Is Greek Debt Really Unsustainable?

by Andrew Watt

Is Greek Public Debt Unsustainable? It's The (nominal growth rate of the) Economy, Stupid!

Greece will go to the polls on January 25th and everybody from German conservatives to Greek leftists seems to agree: Greek public debt is unsustainable. A haircut on investors and some form of partial default – more politely known as debt restructuring – is the only answer.

On the face of it, this is understandable. As Fig. 1 shows[1] Greek public debt exploded during the crisis from around 100% of annual GDP to more than 170% in 2011. If fell back temporarily in 2012 thanks to the haircut imposed on investors, and cuts in the interest rate. But in 2013 and again in the year that has just ended it rose once again, reaching more than 175% of GDP. And this is despite the debt restructuring and swingeing cuts in public spending and tax hikes. It would seem that a further round of debt restructuring is unavoidable. However, a closer look reveals this is far from inevitable. To see why one needs to look both at the situation in Greece itself, but also consider the policy context within the monetary union as a whole. All that Greece needs is a little nominal economic growth.

Fig 1: Greece - Debt: GDP Ratio

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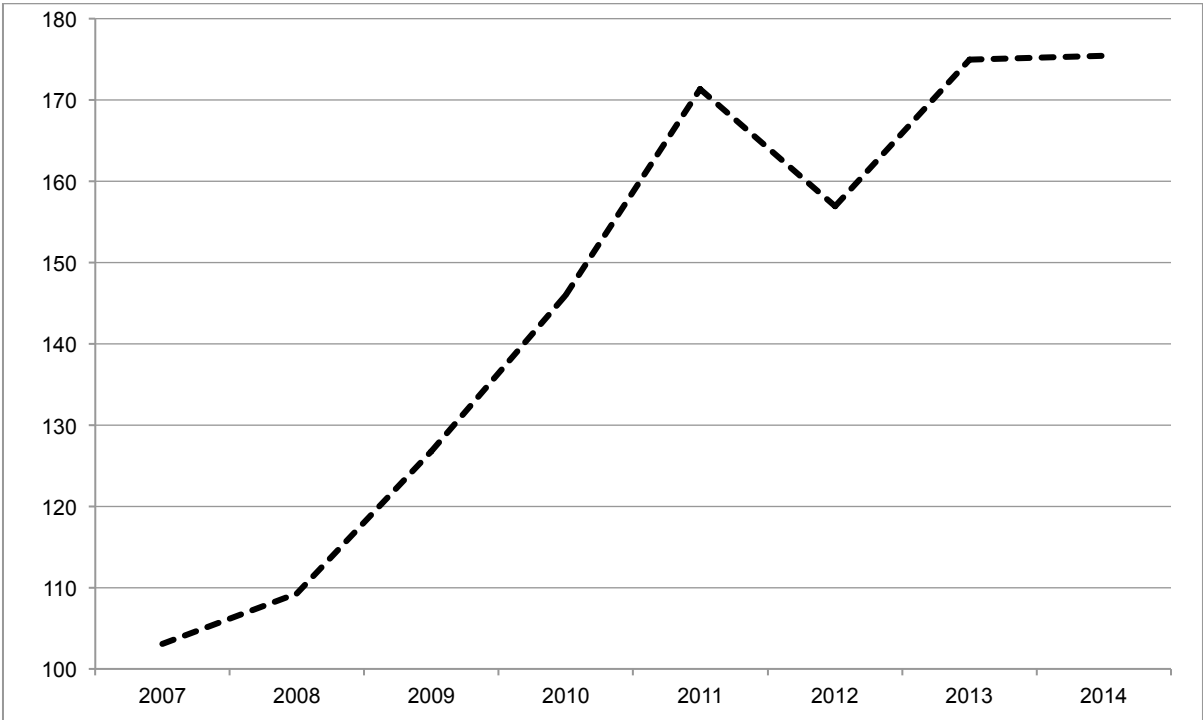
[1]   All the figures in this paper are based on data from the AMECO database, except Fig. 6 which uses my own calculations on Eurostat data.

