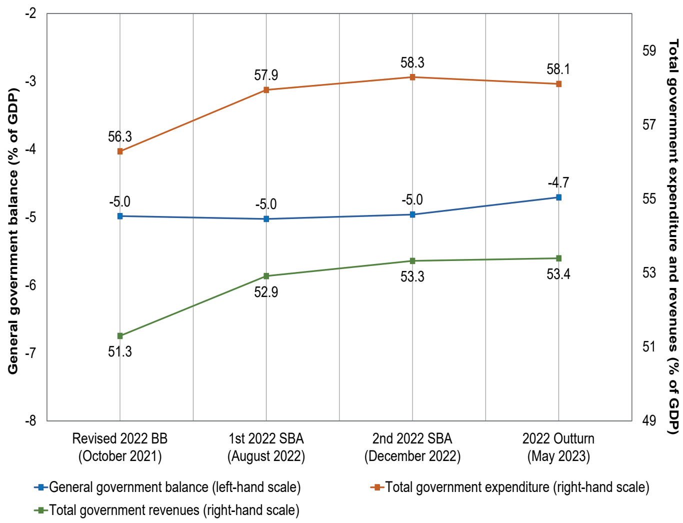
- However, an imported inflation shock of more than 4 percentage points in 2022 had a strong impact on revenues and expenditure through several channels.

- Spontaneous growth of taxes and social security contributions outstripped GDP growth by a wide margin. This major stylised fact was incorporated into the forecasts in the first 2022 Supplementary Budget Bill in July 2022. It stemmed primarily from the components of growth, the strength of wage growth and the large increase in taxable corporate profits in 2021, which has a lagged impact on government revenues.

- The inflation shock affected expenditure in two main ways: (i) the indexation of certain expenditure; (ii) the measures implemented since the end of 2021 to protect businesses and households from inflation.

- In the fourth quarter of 2021, it was impossible for the Budget Bill to foresee the scale of the energy shock or the measures that would be introduced to support households and businesses. However, the capacity for rapid revisions of forecasts to allow proportionate discretionary tax measures and resolute commitments to the deficit target made it possible to attain a deficit that was close to the original target, despite the shocks affecting revenue and expenditure (see Chart).

Changes to 2022 public finance forecasts during the year



Source: DG Trésor forecasts in the revised 2022 Budget Bill and the first and second Supplementary Budget Acts; outturn: INSEE.

1. The general government balance was on target despite the imported inflation shock

1.1 The 2022 public deficit was close to the target of 5.0% of GDP set in the Budget Acts

On 31 May 2023, INSEE published the provisional general government accounts for 2022. These accounts showed a general government balance deficit[1] standing at 4.7% of GDP. This is close to the 5.0% of GDP target set in the 2022 Budget Bill, as revised on 22 October 2021[2] (hereinafter referred to as the revised 2022 Budget Bill), to incorporate the effects of the France 2030 Plan and the preliminary costs estimates for the caps on gas and electricity prices. The target was upheld in both 2022 Supplementary Budget Acts, dated 16 August 2022 and 1 December 2022.

This result is in contrast to that of 2021. The 2021 public deficit published by INSEE in May 2022 stood at 6.5% of GDP, which was much better than the forecasts of 8.5% of GDP in the 2021 Initial Budget Act, and better than the 8.2% of GDP forecast underlying the Supplementary Budget Act of 1 December 2021. This stemmed from a much greater resurgence of growth than expected at the time the Budget Bills were submitted. Virtually all of the European countries encountered the same surprise as they emerged from the pandemic-induced recession.

1.2 The stability of the deficit forecasts in the course of 2022 masks large swings in expenditure and revenues

General government balance forecasts were not modified in the course of 2022 and the balance ended up close to the forecasts, but this result obscures the fact that the unforeseeable expenditure related to the pandemic was covered by stronger revenue growth. The forecasts for total government expenditure and total government revenues both increased by €60bn between the Initial 2022 Budget Act and the first 2022 Supplementary Budget Act and by a further €20bn in the second 2022 Supplementary Budget Act (see Chart on first page).

