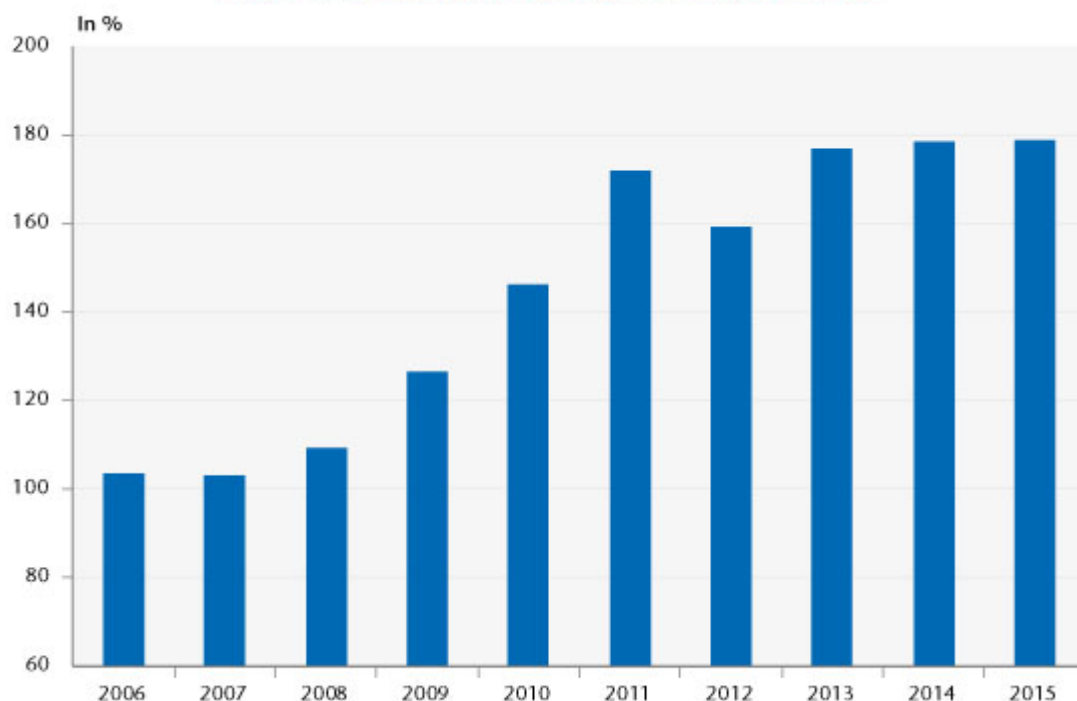


Why can't Greece get out of debt?

By [Sébastien Villemot](#)

Between 2007 and 2015, Greece's public debt rose from 103% to 179% [1] of its GDP (see chart below). The debt-to-GDP ratio rose at an uninterrupted pace, except for a 12-point fall in 2012 following the restructuring imposed on private creditors, and despite the implementation of two macroeconomic adjustment programs (and the beginning of a third) that were aimed precisely at redressing the Greek government's accounts. Austerity has plunged the country into a recessionary and deflationary spiral, making it difficult if not impossible to reduce the debt. The question of a further restructuring is now sharply posed.

Figure 1. Greece's public debt as % of GDP, 2006-2015

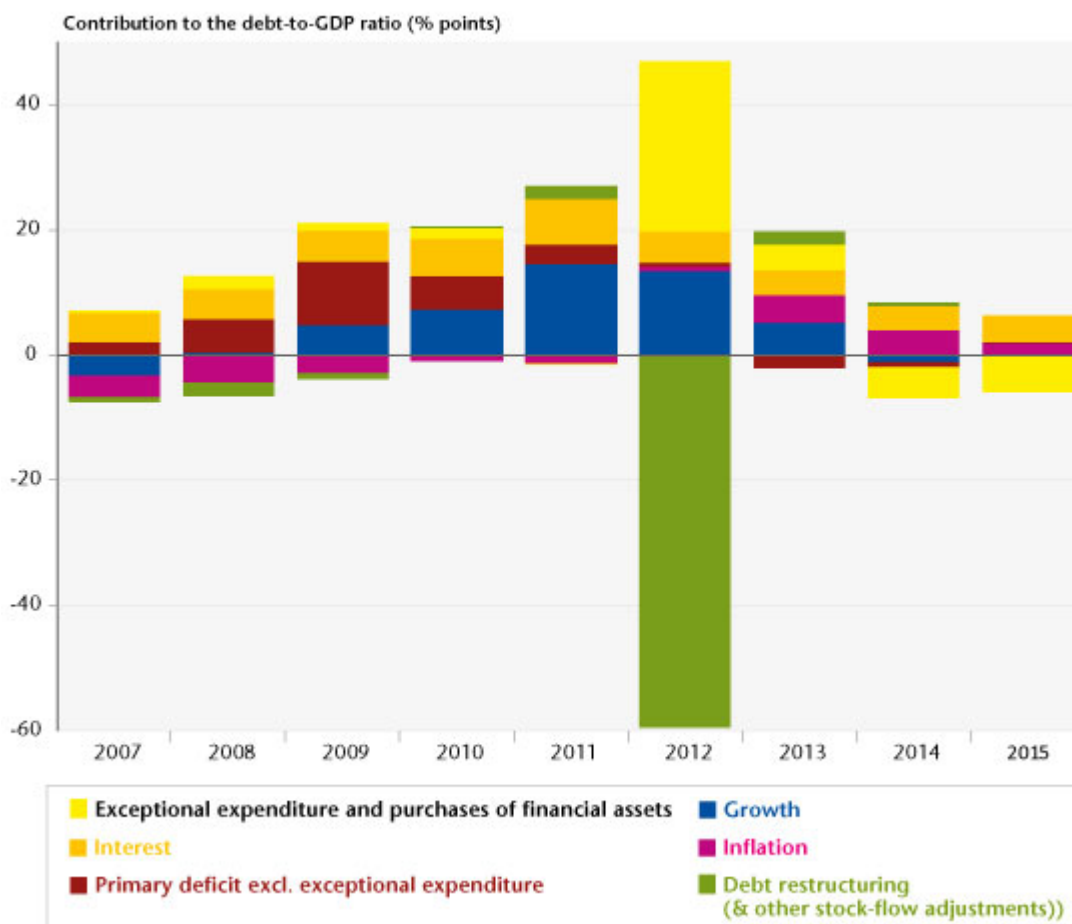


Sources: Eurostat, European Commission..

What explains this failure? How much have the various factors involved (public deficit, austerity, deflation, restructuring, bank recapitalization, etc.) contributed to changes in the

debt? To provide some answers, we conducted an accounting breakdown of the changes in the debt ratio: the result is given in the graph below for the period 2007-2015.

Figure 2. Accounting breakdown of changes in the debt ratio



Several phases, which correspond to various developments in the Greek crisis, are clearly identifiable on the chart.

In 2007, prior to the financial storm, the GDP-to-debt ratio was stable: the negative effect of the budget deficit (including interest), which increases the ratio's numerator, was offset by the positive impact of growth and inflation, which increase the denominator. So the situation was stable, at least temporarily, even though the debt level was already high (103% of GDP, which also explains the significant interest burden).

This stability was upset with the onset of the global financial crisis in 2008 and 2009: growth disappeared and even entered negative territory, while the primary deficit was rising, partly due to the “automatic stabilizers”, and by 2009 came to 10 percentage points of GDP.