The Debt-service Burden

First consider the burden of interest payments. Figure 2 shows the numbers for Greece and a selection of other Euro Area countries.[2] In 2014 Greece had to devote 4.3% of GDP to pay interest on public debt. This figure is a massive reduction compared with the crushing burden of more than 7% in 2011: debt restructuring has helped. Note also that the current figure is considerably lower than in Portugal and Italy, and about the same as in Ireland. Looking more broadly at euro area countries and further back in time, we see that Belgium and Italy have faced very much higher relative interest rate burdens (5-6% of GDP) in the recent past, while even fiscal paragons such as Austria and Germany have shouldered more than 3% of annual output. None of these figures, by themselves, suggests that Greece is "obviously" unable to service its public debt, even if that debt is high and has risen sharply. Nor, conversely, is it evident that Greece alone faces problems of ensuring fiscal sustainability: a number of Euro Area countries face historically rather high – but not extreme – debt service burdens.

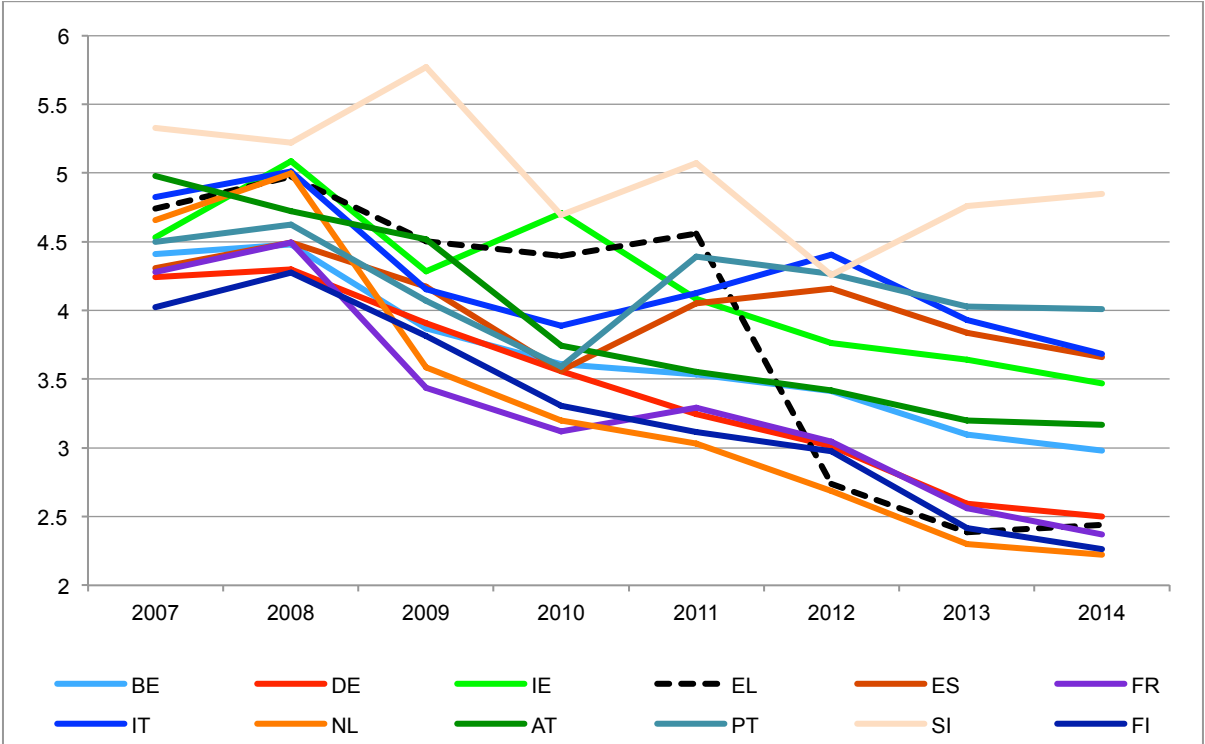**Fig. 2: Interest payments on government debt, % GDP**
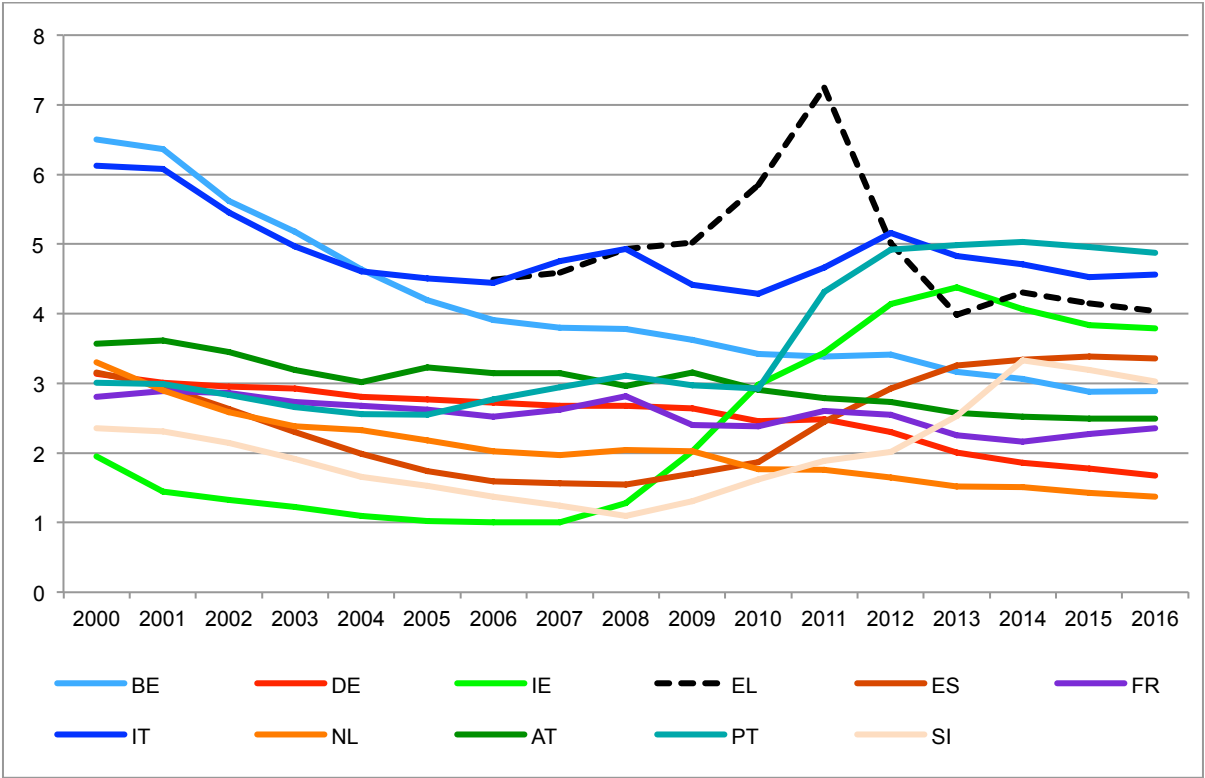
The fact that – contrary to what most media and political commentary might lead one to believe – the Greek interest rate burden is not spectacularly high (nor are debt ratios

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[2]   I have removed some smaller countries and recent entrants to improve visibility. The figures for 2015 and 2016 are Commission forecasts.

galloping out of control) is due not least to the very substantial lowering of effective interest rates.[3] As Figure 3 shows, there has been a general decline in the interest rates paid on their outstanding debt by Member States, but the decline in Greece is particularly dramatic. From slightly above the average of the countries considered here, at 4.7%, the effective rate declined to just 2.4%, one of the lowest in the monetary union and – I dare say a surprise to many – actually a fraction lower than that paid by Germany. This is a reflection of the improved conditions (belatedly) offered to Greece in 2012.

**Fig. 3 Effective interest rates on public debt, %**

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[3]   The AMECO series (AYIGD) sets actual interest payments in the current year in proportion to the government debt of the previous year.

