

The New Stability and Growth Pact: Primum non nocere

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No. 344, March 2011

Abstract

The recent economic and financial crises have shown the weakness of EU economic governance. A process of strengthening macroeconomic and fiscal surveillance started in the course of 2010; the European Commission, among other proposals, suggested a new binding criterion of debt reduction: debt-to-GDP ratio is to be considered sufficiently diminishing if its distance with respect to the 60% of GDP reference value has reduced over the previous three years at a rate of the order of one-twentieth per year.

In this paper we try to evaluate, with the support of the Oxford Economic Global Model, the economic consequences of the simultaneous attempt of all euro area countries to fulfill this one-twentieth criterion in the 2011-2015 period. Simulation results show that the mechanical application of the debt rule proposed by the European Commission would be only marginally efficient in reducing the debt to GDP ratio at best, but with high costs represented by the loss of flexibility, and counterproductive at worst.

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The views expressed in this paper are those of the authors and do not necessarily represent the institutions with which the authors are affiliated. The authors wish to thank Paolo Zanghieri (Oxford Economics) for helpful comment and suggestions. Any error or mistake remains authors' sole responsibility.

ISBN 978-94-6138-087-6

Available for free downloading from the CEPS website (<http://www.ceps.eu>)

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CEPS WORKING DOCUMENT No. 344 / MARCH 2011

Marco Fioramanti and Claudio Vicarelli*

"Prediction is very difficult, especially if it's about the future."

Nils Bohr

Introduction

The global economic and financial crisis drastically reversed the favourable economic conditions that prevailed until 2007, causing a huge deterioration of public finances in European countries.

It is widely agreed that a very sizeable fiscal consolidation will be necessary in years to come in most member states to bring public debt back onto a downward path; a precondition for sustainable long-term output and employment growth.

However, the short and medium-term consequences of a simultaneous and huge fiscal consolidation process in Europe are difficult to assess, and recent economic history does not provide any precedent of a tightening episode comparable to the one that should be implemented in the next few years.

It has been stressed, indeed, that debt sustainability can only be founded on the sustained growth of economies;¹ otherwise, the remedy could well kill the patient.

A new budgetary rule was proposed last September by the European Commission to strengthen the debt criterion of the excessive deficit procedure (EDP). This latter should be made operational through the adoption of a numerical benchmark to assess whether the debt-to-GDP ratio is sufficiently diminishing toward the 60% threshold. "Specifically, a debt-to-GDP ratio above 60% is to be considered sufficiently diminishing if its distance with respect to the 60% of GDP reference value has reduced over the previous three years at a rate of the order of one-twentieth per year."²

This criterion is still under examination by European institutions; an official decision on its adoption has to be taken before next June.

1. A simultaneous fiscal consolidation

As far as we know, there are still no quantitative evaluations of the possible economic consequences of a simultaneous fiscal consolidation in Europe as a consequence of the

¹ See Amato et al., (2010).

² See European Commission (2010) "Proposal for a Council Regulation amending Regulation N. 1467/97 on speeding up and clarifying the implementation of the excessive deficit procedure."

implementation of the one-twentieth rule; we shall try to fill this gap showing the results of a simulation implemented by the Oxford Economics Global Model (OEGM).

1.1 A digression on the characteristics of the model

The OEGM belongs to the Dynamic Aggregative Econometric (DAE) class of models.³ According to Wieland et al., (2009) models differ in terms of economic structure, estimation methodology and parameters estimate. As for the economic structure point of view, the main features of the OEGM are that, for countries and regions, the model is Keynesian in the short run and neoclassical in the long run. Given the presence of nominal rigidities, output is demand-driven in the short period, but as time goes by the system tends to return to equilibrium because output and employment are determined by supply side factors (technology, demography and capital accumulation). The presence of a vertical Phillips curve implies that inflation is a monetary phenomenon in the longer period. All economies are assumed to have a constant return-to-scale Cobb-Douglas production function and monetary policy is set according to the standard Taylor-rule. The transmission mechanism between countries is guaranteed through trade channel, exchange and interest rates. Expectations are assumed to be adaptive. Most of the parameters are estimated using single equation robust OLS; some others are calibrated.⁴

