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Rebalancing the eurozone troubled economies

Abstract

The aim of the article is to assess how much rebalancing of the six eurozone troubled economies (Ireland, Portugal, Spain, Italy, Greece, Cyprus) was achieved since the outbreak of the financial crisis in 2007/2008, to what extent migrations were a mitigating factor on their labor markets and how much the troubled countries were assisted in their adjustment by other countries. The first part of the article shows an overall macroeconomic picture of the troubled economies' rebalancing together with a presentation of the etiology of the problem (i.e. accumulation of imbalances). The second part presents the role of migrations and the third part the role of the Eurosystem and international financial assistance in the rebalancing process. The research is based on comparing developments in selected indicators across countries. The conclusions are that the rebalancing in the troubled countries was either at most limited or actually their economies continued to fall out of balance (various indicators showing various developments make the situation ambiguous), migrations were either not much supportive for rebalancing of the troubled economies or they did not provide any dent to unemployment at all and that the troubled countries were provided with significant international assistance mainly in the form of the ECB policies causing the rise in the Target balances.

Keywords: eurozone, rebalancing, adjustment process
JEL: F320, F330, F410, J610

Introduction

The eurozone countries have restricted policy options to balance their economies, both internally and externally, as compared to countries using exchange rate arrangements that allow for exchange rate adjustment. When confronted with a crisis having its roots in deteriorated international competitiveness of their economies, the eurozone countries, assuming they want to remain in the monetary union, cannot rely on currency depreciation to help improve their external position and their adjustment has to be based on other mechanisms like internal devaluation, its softer version of still positive inflation rate, but one lower relative to the rates experienced by trading partners or even restricting transactions recorded in their balances of payments (foreign trade restrictions, capital controls). Assuming that they want to stick to the trade and capital movement freedoms, they are left with the options of internal devaluation or relatively low inflation rate. Unfortunately, when prices and wages are rigid downwards, as generally is the case, internal devaluation is painful, particularly in terms of lost GDP and high unemployment. The second option of relatively low inflation rate would probably require that the more competitive eurozone countries operating at low unemployment would have to accept "overheating" of their economies, which is also problematic. Whichever path is chosen, the adjustment process can be alleviated (i.e. rebalancing can be slowed down) through international assistance, while unemployment can be additionally moderated through emigration.

Since the outbreak of the financial crisis in 2007/2008 we have been witnessing painful adjustment in the six eurozone troubled economies, i.e. in Ireland, Portugal, Spain, Italy, Greece and Cyprus, after financial markets became aware that international competitiveness of these countries' economies had deteriorated and their private and public sectors might have become unable to repay their debts. The cost of adjustment has not only been borne by these states, but also by other members of the eurozone, who have provided financial assistance or have experienced the consequences of the European Central Bank accommodative policy. This external assistance did not come easy though. In the last few years the eurozone has been going through a strife on the conditions and volumes of interstate financial assistance, the ECB policy, possible mutualization of state debts, on how to deal with failing banks and so on. In general this strife may be seen as one about how the burden of adjustment of the troubled countries should be shared among the eurozone member states.

The aim of this article is to assess how much rebalancing of the eurozone troubled countries' economies was achieved since the outbreak of the financial crisis in 2007/2008, to what extent migrations were a mitigating factor on their labor markets and how much the troubled countries were assisted in their adjustment by other countries. The first part of the article shows an overall macroeconomic picture of the troubled economies' rebalancing together with a presentation of the etiology of the problem (i.e.

accumulation of imbalances), which might offer some clue into how much adjustment is supposed to return the troubled economies to balance and as a point of reference to what was actually achieved. Then the article focuses on specific issues that in the author's opinion are important aspects of rebalancing of the troubled countries' economies. The second part presents the role of migrations and the third part the role of the Eurosystem and international financial assistance in the rebalancing process. The author thinks that omitting these issues would render the analysis of the rebalancing incomplete. Finally, conclusions are drawn.

The research is based on comparing developments in selected indicators across countries. The first two parts of the article are based on the Eurostat data. The analysis presented in the third part of the article uses both the Eurostat and the Ifo Institute data.

Macropicture

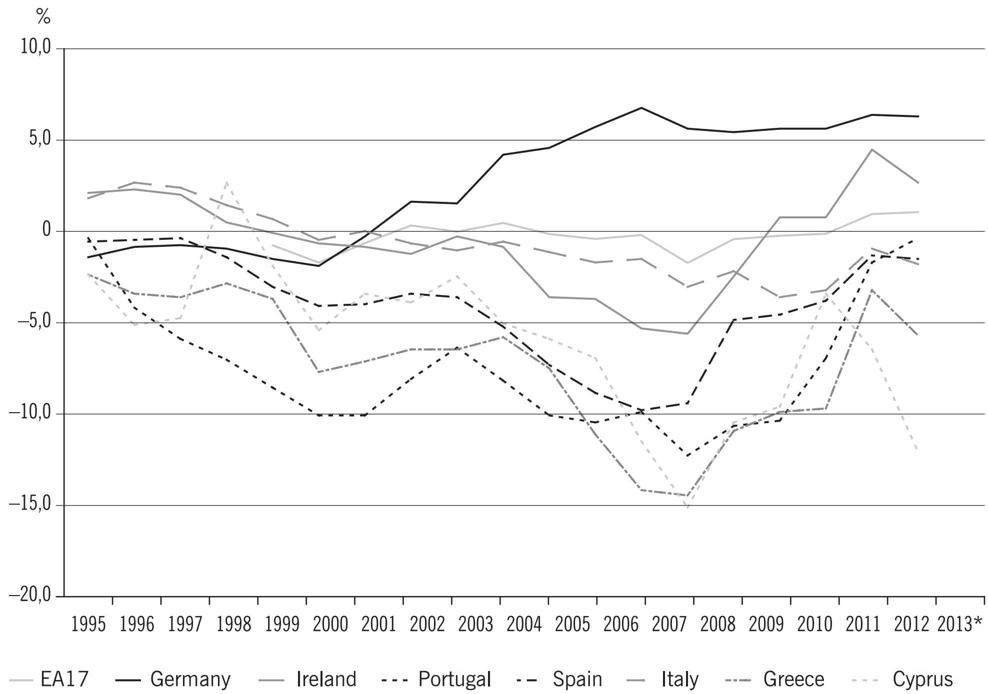
A good starting point for analyzing rebalancing of the eurozone troubled economies might be to establish, how large these imbalances were before the rebalancing started. Looking at the eurozone crisis as a balance-of-payments one should be of use here. Current developments in the eurozone show that too much of international capital flows to the troubled countries prior to the outbreak of the financial crisis were not used for sound investment improving the economy's production capacity that subsequently allows to repay creditors and increase domestic spending. How did it come about? Sinn [2013, p. 3] reminds that before the introduction of the euro the "southern" states and private sectors had to pay much higher interest rates than the "northern" ones and these differences in interest rates disappeared in the second half of the 1990s because investors perceived the Eurosystem as a protection against state bankruptcy and private bankruptcies subordinate to it. Feldstein [2011, p. 5] likewise points that due to the creation of the monetary union interest rates fell in some of the eurozone countries and this brought increased borrowing on the part of households to finance home building and on the part of governments to finance deficits accompanying social transfers, whereas bond buyers in spite of the "no bailout" clause in the Maastricht Treaty assumed bonds issued by all the governments in the eurozone to be equally safe. Krugman [2012] similarly states that the introduction of the euro led many investors to believe that cross-border investment within the eurozone became much less risky. When financial markets realized that they had been overoptimistic about investing in the south of the eurozone and in Ireland, the stage for rebalancing was set, which created a serious problem both for the eurozone creditor and debtor countries.