Given the intensity of the fiscal crisis, an initial adjustment plan was implemented in 2010. As the austerity measures began to bite, the primary deficit began to fall (to almost zero in 2012, excluding extraordinary expenses). But austerity also resulted in intensifying the recession: in 2011, growth (very negative) contributed nearly 15 GDP points to the increase in debt. Austerity also led to reducing inflation, which dropped to almost zero, and which is therefore no longer playing its natural role of cushioning debt. Meanwhile, the interest burden remained high (rising to 7.2 GDP points in 2011).

It should be recalled that the accounting breakdown presented here tends to underestimate the negative impact of growth and to overestimate the impact of the budget deficit. Indeed, a recession generates a cyclical deficit, through the automatic stabilizers, and therefore indirectly contributes to debt through the channel of the budget balance. However, to identify the structural and cyclical components of the budget deficit, an estimate of potential growth is needed. In the Greek case, given the depth of the crisis, this exercise is quite challenging, and the few estimates available diverge considerably; for this reason, we preferred to stick to a purely accounting approach.

2012 was a year for big manoeuvres, with two successive debt restructurings in March and December. On paper, there was a substantial cancellation of debt (measured in terms of the stock-flow adjustment): almost 60 GDP points. But what should have been a significant reduction was largely offset by opposing forces. The recession remained exceptionally intense and accounted for 13.5 GDP points of the increase in debt.

Above all, the main negative effect came from bank recapitalizations, which were necessitated by the writing off of public debt securities, which were largely held by domestic banks. In accounting terms, these recapitalisations take two forms: grants to banks (recorded as extraordinary expenses) or purchases of newly issued shares (recorded as purchases of financial assets) [2], which is why these two categories are grouped on the graphic. The category of purchases of financial assets also recognizes the establishment of a financial cushion to finance future bank recapitalizations [3].

In 2013, the debt-to-GDP ratio once again rose sharply, even though the primary balance (excluding exceptional expenses) showed a surplus. Bank recapitalizations (19 billion euros) were a heavy burden and were only partially covered by the sale of financial assets. The recession, although less intense, and deflation, now well established, made the picture even gloomier.

In 2014 and 2015, the situation improved, but without leading to any decline in the debt-to-GDP ratio, even though the primary deficit excluding exceptional spending was almost zero. Deflation persisted, while growth failed to restart (the 2014 upturn was moderate and short-lived), and the banks had to be recapitalized again in 2015 (for 5 billion euros). The interest burden remained high, despite the decision of the European creditors to lower rates on the loans from the European Financial Stability Facility (EFSF): several years would be needed before this shows up in the effective interest burden. Only the sales of financial assets made it possible to hold down the increase in debt, which is clearly not sustainable in the long run since there is a limited stock of these assets.

The table below shows the cumulative contribution of each factor for the period as a whole, and for the sub-period during which Greece was under programme (2010-2015).

Cumulative contribution of each factor

	2007-2015	2010-2015
Growth	41.7	39.7
Inflation	-1.8	8.7
Primary deficit excl. exceptional expenditure	23.9	6.2
Interest	44.7	30.3
Exceptional expenditure & purchase of fin. assets	25.7	22.1
Debt restructuring (& other stock-flow adjustments)	-58.7	-54.6
Total	75.4	52.4

Sources: Eurostat, European Commission, author's calculations..

The two main contributors to the increase in debt are growth (negative) and the cost of interest. In other words, the total increase in debt is due primarily to a “snowball effect”, which means the automatic increase due to the differential between the real interest rate and growth (the infamous “ $r-g$ ”). The debt forgiveness in 2012 was not even sufficient to offset the snowball effect accumulated over the period. The bank recapitalizations that became necessary due in particular to the cancellation of debt were a heavy burden. The primary deficit, which is under the more direct control of the Greek government, comes only in 4th position from 2007 to 2015 (and doesn't contribute much at all over the period 2010-2015).

It is therefore clear that the sharp rise in the debt-to-GDP ratio since 2007 (and especially since 2010) was not primarily the result of the Greek government's fiscal irresponsibility, but resulted instead from an erroneous consolidation strategy that was based on a logic of accounting austerity and not on coherent macroeconomic reasoning. An upturn in growth and inflation will be necessary to achieve any substantial debt reduction. But the new austerity measures set out in the third adjustment plan could cause a return to recession, while the constraints of price competitiveness within the euro zone make it impossible to foresee any renewal of inflation. A significant reduction of debt that is not conditional on a new destructive phase of austerity would allow a fresh start; in a

previous study[\[4\]](#), we showed that a restructuring that cut Greece's debt to 100% of its GDP would correspond to a sustainable scenario. However, Europe's member states, which are now Greece's main creditors, are currently rejecting such a scenario. The path to reducing Greek debt now looks more uncertain than ever...

[\[1\]](#) The data for 2015 are not yet fully available. The figures quoted for this year are projections by the European Commission published on 4 February 2016.

[\[2\]](#) These holdings in bank capital are recorded here at their purchase value. Any subsequent deterioration in these holdings is not reflected in the chart, because this would not lead to a further increase in the gross debt (although it would increase the net debt).

[\[3\]](#) In 2012, Greece bought 41 billion euros worth of EFSF bonds. Of this total, 6.5 billion were immediately given to the Bank of Piraeus, while 24 billion were lent to 4 big banks (which benefited from partial cancellation of their debt in 2013 against equity participations by the Greek State for a lesser value). The remaining 10 billion were returned unused by Greece to the EFSF in 2015, following the agreement of the Eurogroup on 22 February.

[\[4\]](#) See Céline Antonin, Raul Sampognaro, Xavier Timbeau and Sébastien Villemot, 2015, "[La Grèce sur la corde raide](#)" [Greece on the tightrope], *Revue de l'OFCE*, no. 138.

Greece: When history repeats itself

By [Jacques Le Cacheux](#)

The duration of the Greek crisis and the harshness of the series of austerity plans that have been imposed on it to straighten out its public finances and put it in a position to meet its obligations to its creditors have upset European public opinion and attracted great comment. The hard-fought agreement reached on Monday 13 July at the summit of the euro zone heads of state and government, along with the demands made prior to the Greek referendum on 5 July, which were rejected by a majority of voters, contain conditions that are so unusual and so contrary to State sovereignty as we are used to conceiving of it that they shocked many of Europe's citizens and strengthened the arguments of eurosceptics, who see all this as proof that European governance is being exercised contrary to democracy.

By requiring that the creditors be consulted on any bill affecting the management of the public finances and by requiring that the privatizations, with their lengthy list dictated by the creditors, be managed by a fund that is independent of the Greek government, the euro zone's leaders have in reality put Greece's public finances under supervision. Furthermore, the measures contained in the new austerity plan are likely to further depress the already depressed domestic demand, exacerbating the recession that has racked the Greek economy in 2015, following a brief slight upturn in 2014.