These changes stem directly from geopolitical changes and their macroeconomic consequences, particularly with regard to successive revisions to forecasts of inflation and the measures implemented to cope with it. Massive external shocks affected the economy in 2022, as was also the case in 2020 and 2021. France was hit by a further wave of the pandemic in early 2022 and restrictions remained in force until February of that year. Russia's invasion of Ukraine in February 2022 fuelled inflationary pressures that were already being felt at the end of 2021. This led to major revisions of inflation and growth forecasts.

This imported inflation shock automatically had major consequences for revenues and expenditure (Section 2) and led the government to introduce massive support measures for households and businesses to maintain purchasing power and France's output capacity (Section 3).

2. Macroeconomic instability affected public finances throughout the year

2.1 Forecast inflation increased more than threefold and the real growth forecast was cut sharply, but the nominal GDP forecast remained more stable

Inflation (as measured by the consumer price index excluding tobacco) stood at an annual average of 5.2% in 2022, in contrast to the forecast of 1.5% underlying the Initial Budget Act. This inflation shock undermined GDP growth, real GDP grew by 2.5% versus the forecast of 4.0% growth underlying the revised 2022 Budget Bill.

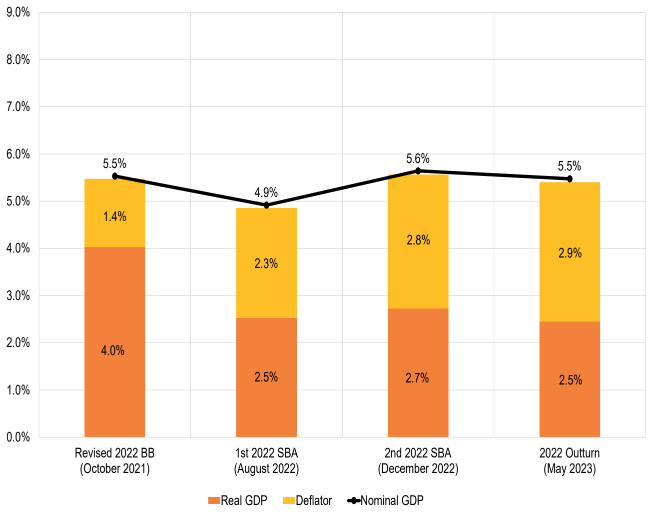
The shock also affected producer prices (GDP deflator). The GDP deflator increased from a forecast of 1.4% in the revised 2022 Budget Bill to 2.9% in the outturn. This revision was smaller than that to the inflation forecast owing to the imported nature of the

(1) Under the Maastricht criteria.

(2) The 2022 Budget Bill was revised on 22 October 2021 to incorporate the France 2030 Plan, which was announced before the Budget Bill was submitted on 5 October, along with the preliminary measures introduced to cope with inflation. This revised version is more comprehensive than the Initial Budget Bill and it is the benchmark used for this issue of *Trésor-Economics*.

shock, which primarily consisted of a negative terms of trade shock for France.[3] Nominal GDP growth was ultimately in line with the initial forecast through the various revisions in 2022, as price and volume surprises offset each other. It matched the forecast of 5.5% in the revised 2022 Budget Bill (see Chart 1).

Chart 1: Breakdown of nominal growth between price effect and volume effect



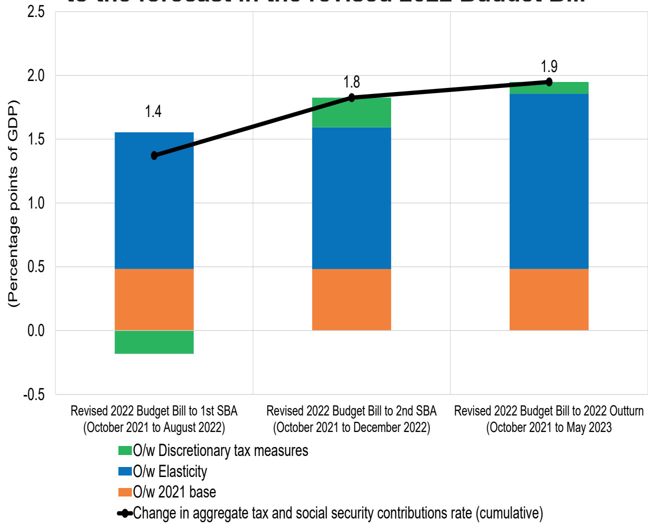
Source: DG Trésor.