The Drivers Of The Debt-to-GDP Ratio

To ensure debt sustainability, the volume of debt does not have to decline. It is sufficient that it be on a firm downward trajectory as a share of nominal GDP. As is well known, the change in the debt-to-GDP ratio depends on four variables, and four alone[4]: the existing debt-to-GDP ratio, the primary – that is before interest payments – budget deficit/surplus, the nominal interest rate on the debt, and the nominal growth rate. We have seen that the existing debt burden is very high, but the interest rate low. Let us now consider the primary fiscal deficit/surplus. Whatever value the other variables take, a primary surplus (deficit) reduces (increases) the debt-to-GDP ratio by an equal amount. After running deficits as far back as the eye can see, Greece posted a very substantial primary surplus of 2.7% of GDP in 2014. As Fig. 4 shows this is considerably higher than all the other countries. The gap between the Greek surplus and the Spanish deficit ratios exceeds five percentage points.

Fig. 4 Primary Budget Balance, 2014
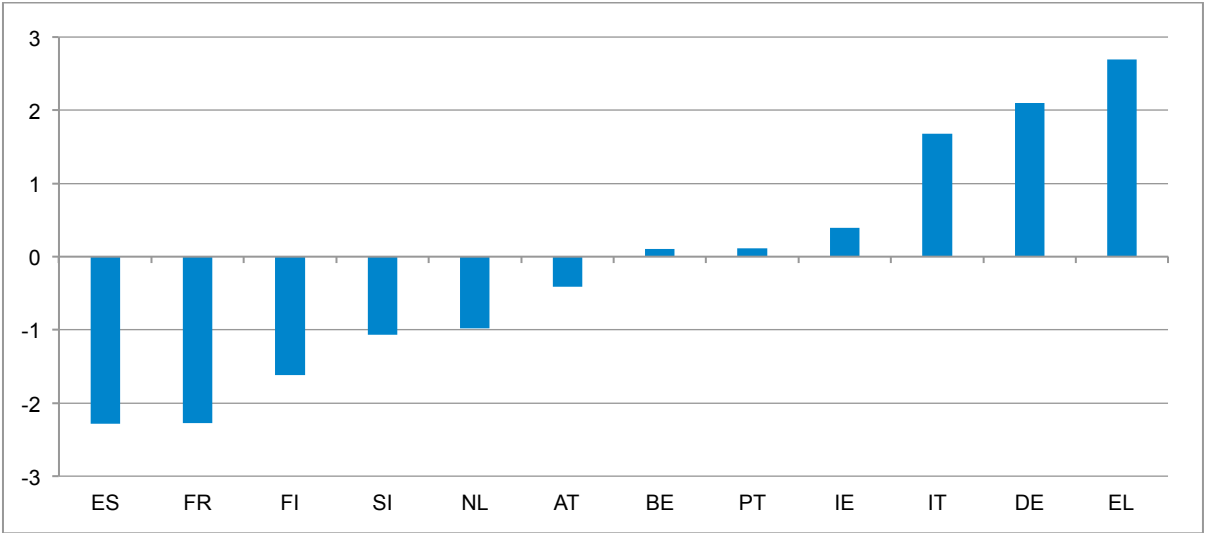
The European Commission foresees further increases in the primary surplus in the current and coming year: clearly, whether this will come to pass depends on whether further belt tightening occurs and – not independently of that – how nominal GDP develops, to which we return. The key point here is that posting primary surpluses puts Greek debt ratios on a declining path, unless that improvement is offset by the other term in the debt-change

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[4]   The equation can be written $\Delta D/Y_{t\text{-}t\text{-}1} = (r\text{-}g)\, D/Y_{t\text{-}1} - PB$, where D is the government debt, Y is output, r the interest rate, g the growth rate and PB the primary government balance. All variables are in nominal terms. A subtlety that I ignore here is that the public debt of most other countries is held domestically. This makes debt servicing easier because the interest income earned by residents is subject to taxation. A very high proportion of Greek debt is currently held abroad, mostly by public institutions. However, there are also arrangements in place to transfer some of the earnings on Greek bonds to the Greek treasury, so that this feature is probably not of decisive importance.

equation. This is the existing debt-to-GDP ratio (i.e. currently 1.75) multiplied by the difference between the nominal growth rate and the nominal interest rate.

