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# Policy Options to Durably Resolve Euro Area Imbalances

**Yvan Guillemette,  
David Turner**

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**by Yvan Guillemette and David Turner**

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## ABSTRACT/RÉSUMÉ

**Policy Options to Durably Resolve Euro Area Imbalances**

A simple econometric framework is presented linking current account balances of euro area countries to *intra* and *extra* euro area competitiveness, cyclical positions, fiscal positions and the oil price. The framework is then used to cyclically-adjust observed current account balances and illustrate the scale of the additional adjustments to competitiveness and/or fiscal balances required in the euro area periphery to bring structural current account balances to levels compatible with sustainable net external debt levels. In Spain and Portugal, cost competitiveness relative to the rest of the euro area would need to improve by about 30%, and by more than twice that in Greece. In peripheral countries, a combination of structural reforms to boost productivity and enhance the flexibility of labour markets, ambitious fiscal consolidation and reductions in labour taxes could substantially facilitate the rebalancing process and reduce the extent to which the burden of adjustment is reliant on further prolonged demand weakness. Surplus and/or strong competitiveness countries could help by likewise making labour and product markets more flexible, accepting above-normal inflation for an extended period and boosting demand, perhaps through reduced fiscal austerity.

*JEL classification codes:* F32; F34; E61; J31.

*Key words:* euro area; imbalances; periphery; competitiveness; unit labour costs; current account; external debt; Greece; Ireland; Portugal; Spain; Italy; Germany.

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**Options de politiques publiques pour réduire durablement les déséquilibres de la zone euro**

Un cadre économétrique simple est développé qui lie la balance au compte courant des pays de la zone euro à la compétitivité *intra* et *extra* euro, aux positions cycliques, aux positions budgétaires et au prix du pétrole. Ce cadre est ensuite utilisé pour corriger les balances courantes observées pour le cycle économique et pour illustrer la taille des ajustements additionnels à la compétitivité et/ou aux budgets nécessaires dans la périphérie de la zone euro pour amener les comptes courants structurels à des balances compatibles avec des niveaux durables de dette extérieure nette. L'Espagne et le Portugal nécessiteraient une amélioration de leur compétitivité par rapport au reste de la zone euro de l'ordre de 30%, et la Grèce de plus de deux fois cela. Dans la périphérie de la zone euro, une combinaison de réformes structurelles pour stimuler la productivité et améliorer la flexibilité du marché du travail, de consolidation budgétaire ambitieuse et d'allègement de la taxation du travail pourrait faciliter substantiellement le processus de rebalancement et réduire la mesure dans laquelle le poids de l'ajustement repose sur une faiblesse de la demande prolongée. Les pays en surplus ou avec une forte compétitivité pourraient aider en rendant eux aussi les marchés du travail et des produits plus flexibles, en acceptant une inflation plus élevée que normal sur une longue période et en stimulant la demande, peut-être en atténuant l'austérité fiscale.

*Classification JEL :* F32 ; F34 ; E61 ; J31.

*Mots clefs :* zone euro ; déséquilibres ; périphérie ; compétitivité ; coûts unitaires de main d'œuvre ; compte courant ; dette extérieure ; Grèce ; Irlande ; Portugal ; Espagne ; Italie ; Allemagne.

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## POLICY OPTIONS TO DURABLY RESOLVE EURO AREA IMBALANCES

by

Yvan Guillemette and David Turner<sup>1</sup>

### Introduction and summary

1. The large imbalances that built up in the euro area during the decade or so preceding the start of the global financial and economic crisis -- in relative prices, current accounts, external debt, fiscal deficits and public and/or private debt -- have only partially reversed since then. Moreover, part of this adjustment may be temporary in the sense that it is explained by the depressed state of demand in those economies which have been under most financial stress. This paper explores policy options for a more complete and durable resolution of these imbalances, which is a pre-requisite for ending the threat of a break-up in the euro area.

2. This paper develops and applies a simple analytical empirical framework to identify the nature and scale of possible policy responses to reduce imbalances within the euro area. It focuses on Greece, Portugal, Spain, Ireland and Italy -- those euro-area countries most under financial market pressure -- which are hereafter sometimes referred to as “peripheral” countries, with the rest of the euro area designated as such or as “core” countries. This is not to say that these five countries are alone responsible for euro area imbalances or their resolution, nor to suggest that their situations are identical. Also, the simple framework used here does not allow for the likely interaction between policy channels, and omits important channels such as financial-sector policy in which reforms are necessary and ongoing.

3. The main findings are as follows:

- There have already been large corrections to the current account imbalances that built up during the pre-crisis expansion: the number of euro area countries with current account deficits exceeding 4% of GDP declined from seven just prior to the crisis to one in 2012; and aggregate euro area current account imbalances (measured as the absolute sum of current account balances normalised on GDP) have declined by about one-third since their peak in 2007. Nevertheless, further adjustment will be required, both because part of the reduction in the current account deficits of peripheral countries is cyclical, the result of very depressed demand conditions, and because except in Italy, external indebtedness has continued to increase.

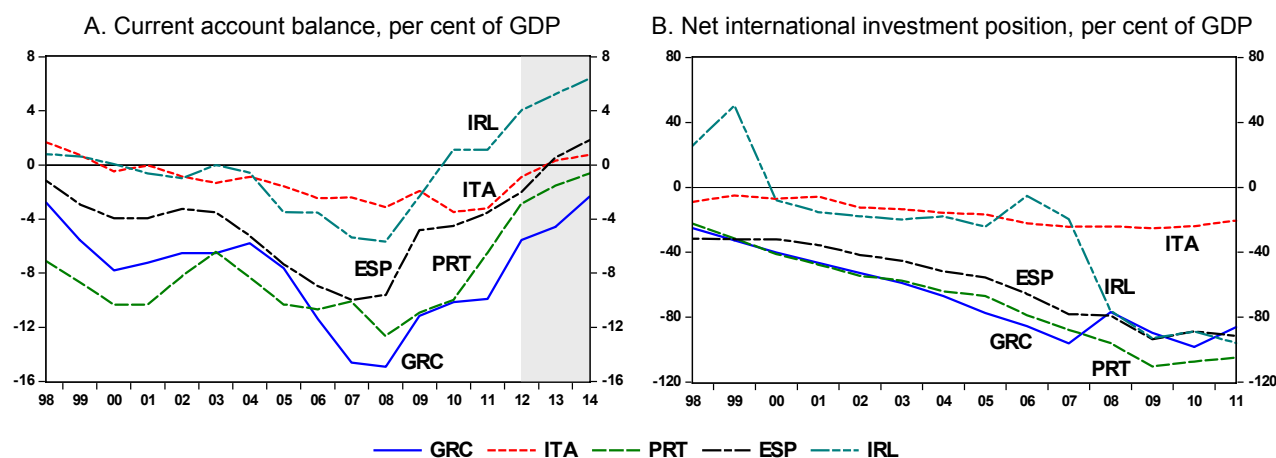
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1. Respectively Economist and Head of Division in the Macroeconomic Analysis Division of the OECD Economics Department. The views expressed in this paper are those of the authors and not necessarily those of the OECD or its member countries. Without implicating them, the authors wish to thank Nigel Pain, Claude Giorno, Jean-Luc Schneider, Jorgen Elmeskov, Sebastian Barnes, Paul Van den Noord, David Carey, Cyrille Schwellnus, Volker Ziemann, Henrik Braconier, Andres Fuentes and Pier Carlo Padoan for comments on earlier drafts, Jérôme Brézillon for calculating measures of *intra* and *extra* euro area relative unit labour costs and Diane Scott for assistance in preparing the document.