Impoverishment without adjustment

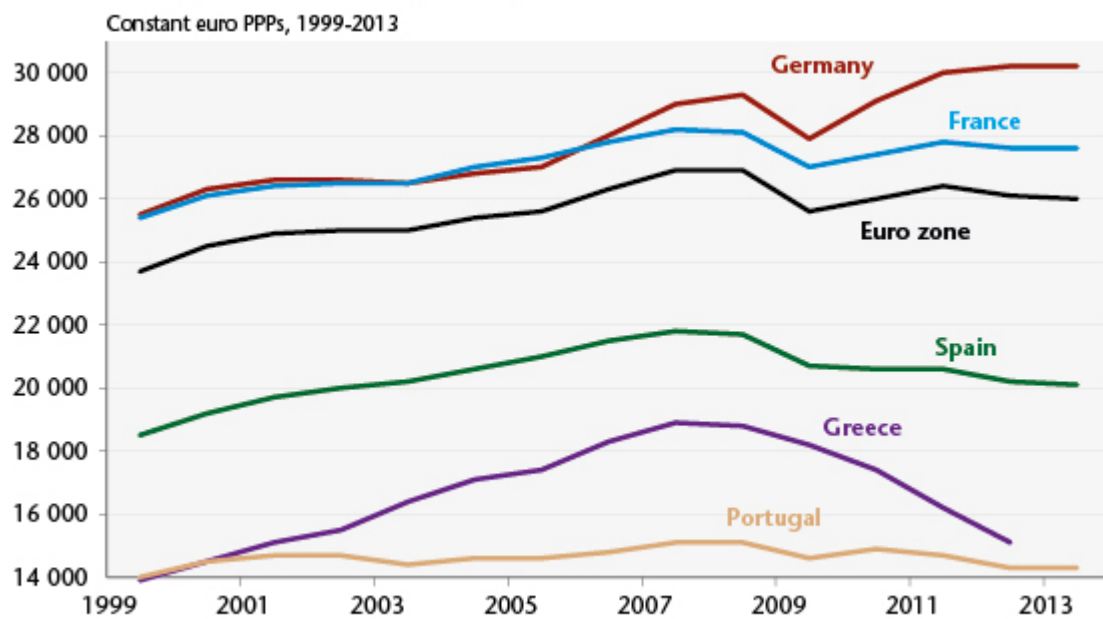
The Greek crisis, which in 2010 triggered the sovereign debt crisis in the euro zone, has seen prolonged agony punctuated

by European psycho dramas that always conclude in extremis by an agreement that is supposed to save Greece and the euro zone. From the beginning, it was clear that a method based on the administration of massive doses of austerity without any real support for the modernization of the Greek economy was doomed to failure [1], for reasons that are now well understood [2] but at the time were almost universally ignored by officialdom, whether from European governments, the European Commission or the IMF, the main guarantor and source of inspiration for the successive adjustment plans.

The results, which up to now have been catastrophic, are well known: despite the lengthy austerity cure, consisting of tax hikes, public spending cuts, lower wages and pensions, etc., the Greek economy, far from recovering, is now in a worse state, as is the sustainability of the country's public finances. Despite the agreement in 2012 of Europe's governments on a partial default, which reduced the debt to private creditors – relief denied by those same governments two years earlier – Greece's public debt now represents a larger percentage of GDP (almost 180%) than at the beginning of the crisis, and new relief – this time probably by rescheduling – seems unavoidable. The third bailout package – roughly 85 billion euros, on the heels of approximately 250 billion over the past five years – will be negotiated over the coming weeks and will be in large part devoted just to meeting debt repayments.

Meanwhile, the average living standard of Greeks has literally collapsed; the difference with the euro zone average, which had tended to decline during the decade before the crisis, has now widened dramatically (Figure 1): the country's GDP per capita is now a little less than half that in Germany. And GDP per capita still only poorly reflects the reality in an economy where inequality has increased and spending on social protection has been drastically reduced.

Figure 1. Real GDP per capita in several euro zone countries

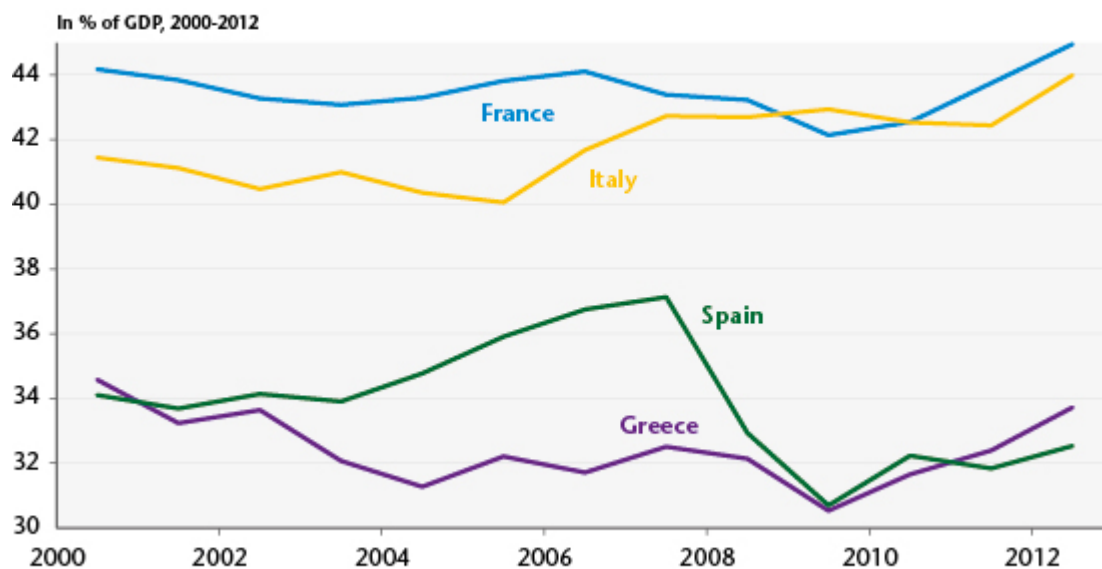


Source : Eurostat.

The new austerity plan is similar to the previous ones: it combines tax hikes – in particular on VAT, with the normal rate of 23% being extended to the Islands and many sectors, including tourism, that were previously subject to the intermediate rate of 13% – with reduced public spending, and will result in budget savings of about 6.5 billion euros over a full year, which will depress domestic demand and exacerbate the current recession.

The previous adjustment plans also featured “structural” reforms, such as lowering the minimum wage and pensions, deregulation of the labour market, etc. But it is clear that the fiscal component of these plans did not have a very visible impact on government revenue: after having declined significantly until 2009, the Greek tax burden – measured by the ratio of total tax revenue to GDP – has definitely increased, but not much more than in France (Figure 2). This does not mean, of course, that an even stronger dose of the same medicine will lead to better healing.

**Figure 2. Level of overall fiscal pressure
in several euro zone countries**



Source : Eurostat.

Does history shed light on the future?

The ills afflicting the Greek economy are well known: weak industrial and export sectors – apart from tourism, which could undoubtedly do better, but performs honourably – numerous regulated sectors and rentier situations, overstuffed and inefficient administration and tax services, burdensome military expenditure, etc.

None of this is new, and no doubt it was the responsibility of the European authorities to sound the alarm sooner and help Greece to renovate, as was done for the Central and Eastern Europe countries in the early 2000s in the years before they joined the European Union. Will the way it has been decided to do this now, through a forced march with the Greek government under virtual guardianship, be more effective?

If we rely simply on history, the temptation is to say yes. There are many similarities between the situation today and a Greek default back in 1893. At that time Greece was a relatively new state, having won its independence from the Ottoman Empire in 1830 following a long struggle supported by the European powers (England and France), which put the

country under a Bavarian king. Greece was significantly poorer than the countries of Western Europe: despite an effort at modernization undertaken after independence that was led by the Bavarian officials assembled around the Greek King Otto, in 1890 the country's GDP per capita was, according to data assembled by Angus Maddison[\[3\]](#), about 50% of the level of France, and a little less than one-third that of the UK. The analysis of Greece at that time was little better than that today:

“ ... Greece has been characterized throughout the 19th century by structurally weak finances, which has led it to default repeatedly on its public debt. According to the *Statesman's Yearbook*, in addition to significant military spending, Greece faces high expenditures on a disproportionately large number of officials for a small undeveloped state. Moreover, since part of Greece's debt is guaranteed by France and Great Britain, Greece could suspend debt service without the creditors having to suffer the consequences. The French and British budgets would be compelled to pay the coupons.

