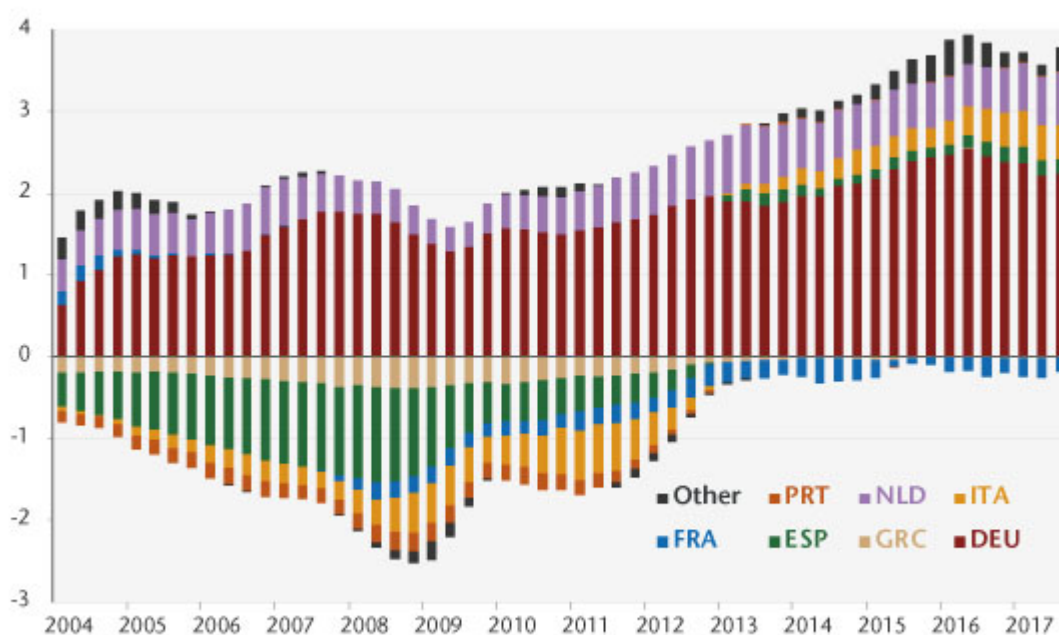


Major adjustments are awaiting the euro zone

By [Bruno Ducoudré](#), [Xavier Timbeau](#) and [Sébastien Villemot](#)

Current account imbalances are at the heart of the process that led to the crisis in the euro zone starting in 2009. The initial years of the euro, up to the crisis of 2007-2008, were a period that saw widening imbalances between the countries of the so-called North (or the core) and those of the South (or the periphery) of Europe, as can be seen in Figure 1.

Figure 1. Current account balances (moving average over four quarters)
in % of GDP of the euro zone



Source: Eurostat.

The trend towards diverging current account balances slowed sharply after 2009, and external deficits disappeared in almost all the euro zone countries. Despite this, there is still a significant gap between the northern and southern countries, so there cannot yet be any talk about reconvergence. Moreover, the fact that the deficits have fallen (Italian and Spanish) but not the surpluses (German and Dutch) has radically changed the ratio of the euro zone to the rest of the world: while the