2.2 The assumption that spontaneous growth of aggregate tax and social security contributions would outstrip GDP growth was confirmed

The aggregate tax and social security contribution rate increased by 1.9 percentage points between the forecast in the revised 2022 Budget Bill and the figure published by INSEE (see Chart 2) and stood at 45.4% of GDP, up from 44.3% in 2021. The increase breaks down into three parts: the integration into the base of the good surprises in the 2021 budget outturn, which added 0.5 percentage points to the increase in the rate; changes resulting from discretionary tax measures[4] which added 0.1 percentage points to the increase; and spontaneous growth, meaning aggregate tax and social security contributions growth unrelated to discretionary measures[5] introduced by the government, which contributed 1.4 percentage points to the increase in the rate.

Spontaneous growth of aggregate taxes and social security contributions is strongly correlated to GDP growth.[6] In general, the forecast is based on the assumption that growth of aggregate taxes and social security contributions tracks nominal GDP growth and tax elasticity stands at the historical average of 1. This was true for the revised 2022 Budget Bill, in which strictly unitary tax elasticity to GDP growth was expected, meaning that both values would change at the same rate. And yet, the provisional general government accounts published by INSEE in May 2023 showed elasticity of 1.6, meaning that spontaneous revenue growth was 1.6 times greater than GDP growth, excluding the effect of discretionary tax measures, even though the nominal GDP growth rate was the same in both publications.

Chart 2: Breakdown of revisions to the aggregate tax and social security contribution rate compared to the forecast in the revised 2022 Budget Bill



Source: DG Trésor.

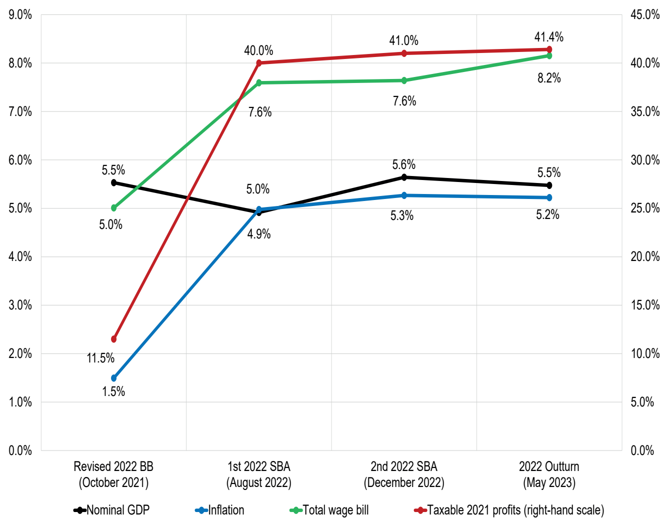
This big difference stems from the fact that some tax bases are not fully accounted for in the current year's GDP. This was the case in particular for VAT revenues, which increased by €9bn between the revised 2022 Budget Bill and the outturn. The VAT is levied on imports as well, whereas the effect of import prices is not directly visible in the GDP deflator. This effect was particularly pronounced in 2022 owing to the components of nominal growth, which was driven by commodity prices, and energy prices more specifically.

(3) G. Clavères (2022), « The Distribution of Losses Caused by the Energy Terms of Trade Shock », *Trésor-Economics*, No. 318.
(4) €7.7bn in the 2022 outturn, according to INSEE, versus the decline of €10.1bn forecast in the revised 2022 Budget Bill, for a difference of nearly €2.5bn.
(5) Indexation of some taxes and social security contributions (e.g. inflation-linked revaluation of income tax brackets, which resulted in a lower effective tax rate) is not classified as a discretionary tax measure and therefore counts as spontaneous growth.
(6) See E. Dubois (2023), « L'élasticité des prélèvements obligatoires au PIB », HCFP, *Note méthodologique*, No. 2023-01.

It was also the case for payroll contributions, especially social security contributions, which increased by €22bn between the revised 2022 Budget Bill and the outturn. Payroll growth outstripped GDP growth and was revised upward by 3 percentage points between the revised 2022 Budget Bill and the outturn. This revision stems from the large rise in prices, which was integrated into the automatic revaluation of the statutory minimum wage, and from stronger than expected growth of payroll employment.