“By 1890, however, the situation had become critical. At the end of 1892, the Greek Government could continue paying interest only by resorting to new borrowing. In 1893, it obtained parliamentary approval for negotiating a rescheduling with its international creditors (British, German, French). Discussions were drawn out until 1898, with no real solution. It was Greece's defeat in the country's war with Turkey that served as a catalyst for resolving the public finances. The foreign powers intervened, including with support for raising the funds claimed by Turkey for the evacuation of Thessaly, and Greece's finances were put under supervision. A private company under international control was commissioned to collect taxes and to settle Greek spending based on a seniority rule designed to ensure the payment of a minimal interest. Fiscal surpluses were then allocated based on 60% to the creditors and 40% for the government.”[\[4\]](#)

Between 1890 and 1900, Greek per capita income rose by 15% and went on to increase by 18% over the next decade; in 1913, it came to 46% of French per capita income and 30% of the British level, which was then at the height of its prosperity. So this was a success.

Of course, the context was very different then, and the conditions that favoured the guardianship and the recovery are not the same as today: there was no real democratic government in Greece; there was a monetary regime (the gold standard) in which suspensions of convertibility – the equivalent of a “temporary Grexit” – were relatively common and clearly perceived by creditors as temporary; and in particular there was a context of strong economic growth throughout Western Europe – what the French called the “Belle Epoque” – thanks to the second industrial revolution. One cannot help thinking, nevertheless, that the conditions dictated to Greece back then inspired the current decisions of Europe’s officials[5].

Will the new plan finally yield the desired results? Perhaps, if other conditions are met: substantial relief of the Greek public debt, as the IMF is now demanding, and financial support for the modernization of the Greek economy. A Marshall Plan for Greece, a “green new deal”? All this can succeed only if the rest of the euro zone is also experiencing sustained growth.

[1] See Eloi Laurent and Jacques Le Cacheux, “Zone euro: *no future?*”, *Lettre de l’OFCE*, no. 320, 14 June 2010, <http://www.ofce.sciences-po.fr/pdf/lettres/320.pdf> .

[2] See in particular the work of the OFCE on the recessionary effects of austerity policies: <http://www.ofce.sciences-po.fr/pdf/revue/si2014/si2014.pdf> . Recall that the IMF itself has acknowledged that the

adjustment plans imposed on the European economies experiencing public debt crises were excessive and poorly designed, and especially those imposed on Greece. This *mea culpa* has obviously left Europe's main leaders unmoved, and more than ever inclined to persevere in their error: *Errare humanum est, perseverare diabolicum!*

[3] See the data on the Maddison Project site: <http://www.ggdcc.net/maddison/maddison-project/home.htm> .

[4] Excerpt from the article by Marc Flandreau and Jacques Le Cacheux, "La convergence est-elle nécessaire à la création d'une zone monétaire ? Réflexions sur l'étalon-or 1880-1914" [Is convergence necessary for the creation of a monetary zone? Reflections on the gold standard 1880-1914], *Revue de l'OFCE*, no. 58, July 1996, <http://www.ofce.sciences-po.fr/pdf/revue/1-58.pdf> .

[5] An additional clue: the German Finance Minister Wolfgang Schäuble insisted that Greece temporarily suspend its participation in the euro zone; in the 1890s, it had had to suspend the convertibility into gold of its currency and conducted several devaluations.

Is Greece in the process of divorce?

By [Jérôme Creel](#)

The ongoing Greek saga is looking more and more like an old American TV series. JR Ewing returns to the family table feeling upset with Sue Ellen for her failure to keep her promise to stop drinking. Given the way things are going, a

divorce seems inevitable, especially if Bobby sides with his brother and refuses to help his sister-in-law any longer.

Just like in Dallas, addiction to a potentially toxic substance, public debt, is plaguing Europe's states and institutions. Analyses on Greece focus mainly on debt-to-GDP ratios. On these terms, Greece's public debt-to-GDP ratio rose from 2011 to 2014: European public opinion can therefore legitimately question the ability of the Greek people (really the Greek state) to curb spending and raise taxes. A divorce is inevitable. But if we look at the amounts involved, the situation seems somewhat different.

Between 2011 and 2014, Greece's public debt decreased by 39 billion euros according to Eurostat. Seen in this light, the Greek state is making a real effort. But this obscures the aid of the creditors. The Greek state has in fact benefited from the restructuring of its debt, including a partial but important default on its public debt to its private creditors. According to [Jeromin Zettelmeyer, Christoph Trebesch and Mitu Gulati](#), the amount of debt for which the Greek state was forgiven was on the order of 100 billion euros. Without this aid, the amount of Greece's debt would have increased between 2011 and 2014 by 61 billion euros (100 billion minus the aforementioned 39 billion). This is not nothing for a country like Greece. However, note that Greek debt accounts for only 3.5% of the euro zone's total public debt.

Furthermore, how were the other EU countries faring at the same time? No better! The addiction to public debt, if we can indeed speak of addiction, is general. The public debt of the EU and the euro zone rose by 6 GDP points, or by 1400 billion and 800 billion respectively. By comparison, the increase in the Greek debt is a drop in the ocean. Germany's public debt rose by 68 billion euros, Italy's by 227 billion, Spain's and France's by 285 billion respectively, and the United Kingdom's by 277 billion pounds, or 470 billion euros, again according to Eurostat. Relative to their respective GDPs, Spain's debt

increased by almost 30 points, Italy's by more than 15 points, France's by 10 points, and the UK's by nearly 8 points. Only Germany has seen its debt ratio go down, thanks to stronger economic growth.

[Paul de Grauwe](#) recently insisted on the fact that Greece's debt is sustainable: given the various debt restructurings already undertaken, the public debt-to-GDP ratio of 180% would be roughly 90% in present value, i.e. after having accounted for future interest payments and scheduled repayments, some of which are in a very distant future^[1].

Economists, including in this case Paul de Grauwe, use the state's intertemporal budget constraint to understand the sustainability of public debt. Rather than using a retrospective approach, the public debt can be analysed from a prospective approach. If the following year's debt depends on the present debt, then by symmetry, the present debt depends on the following year's debt. But next year's debt will depend on the following year's debt, by iteration. Ultimately, the present debt depends on the debt of the following year and on and on until the end of time: it depends on future debts. But these future debts also depend on future public deficits. The intertemporal budget constraint thus expresses the fact that today's public debt is equal to the sequence of future public deficits and to the final debt (that at the end of time), all expressed in present values.

In contrast to businesses and households, the state is supposed to have an infinite time horizon, which makes it possible to reset the present value of the debt at the "end of time" to zero. We can then say that the public debt is sustainable if future governments provide adequate public surpluses to pay off that debt. This is possible after periods of high public deficits, provided that these periods are followed by others during which governments accumulate budget surpluses. Given the extension of the maturity of Greek debt and the low level of future interest payments, the budget

surplus required to repay the current debt is low. Paul de Grauwe concludes that Greece is subject to a liquidity crisis rather than a sovereign default crisis. So, again according to Paul de Grauwe, what is needed is to adjust the fiscal austerity plans and forthcoming reforms to the actual level of the public debt, which is substantially lower than the level being used as the basis for negotiations between the Greek state and the “institutions” (ECB, Commission, IMF). In other words, the “institutions” can loosen their grip.