On the basis of the presented views one might assume that imbalances started to accumulate about the time of the euro introduction or earlier. According to the opinion presented by Sinn, who draws attention to the European Council meeting in Madrid in December of 1995 as a point in time when the euro was definitively announced and after which the interest-rate spreads between the "southern" and "northern" states disappeared within two years [Sinn, 2013, p. 3], one might assume that 1995 could be a starting point for this analysis, at least for the countries that were the members of the eurozone from its creation in 1999. Taking the abovementioned views into account time series presented below start between 1995 and 2001. The exact choices of the points of departure were driven by the need to present clearly the developments before the outbreak of the financial crisis, ensure data comparability and were also dependent on the availability of the statistics. Indicators present the situation not only in the six troubled countries but also for the whole euro area composed of 17 states (the EA17) and Germany in order to place the developments in the troubled countries in the eurozone perspective.

As it can be seen on Chart 1, the troubled countries' balances of payments significantly worsened prior to the outbreak of the financial crisis. In 1995 Ireland and Italy recorded current account surpluses of 2,5% and 2,2% of GDP respectively, Portugal and Spain were almost balanced, while Germany recorded a 1,2% deficit. Deficits of Greece and Cyprus (which joined the eurozone in 2001 and 2008 respectively) were then at 2,2%. In 2000, Ireland and Italy had almost balanced current accounts and Germany was still in deficit, but deficits of Portugal, Spain, Greece and Cyprus reached 10,3%, 4,0%, 7,8% and 5,4% respectively. Up until 2003 current accounts of the troubled countries improved or at least did not worsen markedly but afterwards they started to deteriorate again and in 2008 the deficit in Italy reached 2,9%, in Ireland 5,6%, in Spain 9,6%, in Portugal 12,6%, in Greece 14,9% and in Cyprus 15,6%. Then, in the context of the eurozone crisis, current accounts of the troubled countries improved. In 2012 Ireland recorded a 5,0% surplus, while deficits of Portugal, Spain and Italy stood only at -1,5%, -1,1% and 0,7% respectively. Deficits of Greece and Cyprus were still significant at 3,1% and 6,5% respectively. Yet one should take note of the data for the first quarter of 2013 that show increased current account deficits for Italy (1,6%), Greece (5,7%) and Cyprus (12,4%). The German current account surplus did not come below 6,0% since 2006, while the current account of the eurozone from the start of its existence remained largely in balance. In general current account deficits that arose prior to the crisis largely reversed afterwards, but the German surplus did not adjust to assist the troubled economies in their rebalancing. Thus the other eurozone countries have recorded deteriorations in their current accounts, in particular France (from 0,5% surplus in 2005 to 2,4% deficit in the first quarter of 2013) and Belgium (from 1,9% surplus in 2007 to 3,3% deficit in the first quarter of 2013).

Developments in the current accounts presented above are reflected in the net international investment position (IIP) statistics shown on Chart 2, where one can observe diverging paths for Germany and the six troubled countries. Since the introduction of the euro, Germany recorded a growth trend in its net IIP (a rise from 0,4% of GDP in 1998

CHART 1. Current account balance of the EA17, Germany, Ireland, Portugal, Spain, Italy, Greece and Cyprus in 1995–2013* (% of GDP)

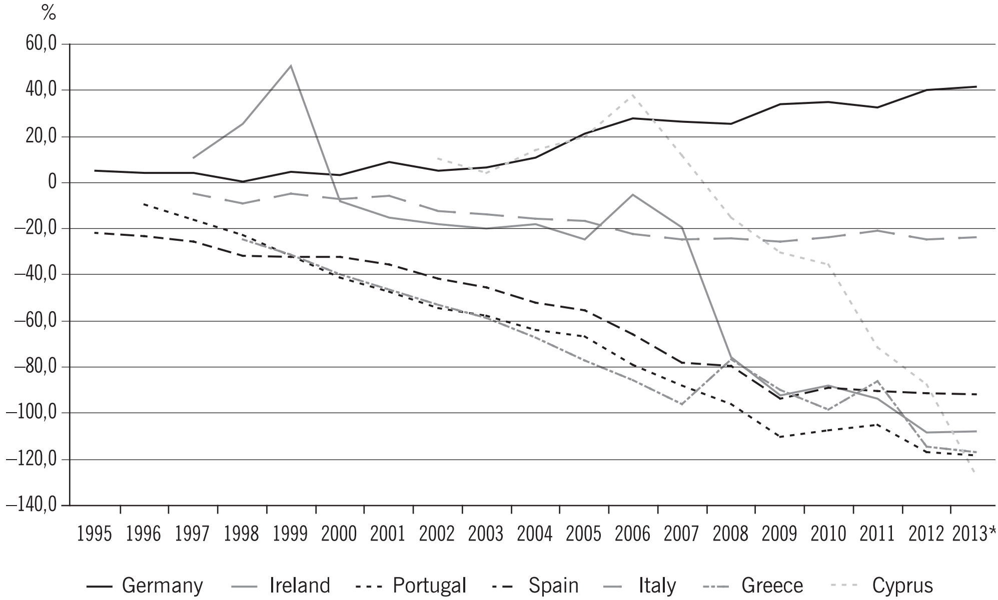


* Data for the first quarter of 2013.