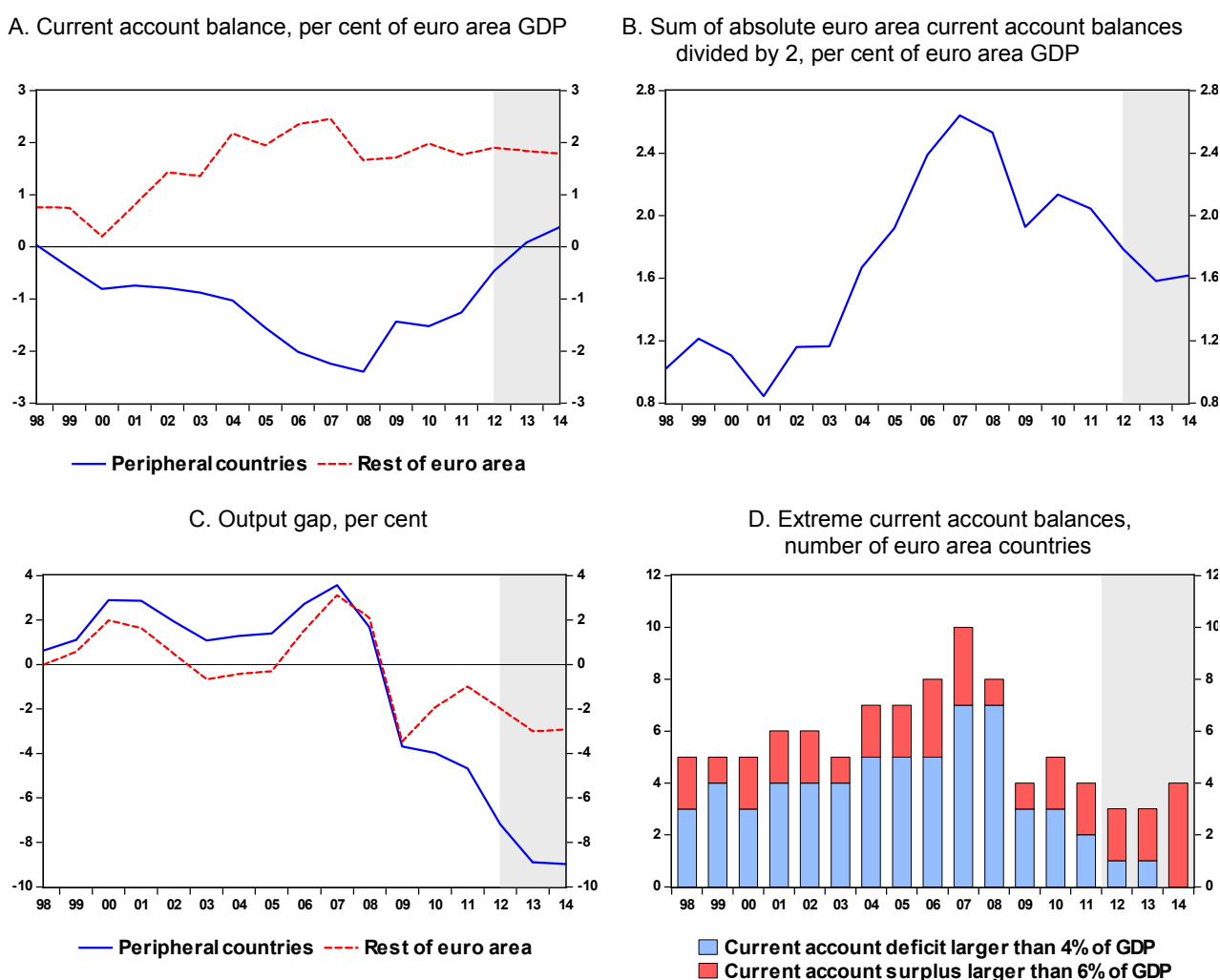
- One of the main drivers of current account balances is changes in competitiveness. For Spain and Portugal, the current balance changes required to reduce net external debt to 35% of GDP over 20 years would require improvements in cost competitiveness against the rest of the euro area of about 30%, and by more than double that for Greece. Currently, the main adjustment mechanism consists of depressed demand in peripheral countries, with large output gaps and high unemployment putting downward pressure on wages and prices. Relying only on this mechanism for the rest of the required adjustments is neither realistic nor desirable. It would help if at least part of the necessary competitiveness adjustments occurred in core countries. For example, a 23% increase in Germany's unit labour costs relative to the rest of the euro area would be needed to restore German competitiveness to the level prevailing at the creation of the euro.
- In both core and peripheral countries, labour and product market reforms to make wages and prices more responsive to demand conditions would facilitate the necessary relative cost/price adjustments. There is considerable scope for such structural reforms in many of the euro area countries where competitiveness needs to improve most.
- In peripheral countries, structural reforms to boost productivity would most likely be reflected in improved competitiveness given the depressed demand conditions prevailing there. Tax cuts on labour, with compensating increase in other taxes such as property or value-added taxes, could also directly, if only temporarily, reduce unit labour costs. There is ample scope for such "fiscal devaluation" in Italy, Greece, Portugal and Spain, where social security and social taxes account for a relatively high share of total taxation. Even a temporary effect from fiscal devaluation would be useful while waiting for the more durable effects of structural reforms.
- Once recoveries are under way, further fiscal consolidation in peripheral countries would help reduce current account deficits. In Greece, Ireland and Portugal, targeting gross public debt-to-GDP ratios of 60% could reduce current account deficits by 1½ to 2½ percentage points of GDP according to the model used here, and possibly by more.
- In surplus and/or strong competitiveness countries, accepting above-normal inflation for an extended period and boosting demand, perhaps through reduced fiscal austerity, would reduce the extent to which the burden of adjustment is reliant on further prolonged demand weakness in peripheral countries.
- A depreciation of the single currency would help adjustment, but only marginally.

#### **The build-up of imbalances and the partial correction since the beginning of the crisis**

4. In the period leading to and after the introduction of the euro in 1999, interest rates in peripheral euro area countries fell dramatically as foreign investors, notably investors from core euro area countries, rushed to invest there, assuming that not only exchange rate risks, but also sovereign default risks, had largely been eliminated by the currency block. The counterparts to these large capital inflows were large current account deficits in peripheral countries, notably in Greece, Ireland, Portugal, Spain and, to a lesser extent, Italy (Figures 1A and 2A). Aggregate euro area current account imbalances (measured as the sum of absolute euro area current account balances, divided by two) increased from 1% of area-wide GDP in 1998 to 2.6% in 2007 just prior to the crisis (Figure 2B). As a result of continued large current account deficits, the net international investment positions of peripheral countries have deteriorated substantially (Figure 1B). Except in Italy, net external debt in peripheral countries is now higher than 80% of GDP.

**Figure 1. External imbalances in the periphery**

Source: OECD Economic Outlook 92 database, European Commission and Secretariat calculations.

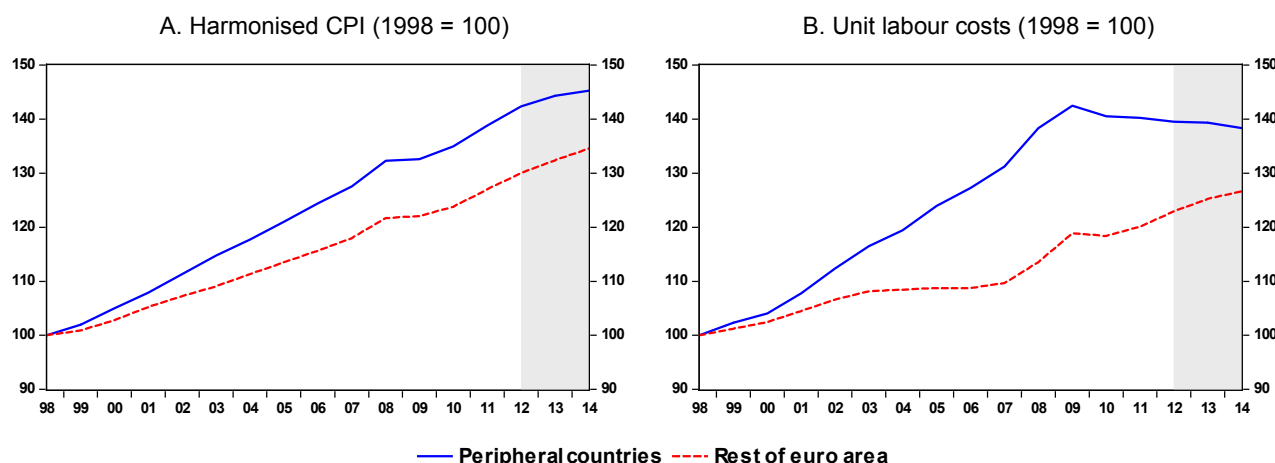
**Figure 2. Current account imbalances in the euro area**

Source: OECD Economic Outlook 92 database and Secretariat calculations.



5. Large capital inflows from the core and low interest rates fuelled credit growth<sup>2</sup> and investment booms in the periphery, notably housing bubbles in Spain and Ireland, shifting resources from tradable to non-tradable sectors and bidding up wages and prices, as reflected in gradual divergence of relative cost and price levels between the core and the periphery (Figures 3A and 3B). Said otherwise, because peripheral euro area countries have fixed exchange rate with core countries, the needed real exchange rate adjustments could not occur through nominal exchange rate appreciation, but took place instead through faster domestic price inflation in the periphery than in the core.<sup>3</sup> Furthermore, as prices rose faster in peripheral than in core countries, their real interest rates fell relative to those in the rest of the euro area, encouraging still more borrowing.

**Figure 3. Relative price levels**



Source: OECD Economic Outlook 92 database and Secretariat calculations.

6. Not only private but public sector borrowing was encouraged by the low interest rate environment in the periphery, particularly in Greece. But everywhere, the fiscal windfalls of the pre-crisis expansion were largely spent rather than saved and, not surprisingly, fiscal balances in peripheral countries deteriorated substantially during the worst of the crisis in 2008 and 2009, putting debt ratios on steep upward paths (Figures 4A and 4B). Today, the countries with the largest current account deficits also tend to be the ones with the largest fiscal deficits.