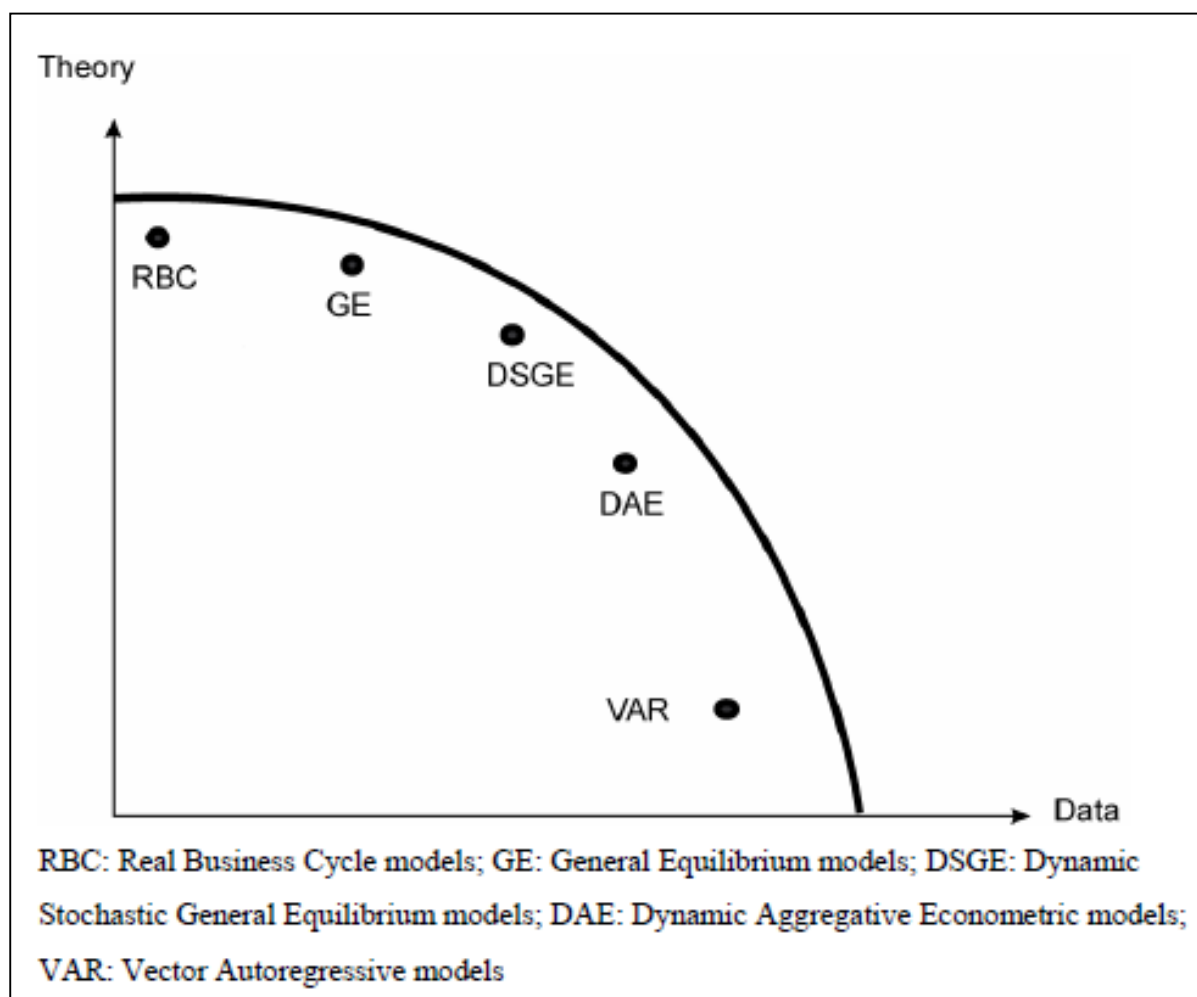
Conceptually, the DAE class of models is situated in the middle of two extremes represented by theoretical and purely statistical models (Figure 1), having some advantages with respect to both classes. In fact, theory founded models have poor short-term forecasting records and are mainly used for simulation, while statistical models have good short-term forecasting records but they do a bad job over the long horizon. DAE models have proven their ability to produce reliable short and long-term forecasts and are considered a valuable tool for simulation and scenario analysis. For this reason, this class of models is widely adopted both in national and international institutions and private firms.⁵

³ Bårdsen *et al* (2006).