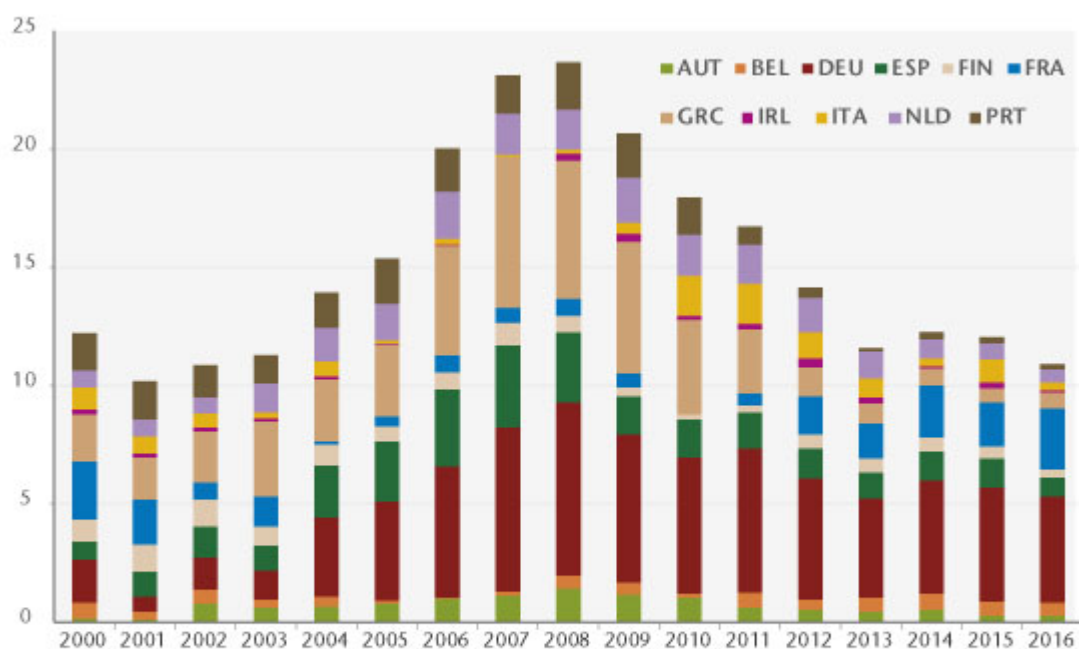
zone's current account was close to balanced between 2001 and 2008, a significant surplus has formed since 2010, reaching 3.3% of GDP in 2016. In other words, the imbalance that was internal to the euro zone has shifted into an external imbalance between the euro zone and the rest of the world, in particular the United States and the United Kingdom. This imbalance is feeding Donald Trump's protectionism and putting pressure on exchange rates. While the nominal exchange rate internal to the euro zone is not an adjustment variable, the exchange rate between the euro and the dollar can adjust.

It seems unlikely that the euro zone can maintain a surplus like this over the long run. Admittedly, the pressures for the appreciation of the euro are now being contained by the [particularly accommodative monetary policy of the European Central Bank](#) (ECB), but when the time comes for the normalization of monetary policies, it is likely that the euro will appreciate significantly. In addition to having a deflationary impact, this could rekindle the crisis in the zone by once again deepening the Southern countries' external deficits due to their loss in competitiveness. This will in turn give new grounds for leaving the euro zone.

[In a recent study \[1\]](#), we seek to quantify the adjustments that remain to be made in order to resolve these various current account imbalances, both within the euro zone and vis-à-vis the rest of the world. To do this, we estimate equilibrium real exchange rates at two levels. First, from the point of view of the euro zone as a whole, with the idea that the adjustment of the real exchange rate will pass through an adjustment of the nominal exchange rate, notably the euro vis-à-vis the dollar: we estimate the long-term target of euro / dollar parity at USD 1.35 per euro. Next, we calculate equilibrium real exchange rates within the euro zone, because while the nominal exchange rate between the member countries does not change because of the monetary union, relative price levels allow adjustments in the real exchange rate. Our

estimates indicate that substantial misalignments remain (see Figure 2), with the average (in absolute terms) misalignment relative to the level of the euro being 11% in 2016. The relative nominal differential between Germany and France comes to 25%.

Figure 2. Indicator of nominal intra-euro zone adjustments with countries' contributions



Note: Figure 2 relates the average (weighted by GDP) of the absolute value of the nominal adjustments. The contribution of each country to this average is shown. The nominal disadjustments correspond to the changes in price of the added value that must be made simultaneously so that all the countries hit their current account target. This figure can be interpreted as a summary measure of the level of the internal disadjustments of the euro zone, with the contribution of each country.

Source: OFCE calculations.