The “Greek case” can thus be relativized and the divorce put off. Sue Ellen’s addiction is less exceptional than it seems at first glance.

[1] After 2015 and 2019, which will involve substantial repayments from the Greek state, the “difficult” years will then be situated beyond 2035 (see the amortization profile of Greece’s debt in [Antonin et al., 2015](#)).

Greece: an agreement, again and again

By [Céline Antonin](#), Raul Sampognaro, [Xavier Timbeau](#), [Sébastien Villemot](#)

... La même nuit que la nuit d'avant
night as the night before

[...The same

Les mêmes endroits deux fois trop grands

The same

places, twice too big
T'avances comme dans des couloirs You
walk through the corridors
Tu t'arranges pour éviter les miroirs You
try to avoid the mirrors
Mais ça continue encore et encore ... But it
just goes on and on...]

[Francis Cabrel, *Encore et encore*, 1985.](#)

Just hours before an exceptional EU summit on Greece, an agreement could be signed that would lead to a deal on the second bail-out package for Greece, releasing the final tranche of 7.2 billion euros. Greece could then meet its deadlines in late June with the IMF (1.6 billion euros) as well as those in July and August with the ECB (6.6 billion euros) and again with the IMF (0.45 billion euros). At the end of August, Greece's debt to the IMF could rise by almost 1.5 billion euros, as the IMF is contributing 3.5 billion euros to the 7.2 billion euro tranche.

Greece has to repay a total of 8.6 billion euros by September, and nearly 12 billion by the end of the year, which means funding needs that exceed the 7.2 billion euros covered by the negotiations with the Brussels Group (i.e. the ex-Troika). To deal with this, the Hellenic Financial Stability Fund (HFSF) could be used, to the tune of about 10 billion euros, but it will no longer be available for recapitalizing the banks.

If an agreement is reached, it will almost certainly be difficult to stick to it. First, Greece will have to face the current bank run (despite the apparent calm in front of the bank branches, more than 6 billion euros were withdrawn last week according to the *Financial Times*). Moreover, even if an agreement can put off for a time the scenario of a Greek exit from the euro zone, the prospect of exceptional taxes or a tax reform could deter the return of funds to the country's banks. Furthermore, the agreement is likely to include a primary

surplus of 1% of GDP by the end of 2015. But the [information on the execution of the state budget](#) up to May 2015 (published 18 June 2015) showed that revenue continues to be below the initial forecast (- 1 billion euros), reflecting the country's very poor economic situation since the start of 2015. It is true that the lower tax revenues were more than offset by lower spending (down almost 2 billion). But this is cash basis accounting. The [monthly bulletin](#) for April 2015, published on 8 June 2015, shows that the central government payment arrears have increased by 1.1 billion euros since the beginning of 2015. It seems impossible that, even with an excellent tourist season, the Greek government could make up this lag in six months and generate a primary surplus of 1.8 billion euros calculated on an accrual basis.

A new round of fiscal tightening would penalize activity that is already at half-mast, and it could be even more inefficient in that this would create strong incentives to underreport taxes in a context where access to liquidity will be particularly difficult. The Greek government could try to play with tax collection, but introducing a new austerity plan would be suicidal politically and economically. Discussion needs to get started on a third aid package, including in particular negotiations on the reduction of Greece's debt and with the counterparties to this relief.

Any agreement reached in the coming days risks being very fragile. Reviving some growth in Greece would require that financing for the economy is functioning once again, and that some confidence was restored. It would also require addressing Greece's problems in depth and finding an agreement that was sustainable over several years, with short-term steps that need to be adapted to the country's current situation. In our study, "[Greece on the tightrope](#) [in French, or the English-language post describing the study at <http://www.ofce.sciences-po.fr/blog/greece-tightrope/>]," we analysed the macroeconomic conditions for the sustainability

of the Greek debt. More than ever before, Greece is on the tightrope. And the euro zone with it.

Greece on a tightrope

By [Céline Antonin](#), Raul Sampognaro, [Xavier Timbeau](#) and [Sébastien Villemot](#)

[This text summarizes the special study, "Greece on a tightrope"](#)

Since early 2015, Greece's new government has been facing intense pressure. At the very time that it is negotiating to restructure its debt, it is also facing a series of repayment deadlines. On 12 May 2015, 750 million euros was paid to the IMF by drawing on the country's international reserves, a sign that liquidity constraints are becoming more and more pressing, as is evidenced by [the letter](#) sent by Alex Tsipras to Christine Lagarde a few days before the deadline. The respite will be short: in June, the country has to make another payment to the IMF for 1.5 billion euros. These first two deadlines are only a prelude to the "wall of debt" that the government must deal with in the summer when it faces repayments of 6.5 billion euros to the ECB.

Up to now, Greece has made its payments despite its difficulties and the suspension of the bailout program negotiated with the "ex-Troika". Thus, 7.2 billion euros in remaining disbursements have been blocked since February 2015; Greece has to come to an agreement with the former Troika before June 30 if it is to benefit from this financial windfall, otherwise it will fail to meet its payment deadlines

to the ECB and IMF and thus default.

Besides Greece's external repayments, the country must also meet its current expenses (civil servant salaries, retirement pensions). But the news on the fiscal front is not very encouraging (see [State Budget Execution Monthly Bulletin, March 2015](#)): for the first three months of the year, current revenue was nearly 600 million euros below projections. Only the use of its European holding funds, combined with an accounting reduction in expenditures (1.5 billion euros less than forecast) allowed the Greek government to generate a surplus of 1.7 billion euros and to meet its deadlines. So by using bookkeeping operations, the Greek government was able to transfer its debt either to public bodies or to its providers, thus confirming the tight liquidity constraints facing the State. Preliminary data at the end of April (to be taken with caution because they are neither definitive nor consolidated for all government departments) seem nevertheless to qualify this observation. [At end April](#), tax revenues had returned to their expected level; however, the government's ability to generate cash to avoid a payment default is due to its holding down public spending through the accounting operations described above. These accounting manipulations are simply emergency measures, and it is high time, six years after the onset of the Greek crisis, to put an end to this psychodrama and finally find a lasting solution to Greece's fiscal difficulties.

Our study, ["Greece on a tightrope"](#), considers what would be the best way to resolve the Greek debt crisis over the long term and the potential consequences of a Greek exit from the euro zone. We conclude that the most reasonable scenario would be to restructure the country's debt, with a significant reduction in its present value (cutting it to 100% of Greek GDP). This is the only way to significantly reduce the likelihood of a Grexit, and is in the interest not only of Greece but also of the euro zone as a whole. Furthermore, this

scenario would reduce the scale of the internal devaluation needed to stabilize Greece's external position.

If the Eurogroup were to refuse to restructure Greece's debt, a new assistance program would then be needed in order to deal with the current crisis of confidence and to ensure funding for the cash needs of the Greek State over the coming years. According to our calculations, this solution would require a third bailout plan of around 95 billion euros, and its success would depend on Greece being able to generate major primary budget surpluses (of around 4% to 5% of Greek GDP) over the coming decades. Historical experience shows that, due to political constraints, there is no guarantee of being able to run a surplus of this magnitude for such a long time, so this commitment is not very credible. A new assistance program would not therefore eliminate the risk that the Greek State would face yet another financial crisis in the coming years.