⁴ For example, this latter is the case for Cobb-Douglas Production function and Taylor-rules parameters.

⁵ For example both the OECD's New Global Model and the ECB's multi-country model belong to this class.

Figure 1. Models' space representation



Source: Bårdsen *et al* (2006)

Although these models have an adaptive formalisation of expectation, the response to external shock qualitatively resembles those of new-Keynesian Dynamic Stochastic General Equilibrium (DSGE) models with rational expectation. In fact while shocks are time persistent in the old-fashioned Keynesian models,⁶ DAE models show a strong response in the short run, but the economy rapidly returns towards the long-run fundamental relation because of the neoclassical formalisation of equilibrium relationships.

To assess the robustness of the OEMG model we should replicate the same simulation over different models. This is a very hard task, complicated by the fact that very few models are publicly available. Furthermore, not every model has the same degree of detail as the OEMG, so we should reconsider the design of our simulation. An approximation of the robustness of OEMG could be achieved confronting fiscal multipliers of various studies. In the OEMG these are between 0.6 and 0.7 for temporary fiscal shocks in the euro area in the first year and between 0.4 and 0.8 two years later, for public consumption and investment respectively. There seems to be a wide consensus around this magnitude (0.5-1), with the OEMG

⁶ For a comparison between old and new-Keynesian macroeconomic model, see Wieland *et al.*, (2009).

multipliers situated near the lower bound of the range.⁷ This suggests that our results could be considered as quite conservative.

Since the Giavazzi e Pagano (1990) seminal paper, a growing body of literature criticised the kind of simulation we performed here because it does not consider the so-called ‘non-Keynesian effects’ of fiscal contraction. According to this literature, if forward-looking expectations are not completely endogenized, the real effects of fiscal shock are usually over/under-valued, depending on the sign of the shock. For example, in the case of fiscal contraction, the adjustment could even be expansionary “if agents believe that the fiscal tightening generates a change in regime that eliminates the need for larger, maybe much more disruptive adjustments in the future”.⁸ The OEGM characteristics allow us to catch just a small fraction of these effects (through the interest rate channel), but it seems to be consistent with the view of two major international organisations,⁹ which find large contractionary short-run effects of simultaneous fiscal consolidations. It is also worth noting that non-Keynesian effects depend, in their magnitude, on the instruments used to implement the fiscal consolidation; spending cuts seem to have less contractionary effects than tax rises. With respect to the composition of the fiscal contraction, our simulation assumes a neutral position as the adjustment is evenly distributed between spending and revenues.

1.2 Simulation design

The starting hypothesis is that the new rule will be in force in 2011, so that the first year in which the “sufficient diminishing” criteria will be assessed is 2014. To be in line with the one-twentieth debt-to-GDP reduction criteria for this year, all countries should eventually start to consolidate the fiscal position already in the current year.

To proceed with the simulation, in each year of the forecasting horizon (2011-15) we calculate the magnitude of economic measures to correct the debt/GDP trend, considering both the level of this ratio at the end of the previous year and its foreseen trend dynamic in the current year, as implied by the model’s forecast. If there is an underlying growing (decreasing) trend of debt/GDP ratio in the current year, the magnitude of the adjustment will be more (less) restrictive with respect to the one-twentieth rule to take into account the estimated departure (approaching) from (to) the target.