In the current situation, claims by some euro zone countries are not accumulating on others in the zone, but there is accumulation by some euro zone countries on other countries around the world. This time the exchange rate (actual, weighted by accumulated gross assets) can serve as an adjustment variable. The appreciation of the euro would therefore reduce the euro zone's current account surplus and depreciate the value of assets, which are probably accumulated in foreign currency. France however now appears as the last country in the euro zone running a significant deficit. Relative to the zone's other countries, it is France that is contributing most (negatively) to the imbalances with Germany (positively). If the euro appreciates, it is likely that France's situation

would further deteriorate and that we would see a situation where the net internal position accumulates, but this time between France (on the debtor side) and Germany (creditor). This would not be comparable to the situation prior to 2012, since France is a bigger country than Greece or Portugal, and therefore the question of sustainability would be posed in very different terms. On the other hand, reabsorbing this imbalance by an adjustment of prices would require an order of magnitude such that, given the relative price differentials that would likely be needed between France and Germany, it would take several decades to achieve. It is also striking that, all things considered, since 2012, when France undertook a costly reduction in wages through the CICE tax credit and the Responsibility Pact, and Germany introduced a minimum wage and has been experiencing more wage growth in a labour market that is close to full employment, the relative imbalance between France and Germany, expressed in the adjustment of relative prices, has not budged.

Three consequences can be drawn from this analysis:

1. The disequilibrium that has set in today will be difficult to reverse, and any move to speed this up is welcome. Ongoing moderation in rises in nominal wages in France, stimulating the growth of nominal wages in Germany, restoring the share of German added value going to wages, and continuing to boost the minimum wage are all paths that have been mentioned in the various iAGS reports. A reverse social VAT, or at least a reduction in VAT in Germany, would also be a way to reduce Germany's national savings and, together with an increase in German social security contributions, would boost the competitiveness of other countries in the euro zone;
2. The pre-crisis internal imbalance has become an external imbalance in the euro zone, which is leading to pressure for a real appreciation of the euro. The order of

magnitude is significant: it will weigh on the competitiveness of the different countries in the euro zone and will lead to the problems familiar prior to 2012 resurfacing in a different form;

3. The appreciation of the euro caused by the current account surpluses in certain euro zone countries is generating an externality for the euro zone countries. Because their current accounts respond differently to a change in relative prices, Italy and Spain will see their current account balance react the most, while Germany's will react the least. In other words, the appreciation of the euro, relatively, will hit the current accounts of Italy and Spain harder than Germany's and will lead to a situation of internal imbalance much like what existed prior to 2012. This externality together with the reduced sensitivity of Germany's current account to relative prices argues for a reduction in imbalances by boosting Germany's internal demand, i.e. by a reduction in its national savings. The tools to do this could include boosting public investment, lowering direct personal taxes, or raising the minimum wage more quickly relative to productivity and inflation.

[\[1\]](#) Sébastien Villemot, Bruno Ducoudré, Xavier Timbeau: "Taux de change d'équilibre et ampleur des désajustements internes à la zone euro" [Equilibrium exchange rate and scale of internal misalignments in the euro zone], *Revue de l'OFCE*, 156 (2018).

Balance sheets effects of a

euro break-up

By Cédric Durand (Université Paris 13), and [Sébastien Villemot](#)

When it was introduced at the turn of the millennium, the euro was widely perceived as a major achievement for Europe. The apparent economic successes, coupled with cross-country convergence of several economic indicators, fueled this sentiment of success. A couple of years later, the picture looks dramatically different. The world financial crisis has revealed imbalances that have led to the sovereign debt crisis and brought the euro area on the verge of dislocation. The austerity policies that became the norm on the continent in 2011 fueled a protracted stagnation[\[1\]](#), with growth rates that look bleak in comparison to the United States and the United Kingdom.

This economic underperformance has fueled popular resentment against the euro, now seen by a growing number of European people as the problem rather than the solution. The financial community itself seems to be prepared to the possibility of an exit or a dissolution of the single currency by cutting back on cross-border positions. Greece was on the verge to leave in 2015. And the intellectual mood is also shifting: leading thinkers, such as US economist Joseph Stiglitz, or German Sociologist Wolfgang Streeck are among the most visible figures of a wider change of attitude.