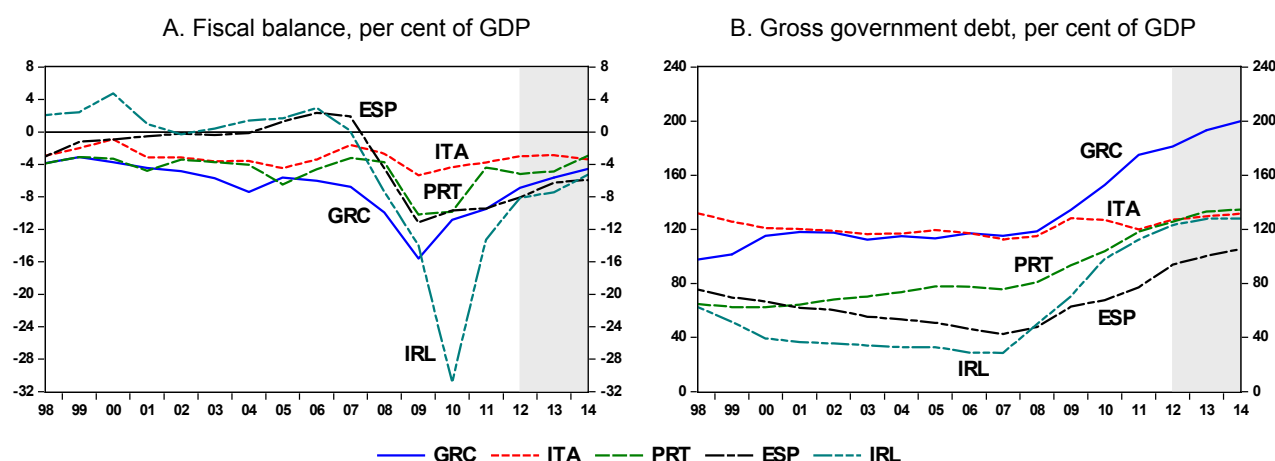
7. The unravelling of housing bubbles in several European countries and in the United States starting in 2007, together with the global economic and financial crisis that ensued, provoked capital account reversals in peripheral euro area countries that had large capital account surpluses. Capital inflows into the periphery are now lower, probably quite permanently, as risk perceptions have re-adjusted to the unfinished status of the monetary union. Therefore, the current account deficits that peripheral countries can sustain are lower as well. But peripheral countries' nominal exchange rates can no more adjust now to allow real exchange rate depreciation than they could adjust during the pre-crisis expansion. Thus, so far, it

2. According to World Bank figures, from 1998 to 2007, loans to the private sector from domestic banks and other credit institutions increased from 32% to 84% of GDP in Greece, 81% to 184% in Ireland, 92% to 160% in Portugal, 81% to 169% in Spain and 56% to 97% in Italy (Lane, 2012).

3. While trend increases in unit labour costs relative to the rest of the euro area had been going on since the late 1980s in Greece and Portugal, indicating that they may be largely due to Balassa-Samuelson-type effects, they coincide well with the currency union in the case of Spain, Ireland and Italy, suggesting that the low interest rate environment brought about by the union also had a lot to do with divergences in competitiveness.

is largely quantities that have adjusted, with domestic demand in peripheral countries collapsing by enough to reduce imports to levels consistent with reduced net capital inflows. Unfortunately, these lower domestic demand levels are not consistent with full employment at current relative prices, leading to widespread job losses and other idle resources. In addition to high unemployment rates, the collapse of domestic demand in peripheral countries is visible in their large estimated output gaps (Figure 2C), as well as sharply lower import volumes and smaller current account deficits (Figure 1A). The number of OECD euro-area countries with current account deficits exceeding 4% of GDP (a threshold used by the European Commission Imbalances Scoreboard, European Commission (2011)) declined from seven just prior to the crisis, to one in 2012 (Figure 2D). Aggregate euro area current account imbalances have declined by about one-third since their peak in 2007 (Figure 2B). Severe fiscal austerity, rendered necessary by the sovereign debt crises that have accompanied capital account reversals, has added to domestic demand weakness, and although fiscal positions have improved noticeably, peripheral countries still have large fiscal deficits and public debt ratios continue to increase (Figures 4A and 4B).

**Figure 4. Fiscal imbalances in the periphery**



Source: OECD Economic Outlook 92 database and Secretariat calculations.

8. Eventually, relative price adjustments must occur within and between euro area countries so that domestic and external demands in peripheral countries are consistent with full employment and lower fiscal and current account deficits. These adjustments have already begun in most peripheral countries. For instance, by the end of 2012, total-economy relative unit labour costs were projected to have fallen by about 20% compared to their recent maximums in Ireland and Greece, and by 13% in Spain. Little correction has occurred in Portugal, and in Germany relative unit labour costs have increased by only about 3½ per cent compared to their minimum in 2008. No cost competitiveness adjustment has occurred in Italy. In the general narrative above, however, Italy is probably the country which differs the most from the other four peripheral countries: it did not have large capital inflows during the pre-crisis period, it has had the smallest current account reversal since the crisis began, its net external debt is comparatively low and its fiscal deficit is the smallest. The deterioration in its cost competitiveness relative to the rest of the euro area since the formation of the currency block seems due in large part to perennially low productivity growth. Nevertheless, since Italy now suffers from a similar lack of competitiveness, high public debt and elevated government bond yields as the other four countries, it could be helped by some of the same policy reforms.

9. To study the link between relative price adjustments and the sustainability of peripheral countries' external positions more systematically, the next section develops and applies a simple model for the determination of current account balances in euro area countries.

### A simple econometric framework

10. The analysis makes use of a simple econometric framework in which current account balances in euro area countries are linked to economies' cyclical positions, total-economy unit labour costs relative to other euro area economies and, separately, to economies outside the euro area, structural fiscal balances and the oil price. Specifically, equation [1] for current account balances as a percentage of GDP (CBGDPR) for 12 euro-area countries<sup>4</sup> is estimated:

$$\begin{aligned}\Delta CBGDPR_{i,t} = & \alpha_i + \beta_1 \Delta[open_{i,t}^{world} \cdot RGAP_{i,t}] + \beta_2 open_i^{euro} \cdot 100 \Delta \log RULC\_EA15_{i,t} \\ & + \beta_3 open_i^{row} \cdot 100 \Delta \log RULC\_ROW_{i,t} + \beta_4 \Delta[open_{i,t}^{world} \cdot RFISCAL_{i,t}] \\ & + \beta_5 oilintensity_i \cdot 100 \Delta \log POIL_{i,t} + \varepsilon_{i,t}\end{aligned}\quad [1]$$

where  $RGAP_{i,t}$  is the relative output gap of country  $i$  in year  $t$  measured as the difference between a country's output gap ( $GAP$ ) and an average of its worldwide trading partners' output gaps weighted by trade shares.

$$\begin{aligned}RGAP_{i,t} = & GAP_{i,t} - XGS_{i,t}/(XGS_{i,t} + MGS_{i,t}) \cdot \sum_{j \neq i} (EXPORTSHARE_{i,j} \cdot GAP_{j,t}) \\ & - MGS_{i,t}/(XGS_{i,t} + MGS_{i,t}) \cdot \sum_{j \neq i} (IMPORTSHARE_{i,j} \cdot GAP_{j,t})\end{aligned}\quad [2]$$

$XGS$  is the value of exports and  $MGS$  the value of imports.  $EXPORTSHARE_{i,j}$  ( $IMPORTSHARE_{i,j}$ ) is country  $j$ 's share of country  $i$ 's total exports (imports) of goods and services based on a fixed 2005 world trade matrix (see Brézillon, Guichard and Turner, 2010). In the regression, the relative gap measure is scaled by world trade openness ( $open^{world}$ ) to account for the greater expected impact of differences in cyclical positions between a country and its trading partners when that country is more opened to trade. World trade openness is measured as the ratio of the sum of exports and imports to the sum of output ( $GDP$ ) and imports, scaled to average one in 2005 across the euro area countries included in the regression.<sup>5</sup>

$$open_{i,t}^{world} = (XGS_{i,t} + MGS_{i,t})/(GDP_{i,t} + MGS_{i,t})\quad [3]$$

11.  $RULC\_EA15$  measures a country's cost competitiveness relative to the 14 other OECD members of the euro area. It is an index of unit labour costs relative to the rest of the euro area using double export weights, reflecting not only competition in the home markets of the 14 euro area competitors, but also third-market export competition.<sup>6</sup> It is re-scaled to be equal to 100 in 1998, just before the introduction of

4. All OECD countries in the euro area excluding Estonia, Luxembourg and Slovakia.

5. The standard deviation is 0.3. Greece, France and Italy have the lowest openness (about 0.7) and Ireland the highest (1.5).