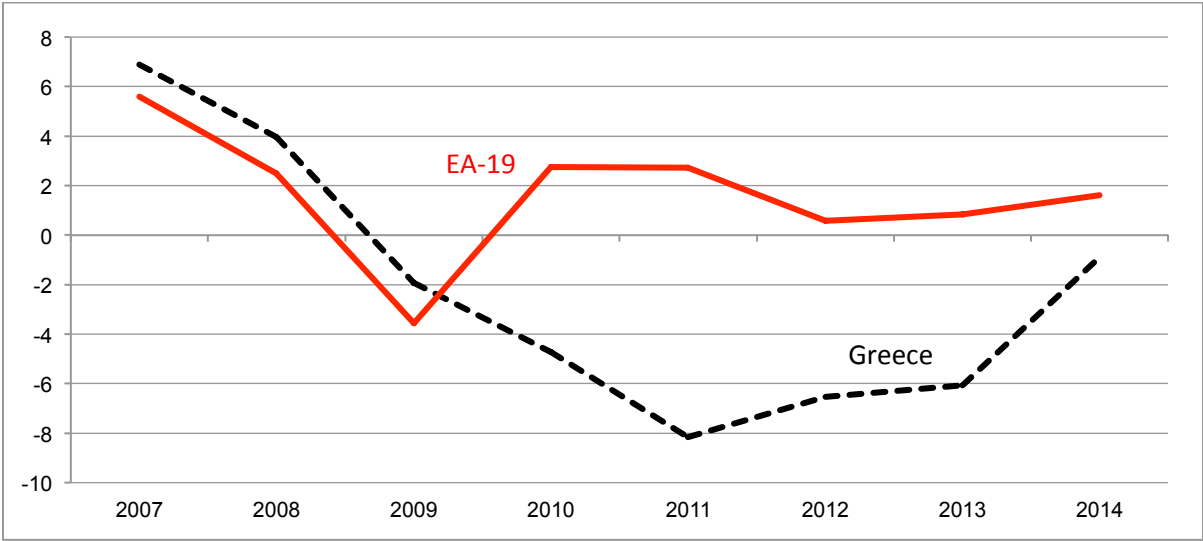**Fig. 5 Nominal GDP, Annual % change**

Fig. 5 shows the growth rate of nominal GDP in Greece and for comparison that of the Euro Area as a whole. It clearly reveals the proximate cause of the explosion of Greek debt ratios. The nominal growth rate in Greece was very similar, actually slightly higher, than the Euro Area average until 2009. However, whereas 2009 was the sole year in which nominal output contracted in the currency union as a whole, in Greece it has been negative for six consecutive years, during which time nominal output has fallen by more than 25%. Nominal interest rates on government bonds cannot be negative. Even if interest rates were zero, negative nominal output growth of, say, 5% serves to increase a debt ratio of 175% of GDP by 8.75% in a single year, merely due to the "mechanical" impact on GDP, the denominator of the debt ratio. It is important to realise that this ignores the additional impact of the loss of government revenue and higher spending (automatic stabilisers).

It can be seen from the figure that the pace of nominal GDP contraction has at last slowed sharply and had almost come to an end by 2014. If the rate of nominal GDP growth is as high as the interest rate, then the second term of the equation is zero and the debt ratio falls in step with the size of the primary surplus. And for every percentage point that the nominal growth rate exceeds the interest rate the debt ratio falls by one hundredth of the debt-to-GDP ratio (i.e. currently by 1.75 percentage points).