A country exiting the euro, or even the dissolution of the single currency, has therefore become a concrete possibility. Such an event would obviously have a major impact in several dimensions. On the economic side, the most obvious consequence would be the changing conditions in products markets due to the new exchange rates; uncertainty would prevail in the short run, but in the longer run the possibility of adjusting nominal parities would help with the unfolding of current account imbalances.

There however exists another impact, less discussed, but potentially more disruptive: the changes in the balance sheet position of economic actors, resulting from the currency redenomination process. This process could introduce significant currency mismatches between the asset and liability sides. Assessing the unfolding of these balance sheet effects is crucial, because they could affect financial relations, investment and trade, have unexpected redistributive effects and, if not adequately managed, lead to productive disruption.

The concrete questions that we ask are the following. If a country exits the euro and depreciates its new national currency, what will be the consequences for domestic economic agents which have liabilities denominated in euros: will they be able to repay in the new national currency? and if not, will they be able to avoid bankruptcy despite the increase of their debt burden? Conversely, what are the consequences for exiting countries whose new currency appreciates and who have accumulated foreign assets?

In a [recent research paper](#), we propose such an assessment of the redenomination risk in the euro area, by country and by main institutional sector, for two scenarios: a single country exit and a complete break-up.

Our analysis relies on the concept of “relevant” liabilities and assets: those are the balance sheet items that will not be redenominated into the new currency after the exit, because of legal or economic reasons. In practice, the most important factor for determining which debt or assets are “relevant” is their governing law: if a financial contract is governed by domestic law, the chances are high that the government of the exiting country will be able to redenominate it into the new currency, by simply passing a law in parliament. Conversely, contracts under foreign law (typically English or New York law) will remain in euros—or be redenominated in some other foreign currency if the euro disappears. In the first case,

the lender bears the economic loss; in the second case, the risk is borne by the borrower whose debt burden is increased, unless she decides to default and therefore to impose losses on the lender.

Focusing on the liability side, Table 1 presents our estimates for the relevant debt, by country and institutional sector. It therefore gives an estimate of the exposure of the various sectors and countries to a euro-exit followed by a depreciation. Since the first months after a euro exit will be the most critical, potentially with an exchange rate overshooting, the short-term component of the relevant debt is also reported.

Table 1. Relevant debt by sector (% of GDP, Q3 2015)

In %

	Greece	Italy	Portugal	Spain	Ireland	France
General government	142	8	57	12	35	2
<i>incl. short term</i>	3	1	1	0	2	0
Financial corporations	42	30	18	43	395	42
<i>incl. short term</i>	29	4	2	8	98	8
Non-financial corps. + households	13	18	20	15	312	33
<i>incl. short term</i>	5	8	8	4	53	17

	Germany	Netherlands	Austria	Luxembourg	Belgium	Finland
General government	6	5	35	7	10	17
<i>incl. short term</i>	2	2	4	0	2	6
Financial corporations	28	225	35	876	22	59
<i>incl. short term</i>	9	36	8	135	1	17
Non-financial corps. + households	20	66	23	910	23	20
<i>incl. short term</i>	5	18	6	385	13	4