6. Total-economy unit labour costs are defined as total employee compensation (wages and employer social contributions) divided by the volume of output. The double-weighting scheme takes into account competition between a country's exports and the domestic producers of its export markets, but also competition between a country's exports and other countries' exports to these markets, hence the "double" weight. For details on the methodology, see Durand, Simon and Webb (1992).

the euro (Figure 5). In the regression, it is weighted by a country's openness to the rest of the euro area ( $open^{euro}$ ). Openness to the rest of the euro area is calculated as in [3] but using only imports and exports from/to the euro area in the numerator. It is based on a fixed 2005 bilateral trade matrix so it does not vary through time. It is also scaled to average one across the euro area countries included in the regression.<sup>7</sup>

12. *RULC\_ROW* measures a country's cost competitiveness relative to the rest of the world, excluding other euro area countries (Figure 5). It is constructed using the same methodology as *RULC\_EA15* except that the group of comparator countries are OECD countries not in the euro area, as well as China, India, Indonesia, Russia, Brazil, South Africa and a few others (34 countries in total). In the regression, it is weighted by a country's openness to the rest of the world (*i.e.* to countries not in the euro area). Openness to the rest of the world ( $open^{row}$ ) is calculated as in [3] but using only imports and exports from/to countries outside of the euro area in the numerator. It is based on the fixed 2005 bilateral trade matrix mentioned above and so it does not vary through time. This openness measure is also scaled to average one across the euro area countries included in the regression.<sup>8</sup>

13. *RFISCAL* measures a country's fiscal position relative to that of its trading partners. It is calculated in the same way as the relative output gap but using underlying fiscal balances as a percentage of GDP (*NLGQU*) in place of output gaps. In the regression, this fiscal gap measure is weighted by world trade openness, the same weight used for the relative output gap measure.

$$RFISCAL_{i,t} = NLGQU_{i,t} - XGS_{i,t}/(XGS_{i,t} + MGS_{i,t}) \cdot \sum_{j \neq i} (EXPORTSHARE_{i,j} \cdot NLGQU_{j,t}) \\ - MGS_{i,t}/(XGS_{i,t} + MGS_{i,t}) \cdot \sum_{j \neq i} (IMPORTSHARE_{i,j} \cdot NLGQU_{j,t}) \quad [4]$$

14. *POIL* captures the influence of the oil price on the current balance. It is calculated using the Brent price of a barrel of oil in US dollars (*WPBRENT*), the USD/EUR nominal exchange rate (*EA15\_EXCH*) and a country's GDP deflator (*PGDP*). In the regression, this real local-currency oil price is weighted by a measure of the difference between a country's oil consumption and oil production intensities, measured in tonnes of oil per million US dollars of output using 2009 data from International Energy Agency (2011). Net oil consumption intensity (*oilintensity*) is then scaled to average one across euro area countries included in the regression.<sup>9</sup>

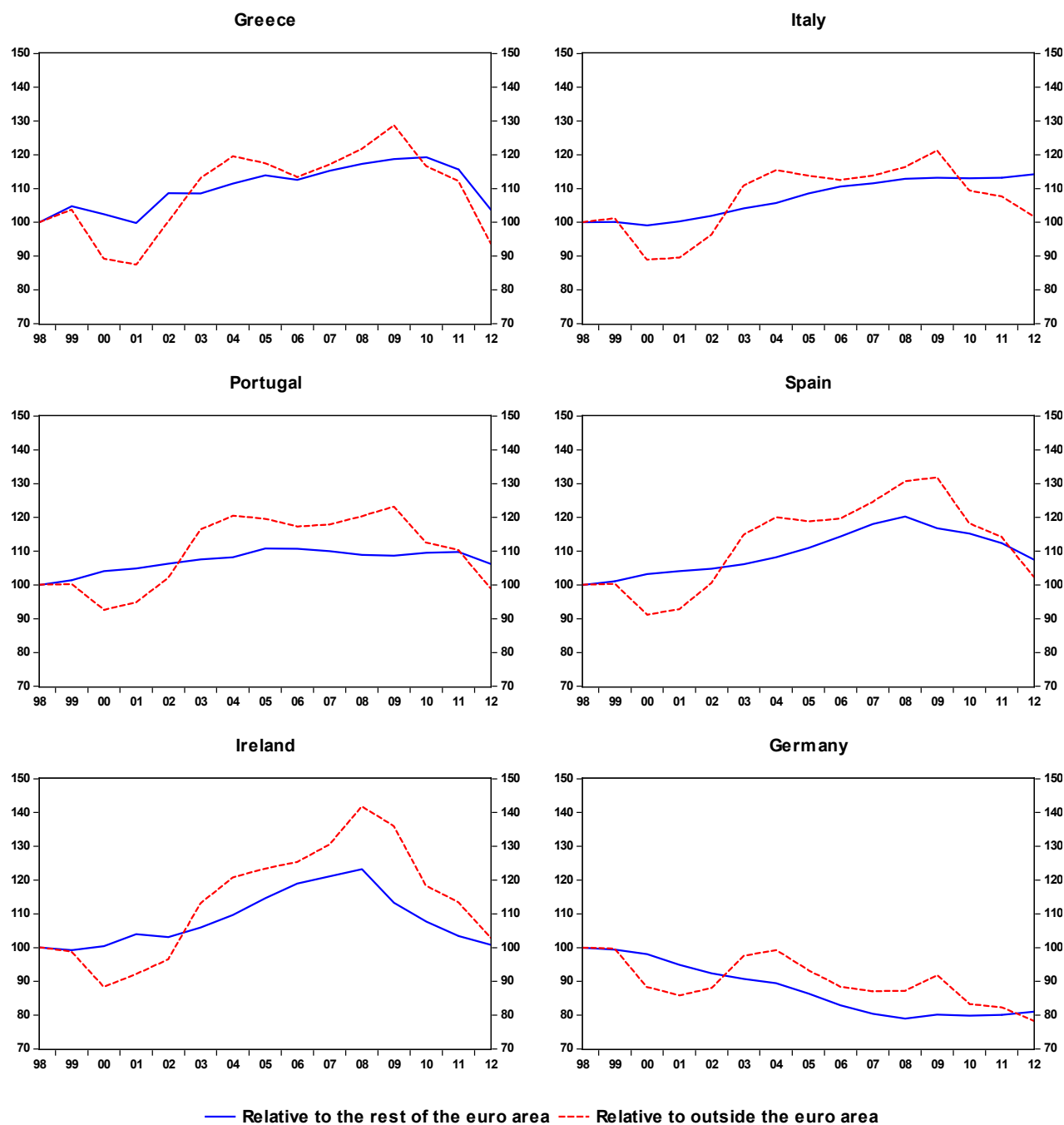
$$POIL_{i,t} = WPBRENT_t/EA15\_EXCH_t/PGDP_{i,t} \quad [5]$$

15. Finally,  $\alpha_i$  are country-specific constants that capture any trend increase or decrease in current account balances over the estimation period not explained by the explanatory variables, and  $\varepsilon$  is an error term.

- 
7. The standard deviation is 0.2. Greece has the lowest openness to the euro area (about 0.7) and Belgium the highest (1.5).
8. The standard deviation is 0.2. Portugal has the lowest openness to countries outside the euro area (0.7) and Ireland the highest (1.4).
9. The standard deviation is 0.2. Italy has the lowest oil intensity (0.8) and Belgium the highest (1.3).

Figure 5. Relative unit labour costs of selected euro area countries

1998 = 100



Source: OECD Economic Outlook 92 database and Secretariat calculations.

16. Equation [1] is estimated for the 12 euro area countries simultaneously with the Seemingly Unrelated Regression method, allowing for common coefficients across countries and using available data from 1998 to 2011 from the OECD Economic Outlook 92 database. Estimation results appear in Table 1. Coefficient estimates suggest that, at average trade openness to the world, a one percentage point increase in a country's relative output gap reduces its current account balance by about 0.3 percentage point of GDP.<sup>10</sup> At average openness to the rest of the euro area, a 10% increase in unit labour costs relative to the rest of the euro area reduces the current account balance by 1.6 percentage points of GDP.<sup>11</sup> At average openness to countries outside the euro area, a 10% increase in unit labour costs relative to non-euro countries lowers the current account balance by 0.5 percentage point of GDP.<sup>12</sup> At average openness to the world, a 1 percentage point of GDP increase in a country's relative fiscal position increases its current account balance by about 0.2 percentage point of GDP.<sup>13</sup> Finally, a 10% increase in the real local-currency price of oil lowers the current account balance by approximately 0.3 percentage point of GDP for a country at average oil intensity.<sup>14</sup>

**Table 1. Equation [1] estimation results**

Regressor	Coefficient estimate
Relative output gap ( $\beta_1$ )	-0.273*
Unit labour costs relative to euro area ( $\beta_2$ )	-0.162*
Unit labour costs relative to outside the euro area ( $\beta_3$ )	-0.050*
Relative fiscal position ( $\beta_4$ )	0.208*
Real local-currency oil price ( $\beta_5$ )	-0.025*

\* Statistically significant at the 1% level.