The greater tax elasticity also stems from stronger than expected corporate income tax revenue growth, with an increase of €22bn between the revised 2022 Budget Bill and the outturn, from the strong growth of taxable profits in 2021, which rose by 41.4%, versus an estimate of 11.5% growth at the time the revised 2022 Budget Bill was submitted. The increase affects both advance tax payments and the corporate income tax balance in 2022 (see Chart 3).

Chart 3: Estimated changes in the main macroeconomic variables over time



Source: DG Trésor.

With the first 2022 Supplementary Budget Bill in July 2022, the decision was made to break with habit and assume greater than unitary tax elasticity. This was done on the basis of the preliminary data concerning the corporate income tax balance, which pointed to a large increase in taxable profits in 2021. The High Council on Public Finances approved this decision, noting that: “the forecast of tax elasticity much greater than 1 can be justified by the specific characteristics of the year 2022”.[7] The second 2022 Supplementary Budget Bill maintained this elasticity for 2022 and this choice was validated by the provisional 2022 general government accounts.

It should be noted that the 2023-2027 Stability Programme foresees tax elasticity that is much lower than 1 in 2023. This is justified by the fact that most of the increase in the aggregate tax and social security contribution rate seen in 2022 is deemed to be unlikely to last.

2.3 Indexation of a share of government expenditure added to the deficit

An inflation shock automatically affects government expenditure through three main channels. First, debt service costs are sensitive to inflation, since index-linked bonds account for approximately 12% of outstanding central government debt securities. Issuance of such bonds serves the objective of diversifying central government financing channels and risks. It also enables the government to smooth its deficit contracyclically over an entire business cycle.[8] Currently, a variation of 1% over the benchmark scenario in France and the euro area for consumer prices indices, excluding tobacco, has led to an increase in the provision for indexation costs of approximately €2.5bn. Total central government debt service costs reported in the national accounts, which include this provision, ultimately stood at 0.8 percentage points of GDP more than the forecasts in the revised 2022 Budget Bill.

Secondly, virtually all social benefits are automatically revalued for inflation. The exact revaluation rules vary from one benefit to the next, but increases are calculated and implemented on the basis of past inflation and not inflation forecasts for the current year. The full cost of this indexation for public finances – estimated to add 0.2 percentage points of GDP to government expenditure for an inflation shock of one percentage point – is generally felt with a one-year lag. However, the government’s decision in 2022 to increase all benefits by 4% proactively on 1 July meant that some of the indexation cost for benefits was recognised in 2022. The effect of this decision was an additional 0.3 percentage points of GDP in 2022 (see Section 3).

Thirdly, intermediate consumption of general government (procurement of the goods and services needed for current operations) costs more because

(7) HCFP (2022), Avis n° HCFP-2022-2 relatif au premier projet de loi de finances rectificative pour 2022.
(8) P. Copin, J. Dalbard (2022), “France’s Sovereign Debt Issuance Strategy”, *Trésor-Economics*, No. 297.

of inflation. The additional cost may be partially lagged sometimes (as in the case of energy supply contracts that fix prices over several years) or offset by cutting other expenditure, when nominal expenditure caps are set in advance. Government investment expenditure can also increase as the result, for example, of higher construction costs.

3. The government's response to higher energy prices was immediate and massive

3.1 Massive measures were introduced and adapted in real time to protect households and businesses

As prices rose from the end of 2021 onwards, especially energy prices, the government introduced large-scale measures to protect France's economy. These measures evolved throughout 2022 to adapt to the repercussions of Russia's invasion of Ukraine, which caused large fluctuations in government expenditure forecasts in three main phases.