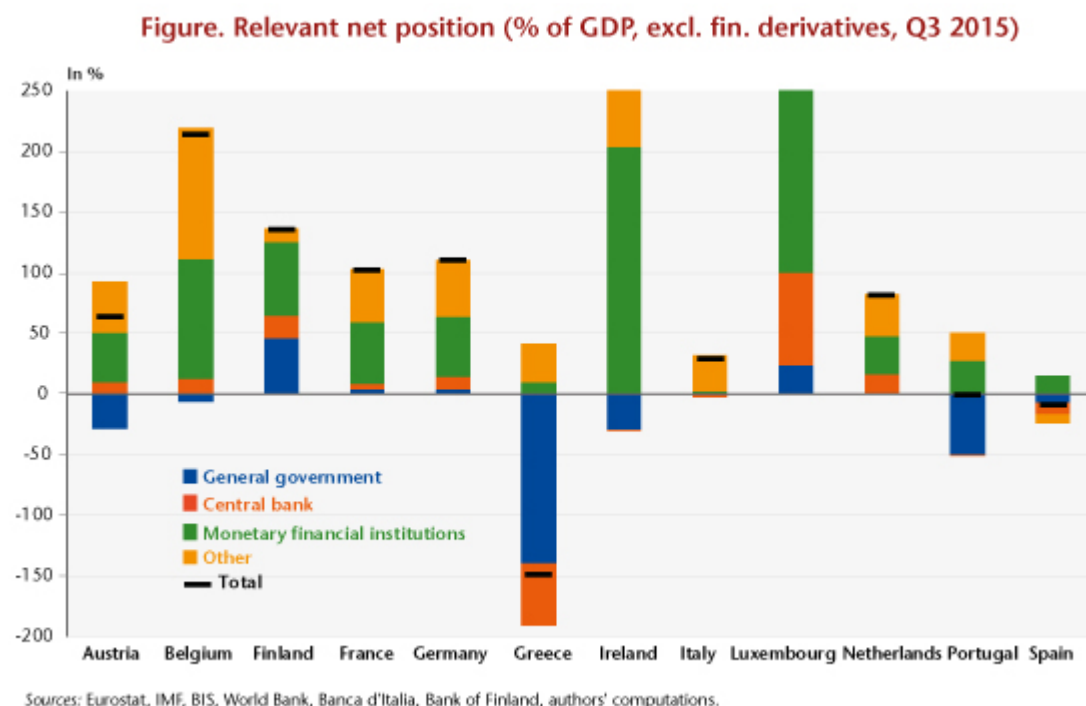
Sources : BIS, World Bank QEDS, authors' computations.

On the side of public debt, the countries most at risk are Greece and Portugal, since they have large external loans that will have to be reimbursed in euros. Conversely, France or Italy are quite safe on their public debt, because almost all of it is under domestic law and can therefore be easily redenominated into Francs or Lira. The financial sector is more exposed, especially in countries acting as financial intermediaries like Luxembourg, the Netherlands or Ireland. The exposure of the non-financial private sector looks much more limited (and due to data limitations, the figures are overestimated in countries with a highly developed non-banking

financial system).

However, relevant liabilities are not the whole story. Relevant assets also matter: for countries which are expected to depreciate (typically southern countries including France), those help mitigating the debt problem, since assets in foreign currency will become more valuable in the domestic currency; conversely, in the case of a currency appreciation (typically northern countries), it is from the asset side that difficulties can arise.

The figure shows our estimates for relevant net positions, *i.e.* for the difference between relevant liabilities and assets. A positive number means that a depreciation will improve the balance sheet, while an appreciation will deteriorate it.



The striking fact is that, for most countries and sectors, the relevant net position is positive. This means that northern countries can make a significant loss on their foreign assets if they leave. Conversely, for southern countries and France, there is no aggregate balance sheet risk for the private sector (except for Spain), and even no risk for the public

sector in some cases. This does not mean that there is no problem because, at the micro level, the holders of the relevant assets may not be the same as those of the relevant liabilities, but at least there is room for maneuver.

In order to give a broader picture that takes into account the fact that assets can mitigate liabilities problem—but only to some extent—and that short-term debt is the most critical issue, we have constructed a composite risk index that synthesizes all these dimensions, as shown in Table 2. In particular, this indicator was constructed using estimates for the expected exchange rate movements after the exit from the euro.

Table 2. Composite risk index (Q3 2015)

	General government + central bank	Financial corporations	Non-financial corps. + households
Austria	0	1	1
Belgium	1	0	1
Finland	0	2	1
France	0	0	1
Germany	0	1	1
Greece	3	3	1
Ireland	1	3	2
Italy	0	0	0
Luxembourg	1	3	3
Netherlands	0	0	1
Portugal	2	1	1
Spain	1	1	1

Légend:

0 = No risk	2 = Medium risk
1 = Low risk	3 = High risk

Source: authors' computations.