Source: OECD Economic Outlook 92 database and Secretariat calculations.

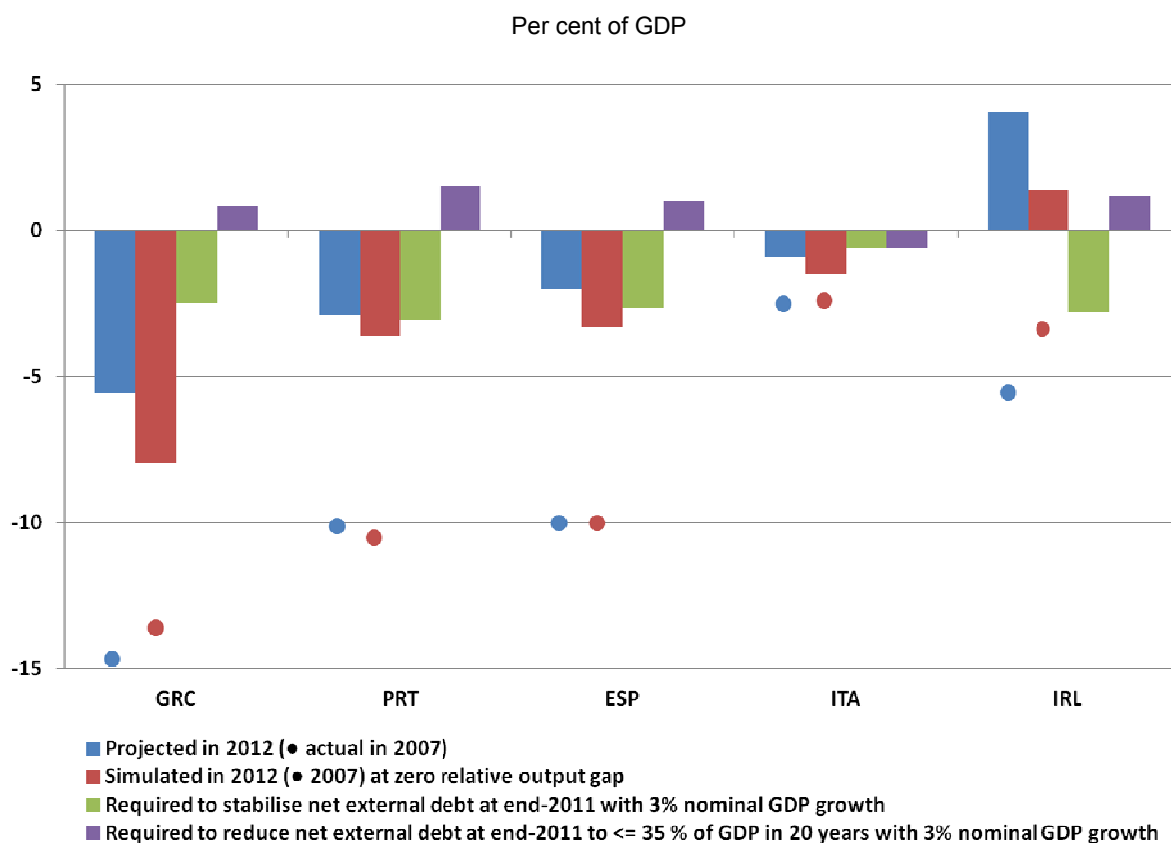
17. That relative competitiveness is treated as an “independent” variable in this framework, while the current account balance is the “dependent” variable, is not meant to suggest that the causation runs one way only. Even if, as argued above, current account imbalances were primarily a reflection of capital flows, not of a lack of competitiveness *ex ante*, capital inflows in peripheral countries contributed to cost inflation, making these countries less competitive *ex post*. Also, it is still the case that a sustainable reduction of current account imbalances will need to be accompanied by relative price adjustments. So

- 
10. At minimum openness to the world (Greece, France and Italy), this corresponds to an increase of 1.4 percentage point in the output gap, with no change in trading partners' output gaps. At maximum openness (Ireland), it corresponds to an increase of 0.7 percentage point in the output gap, all else equal.
11. At minimum openness to the rest of the euro area (Greece), this corresponds to an increase of 14% in unit labour costs relative to the rest of the euro area. At maximum openness (Belgium), it corresponds to an increase of 7% in relative unit labour costs, all else equal.
12. At minimum openness to countries outside the euro area (Portugal), this corresponds to a 14% real appreciation of the euro. At maximum openness (Ireland), it corresponds to a 7% real appreciation of the euro, all else equal.
13. At minimum openness (Greece, France and Italy), this corresponds to an increase of 1.4 percentage points in the underlying fiscal balance, with no change in trading partners' underlying fiscal balances. At maximum openness (Ireland), it corresponds to an increase of 0.7 percentage point in the underlying fiscal balance, all else equal.
14. At minimum net oil consumption intensity (Italy), this corresponds to a 13% increase in the real local-currency price of oil. At maximum oil intensity, it corresponds to an 8% increase in the oil price.

while calculations using estimates from the above framework are illustrative only, they suggest the following:

- The euro area countries that ran the largest external deficits in the pre-crisis period have experienced the most severe downturns and a significant part of the improvement in their external balances since 2007 is related to a collapse in economic activity. For instance, correcting for its much weaker cyclical position as compared with its trading partners, Spain's cyclically-adjusted current account deficit in 2012 is estimated to be 3.3% of GDP (as opposed to a projected 2%), with similar adjustments for Greece, Ireland, Italy and Portugal (Figure 6).<sup>15</sup> Thus, a generalised recovery in the euro area, with no further changes in competitiveness and relative domestic demand, would imply some re-emergence of current account imbalances. That being said, most of the improvement in euro area current account imbalances since the onset of the crisis appears to be structural.

**Figure 6. Actual, cyclically-adjusted and sustainable current account balances in euro area periphery**

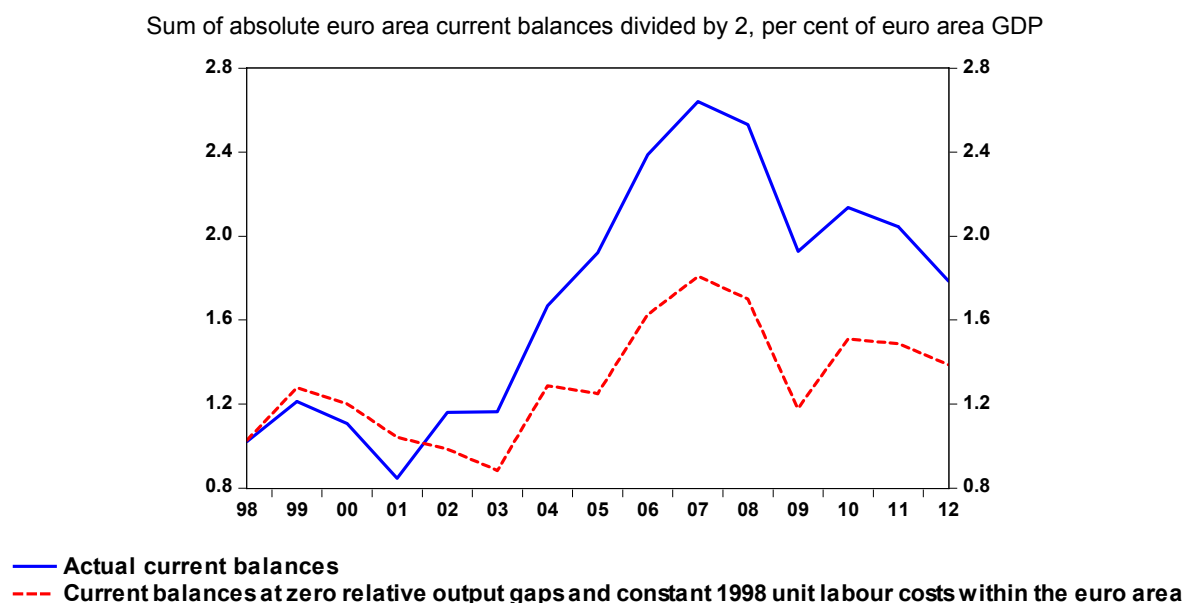


Source: OECD Economic Outlook 92 database and Secretariat calculations.

15. Based on the latest data releases, the OECD Economic Outlook 92 projection of Greece's current account balance for 2012 (-5.5% of GDP) may be too pessimistic. Recent debt restructuring agreements may have permanently reduced the investment income deficit more than projected, for instance. To the extent that the current balance in 2012 (and subsequent years) will turn out better than expected for structural reasons, the competitiveness improvements needed for external sustainability may be lower than reported in the text.

- Much of the widening of current account imbalances between the introduction of the single currency and the start of the crisis is associated with divergences in relative cost competitiveness within the euro area. In a simulation that maintains relative unit labour costs within the euro area at their 1998 levels, aggregate current account imbalances (measured as the sum of absolute current balances of individual euro area countries divided by two) increase from 1% of euro area GDP in 1998 to a maximum of 1.8% in 2007 just prior to the crisis, as compared with an actual maximum of 2.6% (Figure 7).