The first phase started in September 2021 with the implementation of caps on gas and electricity prices. The government used various components of these caps to act directly on the level of inflation affecting households and businesses by covering part of the increase in energy prices. Without the price caps, the households and businesses benefiting from regulated prices[9] at the time energy prices peaked[10] would have paid more than €70/MWh more for electricity (a 40% increase) and nearly €200/MWh more for gas (a 180% increase). The compensation that the government paid to energy suppliers to maintain the price caps depended directly on market prices for gas and electricity. This meant the estimated cost to public finances varied greatly throughout 2022. In the third quarter of 2022, a large increase in prices was expected by the end of the year. The cost of the price caps for the 2022 budget was estimated at €27.6bn in the second 2022 Supplementary Budget Act. This cost ultimately stood at €24.9bn in the provisional general government accounts for 2022, as a result of the slight easing of gas prices at the end of 2022. In this first phase, the government also introduced a €100 inflation allowance for 38 million people in the fourth quarter of 2021. The total cost of €3.8bn was spread over 2021 and 2022 in the revised 2022 Budget Bill.[11] In the end, the full cost of this measure was imputed to the 2021 budget in the forecasts in the second Supplementary Budget Act and recognised in the accounts for the year.[12]

In a second phase, the price caps were backed up by the government's Economic and Social Resilience Plan announced on 16 March 2022, with specific additional measures benefiting households and businesses (fuel rebates, support for energy-intensive businesses and specific support for the sectors with the greatest exposure to rising input costs).[13] The two 2022 Supplementary Budget Acts supplemented these measures to support low-income households coping with inflation, with early revaluation of pensions and social benefits on 1 July, an exceptional back-to-school aid and support vouchers for the households most vulnerable to higher energy prices.[14] In contrast to the price caps, the cost of these measures was not directly linked to energy prices, which meant that the estimated cost showed little change. However, they had a significant impact on public finances as the additional expenditure in the second 2022 Supplementary Budget Act for these measures came to €20.1bn.

The government simplified and broadened the assistance for energy-intensive businesses in the fourth quarter with a view to providing greater support for the businesses most affected by higher energy prices, especially after 15 November 2023, when the European Commission's Temporary Crisis Framework was made more flexible.

(9) Regulated gas and electricity prices may be applied for households and very small businesses with electricity consumption of less than 36 kVA.
(10) October 2022 for gas and August to December 2022 for electricity.
(11) €1.5bn in 2021 and €2.3bn in 2022.
(12) This was recognised as an accrued cost because the benefit is a "cash social insurance benefit". As such, the expenditure is recognised when the benefit is introduced.
(13) Agriculture, fisheries, transport and construction.
(14) A voucher for low-income households using heating oil was introduced under the first 2022 Supplementary Budget Act. The second Supplementary Budget Act added an exceptional energy voucher and a voucher for fuel wood.

3.2 Certain actions helped limit the impact of the energy measures on the deficit

Some of the revenues linked to energy prices and the temporary solidarity contribution on surplus profits authorised by an EU Regulation limited the net cost of the measures for public finances. This means the estimated cost of "energy" measures net of revenue remained stable starting with the first 2022 Supplementary Budget Act, even though the gross cost fluctuated by nearly €8bn (see Table 1).

The spontaneous increase in revenue linked to energy prices was primarily the result of the symmetrical operation of the public service energy tax. A large share of this tax corresponds to subsidies for renewable energy production, which benefits from a government price guarantee. Before the energy crisis, the government covered the difference between the actual producer prices on the energy market and the guaranteed price for renewable energy producers, which was higher at the time. Symmetrically, when market prices are high, the difference generates government revenues.

In addition to these revenues, the Solidarity Contribution on Surplus Profits was implemented under the terms of the European Regulation after its adoption during the 2023 budget debate. Both measures are aimed at electricity producers, in the case of the contribution on inframarginal rent from electricity production, and businesses in the extractive, oil refining and coking sectors, in the case of the Exceptional Solidarity Contribution. In both cases, the rents accruing to energy producers from higher prices were taxed to finance the price caps.

In aggregate, the additional revenues and expenditure savings linked to changes in energy prices came to €11.7bn in the provisional general public accounts for 2022 (2022 outturn).