Implications And Options

What does this analysis imply? The first key point is that, contrary to what is suggested by those claiming that Greek debt is obviously unsustainable, the debt ratio is currently close to being on a declining trajectory. If the primary surplus and the interest rate are merely maintained – not even increased and decreased, respectively – the Greek debt burden will fall, albeit extremely slowly, even if nominal GDP is stagnant. Secondly, given that interest rates are already low, the priority must be to increase the rate of nominal output growth, which is in any case on the cusp of moving into positive territory. This would substantially accelerate the pace of debt reduction. What are the prospects of this? Clearly this is hard to judge and, more importantly, will depend decisively on policy choices in Greece and elsewhere that are currently highly uncertain. But some assessments can be made and options set out.

Start with *real* output. Countries that have a large negative output gap, as Greece undoubtedly does following six years of recession, can be expected, on emerging from crisis and once a demand squeeze has been lifted, to grow rapidly in real terms because they have a lot of underutilised labour and capital.[5] The predicted modest acceleration of the growth of Euro Area partners, the depreciation of the Euro and the decline in energy costs will provide some growth stimulus.

Clearly the Greek fiscal stance will be important. Faster growth will itself tend to increase the primary surplus without discretionary consolidation. If the fiscal stance is relaxed, as is widely predicted to be the intention of the new government after the election, the structural primary surplus will decline, but economic growth will be higher. Which effect predominates in terms of the effect on the current primary surplus and on debt ratios is uncertain and will depend on the nature of the fiscal measures adopted and imponderables such as confidence effects. A growing literature suggests that, under prevailing conditions, fiscal multipliers are substantially above 1, implying falling debt ratios.[6] What would clearly be much more favourable in terms of fiscal consolidation would be additional government investment spending in Greece that is financed externally, i.e. by some form of European-level intervention.[7] Also conducive would be expansionary policies by other Euro Area Member States in their own countries (even if trade linkages with Greece are rather weak).

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[5] Examples of such turnarounds include the United Kingdom after the ERM crisis or Sweden after the financial crisis in the early 1990s. These rebounds came after currency depreciations. On the related issue of Greek price competitiveness see below.

[6] E.g. chapter 1 of the *independent Annual Growth Survey 2015*, http://www.iags-project.org/documents/iags_report2015.pdf/, and Gechert/Rannenberg 2014, Are Fiscal Multipliers Regime-Dependent? A Meta Regression Analysis, *IMK Working Paper* 139, http://www.boeckler.de/imk_5279.htm?produkt=HBS-005937&chunk=1&jahr=/

[7] For some proposals see the *independent Annual Growth Survey 2015*, http://www.iags-project.org/documents/iags_report2015.pdf/

Regarding the price component of nominal output, the first issue is the average inflation rate of the Euro Area. The ECB target is just under 2%. Currently inflation is around 0.3%. Merely by virtue of the ECB "doing its job" and raising the inflation rate by 1.7 percentage points, assuming the Greek inflation rate moves in tandem, would bring about a fall in the debt-to-GDP ratio of almost 3 percentage points every year just by the mechanical effect of higher nominal output growth.[8]

The second issue concerns the need for Greek inflation to remain below the Euro Area average in order for the country to regain lost competitiveness. There is no doubt that this was necessary after the crisis broke, and this explains a considerable part of the decline in nominal GDP. The extent to which this remains the case going forward, however, is disputed, and would warrant a more thorough discussion than is possible here.[9] Fig. 6 shows that the inflation gap appears to have peaked at the end of 2013. Since then the gap – and thus the extent of the intra-EMU price-competitiveness improvement – has tended to narrow, against the background of a worrying disinflationary trend in the Euro Area as a whole. If the inflation gap were to stabilise at 1 percentage point and if the ECB were to genuinely commit to fulfilling its mandate by deploying the quantitative easing measures needed to raise the overall inflation rate to its target, the nominal component of GDP growth in Greece going forward would be around 1%. Under such conditions nominal growth rates of 3% would appear far from implausible, if domestic austerity were loosened somewhat.

Higher real growth rates would be perfectly conceivable given external support for investment, in which case also the inflation gap would shrink, and the primary surplus would rise without any increase in discretionary fiscal consolidation. Once the growth dynamic is kick-started the substantial unused capacities suggest that it could be maintained for a substantial period.