**Figure 7. Euro area current account imbalances with no divergence in cost competitiveness within the area**



Source: OECD Economic Outlook 92 database and Secretariat calculations.

- Between 2009 and 2011, the euro depreciated by nearly 9% in real effective terms. It is now worth about the same as it was in 1998. Depreciation seems to have contributed little to reducing the current account deficits of deficit countries since 2009, and continued depreciation -- improvements in competitiveness relative to countries outside the euro area -- might do little to help aggregate imbalances within the euro area as it would probably boost the pre-existing imbalances in surplus countries about as much as it would reduce the imbalances in deficit countries. Even so, euro depreciation would contribute towards the external sustainability of peripheral countries, although estimates from the above framework suggest that the boost to the current account from an improvement in competitiveness relative to countries outside the euro area is only about one-third of that from an equivalent percentage improvement in competitiveness relative to countries within the area.

### The scale of the external rebalancing challenge

18. Since 2007, total-economy relative unit labour costs of euro area countries under financial market stress have come down, bringing current account deficits down with them. Greece and Ireland are already back to their 1998 competitiveness levels relative to the rest of the euro area – that is, back to the level prevailing at the beginning of monetary union. Portugal and Spain need only an extra 5-7% reduction in relative unit labour costs to reach this benchmark. Italy has not reduced relative unit labour costs since the crisis, and they remain 15% higher than in 1998, though a small decline in absolute unit labour costs is projected to occur in 2014. Much of the falls in total-economy unit labour costs may be due to cuts in



public-sector employment and wages, however, with smaller adjustments in tradable sectors and thus in external competitiveness. Despite relative competitiveness of countries under market pressure approaching 1998 levels, not only do cyclically-adjusted imbalances remain, but external debt has increased substantially in these countries. Hence, simply attaining or maintaining relative competitiveness positions within the euro area at 1998 levels would probably be insufficient to restore sustainable external positions.

19. A weak notion of current account sustainability might call for lowering the current account deficit to a level that stabilises net external debt as a percentage of GDP. According to the econometric framework set out above, and if the adjustment is to occur only through cost competitiveness within the euro area, Italy, Portugal and Spain would require between 3% and 7% additional gains in competitiveness relative to the rest of the euro area to meet this objective (Table 2). Greece would need an extra 50% competitiveness boost. If instead adjustments were to occur only through cost competitiveness relative to the rest of the world, that is to say through a real depreciation of the euro, Italy, Portugal and Spain would need an extra 15-20% boost to competitiveness, reflecting the smaller estimated impact of extra-area competitiveness on current balances in the econometric equation (see Table 1).

**Table 2. Adjustments needed to stabilise net external debt as a share of GDP<sup>1</sup>**

	Required adjustment to current account balance from 2012 cyclically-adjusted estimate	Competitiveness adjustment needed relative to rest of euro area, all else equal	Competitiveness adjustment needed relative to outside the euro area, all else equal
	<i>Percentage points of GDP</i>	<i>Per cent change in relative unit labour costs</i>	
Italy	↑ 0.9	-7.0	-21.1
Portugal	↑ 0.6	-3.5	-15.4
Spain	↑ 0.6	-4.4	-15.2
Ireland	No adjustment needed		
Greece	↑ 5.4	-48.7	Impossible (-123.9)

1. Using the stock-flow equation  $[niip_t = niip_{t-1}/(1+g) + ca]$  where  $niip$  is the net international investment position as a share of GDP,  $g$  is the constant nominal growth rate of GDP and  $ca$  is the current account balance as a share of GDP, the first column reports the immediate current account balance adjustment needed (from the estimated cyclically-adjusted balance in 2012) to stabilise net external debt at its end-2011 value, assuming constant nominal GDP growth of 3%. Valuation effects (arising when a country's external assets and liabilities are not denominated in the same currency) are ignored in these calculations, but they could be significant. The next two columns report the immediate adjustment needed to relative unit labour costs in 2012 to achieve this stabilisation based on the parameters estimated from equation [1]. The larger the computed adjustment, the less reliable the estimate becomes because it relies on a linear extrapolation and when this mechanical calculation yields a required negative adjustment in excess of 100%, it is deemed "impossible".

Source: OECD Economic Outlook 92 database and Secretariat calculations.

20. A stronger notion of current account sustainability might call for reducing net external debt below a maximum level. Although the choice of such a level is somewhat arbitrary, the computations here use 35% of GDP, corresponding to the threshold used by the European Commission in its 'Imbalances Scoreboard' (European Commission, 2011), to be attained within 20 years. Save for Italy, which is already within that threshold, peripheral countries need current account surpluses between 1% and 2% of GDP to attain this objective, assuming nominal GDP growth of 3% (Figure 6). Among other peripheral countries, only Ireland currently has a current account balance that, once adjusted for its relative cyclical position, is consistent with bringing net external debt down to 35% of GDP by 2031. In the case of Portugal, Spain and Greece, unpalatable adjustments to cost competitiveness within the euro area would be required to obtain the needed current account adjustments, suggesting that developments other than relative cost adjustments, perhaps including additional rounds of debt restructuring, would be necessary to eventually bring net external debt down to the 35% threshold (Table 3).

21. Being based on a simplistic framework, this assessment leaves out important considerations in the sustainability of external positions, such as the interest rate paid on foreign liabilities. It also abstracts from the contribution that fiscal consolidation will make to external adjustment, which is set to be large in the countries concerned. For many reasons, however, these calculations may under-estimate the needed gains in competitiveness in the periphery. First, they are static calculations that assume an immediate improvement in competitiveness, current balances, and an immediate stabilisation or reduction of net external debt from its end-2011 value. In reality, these adjustments would take time, net external debt would in the meantime keep increasing and the eventual competitiveness improvements needed would be even greater. Second, the calculations assume 3% nominal GDP growth rates, but no peripheral country is projected to grow at this rate in 2013 and 2014, so under current conditions the current account balances required to stabilise net external debt are even higher. Third, they ignore non-price factors and thus any negative hit to the competitiveness of these countries associated with the emergence of China and Eastern Europe for reasons other than costs. Finally, though this point does not undermine the calculations themselves, it must be recognised that gains in relative competitiveness in the periphery imply an equivalent loss of competitiveness elsewhere. Hence, the ease with which competitiveness would adjust in peripheral countries depends in part on market and policy responses in other countries.

**Table 3. Adjustments needed to lower net external debt at end-2011 to 35% of GDP over 20 years<sup>1</sup>**

	Required adjustment to current account balance from 2012 cyclically-adjusted estimate	Competitiveness adjustment needed relative to rest of euro area, all else equal	Competitiveness adjustment needed relative to outside the euro area, all else equal
	<i>Percentage points of GDP</i>	<i>Per cent change in relative unit labour costs</i>	
Italy	Net external debt already less than 35% of GDP		
Portugal	↑ 5.1	-31.3	Impossible (-139.3)
Spain	↑ 4.3	-30.7	Impossible (-107.4)
Ireland	No adjustment needed		
Greece	↑ 8.7	-78.7	Impossible (-200.2)

1. Using the stock-flow equation  $[niip_t = niip_{t-1}/(1+g) + ca_t]$  where  $niip$  is the net international investment position as a share of GDP,  $g$  is the constant nominal growth rate of GDP and  $ca$  is the current account balance as a share of GDP, the first column reports the immediate current account balance adjustment needed (from the estimated cyclically-adjusted balance in 2012) to lower net external debt to 35% of GDP by 2031, assuming constant nominal GDP growth of 3%. Valuation effects (arising when a country's external assets and liabilities are not denominated in the same currency) are ignored in these calculations, but they could be significant. The next two columns report the immediate adjustment needed to relative unit labour costs in 2012 to achieve this adjustment based on the parameters estimated from equation [1]. When this mechanical calculation yields a required negative adjustment in excess of 100%, it is deemed "impossible".

Source: OECD Economic Outlook 92 database and Secretariat calculations.

## Policies to ease relative price adjustments

22. A number of policy approaches could help reduce adjustment costs during the resolution of imbalances: *i)* boost domestic demand and allow higher-than-normal inflation in core euro area countries; *ii)* undertake labour market reforms to make wages more responsive to the state of the economy; *iii)* undertake reforms to boost productivity for a given wage level; *iv)* undertake ambitious fiscal consolidation and reforms to the tax mix. Each of these is examined in turn.