The simulation is run year by year. For the first year, we calculate the magnitude of economic measure for each country, attributing half of the total amount of the fiscal correction to the main sources of budget revenues and half among expenditures items, using national historical weights. Then we run the model and calculate the total amount of economic measures for the second year, using the results of the first year’s simulation, and so on. We leave the monetary policy to freely react to the simulated evolution of the economic condition according to the model’s own Taylor rule. This implies that the monetary policy becomes more accommodative with respect to the baseline.

⁷ A comparison can be done by looking at Oxford Economics (2011), Hervé et al., (2010), Wieland et al., (2009), Coenen et al., (2010).

⁸ Alesina and Ardagna (2010).

⁹ IMF (2010) Chapter 3, and OECD (2010) Chapter 4.

We are aware that, according to the EC proposal, new rules for fiscal correction should be applied to public finance imbalances and debt/GDP ratios adjusted for the cycle. Anyway we choose not to adopt this methodology; in our opinion, costs outweigh the possible benefits because cyclically-adjusted measures do not reduce the uncertainty surrounding the 'true' measures.¹⁰

2. Results

2.1 A very restrictive 2011...

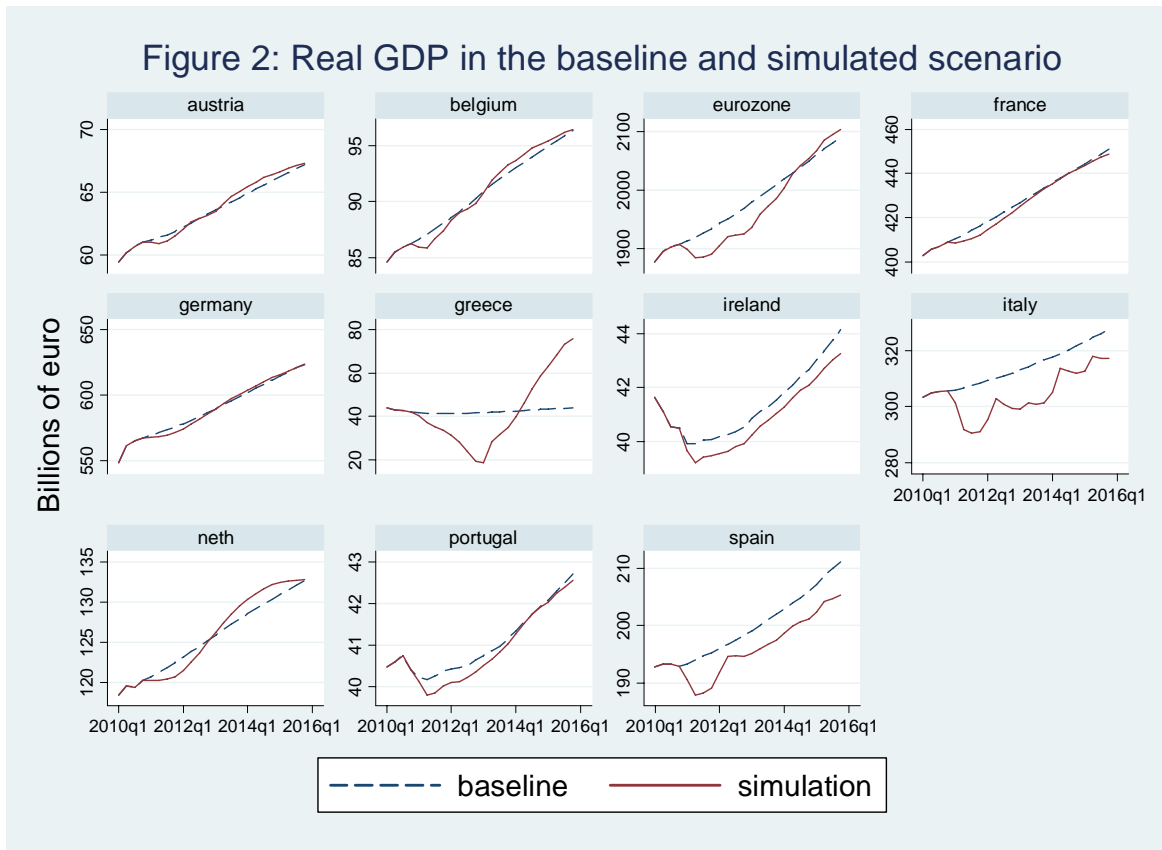
The effects of a simultaneous public finance correction by euro area countries, in line with the rule proposed by European Commission, would be very restrictive in the first year of the simulation. In the euro area as a whole, the GDP growth rate would be lower by 1.8 percentage point (pp) in comparison with the baseline; the unemployment rate would be 0.5 of a pp higher.