In other words, the full repayment of the Greek debt is based on the fiction of running a budget surplus for several decades. Accepting a Greek exit from the euro zone would imply a significant loss of claims that the world (mainly Europe) holds both on the Greek public sector (250 billion euros) and on the private sector (also on the order of 250 billion). To this easily quantifiable loss would be added the financial, economic, political and geopolitical impact of Greece's departure from the euro zone and possibly the European Union. This might look like an easy choice, since writing off 200 billion euros in loans to the Greek State would make it possible to end this psychodrama for once and for all. But the political situation is deadlocked, and it is difficult to give up 200 billion euros without very strong counterparties and without dealing with the issue of moral hazard, in particular the possibility that this could induce other euro zone countries to demand large-scale restructurings of their own public debt.

The Greek Sisyphus and its public debt: towards an end to the ordeal?

By [Céline Antonin](#)

After its failure to elect a new President by a qualified majority vote, the Greek Parliament was dissolved, with early elections to be held on 25 January 2015. The radical left party Syriza is leading the opinion polls on the election, ahead of the “New Democracy” party of the outgoing Prime Minister, Anthony Samaras. While Syriza’s economic programme has met with enthusiasm from the population, it has aroused concern from the Troika of creditors (IMF, ECB and EU), particularly on three issues: the country’s potential withdrawal from the euro zone, the implementation of a fiscal stimulus, and a partial sovereign default. This last topic will be the main issue after the elections.

The election’s real stakes: restructuring Greece’s public debt

Fears about Greece’s potential exit from the euro zone (the infamous “Grexit”) need to be nuanced. The situation is different from what it was at the time of the sovereign debt crisis, when bond rate differentials were fuelling worry about contagion and the breakup of the euro zone. Furthermore, Syriza is not in favour of leaving the euro, and no-one can force the country’s hand, given that there is no provision for this in any text. Finally, the consequences of such a decision on the other members could be severe, so that a Greek withdrawal from the euro zone would come only as a last resort.

Syriza is calling for an end to austerity and for a fiscal stimulus of 11 billion euros along with restoring the minimum wage to its previous level, better pensions, rehiring civil servants and increased public spending. Can a compromise be reached with the Troika? Nothing is less sure, and it is virtually certain that Syriza will have to revise its ambitions downwards. The Greek deficit has of course shrunk. The country ran a small primary surplus in 2014 and is expected to continue its fiscal consolidation policy in 2015-2016. But Greece must continue to borrow to finance the interest on the debt, to repay or renew the debt reaching maturity and to repay the loans from the IMF. To do this, Greece must rely largely on external aid. From the second half of 2015, the country will face a financing gap of 12.5 billion euros (19.6 billion euros if it does not get IMF assistance). Moreover, Greece's still fragile banks [\[1\]](#) are very dependent on access to the ECB's Emergency Liquidity Assistance Program (ELA), which allows them to obtain emergency liquidity from the Bank of Greece. If Greece rejects the reforms, a showdown with the Troika is likely. The ECB has already threatened to cut off the country's access to liquidity. In addition, the Troika is the main creditor of Greece, which however has a new bargaining point: to the extent that Greece borrows only what it needs to repay its debt, and not to fund its budget deficit, it could threaten its creditors with a unilateral default on payments, even if this is a dangerous game that could deprive it of access to market financing for many years to come.

It is precisely this issue of restructuring Greece's debt and a partial default that is being emphasized by Syriza and which will likely be one of the main post-election issues. Alexis Tsipras wants to cancel a portion of the public debt, to put a moratorium on interest payments, and to condition repayments on the country's economic performance. According to forecasts by the EU Commission and the IMF, Greece's public debt ratio is expected to fall from 175% of GDP in 2013 to 128% in 2020.

However, the assumptions underlying this scenario are not realistic, *i.e.* nominal growth of more than 3% in 2015, a primary surplus of 4.5% of GDP between 2016 and 2019, etc. Given the size of Greece's public debt in 2013 and its amortization profile (with reimbursements amounting to 13 billion euros in 2019 and up to 18 billion euros in 2039 [2]), a new restructuring seems inevitable.

A public debt that is essentially held by euro zone countries

Since the onset of the Greek crisis in autumn 2009, the composition of the country's public debt has changed substantially. While in 2010, the debt was held by financial investors, the picture in early 2015 is very different [3]. After two assistance plans (in 2010 and 2012) and a restructuring of the public debt held by the private sector in March 2012 (Private Sector Involvement Plan), 75% of the public debt now consists of loans (Table 1). Together the IMF, the ECB, the national central banks and the countries of the Eurozone hold 80% of Greece's public debt.

Table 1. Breakdown of Greece's public debt, by holder, september 2014

In billion euros		
	September 2014	As % of total debt
Total	321,7	100
Debt securities	79,8	25
Commercial paper (Short-term)	13,4	4
Treasury bills (Long-term)	66,4	21
<i>By ECB and national central banks</i>	25,0	8
<i>By private sector</i>	41,4	13
Loans	241,8	75
IMF	32,1	10
Greek central bank + domestic loans	4,4	1
Euro zone countries	194,8	61
<i>From 1st assistance plan (Greek Loan Facility)</i>	52,9	16
<i>From 2nd assistance plan (EFSF)</i>	141,9	44
Other loans and repos	10,5	3

Sources: Debt Management Agency, IMF, ECFIN, author's calculations.

Conversely, since the March 2012 restructuring plan, Europe's banks have sharply reduced their exposure to Greece's public debt (Table 2). Moreover, their capital levels have risen

since 2010, especially with the gradual implementation of the Basel 3 reform. The banks thus have a safety margin in the case of a partial default by Greece.

Table 2. Exposure of banks to Greek debt (public and total)

In billions of euros

	Total Greek debt (public + private)			Greek public debt		
	Q3 2009	Q1 2012	Q2 2014	Q4 2010	Q1 2012	Q2 2014
Total banks	430,5	105,6	73,8	62,9	9,0	3,5
European banks	389,2	99,1	47,8	60,2	8,3	2,2
<i>France</i>	112,4	54,7	3,0	20,3	2,5	0,1
<i>Germany</i>	61,8	8,3	18,9	20,0	1,0	0,2
<i>United Kingdom</i>	17,9	11,1	18,1	4,6	0,3	0,8
Non-European banks	NA	6,5	26,1	2,6	0,7	1,3
<i>United States</i>	27,8	5,1	24,6	2,0	0,6	1,3

Sources: BIS, ECB, author's calculations.

Since more than half of Greece's public debt is held by members of the euro zone, no renegotiations can take place without their involvement.

So what are the possibilities for restructuring the debt?

The European countries have already made several concessions to help Greece service its debt:

- The maturity of the loans has been increased and the interest rate on loans granted by the EFSF has been reduced. For the first assistance program (bilateral loans), the initial maturity was 2026 (with a grace period until 2019) and the interest rate was indexed to the 3-month Euribor plus a risk premium of 300 basis points. In 2012, this risk premium was cut to 50 basis points and the maturity was extended by 15 years to 2041;

- Any profits made by the ECB and the national central banks on the bonds they hold were returned to Greece;

- Interest payments on the EFSF loans were deferred by 10 years.

Solutions like some used in the past could be implemented. The

debt could be rescheduled. Indeed, the rate charged on the loans in the first assistance package (3-month Euribor + 50 basis points) is generally higher than the financing costs of the European countries, and could be lowered. And the term of the loans in the first and second assistance packages could be extended by another 10 years, until 2051. According to the Bruegel think-tank, these two measures combined [would reduce Greece's total repayments by 31.7 billion euros](#).