Table 1: Impact of support measures to cope with inflation on the general government balance (€bn)

Impact of support measures and price caps on the general government balance in 2022 (€bn)		Revised 2022 BB	1st 2022 SBA	2nd 2022 SBA	2022 Outturn
Expenditure measures	Gas price cap – compensation for suppliers	–1.2	–4.7	–8.5	–6.7
	Electricity price cap – cuts in consumption taxes	–5.9	–7.4	–7.4	–7.0
	Electricity price cap* – compensation for suppliers		–8.9	–11.6	–11.2
	Gas storage		0.0	–0.7	0.0
	Fuel rebates		–7.6	–7.6	–7.9
	Inflation allowance	–2.3	0.0	0.0	0.0
	Exceptional back-to-school aid		–1.1	–1.1	–1.1
	Early revaluation of pensions and social benefits		–6.7	–6.7	–6.7
	Kilometric scale for tax deductions		–0.4	–0.4	–0.4
	Electricity price cushion		0.0	0.0	0.0
	Subsidy for energy-intensive businesses		–3.0	–1.5	–0.5
	Industry support		–1.1	–1.1	–0.9
	Support vouchers for low-income households**		–0.2	–2.2	–1.2
Total impact of expenditure measures		**–9.4**	**–41.2**	**–48.8**	**–43.6**
Additional revenues and expenditure savings	Cut in public service energy tax***	2.7	11.0	17.2	10.1
	Contribution on inframarginal rent from electricity production			1.3	1.2
	Exceptional Solidarity Contribution				0.2
	Increase in hydroelectricity royalties			0.3	0.2
Total impact of revenue and expenditure savings		**2.7**	**11.0**	**18.8**	**11.7**
Net total impact		**–6.7**	**–30.2**	**–30.0**	**–31.8**

Source: DG Trésor.

* Including the extension of the regulated quota of nuclear power provided to retailers (ARENH).

** Exceptional energy vouchers, "heating oil" voucher, "fuel wood" voucher and fuel rebate.

*** The savings shown is the difference between the public service electricity tax level to date and the level stipulated by the Energy Regulation Commission in July 2021, before the implementation of the price caps (€8.8bn in 2022).

4. Maintaining the initial general government balance target shows determination in the face of rapidly changing circumstances

4.1 The 2022 Budget Bill could not foresee either the scale of the shock or the scale of the measures to be taken

The revised 2022 Budget Bill instituted the first version of the energy price caps, but the scale of inflation shock (the largest since the early 1980s) and the nature and cost of support measures were all unforeseeable. In addition to the measures to combat inflation and its impact, set out in detail above, other large-scale measures had an impact on government expenditure. The slower than expected recovery from the pandemic and actions in favour of the healthcare system required an increase in healthcare expenditure that was 0.4 percentage points of GDP greater than forecast in the revised 2022 Budget Bill. The provision for pandemic related one-off expenditures under the National Healthcare Expenditure Target was increased by €5.0bn to €11.7bn between the revised 2022 Budget Bill and the outturn. Further measures were taken to promote purchasing power, including a 3.5% revaluation in the civil service pay scale on 1 July 2022, and the elimination of the television license fee in 2022.

4.2 Sustained nominal GDP growth made it possible to achieve the initial deficit target, which remained a policy priority

Nominal GDP growth in 2022 was in line with the forecast underlying the revised 2022 Budget Bill, but the components of this growth were much different from what had been expected. The government's determination to start gradual fiscal consolidation following the pandemic years meant that discretionary expenditure measures were kept in line with the additional revenue linked to this macroeconomic environment. The creation of new revenue sources based on energy suppliers' surplus profits mitigated the sensitivity of the general government balance to prices on the energy market. Throughout the year, real-time assessments of shocks and realistic calculations of their impact on surplus revenue and the costs of the measures under consideration or implemented facilitated decisions regarding the scale of the measures in keeping with the initial general government balance target.

Table 2: Revisions to the general government accounts between the revised 2022 Budget Bill in October 2021 and the provisional 2022 general government account for 2022

Balance forecast in the revised 2022 Budget Bill in October 2021 (% of GDP)	–5.0
Total amount of revisions (percentage points of GDP)	+0.3
Macroeconomic environment	+1.7
O/w denominator effect (nominal GDP growth)	+0.1
O/w aggregate taxes and social security contributions	+2.4
O/w debt service	–0.8
Measures to combat higher prices	–1.0
Other measures	–0.6
O/w measures to promote purchasing power (TV license fee, civil service pay scale)	–0.2
O/w healthcare expenditure (including COVID)	–0.4
Other new information	+0.1
2022 outturn balance (% of GDP)	–4.7

Source: DG Trésor.

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Publication manager:
Dorothée Rouzet

Editor in chief:
Jean-Luc Schneider
(01 44 87 18 51)
tresor-eco@dgtresor.gouv.fr

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