# Fiscal consolidations for debt-to-GDP ratio containment? Maybe … but with much care

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*As fiscal-consolidation policies are being implemented across the EU, a debate has been developing concerning the effects of such policies on the dynamics of the debt-to-GDP ratio. This column examines past episodes and finds that following fiscal adjustment may have favourable effects in the short term but that the two-year cumulated changes have been mainly adverse.*

In recent time a wide debate has been developing concerning the effects of restrictive fiscal policies on the dynamics of the debt-to-GDP ratio (*eg* [Corsetti and Müller 2012](http://www.voxeu.org/index.php?q=node/7642)). The debate is nourished by the current experience of EU countries, where fiscal-consolidation policies are implemented.

# Europe today: Fiscal consolidations for debt-to-GDP containment

With the signing of the Fiscal Compact agreement, fiscal consolidations have surged as the main response to the Eurozone debt crisis. EU politicians (willingly or unwillingly) have bound their fiscal policy to the respect of super-tight fiscal rules. At first sight, this, combined with centralised monetary policy, leaves little room for discretionary national-based economic policies.

While we avoid judging such a decision out of the emergency context in which it has been signed, we examine whether a fiscal consolidation can reduce or contain the debt-to-GDP ratio. The discussion here summarises the main findings of our new research ([Cafiso and Cellini 2012](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2011869)) and it is linked to Cafiso (2012) and Cafiso and Cellini (2011) where the fiscal adjustment required to meet the new EU debt-reduction rule is discussed.

The very simple problem with fiscal consolidations for debt-to-GDP ratio containment is that the restrictive effect of a fiscal consolidation on GDP might well offset the deficit reduction and cause an undesired debt-to-GDP ratio increase. As a matter of fact, this is an outcome which cannot be excluded *a priori* (Gros 2011, Krugman 2011, Sutherland *et al* 2012) and which has a clear theoretical reference in the fiscal multiplier literature (see, among the others, Cwik and Wieland 2011 for their focus on the Eurozone).

Our analysis covers a selected group of EU countries observed over the period 1980–2009 and considers fiscal-consolidation events as recently recorded in Devries *et al* (2011).[1](http://www.voxeu.org/index.php?q=node/7743#fn1) We check the associated contemporaneous variation in the debt-to-GDP ratio with respect to its past evolution (short-term response) and the associated *ex post* debt-to-GDP ratio cumulated change (medium-term response). Results are drawn from the comparison of the debt-to-GDP ratio distribution under different policy stances.

# Fiscal consolidations and the debt-to-GDP ratio: Short-term response

Fiscal consolidations implemented in year *t* affect the debt-to-GDP ratio the same year as the variation is largely driven by the deficit. Then, we wonder whether a fiscal consolidation is in general associated with a favourable debt-to-GDP ratio evolution with respect to its previous two-year average change. We look for a discontinuity in the debt-to-GDP ratio evolution with respect to its past.

Our results can be summarised as follows. Fiscal consolidations appear to be associated with a favourable contemporaneous evolution of the debt-to-GDP ratio when one considers the EU countries under scrutiny as a whole. However, if we go country by country (Table 1), we realise that there are exceptions.

# Fiscal consolidations and the debt-to-GDP ratio: Medium-term response

As for an assessment of the medium-term response to fiscal consolidation, we consider the *ex post* cumulated change in the manner of Alesina and Ardagna (2010). However, we opt for a two-year horizon (considered as medium-term) and check the sign of the two-year cumulated change in case of fiscal consolidation.[2](http://www.voxeu.org/index.php?q=node/7743#fn1)

All in all, it emerges that the medium-term response (namely, the cumulative effect in the current and subsequent year) is adverse in most countries (Table 1). Indeed, fiscal consolidations are more likely to be associated with a two-year cumulated debt-to-GDP ratio increase in general.

In the few cases when fiscal consolidations are associated with a reduction in the debt-to-GDP ratio, our analysis shows that two-year reductions are larger on average when fiscal consolidations are based on expenditure cuts rather than on tax increases. This is in line with previous research on this issue (eg Guajardo *et al* 2011).

**Table 1.** Response to a fiscal consolidation: Short- and medium-term results



*Notes:* “F” stands for Favourable, “A” stands for Adverse; the short-term response is classified as “F” if the break-of-tendency is positive in more than 50% episodes (SH, share) of the total observed when a fiscal consolidation is implemented; otherwise, it is defined as “A”; the medium-term response is classified as “F” if the two-year cumulated change is negative in more than 50% episodes (SH, share) of the total number observed when a fiscal consolidation is implemented; otherwise, it is defined as “A”; “F/A” denotes a case of exactly 50% positive/negative episodes; \* if 50%<SH<= 65% or 50%>SH>= 35%, \*\* if 65%<SH<= 75% or 35%>SH>= 25%, \*\*\* if 75%<SH or 25%>SH; “na” when total number of events is less than 4.

# Final remarks

A difference between the short- and medium-term response therefore emerges. The former is favourable for the majority of countries, while the latter is generally adverse. A plausible explanation can be found in Guajardo *et al* (2011) where the authors show that the effect on real GDP achieves its peak within 2 years. Then, the different timing of the effect of a fiscal consolidation on the deficit (in level) and on the output may explain the difference between the short- and medium-term. The deficit responds contemporaneously and this causes a positive short-term effect given that the GDP remains temporarily stable, but when the GDP starts declining the debt-to-GDP ratio worsens and this explains the adverse medium-term effect. This explanation is in line with other studies (*eg* Clinton *et al* 2011) which highlight a varying effect of fiscal consolidations on macroeconomic variables over time.

Should governments engage in fiscal consolidation to reduce or contain their debt-to-GDP ratio? When we consider what has happened in the past and do not specifically take into account the adjustment-mix chosen to enforce the fiscal consolidation (Nickel *et al* 2010), the evidence suggest the case for fiscal consolidation is rather weak.

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1 In this work, the authors compile a data set reporting the budget effect of fiscal consolidation episodes following the so-called narrative approach. The alternative is using a variation of the Cyclical-Adjusted Primary Balance which, Devries *et al* (2011) argue, biases the analysis. They therefore compile their own data set.

# 2 We choose a two-year horizon because correlations show association only up to one period after a fiscal consolidation event in our analysis; Alesina and Ardagna (2010) use a three-year horizon in theirs

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