These measures nevertheless seem limited for resolving the issue of Greek debt: they only postpone the problem. Other measures are needed to relieve Greece of its public debt burden. As the euro zone countries are the main ones exposed to Greece's debt, they have an interest in finding a compromise: if there is a unilateral default, it is taxpayers throughout Europe who will wind up paying.

As for the IMF, there's no point waiting for debt forgiveness. The institution is indeed the senior creditor in case of a country's default, and lender of last resort. Since its founding, it has never cancelled a debt. It is therefore with the members of the euro zone, Greece's main creditors, that a partial default needs to be negotiated. On the one hand, Greece can threaten an uncoordinated unilateral default, causing losses for its creditors. But on the other, it has no interest in alienating euro zone members and the ECB, which have been its main supporters during the crisis. A sudden default would deprive it of access to market financing for many years; even if Greece has achieved a primary surplus, the situation is unstable and it still needs external financing, even if only to honour its repayments to the IMF. One solution would be for the euro zone countries to accept a discount on the face value of the government debt they hold, as was done with private investors in March 2012.

In conclusion, Greece is facing a series of challenges. In the short term, the priority is to find sources of financing to get through 2015. To do this, the country will have to deal

with the Troika, in particular the ECB, whose action will be crucial. The Bank has warned Greece that if negotiations fail, it could cut off the country's access to liquidity. Furthermore, on 22 January 2015, the ECB must reach its long-awaited decision on quantitative easing; the issue is whether the ECB will accept the redemption of Greek government bonds. In the longer term, the issue of restructuring the debt will inevitably arise, regardless of who wins the polls. However, the restructuring is likely to be easier with public creditors than with the private banks, if, that is, Greece has in turn won the trust of its European partners.

[1] See the [results of the stress tests published by the ECB on 26 October 2014](#).

[2] See the [Hellenic Republic Public Debt Bulletin, no. 75, September 2014, Table 6](#).

[3] For a comparison with the situation in June 2012, see [Céline Antonin, "Retour à la drachme: un drame insurmontable?", \[Return to the drachma: an insurmountable drama?\], Note de l'OFCE no. 20, June 2012](#).

**Would returning to the
drachma be an overwhelming**

tragedy?

by [Céline Antonin](#)

Following the vote in the Greek parliamentary elections on 17 June 2012, the spectre of the country leaving the euro zone has been brushed aside, at least for a while. However, the idea is not completely buried, and it is still being evoked in Greece and by various political forces around the euro zone. This continues to pose the question of the cost of a total default by Greece for its creditors, foremost among them France. The analysis published in the latest [OFCE Note \(No. 20, 19 June 2012\)](#) shows that, despite the magnitude of the potential losses, several factors could mitigate the consequences for the euro zone countries of a default by the Greek state.

The withdrawal of Greece from the euro zone, which is not covered in the Treaties, would cause a major legal headache, as it would involve managing the country's removal from the Eurosystem [\[1\]](#). In case of a return to a new drachma, which would depreciate sharply against the euro [\[2\]](#), the burden of the public debt still outstanding would be greatly increased, as would private debt, which would still be denominated in euros. Many financial and nonfinancial firms would go to the wall. Legally, Greece could not unilaterally convert its debt into new drachmas. Since the country's public debt is not very sustainable and it is denominated almost exclusively in euros, Greece would certainly default (at least partially) on its public debt, including its foreign debt [\[3\]](#). Given that the main holders of Greek debt are euro zone countries, what would be the magnitude of the shock in the case of a Greek default?

While more detail about this can be found in the [OFCE Note \(No. 20, 19 June 2012\)](#), the focus here is on providing a breakdown of the exposure of the euro zone countries (in particular France) to Greek public and private debt. Exposure

to Greek public debt involves three main channels:

- 1) The two aid packages of May 2010 and March 2012;
- 2) Participation in the Eurosystem;
- 3) The exposure of the commercial banks.

An analysis of these channels shows that the main source of exposure of the euro zone countries to losses is the two support plans. The maximum exposure of the euro zone countries through this channel is 160 billion euros (46 billion euros for Germany and 35 billion euros for France). Euro zone countries are also exposed to Greek government debt through their participation in the Eurosystem: indeed, the Eurosystem's balance sheet swelled dramatically to support the vulnerable countries in the euro zone, notably Greece. However, given the Eurosystem's capacity to absorb losses (over 3,000 billion euros), we believe that the potential losses for the countries of the euro zone are not likely to be realized if Greece were to default unilaterally on its public debt. Finally, the euro zone's banking system is exposed to 4.5 billion euros in Greek sovereign risk and up to 45 billion euros from the Greek private sector [\[4\]](#).

The cumulative exposure of the euro zone to Greek debt, excluding the Eurosystem, amounts to a maximum of 199 billion euros (2.3% of the euro zone's GDP, cf. Table), including 52 billion euros for Germany (2% of GDP) and 65 billion euros for France (3.3% of GDP). If we include exposure to the Eurosystem, the cumulative exposure of the euro zone to Greek debt comes to 342 billion euros (4% of euro zone GDP), including 92 billion for Germany (3.6% of GDP) and 95 billion (4.8%) for France. France is the most heavily exposed euro zone country, due to the exposure of its banks to Greek private debt through subsidiaries in Greece. If we consider only Greek government debt, however, it is Germany that appears to be the country most exposed to a Greek default.

Summary of the exposure of different countries to Greek debt

In billion euros

	1) Support plans		2) Eurosystem		3) Commercial banks		Total	Total excl. Eurosystem
	1st plan	2e plan	SMP	TARGET2	Public debt	Private debt		
Germany	14.7	31.4	12.5	27.3	1.3	5.1	92.3	52.5
Austria	1.5	3.2	1.3	2.8	NC*	NC*	8.8	4.7
Belgium	1.9	4.0	1.6	3.5	0.1	0.0	11.1	6.0
Cyprus	0.1	0.2	0.1	0.2	NC	NC	0.6	0.3
Spain	6.5	13,8	5.5	12.0	0.1	0.5	38.4	20.9
Estonia	0.0	0.3	0.1	0.3	NC	NC	0.7	0.3
Finland	1.0	2.1	0.8	1.8	NC	NC	5.7	3.1
France	11.1	23.6	9.4	20.5	1.3	29.1	95.0	65.1
Ireland	0.9	0.0	0.7	1.6	NC	NC	3.2	0.9
Italy	9.7	20.7	8.3	18.0	0.2	1.1	58.0	31.7
Luxembourg	0.1	0.3	0.1	0.3	NC	NC	0.8	0.4
Malta	0.1	0.1	0.0	0.1	NC	NC	0.3	0.2
Netherlands	3.1	6.6	2.6	5.7	NC	NC	18.0	9,7
Portugal	1.4	0.0	1.2	2.5	NC	NC	5.1	1.4
Slovakia	0.5	1.1	0.5	1.0	NC	NC	3.1	1.6
Slovenia	0.3	0.6	0.2	0.5	NC	NC	1,6	0.9
Total EZ	52.9	107.7	45.0	98.0	2.9	35.8	342.3	199.3

[NC => NA]

NA: Not available, as the BIS gives only the exposures of Germany, Belgium, France, Italy and Spain. The totals are thus calculated without taking into account the second tier banks, except for Germany, Belgium, France, Italy and Spain and the Euro Zone Total.

Sources: "The Economic Adjustment Programme for Greece – First review summer 2010", ECB, EFSF, BIS *Quarterly Review* (June 2012), Bank of Greece, author's calculations.