S o u r c e: based on the Eurostat data.

to 41,7% of GDP in the first quarter of 2013). Ireland's net IIP that peaked at 50,4% in 1999 fell to -75,6% in 2008 and then further decreased to -108,2% in 2012. Portugal's net IIP fell from -9,3% in 1996 to -96,2% in 2008 and further to -118,0% in the first quarter of 2013. Spanish net IIP fell from -21,7% in 1995 to -93,7% in 2009 and afterwards it remained relatively stable (-92,0% in the first quarter of 2013). Italian net IIP was the strongest among the six troubled countries, but it also recorded a deterioration from -4,8% in 1997 to -24,5% in 2007 and then remained relatively stable to reach -23,7% in the first quarter of 2013. Greek net IIP fell from -24,5% in 1998 to -96,1% in 2007, then recorded improvements in 2008 and 2011, but finally fell to -116,8% in the first quarter of 2013. The Cypriot net IIP after peaking at 37,7% in 2006 entered a nosedive and fell to -126,7% in the first quarter of 2013. Thus after the outbreak of the financial crisis no adjustment in the net IIP positions of the troubled eurozone economies took place. Actually imbalances in the net IIP in the six troubled countries widened.

CHART 2. **Net international investment position of Germany, Ireland, Portugal, Spain, Italy, Greece and Cyprus in 1995–2013* (% of GDP)**

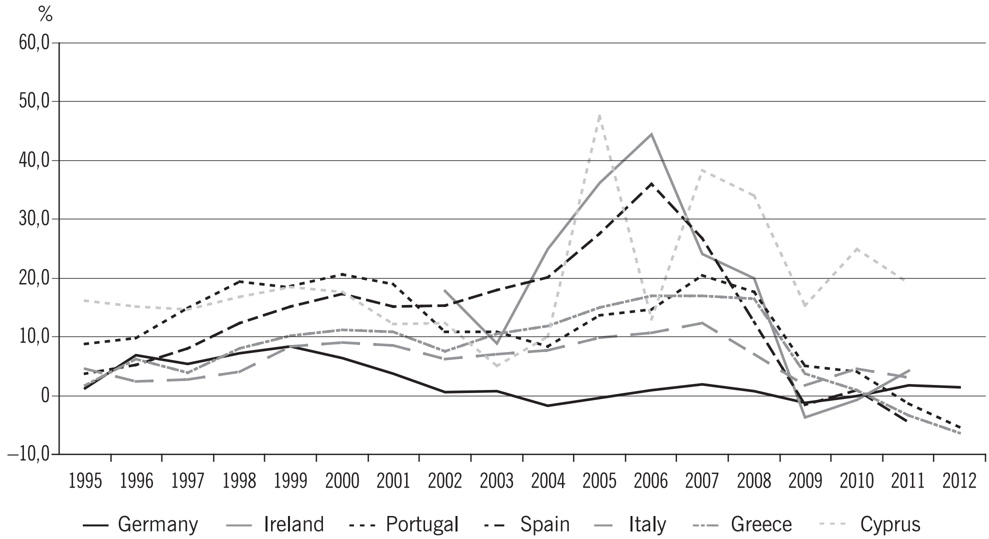


* Data for the first quarter of 2013 (net IIP in relation to the forecasted GDP for 2013).

S o u r c e: based on the Eurostat data.

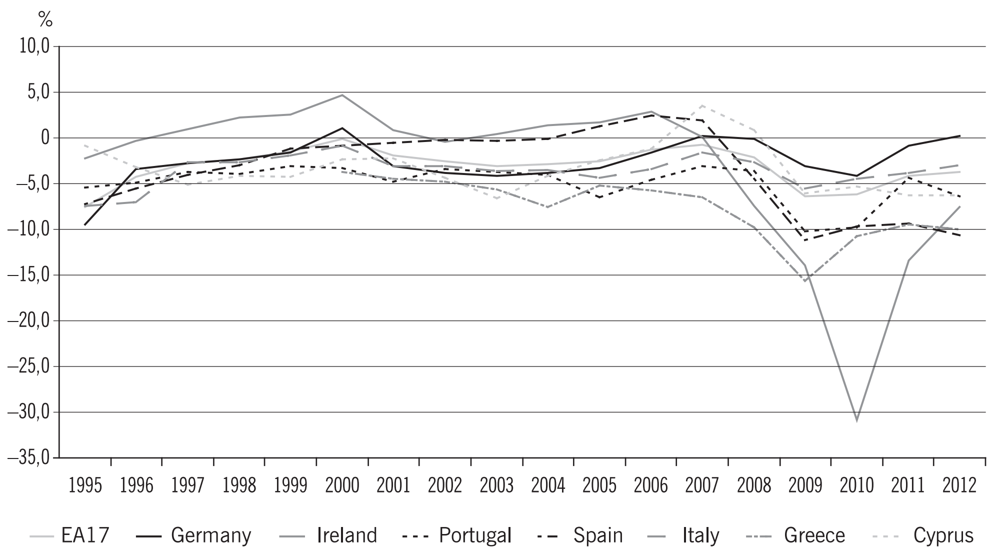
The fall in interest rates in the troubled countries together with changed investors' attitudes reflected themselves in increased credit flow both into the troubled countries' private and general government sectors (Charts 3 and 4 respectively). In 1995 the private credit flow statistics were as follows: 1,3% of GDP in Germany, 9,1% in Portugal, 3,8% in Spain, 4,6% in Italy, 1,8% in Greece, 16,1% in Cyprus. They rose in the second half of the 1990s and in 1999 they reached 8,3% in Germany, 18,6% in Portugal, 15,2% in Spain, 8,4% in Italy, 10,2% in Greece and 18,5% in Cyprus. At the beginning of the 2000s private credit flow in the troubled economies moderated to rise again to very high levels prior to the crisis reaching 44,4% in Ireland in 2006, 20,5% in Portugal in 2007, 36,0% in Spain in 2006, 12,4% in Italy in 2007, 17,0% in Greece in 2007, and 38,4% in Cyprus in 2007. These developments stood in stark contrast to the situation in Germany, where private credit flow fell to just 0,6% of GDP in 2002 and did not rise above 1,9% till 2012. After the outbreak of the financial crisis private credit flow fell to -3,7% in Ireland in 2009, -5,3% in Portugal in 2012, -4,6% in Spain in 2011, 1,7% in Italy in 2009, -6,4% in Greece in 2012 and 15,3% in Cyprus in 2009. Thus the adjustment with respect to private credit flow has been even stronger than the rise prior to the crisis. In the area of public finances no significant deterioration

CHART 3. **Private credit flow (consolidated) in Germany, Ireland, Portugal, Spain, Italy, Greece and Cyprus in 1995–2012 (% of GDP)**



S o u r c e: based on the Eurostat data.