Though this exercise necessarily entails some arbitrary thresholds, it helps identifying a few specific vulnerabilities: the public debts of Greece and Portugal, for which a substantial restructuring or even a default would be the likely outcome; the financial sectors of Greece, Ireland, Luxembourg, and potentially Finland, which would have to undergo a deep restructuring; and potentially the non-financial sector of Ireland and Luxembourg, though that latter

result may be an artifact caused by our data limitations.

The broad conclusion that can be drawn from our analysis is that, even though the problem of balance sheets is real and should be taken seriously, its overall order of magnitude is not as large as some claim. In particular, in the non-financial private sector, the issue should be manageable provided that proper policy measures are implemented, and disruptions should in that case be limited.

Assessing the costs of a euro exit obviously matters for properly dealing *ex post* with the event, if it were to materialize because of some unexpected political or economic shock. But this assessment is also interesting from an *ex ante* perspective, especially for a country which is considering whether to leave or to stay. In this respect, our analysis leads to a somewhat unexpected conclusion: the costs are probably not so high for some deficit countries (Italy, Spain), while they are higher than usually thought for surplus countries who could suffer capital losses through depreciations or defaults. The awareness of this fact should give a stronger bargaining power to southern countries in their negotiations with northern countries concerning the future of the Eurozone.

[1] See the [independent Annual Growth Survey \(iAGS\) reports](#).

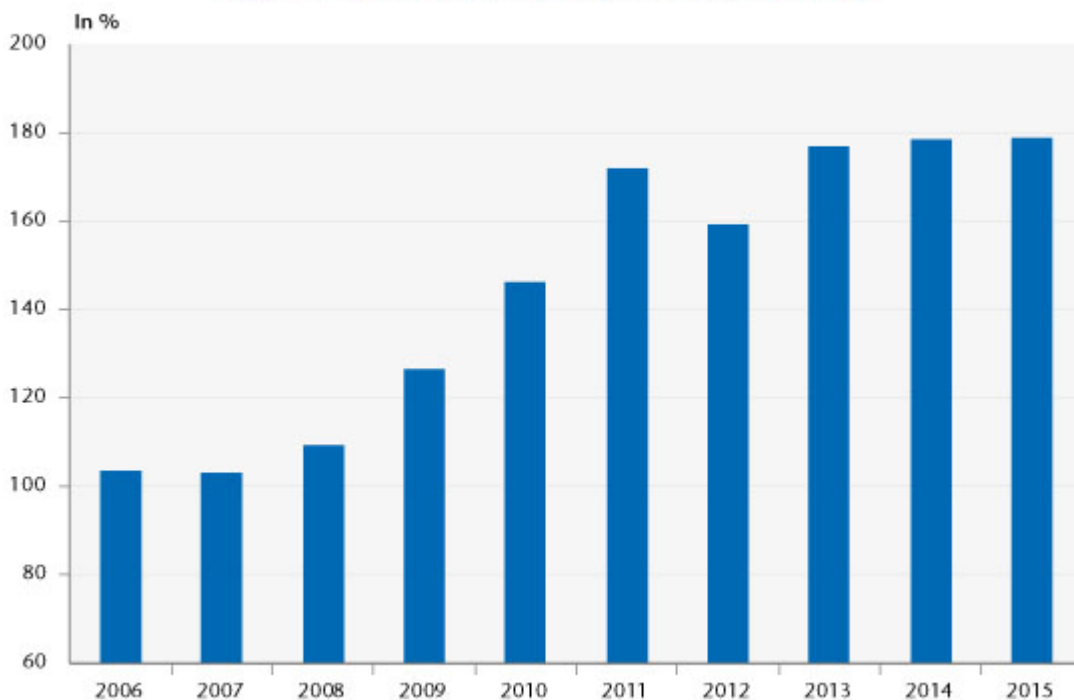
Why can't Greece get out of

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.