The negative economic impact in each single country would be very different (see Figure 2), depending mostly on the initial distance of debt/GDP level from the 60% target. Differences range from -0.6 pp (with respect to the baseline) in the case of Germany and Austria to -11.5 pp in the case of Greece. Most euro area countries would experience a GDP growth rate reduction to a maximum of -1.0 pp. Ireland, Spain and Italy are three important exceptions: GDP growth would be largely affected by fiscal consolidation (-1.4, -2.8 and -4.5 pp less than the baseline respectively), with also widespread losses in terms of unemployment rate (as shown in Figure 3).

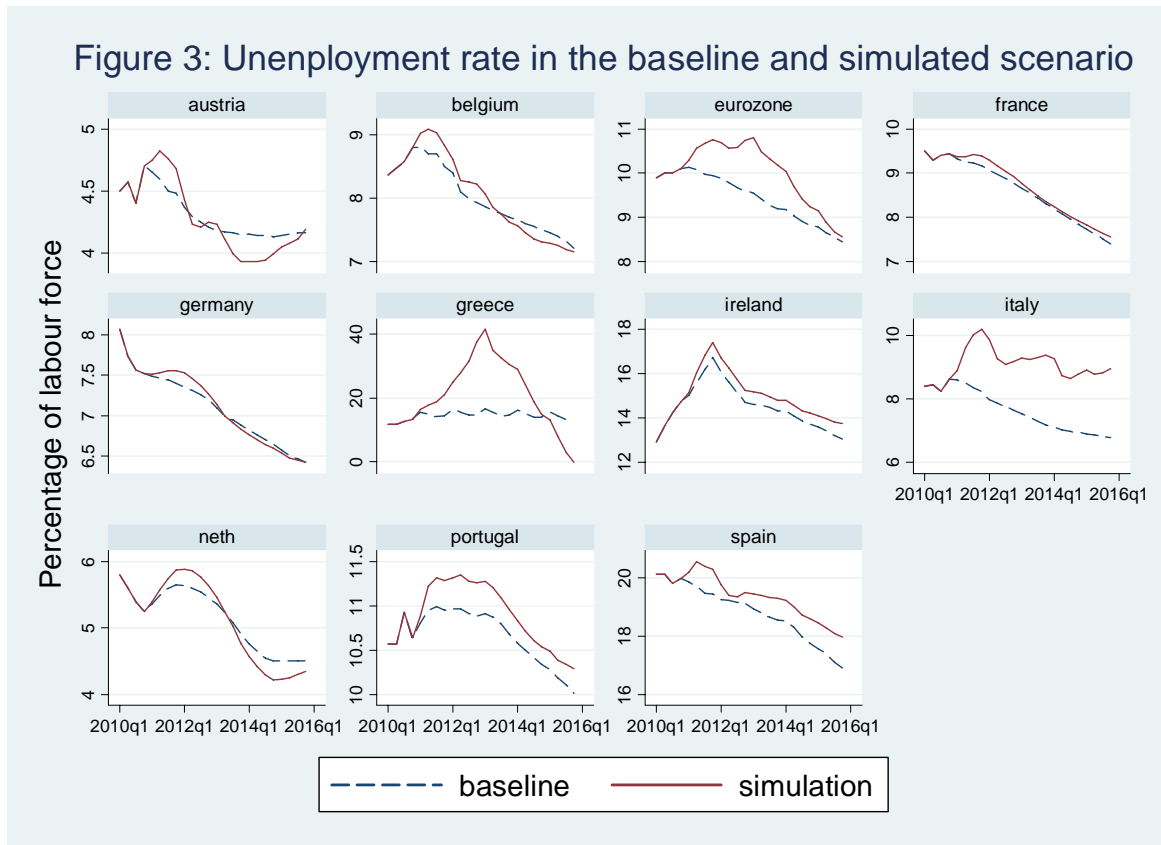
2.2 ...and a sort of normalisation in 2012 for euro area as a whole