CHART 4. **Net lending(+)/borrowing(-) under the Excessive Deficit Procedure in the EA17, Germany, Ireland, Portugal, Spain, Italy, Greece and Cyprus in 1995–2012 (% of GDP)**

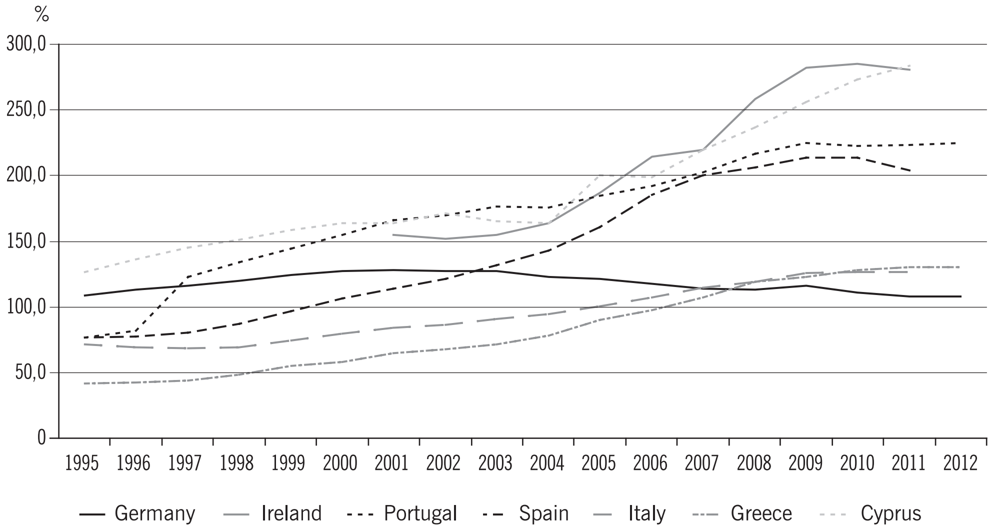


S o u r c e: based on the Eurostat data.

in the troubled countries prior to the outbreak of the financial crisis was recorded. To the contrary, some of them improved their public finances. Ireland recorded surpluses every year in the period 1997–2007 except for 2002 and Spain recorded surpluses in 2005, 2006 and 2007. In the period 2000–2007 the Irish general government sector recorded an average annual surplus of 1,5% of GDP and the Spanish one of 0,5%, while in the other troubled countries average annual deficits were as follows: 4,2% in Portugal, 2,9% in Italy, 5,4% in Greece and 2,5% in Cyprus. The EA17 and Germany recorded on average deficits of 1,9% and 2,3% in this period. Public finances in the troubled countries dramatically deteriorated only after the outbreak of the financial crisis and in the period 2009–2012 an average annual deficit in Ireland reached 16,4%, in Portugal 7,7%, in Spain 10,2%, in Italy 4,2%, in Greece 11,5% and in Cyprus 6,0%, while for the EA17 and Germany it was 5,1% and 2,0% respectively.

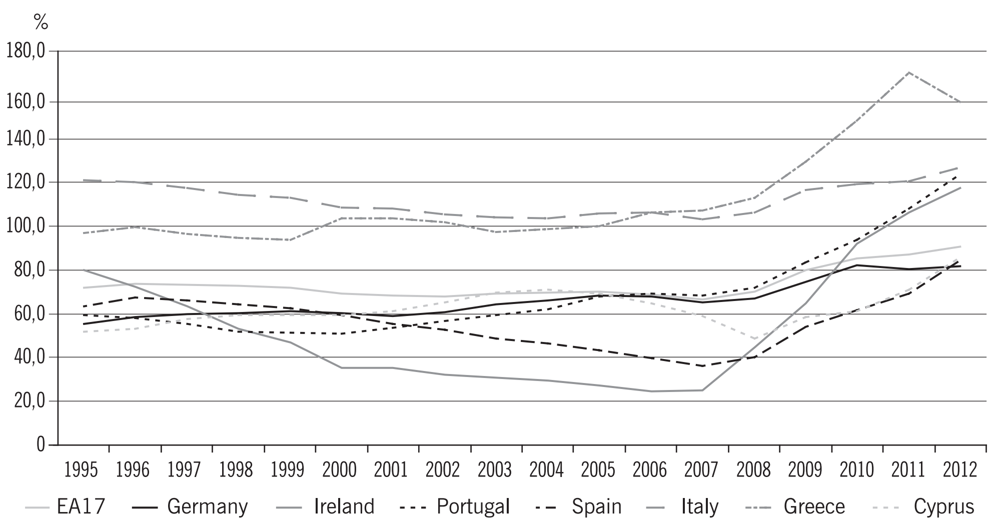
The stock equivalents of the above presented credit flows, i.e. debt statistics for private and general government sectors (Charts 5 and 6 respectively) are also interesting facets of the eurozone adjustment challenge. It is worthwhile to note that private debt in Germany stood at 108,4% of GDP in 1995, rose to 128,0% in 2001 and then started falling to reach 107,6% in 2012. In 1995 Portuguese, Spanish, Italian and Greek private sectors were less in debt than the German one – at 76,7%, 76,6%, 71,5% and 41,6% respectively. In 2008 their debts reached 216,3%, 206,5%, 119,1% and 118,8% respectively. Portugal reached the German level already in 1997, Spain in 2003, Italy in 2007 and Greece in 2008. Cypriot private debt rose from 126,3% of GDP in 1995 to 236,6% in 2008. The Irish one from 154,5% in 2001 to 258,5% in 2008. In the period 2009–2011 the private debt ratios in most of the troubled countries rose (in Ireland by 22,2 p.p., in Portugal by 6,9 p.p., in Italy by 7,1 p.p., in Greece by 11,2 p.p. and in Cyprus by 46,8 p.p.). Only in Spain the ratio declined, but only by 2,5 p.p., thus after the outbreak of the financial crisis there was practically no adjustment in the troubled countries in their private debt levels. As concerns general government debt levels, the German one rose from 55,6% of GDP in 1995 to 65,2% in 2007. The Portuguese, Greek and Cypriot general government debt ratios in this period also rose by about 10 p.p. (the Portuguese one from 59,2% to 68,4%, the Greek one from 97,0% to 107,4% and the Cypriot one from 51,8% to 58,8%), while the ratio for Ireland fell from 80,1% to just 25,1%, for Spain from 63,3% to just 36,3% and for Italy from 120,9% to 103,3%. It was only after 2007 when general government debt-to-GDP ratios dramatically deteriorated. For the EA17 the ratio rose from 66,4% in 2007 to 90,6% in 2012. In Germany in 2012 it reached 81,9% (16,7 p.p. more than in 2007), in Ireland 117,6% (92,5 p.p. more), in Portugal 123,6% (55,2 p.p. more), in Spain 84,2% (47,9 p.p. more), in Italy 127,0% (23,7 p.p. more), in Greece 156,9% (49,5 p.p. more despite a “haircut” in 2012) and in Cyprus 85,8% (27,0 p.p. more).