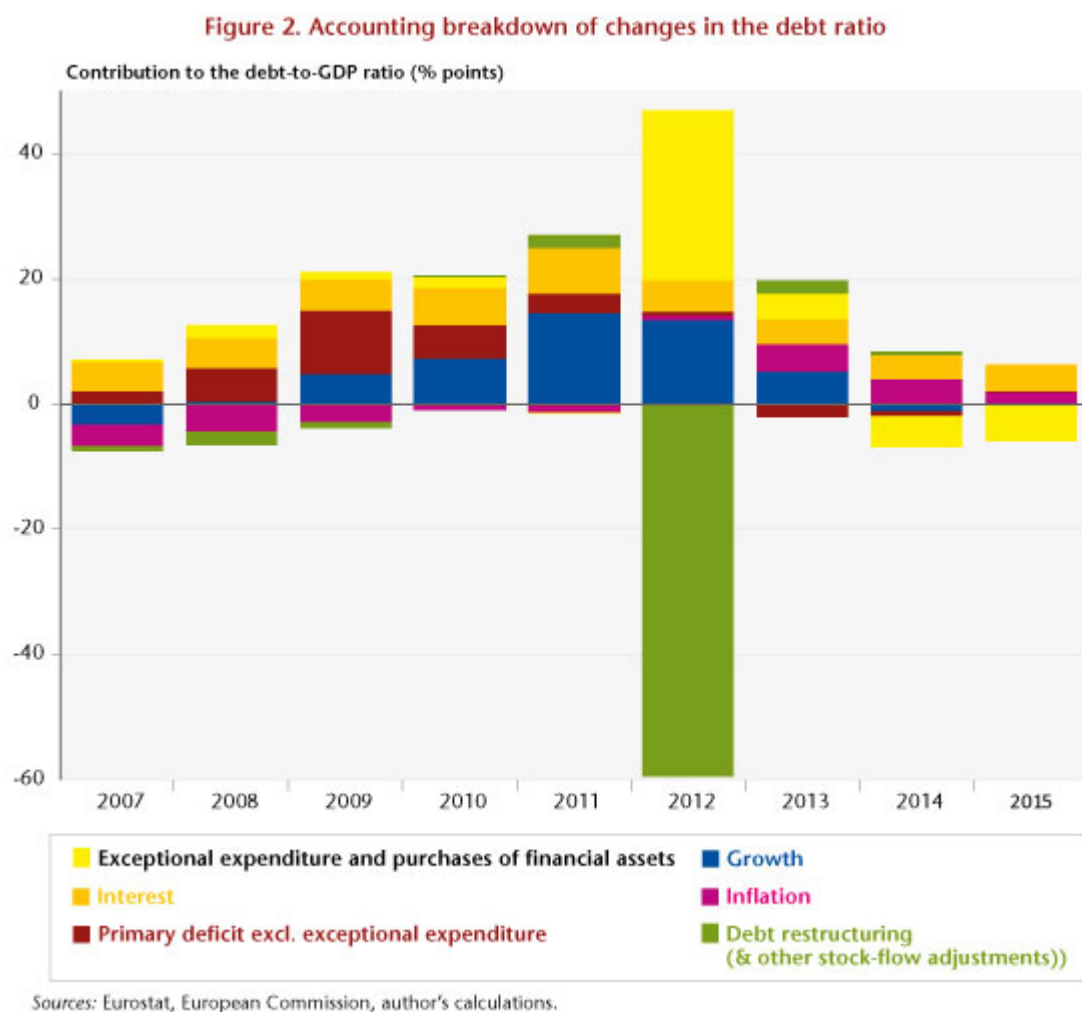
Figure 1. Greece's public debt as % of GDP, 2006-2015



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.



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: an agreement, again and again

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

<i>... La même nuit que la nuit d'avant</i>	[...The same
night as the night before	
<i>Les mêmes endroits deux fois trop grands</i>	The same
places, twice too big	
<i>T'avances comme dans des couloirs</i>	You
walk through the corridors	
<i>Tu t'arranges pour éviter les miroirs</i>	You
try to avoid the mirrors	
<i>Mais ça continue encore et encore ...</i>	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](http://www.ofce.sciences-po.fr/blog/greece-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.