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[8] In fact due to fiscal drag and other factors, the impact would probably be higher still.
[9] What is clear is that unit labour costs have adjusted dramatically, prices less so, although still substantially. The current account deficit is down to below 3% of GDP and the recent euro depreciation will help improve competitiveness vis-à-vis non-Euro Area countries. What is still uncertain is whether the competitiveness and current account improvements have gone far enough that they can be maintained when growth and domestic demand pick up (see the discussion in Ch. 5 of the iAGS 2015, http://www.iags-project.org/documents/iags_report2015.pdf/

Fig. 6 Euro Area-Greece Inflation Differential, HICP, %-points

Simple illustrative simulations along the lines sketched out above show that *even without any further cuts in interest rates and discretionary increases in the primary surplus*, steady falls in debt-to-GDP ratios over a ten year period would be possible given favourable, but not unrealistic framework conditions permitting faster nominal GDP growth. The ratio falls over a ten-year period to 138% of GDP assuming 2% real growth and 1% inflation (at unchanged interest rates and primary surplus). It would decline to 108% given 3% real growth 1.5% inflation (and conservatively adding 1pp to the primary surplus as a result of the faster growth, not austerity measures).

Conclusions

Many voices are claiming that Greek public finances are unsustainable and a Greek haircut is inevitable if Grexit is to be avoided. This is superficially plausible, but a close analysis shows it to be clearly wrong. Sustainability depends on the framework conditions and, given the existing level of the variables, decisively on the rate of nominal economic growth. It has been shown that even without lowering interest rates or further discretionary measures to raise the primary surplus further from its already high level (such measures would in any case likely be futile if not counterproductive), Greek debt *can* be placed on a firm downward trajectory given even a rather modest recovery in nominal output growth.

This recovery will not come about by itself, however. Nor is it merely a matter of changes in Greece itself. Rather, it has been suggested here that a modest recovery could be achieved, given a more favourable global economic environment, if Greece were permitted to loosen the fiscal straitjacket somewhat and, crucially, provided effective steps are finally taken by the ECB to quickly get inflation back on target. Clearly the latter is not a given. But for as

long as the ECB is not fulfilling its mandate, lectures to the Greek electorate on debt sustainability seem rather misplaced, if not slightly absurd. A more substantial recovery, and thus faster improvement in debt ratios, would presuppose some form of European-financed support for public investment in the country, while more expansionary fiscal policies in other countries, such as Germany, would help somewhat. Certainly the already accorded interest-rate concessions will need to be maintained in order to prevent the increase in nominal GDP growth being offset by substantial rises in interest rates paid by Greece. Given current conditions, interest rate rises in the Euro Area as a whole are not on the agenda for the foreseeable future.

After the results of the Greek elections are known a political deal along these lines could be sought between the new Greek government and the European institutions. As part of this, more technical measures that ease the fiscal burden on Greece in the short-term while maintaining debt servicing in the longer run could, of course, have a part to play. The ECB could send a useful signal immediately prior to the Greek elections by announcing a meaningful quantitative easing programme at its meeting on 22nd January. Compared with the current game of chicken between Greeks and the politicians of creditor countries, such an outcome would be much more favourable for both parties. The current uncertainty which is a drag on recovery, the direct losses from a haircut and the likelihood of ongoing financial turmoil from speculation against the bonds of other countries[10] could all be avoided.

Greek default is not inevitable. If it comes about it will have been a policy choice. And those responsible for its consequences should be held to account.

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[10]   Andrew Watt: The Euro Area – Back To Open Crisis In 2015?, Social Europe, 29.12.2014, http://www.socialeurope.eu/2014/12/euro-area-back-open-crisis-2015/

Andrew Watt is Head of Department at the Macroeconomic Policy Institute (IMK Institut für Makroökonomie und Konjunkturforschung) in the Hans-Böckler-Foundation. He was previously Senior Researcher at the European Trade Union Institute (ETUI).

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