CHART 5. Private debt (consolidated) in Germany, Ireland, Portugal, Spain, Italy, Greece and Cyprus in 1995–2012 (% of GDP)



S o u r c e: based on the Eurostat data.

CHART 6. General government gross debt (consolidated) in the EA17, Germany, Ireland, Portugal, Spain, Italy, Greece and Cyprus in 1995–2012 (% of GDP)



S o u r c e: based on the Eurostat data.

Another interesting facet of adjustment in the troubled countries is also the GDP dynamics presented on Chart 7. Prior to 2008 the economies of the six troubled countries generally grew well in comparison with the economies of the whole EA17 area or Germany (in large part due to the inflow of foreign capital, the scale of which was already reflected on Chart 2), but after 2009 the situation reversed. In the period 2000-2007, when the average annual rate of economic growth in the EA17 was 2,2% and in Germany 1,6%, the rate for Ireland was 5,8%, for Portugal 1,5%, for Spain 3,6%, for Italy 1,6%, for Greece 4,2% and for Cyprus 3,8%. But in the period 2010–2012, when the average annual rate of growth for the EA17 area was 1,0% and for Germany 2,6%, the Ireland's economy grew on average by only 0,5% a year and the other troubled countries' economies were shrinking: the Portuguese by 1,0%, the Spanish by 0,4%, the Italian by 0,1%, the Greek by 6,1% and the Cypriot by 0,2%. These disappointing growth rates made it difficult for the troubled countries to show improved economic indicators that have a country's GDP in denominator. Although using such indicators may underestimate the troubled countries' efforts to balance their economies, the disappointing growth rates do not allow to perceive the indicators for and the perspectives of these countries in a more positive, special way.

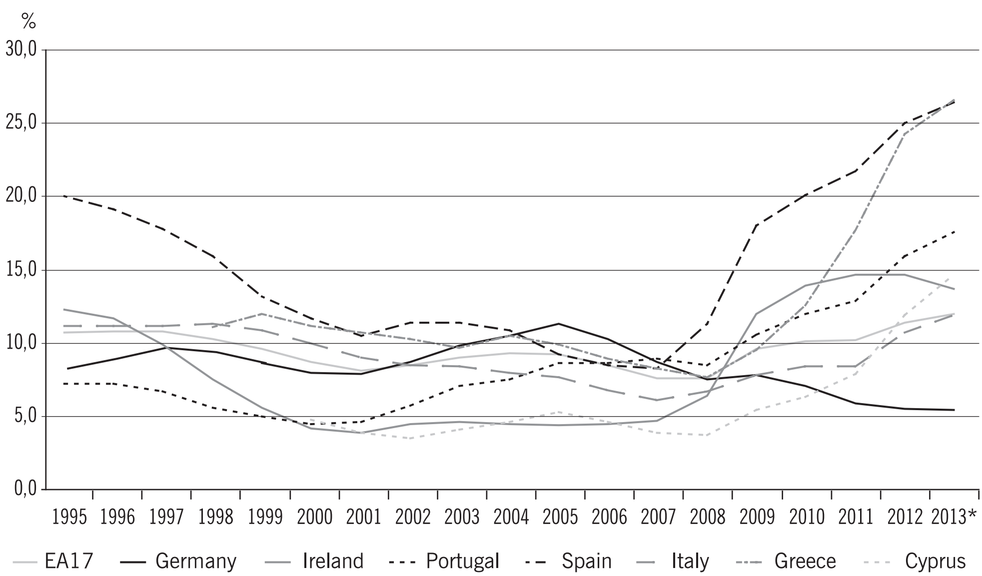
CHART 7. **GDP growth in the EA17, Germany, Ireland, Portugal, Spain, Italy, Greece and Cyprus in 1995–2013***

* Data for 2013 are forecasts.

S o u r c e: based on the Eurostat data.

The GDP dynamics reflected itself on the troubled economies' labor markets, which can be seen on Chart 8. The situation in the EA17 labor market improved in the period 1995–2007 as the unemployment rate fell from 10,7% to 7,6%. In 2007 the situation in Ireland, Italy and Cyprus was better than the average for the EA17, while in Germany, Portugal, Spain and Greece the unemployment rates were in the 8,3-8,9% range. Yet after the outbreak of the financial crisis unemployment in the EA17 increased markedly, especially in the troubled economies. In the first quarter of 2013 the seasonally adjusted rate of unemployment in the EA17 stood at 12,0%, while in Ireland it reached 13,7%, in Portugal 17,6%, in Spain 26,4%, in Italy 11,9%, in Greece 26,6% and in Cyprus 14,7%. These developments are contrasted by the situation in Germany, where in the first quarter of 2013 this rate fell to 5,4%. It is worth to take note of the situation in the two countries recording especially high unemployment rates, i.e. Spain and Greece. In Spain the dire situation on the labor market might be associated with especially large employment creation accompanying the inflow of foreign capital to Spain prior to the crisis outbreak and subsequent reversal of the situation. In 2008 in Spain there were 38,5% more employed (aged 15 or over) than in 1999 (in construction 56,0% more), whereas

CHART 8. **Unemployment rate in the EA17, Germany, Ireland, Portugal, Spain, Italy, Greece and Cyprus in 1995–2013***