In 2012, the negative impact on real GDP growth for the euro area as a whole would be limited (-0.2 pp), but the GDP level would remain well below the baseline. After the public finance correction undertaken in 2011, countries showing a debt/GDP ratio close to 60% (Germany, Austria and the Netherlands), would need a further limited correction (no higher than 0.7% of nominal GDP). The correction in Ireland (more than 4%), Italy (3.5%) and Spain (2.1%) would be much more consistent with respect to those in other countries.

¹⁰ Firstly, a correct estimate of the structural balance requires estimates of output gap and the effects of the economic cycle on government revenues and expenditures. In a recovery phase after a financial and economic crisis, usual difficulties about output gap estimates are higher, due to the possible presence of structural changes that can affect both the potential output of today and its trajectory in the future. Secondly, also the Commission, in calculating the cyclically adjusted budget balance in its forecast exercise, does not go beyond a couple of years (actually to 2013). Beyond the forecast horizon, in medium/long-term projection, the operational hypothesis is that the cyclically adjusted budget balance is equal to the projected actual budget balance. Lastly, in our opinion, the bias we can introduce when we do not consider public finance imbalances and debt/GDP ratios adjusted for the cycle could be negligible in assessing the magnitude of economic measures, in particular in the case of countries showing a higher distance from the 60% target.