Investment behaviour during the crisis: a comparative analysis of the main advanced economies

By [Bruno Ducoudré](#), [Mathieu Plane](#) and [Sébastien Villemot](#)

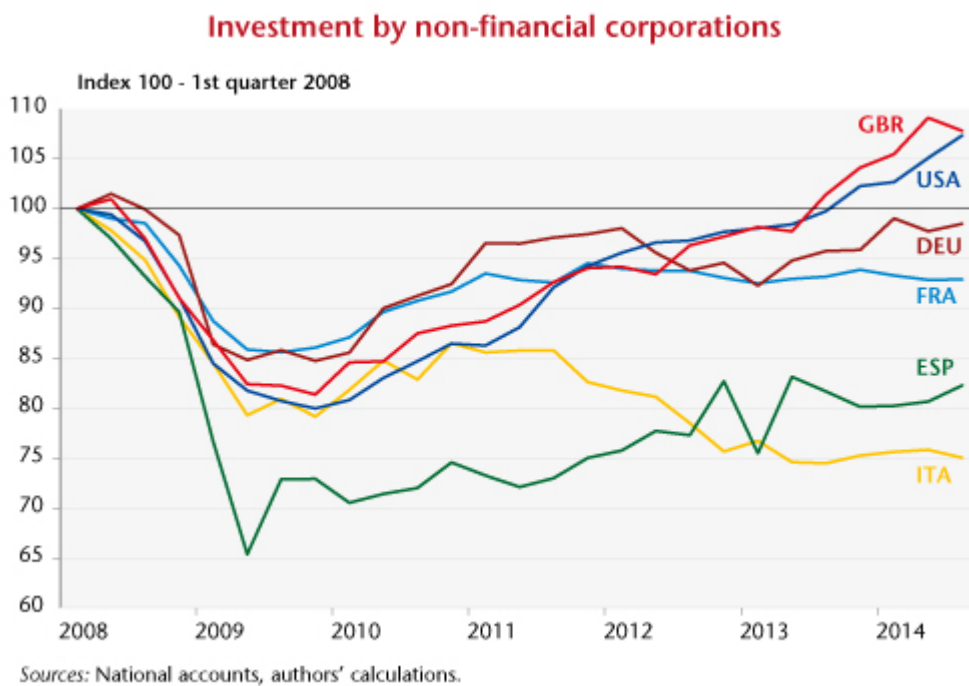
This text draws on the special study, [Équations d'investissement : une comparaison internationale dans la crise](#) [Investment equations : an international comparison during the crisis], which accompanies the 2015-2016 Forecast for the euro zone and the rest of the world.

The collapse in growth following the subprime crisis in late 2008 resulted in a decline in corporate investment, the largest since World War II in the advanced economies. The

stimulus packages and accommodative monetary policies implemented in 2009-2010 nevertheless managed to halt the collapse in demand, and corporate investment rebounded significantly in every country up to the end of 2011. But since 2011 investment has followed varied trajectories in the different countries, as can be seen in the differences between, on the one hand, the United States and the United Kingdom, and on the other the euro zone countries, Italy and Spain in particular. At end 2014, business investment was still 27% below its pre-crisis peak in Italy, 23% down in Spain, 7% in France and 3% in Germany. In the US and the UK, business investment was 7% and 5% higher than the pre-crisis peaks (Figure).

Our study estimates investment equations for six major countries (Germany, France, Italy, Spain, the UK and USA) in an effort to explain trends in investment over the long term, while paying particular attention to the crisis. The results show that using the traditional determinants of corporate investment – the cost of capital, the rate of profit, the rate of utilization of production capacity and business expectations – it is possible to capture the main developments in investment for each country in recent decades, including since 2008.

Thus, since the onset of the crisis, differences in decisions on taxation and on how tight to make fiscal policy and how expansive to make monetary policy have led to differences between countries in terms of the dynamics of the economy and real capital costs and profit rates, which account for the current disparities in corporate investment.



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.