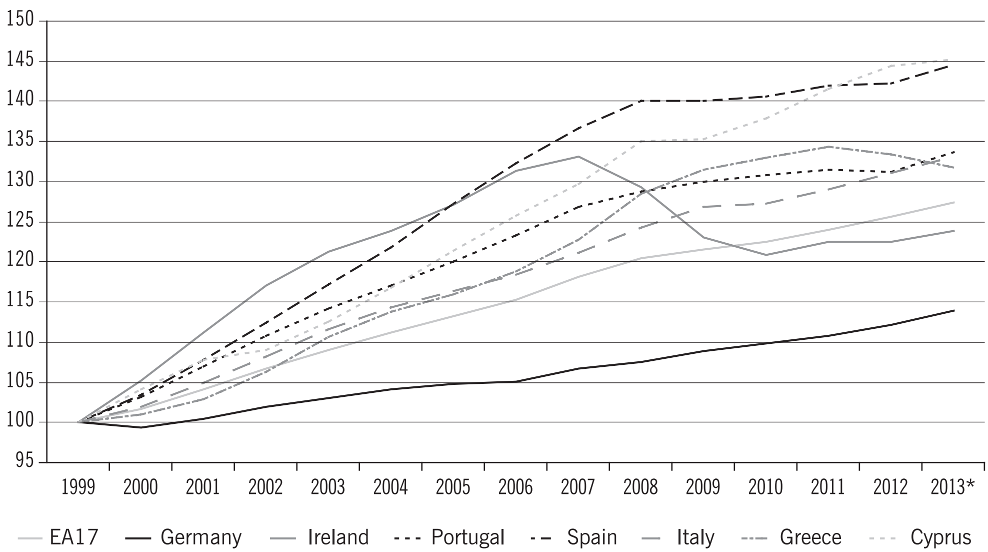
* Data for the first quarter of 2013 (seasonally adjusted).

S o u r c e: based on the Eurostat data.

for the EA17 area (excluding Malta) the employment grew by 14,5%. In Greece it grew by 12,8%, thus below the EA17 average, but Greece experienced especially dramatic GDP contraction in recent years compared to the other troubled economies (see Chart 7), which is one of the main factors explaining its particularly high unemployment rate.

In order to assess the progress in rebalancing of the troubled economies one also needs to look at a few indicators showing changes in their international competitiveness. Credit flowing into the troubled economies prior to the outbreak of the financial crisis has contributed to rising price levels, which is problematic for a country that does not have an option to let its currency depreciate. As it can be seen on Chart 9, prices measured by the GDP deflator (based on euro) in 2007 were 18,1% higher in the whole EA17 area than in 1999. In this period prices in Germany rose only by 6,8%, while in Ireland by 33,1%, in Portugal by 26,8%, in Spain by 36,7%, in Italy by 21,2%, in Greece by 22,7% and in Cyprus by 29,8%. Such rises have deprived the troubled countries of some of their competitiveness, especially in comparison with Germany, but then changes in price levels in the context of the eurozone crisis became more supportive for their competitiveness. Whereas prices both in the EA17 and in Germany in 2012 were 4,3% higher than in 2008, prices in Ireland fell by 5,3% in this period, so this country achieved

CHART 9. **GDP deflator in the EA17, Germany, Ireland, Portugal, Spain, Italy, Greece and Cyprus in 1995–2013* (based on euro, 1999 = 100)**



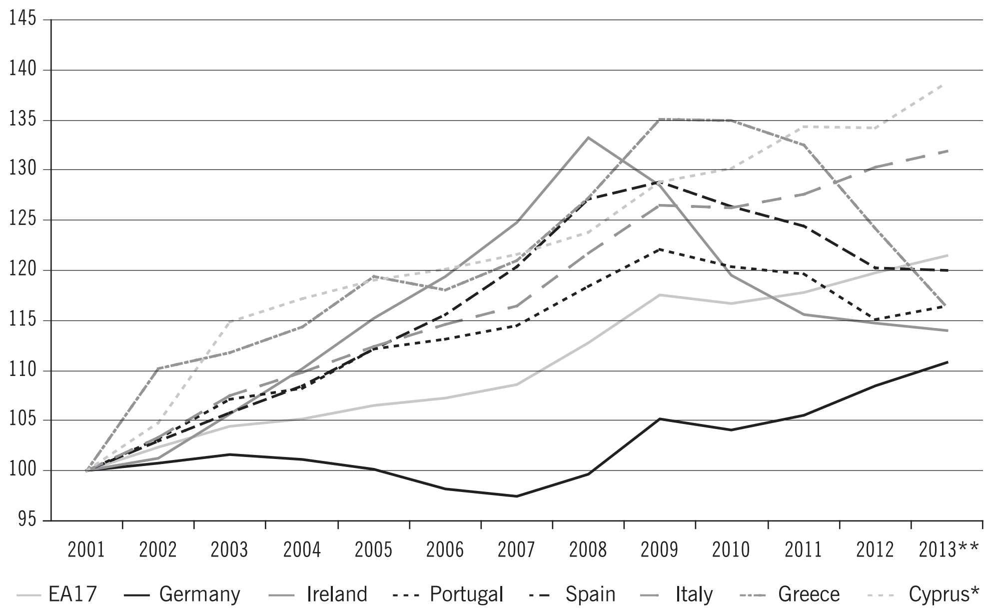
* Data for 2013 are forecasts.

S o u r c e: based on the Eurostat data.

a significant adjustment in price levels. Unfortunately developments in other troubled countries were not so positive for their competitiveness. Prices in Portugal, Spain and Greece rose by 1,9%, 1,6% and 3,8% respectively, so their adjustment was very modest compared to the EA17 and Germany. Yet prices in Italy and Cyprus rose by 5,5% and 6,9% so they recorded further (though slight) losses relative to the EA17 and Germany.

Changes in nominal unit labor costs (NULC) are another indicator helpful in assessing an economy's competitiveness. As it is illustrated on Chart 10, the NULC in Germany in 2008 were almost at the same level as in 2001, while in the EA17 they grew by 12,8%, in Ireland by 33,2%, in Portugal by 18,4%, in Spain by 27,1%, in Italy by 21,7%, in Greece by 27,2% and in Cyprus by 23,8% (an explanation concerning the data on Cyprus is presented in [*] on Chart 10). After the outbreak of the financial crisis some of the troubled countries recovered part of their losses from the pre-crisis period. Whereas in 2012 NULC in the whole EA17 rose by 6,1% as compared to 2008

CHART 10. **Nominal unit labour costs (NULC) in the EA17, Germany, Ireland, Portugal, Spain, Italy, Greece and Cyprus* in 2001–2013** (2001 = 100)**



* Cyprus adopted the euro in 2008, but as the exchange rate movements of the Cypriot pound against the euro were limited in 2001–2007 (within the range of 0,57-0,59 euro for a pound, as it was verified on http://fxtop.com/en/historical-exchange-rates.php on 09.08.2013), the chart presents a fairly good depiction of the Cypriot NULC measured in euro.