Source: Authors' calculation



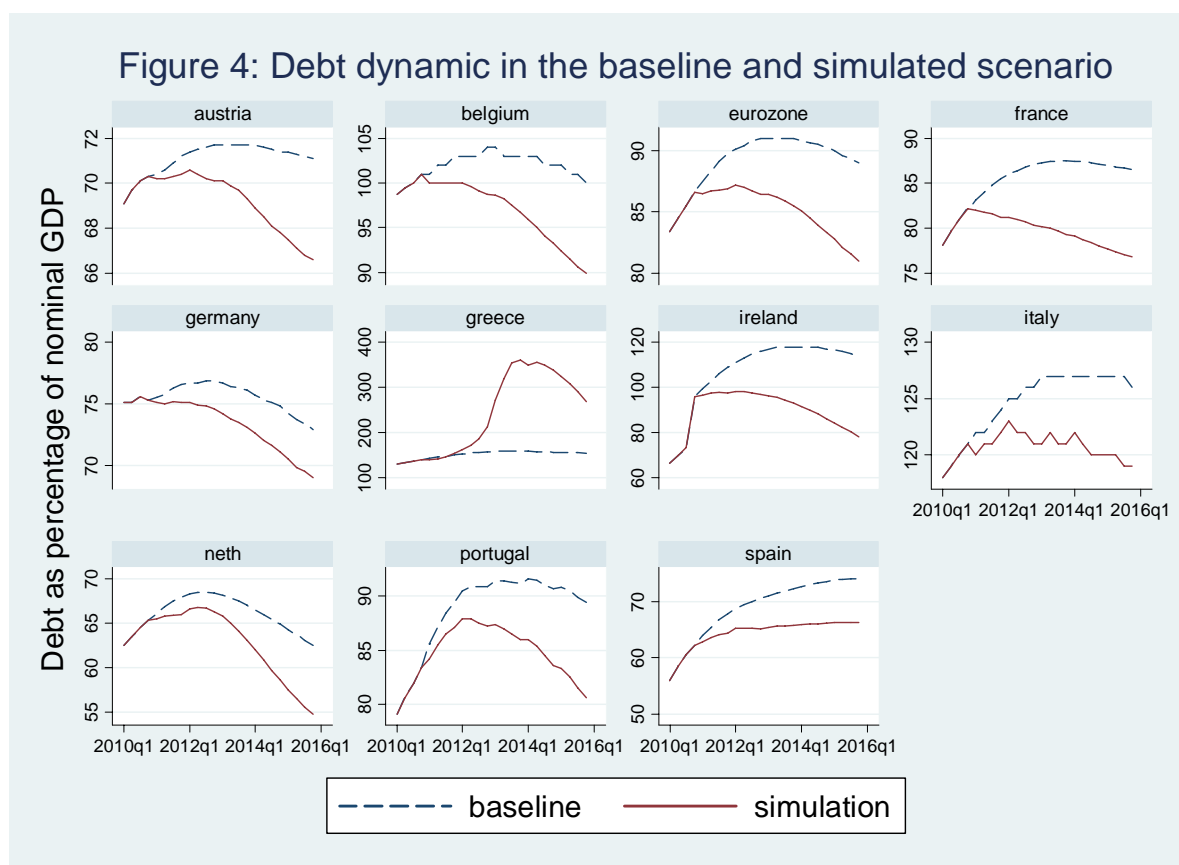
Source: Authors' calculation

2.3 Greece heading for default

In Greece, the economic impact of fiscal consolidation would be dramatic. The magnitude of economic measures to be taken in 2011 should be around 15% of nominal GDP. The restrictive effects on GDP, together with an underlying steeply growing trend of debt level, would push the debt/GDP ratio towards 180% in 2012, and a further huge correction would be necessary in this year (around 38% of nominal GDP!). This trend would continue into 2013, when economic measures to be implemented would become greater than GDP itself: a default would be unavoidable. Starting from 2013, we leave Greece to follow the 'natural' evolution given by the model's own relations for this country. This implies that we are not able to take into account in an objective way¹¹ the effects of a Greek default on the other countries. Simulation results in 2014 and 2015 may be seriously (upwardly) biased.

3. Do countries meet the convergence criteria?

The simulation shows that only a couple of countries (Germany and the Netherlands) would reach the yearly required reduction in debt/GDP level, but only from 2013 onwards (see Figure 4). Anyway, notwithstanding the efforts, no country would satisfy the debt/GDP convergence criteria over the previous three years at a rate of the new rule assessment. Given the poor performances in 2011 and 2012 in terms of debt/GDP reduction, both 2014 and 2015 ex-post assessment of the three previous years would lead all countries into an excessive deficit procedure.



¹¹ Although we could put forward a hypothesis about the spillover effect of Greece's default on the euro area interest rate, borrowing the possible impact from case history, this is beyond the scope of the present exercise insofar as we do not want to model the worst case scenario.

4. Conclusions

Simulation results show that, if initial conditions of euro area countries in terms of debt/GDP level are too far from the 60% target, the mechanical application of the debt rule proposed by European Commission would be counter-productive (Greece), or inefficient (Italy and Spain) because of negative short/medium-term impact on output. In countries where a significant reduction in debt/GDP ratio is reached, economic costs could be higher with respect to limited benefits, due to an anticipation of underlying reduction trend. In fact such countries (Germany, Austria, the Netherlands, France, and Belgium) do not have a debt sustainability problem, and do not cause negative spillovers on to other countries.

More generally, exclusive emphasis on restoring sound public finances will not suffice; together with measures for fiscal discipline, economic policies are needed to sustain growth. Actually the Commission proposal does contain some flexibility in the interpretation¹² of “sufficiently diminishing” criteria, but this could add uncertainty to the interpretation, rather than providing a credible and reachable milestone in the goal of medium and long-term fiscal sustainability.

¹² The [European Commission \(2010\)](#) states also that “Noncompliance with this numerical benchmark is not, however, necessarily expected to result in the country concerned being placed in excessive deficit, as this decision would need to take into account all the factors that are relevant, in particular for the assessment of debt developments, such as whether very low nominal growth is hampering debt reduction, together with risk factors linked to the debt structure, private sector indebtedness and implicit liabilities related to ageing.”

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