### *Boost domestic demand and allow higher-than-normal inflation in core euro area countries*

23. Being "relative" adjustments, changes in competitiveness within the euro area could occur through further reductions in unit labour costs in countries under financial stress, but they could just as well occur through increases in unit labour costs in the rest of the euro area, or a combination of the two. A

23% increase in unit labour costs relative to the rest of the euro area would be needed in Germany to restore its 1998 competitiveness level, for instance. Economic theory, especially that of a Keynesian or New Keynesian bent, suggests that it is more difficult and costly to adjust prices down than up. In particular, a result long accepted in macroeconomics is that wages are downward sticky.<sup>16</sup> It is this downward stickiness that is making reductions in unit labour costs in the periphery particularly costly in terms of unemployment. The previous section showed that remaining adjustment costs are likely to be substantial before external balances are sufficient to reduce net external debt to sustainable levels, even if much adjustment has already occurred. Surplus countries could considerably reduce the need for deflation in peripheral countries, and the associated hardship, by rebalancing spending toward domestic demand and having higher-than-normal wage growth for an extended period.

24. If wage growth continued to differ substantially between deficit and surplus countries to obtain the large competitiveness adjustments still necessary for peripheral countries to regain external sustainability, then it is reasonable to expect continued output price inflation differentials.<sup>17</sup> Making the further simplifying assumption that consumer price inflation, which is what matters for monetary policy, roughly follows output price inflation,<sup>18</sup> and given that the ECB targets close to 2% inflation on average for the euro area, it follows that consumer price inflation substantially above 2% in core euro area countries would facilitate adjustment, otherwise countries requiring competitiveness gains would have to deflate even more for the adjustments to occur and euro area-wide inflation would fall too low relative to the ECB target.

#### ***Easing competitiveness adjustments by reducing wage stickiness***

25. An estimate of the relationship between economic activity and the speed of competitiveness adjustments in the periphery can be obtained using actual data on the adjustments that have already occurred in four of the peripheral countries since the beginning of the crisis (Figure 8). The relationship suggests that a 1.7-percentage-points negative relative output gap for one year is necessary to reduce unit labour costs relative to the rest of the euro area by 1%. On this basis, the roughly 30% additional declines in relative unit labour costs estimated to be necessary in Portugal and Spain to bring current accounts to positions consistent with reducing net external debt to 35% within 20 years would necessitate additional cumulative relative output gaps of about 50 percentage points. Based on projected relative output gaps for 2013, eight more years of relative economic weakness would be necessary in Spain for the adjustment to be completed, but it would take 14 more years in Portugal (given its smaller projected relative output gap for 2013). These calculations are consistent with activity improving somewhat over the adjustment period to the extent other economies in the world also continue to recover from the crisis, because it is relative and not absolute output gaps that enter the calculations. Also, peripheral countries have already embarked

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16. See Akerlof, Dickens and Perry (1996) for a discussion and Dickens *et al.* (2007) for empirical evidence on wage rigidity and downward inflexibility.

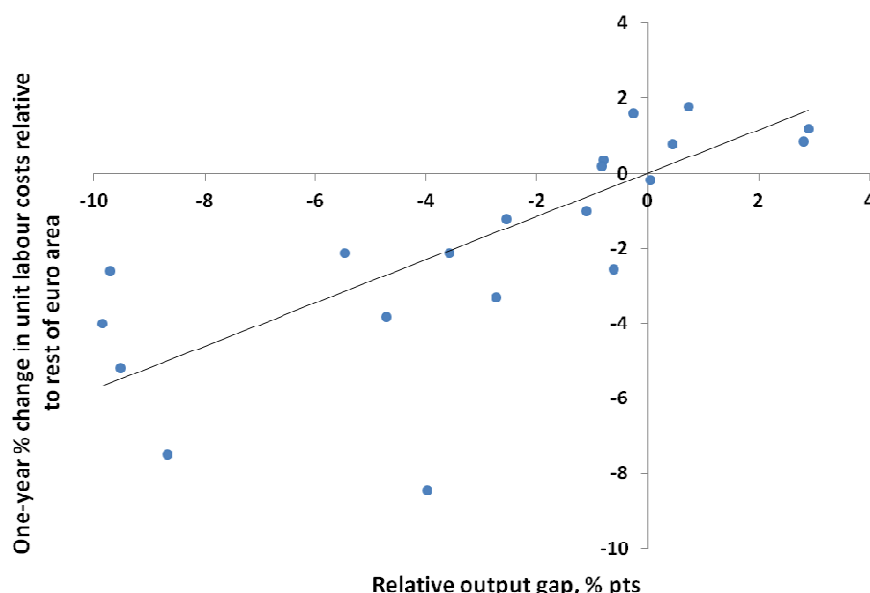
17. The aggregate unit labour cost measure is simply the product of the share of labour in GDP and the GDP deflator. Thus, assuming a constant labour share, the percentage change in relative GDP deflators is equal to the percentage change in relative unit labour costs. This assumption is reasonable because decompositions of unit labour cost growth in peripheral European countries from 1980 to 2007 show that it was driven almost entirely by a rising output price index as opposed to a rising labour share (Felipe and Kumar, 2011). In Ireland, Italy, Spain and Portugal, labour shares remained constant or even declined. In Greece, the labour share increased slightly over the period, but this effect was dwarfed by the rising output price index.

18. This assumption is somewhat heroic given the sometimes large discrepancies between output price and consumer price inflation. Still, over the past two decades, the correlation coefficient between the two is 0.7 to 0.85 for peripheral euro-area countries and 0.7 for the euro area as a whole.

on substantial labour market reforms since 2008, so the pace of adjustment could be higher now than implied by these estimates.

**Figure 8. A simple estimate of the link between economic activity and competitiveness adjustments**

Changes in relative unit labour costs and relative output gap levels in four peripheral countries, 2008-2012<sup>1</sup>

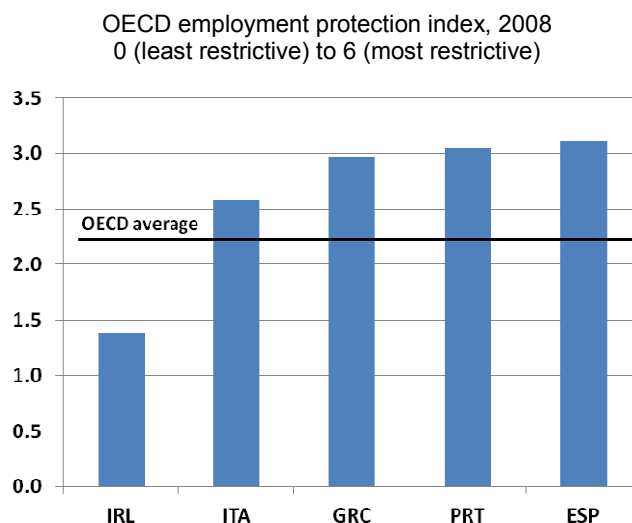


1. 2012 figures are partly based on projections. Outcomes for each of the five years are shown separately, for each of the four countries, for a total of 20 data points. The diagonal line is a least-square regression line with no constant.

Source: OECD Economic Outlook 92 database and Secretariat calculations.

26. This relationship between relative output gaps and changes in relative competitiveness is an average that ignores differences across countries. Yet, price and wage stickiness are related to institutional and structural policies which differ across countries, such as the strength of product and labour market regulation. Studies show that the output/employment costs of reducing inflation tend to be lower in countries that have more flexible labour markets. For example, estimates of the ‘sacrifice ratio’, a related but different relationship between the cyclical position of an economy and inflation (the number of percentage point-years of unemployment in excess of the NAIRU required to achieve a reduction in inflation of one percentage point), have been shown to depend strongly on employment protection laws (e.g. Bowdler and Nunziata, 2010). Based on the latest estimates (for 2008), the restrictiveness of employment protection laws is significantly higher in peripheral euro area countries than on average in the OECD (Figure 9). More timely estimates would no doubt show a reduction given the many reforms that have since taken place, to loosen wage-setting systems for instance (Buti and Turrini, 2012; European Commission, 2012).

27. Although greater labour market dynamism could lead to larger employment losses in the short term, efforts to make labour markets more flexible should continue, for example by easing firing procedures and thus encouraging hiring, by raising retirement ages as part of pension reforms, by allowing for collective bargaining within industries or even firms instead of only on the national level, and by opening up restricted professions, especially in service sectors. Even in surplus countries, more flexible labour markets would help the rebalancing of cost competitiveness across the euro area by facilitating positive wage responses to tightening labour markets when recoveries strengthen.

**Figure 9. Employment protection in peripheral euro area countries**

Source: Venn, D. (2009), "Legislation, collective bargaining and enforcement: Updating the OECD employment protection indicators", *OECD Social, Employment and Migration Working Papers*, No. 89.