** Data for 2013 are forecasts.

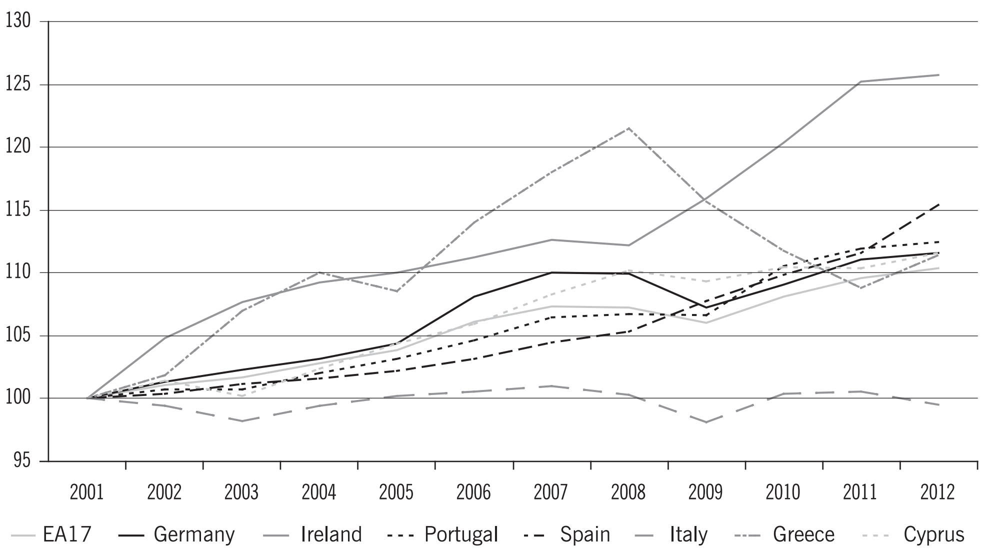
S o u r c e: based on the Eurostat data.

and in and in Germany by 9,0%, in Ireland they fell by 13,8%, in Portugal by 2,7%, in Spain by 5,4% Greece by 2,3%. Unfortunately, the situation in Italy and Cyprus barely changed relative to the EA17 and Germany in this period, so the picture of adjustment in NULC is uneven across the troubled economies.

A useful complement to presenting the developments in NULC, helpful in explaining their nature is to show developments in labor productivity. Chart 11 evidences that in the period 2002–2008 real labor productivity per hour worked recorded the biggest rise among the troubled countries in Greece (21,5%), then Ireland (12,2%), Cyprus (10,2%), which recorded almost the same rise as Germany (9,9%), then Portugal (6,7%) and Spain (5,3%). Italy recorded virtually no rise (0,3%). The rate for the EA17 was 7,3%. These data evidence that before 2009 Germany did not record any outstanding rise in productivity, which points at controlling wages (and thus prices as it can be seen on Chart 9) as a factor allowing to keep their NULC under control. The six troubled economies obviously did not manage to keep wages growth in line with growth in productivity in order to restrain rises in NULC.

An economy's relative competitiveness towards its trade partners can be also assessed by observing changes in real effective exchange rates (REER). In 2008 the REER for the EA17 was 11,5% higher than in 1999 and the change in REER for Portugal, Italy, Greece

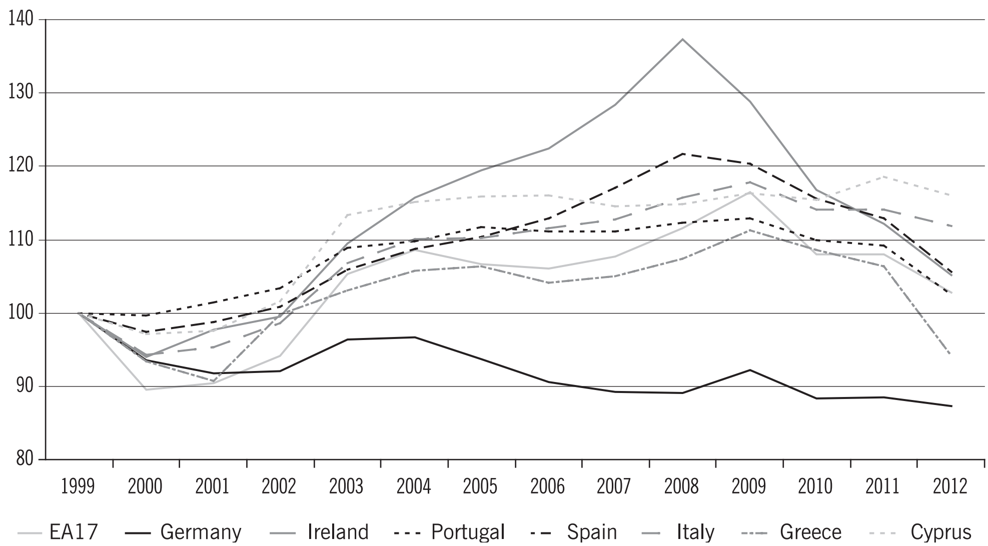
CHART 11. Real labour productivity per hour worked in the EA17, Germany, Ireland, Portugal, Spain, Italy, Greece and Cyprus in 2001–2012 (2001 = 100)



S o u r c e: based on the Eurostat data.

and Cyprus was quite similar for that period (12,3%, 15,7%, 7,4% and 14,8% respectively) as it is visualized on Chart 12. Yet the REER for Ireland rose by 37,3% and for Spain by 21,7% in that time, which means that their economies lost some of their international competitiveness relative to the EA17. In the same period the REER for Germany fell by 10,8% meaning that the country gained in competitiveness relative to the EA17. After the outbreak of the financial crisis the pattern of the REER dynamics in the eurozone changed. In 2012 the REER for the EA17 fell by 7,8% relative to 2008 and in Germany it fell only by 2,1% meaning that it lost some of its price competitiveness relative to the EA17. In this period the REER for Ireland fell by 23,4%, for Spain by 13,3%, for Greece by 12,4% and for Portugal by 8,7%, thus they gained in competitiveness relative to the EA17 and their adjustment was quite substantial relative to changes in the pre-crisis period. The REER for Italy and Cyprus did not change much (-3,3% and 1,0% respectively). Although the developments in the crisis countries were diverse, none of them managed to recover losses relative to Germany from before the outbreak of the financial crisis.

CHART 12. **Real effective exchange rates in the EA17, Germany, Ireland, Portugal, Spain, Italy, Greece and Cyprus in 1999–2012 (1999 = 100, deflator: unit labour costs in the total economy – 36 trading partners)**



S o u r c e: based on the Eurostat data.