These amounts constitute an upper bound: they represent the maximum potential losses in the worst case scenario, namely the complete default of Greece on its public and private debt. Furthermore, it is impossible to predict with certainty all the chain reactions associated with a Greek exit from the euro zone: everything depends on whether the exit is coordinated or not, whether a debt rescheduling plan is implemented, the magnitude of the depreciation of the drachma against the euro, and so on.

The "reassuring" element in this analysis is the magnitude of the potential losses (Table): the shock of a Greek exit would be absorbable, even if it would generate a shock on each member country and widen its deficit, undermining the members'

efforts to restore balanced budgets. However, this analysis also points out how intertwined the economies of the euro zone are, even if only through the monetary union, not to mention the mechanisms of the solidarity budget. A Greek exit from the euro zone could therefore open a Pandora's Box – and if other countries were tempted to imitate the Greek example, it is the euro zone as a whole that could go under.

[1] The Eurosystem is the European institution that groups the European Central Bank and the central banks of the countries in the euro zone.

[2] On this point, see [A. Delatte, What risks face the Greeks if they return to the drachma?, OFCE blog, 11 June 2012.](#)

[3] The foreign debt designates all the [debt](#) that is owed by all a country's public and private debtors to foreign lenders.

[4] This refers to a textbook case, where the drachma's depreciation would be so great that the currency would no longer be worth anything.

What risks face the Greeks if they return to the drachma?

By Anne-Laure Delatte (associate researcher of the Forecasting Department)

The debate about whether the Greeks will stay in the euro zone is intensifying. Christine Lagarde, head of the IMF, has lambasted the Greek government. The German Finance Minister, Wolfgang Schäuble, believes that the euro zone can now deal

with a Greek exit, and that the Greeks no longer have a choice. What would be the risks for the Greeks of a return to the drachma? Would this inevitably plunge the country into chaos? Argentina's experience with returning to the peso in 2002 provides some insight.

In Argentina, the peso/dollar parity was set at one peso per dollar by law in 1991. The dollar could be used freely in domestic exchange. The result was that dollars began to be used for everyday transactions, including the denomination of financial assets. In practice, in the 1990s, on average more than 70% of bank deposits and two-thirds of private sector lending were denominated in dollars. These figures peaked in the last quarter of 2001, just before the system was abandoned, when 75% of private deposits and 80% of all loans were denominated in dollars.

The average Argentinean's strong commitment to the dollar was propped up during the 1990s by the promises of all the presidential candidates to continue the system. Moreover, the abandon of the dollar in January 2002 took place in an especially dramatic context, after five presidents in a row had resigned and amidst a period of popular revolt that was felt beyond the country's borders. The peso was devalued by more than 70% against the dollar, and a massive amount of domestic savings fled the country into foreign banks. While the barter economy remained marginal, the provinces and the central State began to issue their own currency to pay civil servants and government suppliers. According to the country's central bank, in 2002 these parallel currencies accounted for an average of 30% of all bills in circulation.

The context in which Argentina returned to its national currency in 2002 therefore bears some resemblance to the current situation in Greece: widespread political confusion, a serious recession, and above all a national currency with no credibility.

Against all expectations, despite the serious crisis, the social and political disorder and monetary disintegration, which led to predictions that it would take 10 years for Argentina's GDP to return to its pre-crisis level, an economic recovery began to take hold by the second half of 2002. With nominal annual growth of 9% and controlled inflation, Argentina ultimately restored its pre-crisis level by 2004. How did the country manage to leave the dollar with such results?

The default on 90 billion dollars in public debt, followed by a fiscal pact between the provinces and the central State, along with budget controls, led to a recovery in public finances. But the unique feature of Argentina's experience was the monetary reform carried out in January 2002.

The devaluation of the peso rocked the country's financial equilibrium. With 80% of lending contracted in dollars, most consumers and businesses saw the value of their debt virtually quadrupled! After the devaluation, in 2002 the amount of private debt came to 120 billion dollars, whereas the country's GDP was only 106 billion dollars. To avoid bankrupting the entire private sector, the national authorities came up with a rule for the reimbursement of debt.

The logic was that, to avoid bankruptcy, business revenue should be denominated in the same currency as the debt. Hence on 4 February 2002, the government issued decree 214/02, which imposed the "peso-fication" of the entire economy: all prices and all contracts in the real and financial sectors, all salaries and debts, were converted into pesos at a rate of one peso per dollar, whereas the market rate was almost four pesos per dollar. Contracts in the financial sector were also converted: deposits that did not exceed thirty-thousand dollars were converted at a rate of 1.4 pesos for 1 dollar [1]. How could such a rule be imposed in light of the disastrous wealth effects on creditors?

The conversion at a rate of one for one (or 1.4 for 1) imposed by the authorities resulted in a settlement of conflicts over debt in favour of debtors, and to the detriment of national and foreign creditors. However, the main debtor in the economy is the productive sector, that is, businesses. By offering them a protected way out of the crisis, the new monetary rules neutralized balance sheet effects and permitted the devaluation to have the expansionary impact one would conventionally expect. In effect, trade began to run a surplus and the country's economy was able to benefit from the booming global economy in the early 2000s. Exports rose from 10% to 25% of GDP, and by 2004 GDP was 2% higher than the average for the 1990s. In short, the government's monetary rule led to a return to growth and employment, which explains why it won the support of the majority of the population.

In actuality, the Argentines, like the Greeks today, were caught in a trap: with contracts denominated in dollars, the return to the peso, following the devaluation, was leading towards a generalized bankruptcy of the private sector. If the Greeks were to leave the euro right now, the entire country would go bankrupt. If the drachma were devalued by 50%, as certain forecasts currently predict, private debt would double. With revenue denominated in drachmas and debt in euros, businesses and consumers would be incapable of repaying their lenders. This was the same kind of trap that paralyzed Argentina's leaders before 2002.

Argentina's experience thus provides several lessons. First, the main risk for Greece of leaving the euro is that the entire private sector would go bankrupt. Given that the public sector has already restructured 50% of its debt, all else being equal, a return to the drachma would lead to financial conflicts between private creditors and debtors that would paralyze the entire system of payments. Secondly, the State has to play a key role as arbitrator in order to resolve the crisis. In conditions like these, the nature of the rules

adopted is not neutral. A number of solutions exist, and these reflect different policy orientations and have different economic consequences. In Argentina, the decision to favour national debtors ran counter to the interests of the holders of capital and foreign investors. Furthermore, contrary to the assertions of Wolfgang Schäuble, the Greek government does have choices. This is the third lesson. The resolution of the Greek crisis is not simply an economic matter, and the options being offered to the Greek people involve political choices. The choice made will have a more favourable result for some economic groups (such as European creditors, Greek employees, holders of capital, etc.).

Depending on the nature of the political order, the State could seek to maintain the existing balance of forces, or, on the contrary, disrupt them. A reform could lead to a rupture, and provide an opportunity to establish a new balance of forces. The option pursued up to now has consisted of spreading the cost of resolving the Greek crisis over creditors, on the one hand, by restructuring the public debt, and over debtors, on the other hand, by means of structural efforts (cuts in wages \and social transfers), along with an increase in the tax burden. In contrast, a withdrawal from the euro zone accompanied by an Argentina-style restructuring of private and public debt would place the burden of the crisis resolution more on the shoulders of creditors, mainly the rest of Europe. This explains the renewed pressure seen in the discourse of some European creditor countries with respect to Greece, as well as the confusion that typifies the debate in Europe today: in the absence of an optimal solution with a neutral impact, each party is defending its own interests – at the risk of destroying the euro.

[1] Deposits of greater amounts could be either converted under the same conditions or transformed into dollar-denominated Treasury bonds.