### ***Boosting productivity through labour and product market reforms***

28. More broadly, other structural reforms can also help improve competitiveness by boosting productivity. Employment protection legislation reforms, in addition to lowering the employment costs of restoring competitiveness, could raise productivity by between  $\frac{1}{2}$  and  $1\frac{3}{4}$  per cent over 10 years in Italy, Spain, Greece, Portugal and Ireland (Bouis and Duval, 2011). The scope for product market reform in many of the euro area countries where competitiveness needs to improve most is also considerable. OECD estimates suggest that for Italy, Spain, Greece and Portugal, fast implementation of product market reforms could raise productivity by 3-4% over five years and 7-8% over 10 years. For productivity improvements to be reflected in lower unit labour costs, wages would have to rise by less than productivity, but this is more likely to occur in economies where demand conditions are very depressed and unemployment high, as is the case now where financial market pressures are greatest. In addition, labour and product market reforms are complementary: the latter will facilitate the pass-through to lower prices of lower wages (or higher wages in the case of surplus countries). Faster productivity growth, and thus faster nominal GDP growth, would also help reduce public debt/GDP ratios.

### ***Continued fiscal consolidation and changes in the tax mix***

29. The countries with the largest current account deficits also tend to be the ones with the largest fiscal deficits. Ongoing fiscal consolidation in these countries has already reduced current account deficits substantially. For instance, according to the econometric framework set out above, the improvement in Greece's relative fiscal position between 2008 and 2012 explains one-fifth of the increase in its current account balance over the same period (not taking into account any feedback effect of consolidation on activity). While fiscal consolidation efforts must be balanced against growth concerns in the short term, once recoveries are under way, ambitious medium-term fiscal targets would help to ensure a continued reduction in current account imbalances.

30. That same econometric framework can also be used to simulate the effect of aggressive debt reduction by peripheral countries on their external sustainability. To this end, a scenario for the evolution of fiscal positions in OECD countries can be used, along with equation [4] above, to obtain the projected

change in a country's relative fiscal position over a given period. Multiplying this change by the estimated coefficient on the relative fiscal position variable reported in Table 1, and holding openness variables constant at their projected 2014 values, yields a projected change in the current balance. The assumption used here is that the five peripheral euro area countries undertake ambitious fiscal consolidation -- up to 1½ percentage points of GDP per year -- to reduce their gross debt-to-GDP ratio to 60%, while other OECD countries undertake only up to ½ percentage point of GDP of fiscal consolidation per year to stabilise debt-to-GDP ratios. In this scenario, Ireland could increase its current account balance by 2.2 percentage points of GDP, Portugal by 1.2 percentage points and Greece by 1.1 percentage points (Table 4). Italy and Spain would benefit less from such a strategy given their better starting fiscal positions. Such current account improvements would come only gradually, but would make a substantial contribution to external sustainability and reduce the need for further adjustments to cost competitiveness.

**Table 4. Improvement in current account balance in a debt reduction scenario**

Change 2012-20, percentage points of GDP

	DEU	ITA	PRT	ESP	IRL	GRC
Change in underlying fiscal balance <sup>1</sup>	1.9	3.1	7.1	3.0	7.2	7.9
Change in relative fiscal position <sup>2</sup>	0.9	1.9	5.6	1.6	10.4	5.4
Effect on current balance <sup>3</sup>	0.2	0.4	1.2	0.3	2.2	1.1

1. This row reports the change in the underlying fiscal balance between 2012 and 2020 necessary to target a gross debt-to-GDP ratio of 60% with fiscal consolidation of up to 1½ percentage points of GDP per year.

2. The change in the relative fiscal position is calculated using equation [4] above. Fiscal positions for OECD countries other than the five peripheral euro area countries are assumed to improve by up to ½ per cent of GDP per year until their gross debt-to-GDP ratios are stable.

3. The effect on the current balance is calculated by multiplying the change in the relative fiscal position between 2012 and 2020 by the coefficient estimate on this variable reported in Table 1.

Source: *OECD Economic Outlook 91* long-term database and Secretariat calculations.

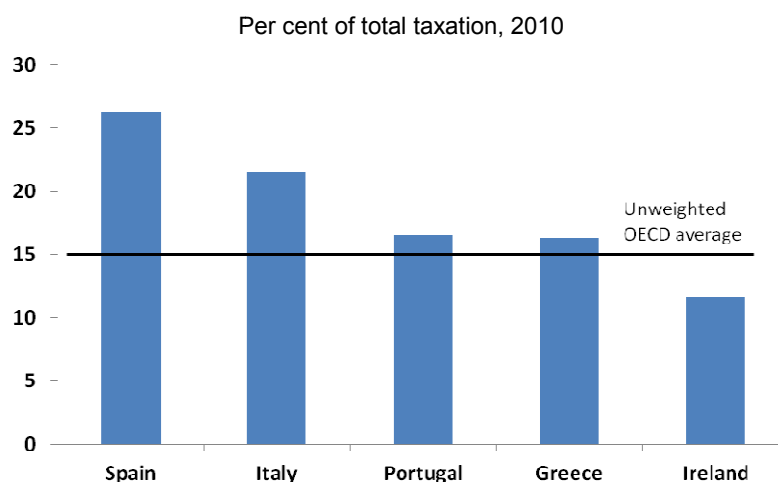
31. While the empirical estimates used here suggest that changes to private saving offset as much as 80% of changes to public saving, so that the impact of fiscal consolidation on current account positions is limited, other empirical evidence from a wider set of OECD countries suggests that changes in private saving offset only 40% of changes to public saving (Röhn, 2010). In this case, the fiscal effects on current balances would be about twice as large as those reported in Table 4. On the other hand, it is likely that not only peripheral euro area countries, but also other OECD countries, will want to reduce debt ratios in the years to come, notably other euro area countries that operate under the same euro-wide fiscal framework. This would reduce the improvements in peripheral countries' relative fiscal positions relative to the assumptions used here, unless peripheral countries were even more aggressive than assumed here and targeted debt ratios lower than 60%.

32. Other fiscal policy reforms could help achieve the needed cost competitiveness adjustments in peripheral euro area countries. Rather than waiting for wages to fall, governments in these countries can bring about the same outcome by reducing taxes on labour, a strategy sometimes referred to as "fiscal devaluation".<sup>19</sup> By reducing payroll and social security taxes on employers, governments directly reduce unit labour costs. By reducing payroll taxes on employees, they may encourage them to accept a lower wage (or lower wage growth). While such tax reforms could contribute only modestly to the needed reductions in unit labour costs, there indeed seems to be some scope for reducing employers' social security contributions in some peripheral countries, especially in Spain and Italy where they represent a

19. The discussion here draws on Shambaugh (2012). See IMF (2011) for empirical evidence that fiscal devaluations can have significant effects.

much bigger share of total taxation than the OECD average (Figure 10). To the extent possible, the budgetary effect of payroll tax cuts can be neutralised by raising value-added or property taxes, which are generally found to be more efficient (Arnold, 2008). Because a fiscal devaluation would work its effects quickly, but the effect would probably not be permanent, it could be used as a temporary measure while waiting for the effects of supply-side policies aimed at boosting growth in the long run.

**Figure 10. Employers' social security contributions in peripheral euro area countries**



Source: *Revenue Statistics 2012*, OECD Publishing.

33. In surplus countries, a relaxation of fiscal austerity policies would help rebalance spending toward domestic demand and generate higher inflation. Taking advantage of the ultra-low interest rate environment, core euro area governments should bring forward all essential public investment plans, thus helping to create a market for peripheral countries' exports.

## Conclusion

34. For the additional current account adjustments needed in Greece, Italy, Spain and Portugal to occur, along with the required relative price changes, one possibility is a continuation of economic weakness in these countries relative to the core, so that high unemployment and other idle resources depress wages and prices until competitiveness is restored. But the welfare costs of such an adjustment mechanism would be high. A better alternative would consist of implementing long overdue fiscal and structural reforms, none of which would be able to produce the necessary adjustments in isolation, but in combination should be sufficient to achieve external sustainability, with the relative importance of individual measures respecting country specificities. Structural reforms to boost productivity growth should be at the core of each country's strategy, for such reforms are the most effective means to permanently lower unit labour costs and boost growth simultaneously. According to the latest OECD structural policy stocktaking report, all four countries are some way away from best practices in many policy areas, notably on dismantling regulatory barriers to competition (Greece, Portugal, Italy); reducing tax evasion (Greece, Italy); making labour markets, and specifically wage bargaining, more flexible (Italy, Portugal, Spain); improving active labour market policies (Spain, Portugal, Greece); and improving education systems (Spain, Portugal, Italy, Greece) (OECD, 2013). Fiscal consolidation and debt reduction should also be part of the medium-term solution in all countries. Considering the size of the remaining structural current account adjustments needed and the potential for structural reforms and fiscal adjustments, Spain, Portugal and particularly Italy should be able to close their sustainability gaps. In the case of Greece, the required adjustment is so large that a very aggressive combination of reforms would be

necessary to bring external debt back to a sustainable path without any form of default. While waiting for the beneficial effects of structural reforms, fiscal devaluation could help reduce unit labour costs in countries with relatively high employer charges. Finally, core countries can help the euro area rebalancing process and reduce the welfare costs sustained by peripheral countries by increasing domestic absorption and letting inflation drift above the euro area target for some time.



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