The developments presented above are summarized in Table 1. The troubled countries' rebalancing effort seen through the lens of the flow indicators (largely reversed current account deficits, dramatic fall in private credit flows, increased public lending) is partly positive. Yet when the rebalancing is being considered looking at their stock counterparts, i.e. no adjustment or deterioration in net IIP positions and private indebtedness and also dramatic rises in public debt statistics, the picture becomes really worrisome, especially when one looks at weak GDP dynamics and dramatic rise in unemployment rates. The indicators showing changes in international price competitiveness of the troubled economies, i.e. inflation rates, nominal unit labor costs and real effective exchange rates, though providing a mixed picture, also do not seem to evidence significant rebalancing.

TABLE 1. **Rebalancing in the six troubled countries after the outbreak of the financial crisis in 2007/2008**

Indicator	Adjustment in the six troubled countries
current account balance (% of GDP)	deficits largely reversed
net international investment position (% of GDP)	no adjustment or deterioration
private credit flow (% of GDP)	credit flow fell more than it had previously increased
general government balance (% of GDP)	deficits increased
private debt (% of GDP)	no adjustment or deterioration
general government debt (% of GDP)	dramatic deterioration
GDP dynamics	mostly negative
unemployment	dramatic rises, especially in Spain and Greece
inflation (GDP deflator)	slight adjustment or slight deterioration, significant adjustment only in Ireland
nominal unit labour costs	significant adjustment, no adjustment in Italy and Cyprus
real effective exchange rates	partial or no adjustment relative to Germany

S o u r c e: based on the Eurostat data.

Migrations

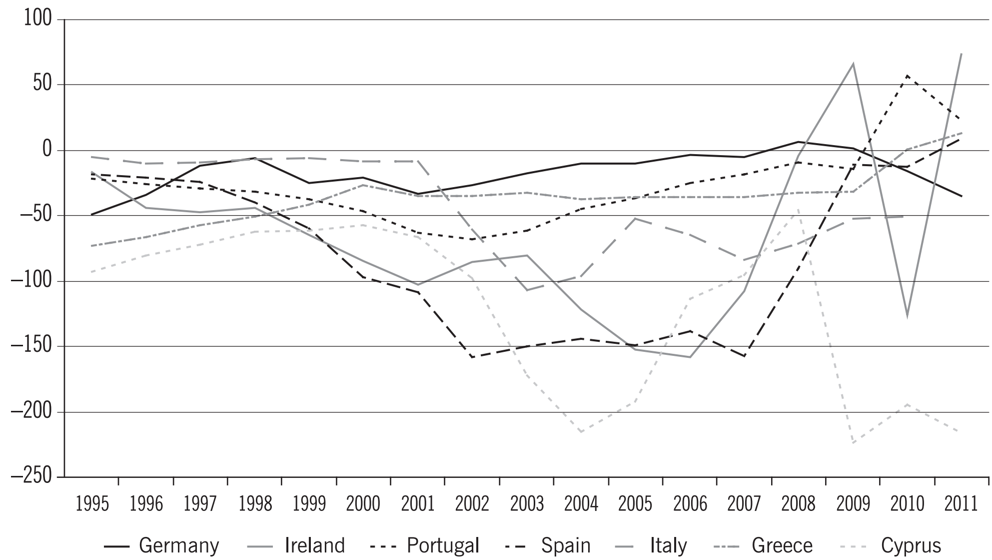
High unemployment rates in the eurozone troubled countries evidence not only the severity of their economic situation, but also, together with low German unemployment figures, suggest lacking geographic labor mobility between the eurozone member states. Yet labor mobility is one of the crucial factors determining whether a given currency area is „optimal”. According to Mundell [1961] high level of geographic labor mobility supports the functioning of fixed exchange rate systems.

Unfortunately empirical analyses show that geographic labor mobility in the eurozone is low [L'Angevin, 2007; Gáková, Dijkstra, 2008; Broyer et al. 2011; Bräuninger, Majowski, 2011]. Feldstein [2011] and Krugman [2012] consider low geographic labor mobility as one of the main problems of the eurozone in the context of its systemic crisis. Feldstein warned against the introduction of the common currency within the EU a few years prior to the euro inauguration highlighting low geographic labor mobility among European nations and vulnerability of the EU countries to asymmetric shocks [Feldstein, 1992].

Developments in net international migrations in Germany and the six troubled countries as a proxy for labor mobility are presented on Chart 13. The data were computed based on changes in population between the beginning of a given and the following year and life births and deaths in a given year. The chart shows that some of the troubled countries started to attract markedly more immigrants prior to the outbreak of the financial crisis. Net immigration in Ireland rose from 44 persons per 10 000 of population in 1998 to 158 in 2006. In Spain it rose from 40 in 1998 to 158 in 2002, then it fell to 138 in 2006 to rise again to 158 in 2007. In Italy it grew from 9 in 2001 to 107 in 2003, then fell to 52 in 2005 and rose to 84 in 2007. In Cyprus it grew from 57 in 2000 to 215 in 2004. Changes in Portugal were not so prominent, as net immigration rose there from 32 persons per 10 000 of population in 1998 to 68 in 2002 and then fell each consecutive year to reach 9 in 2008. Greece recorded virtually no changes as net immigration varied between 32 and 37 persons per 10 000 of population in 2001–2008. In Germany no dramatic changes were recorded, but it attracted less and less immigrants prior to the outbreak of the financial crisis (in 2001 net immigration there stood at 33 persons per 10 000 of population, whereas in 2008 Germany recorded net emigration at the level of 7 persons per 10 000 of population). After the outbreak of the financial crisis only Ireland and Portugal among the troubled countries recorded marked shifts into net emigration, which reached 66 persons per 10 000 of population in Ireland in 2009 and 57 in Portugal in 2010, whereas Spain and Greece recorded virtually no net migrations in 2011 (net emigration at 9 and 13 persons per 10 000 of population respectively). In 2010 Italy was still a country of net immigration (at 51 persons per 10 000 of population), whereas in Cyprus net immigration reached about 200 persons per 10 000 of population yearly in 2009–2011. After the outbreak of the financial crisis Germany turned again into net immigration (34 persons per 10 000 of population in 2011).

The data on net international migrations presented above suggest that only in Ireland and Portugal net emigration might have eased the situation on their labor markets to some extent after the outbreak of the financial crisis, whereas in Spain and Greece a vestigial net emigration could not have helped to alleviate the dire situation on their labor markets. Italy and Cyprus, despite rising unemployment, remained net immigration countries. Germany became the country of net immigration again after the outbreak of

CHART 13. **Net emigration in Germany, Ireland, Portugal, Spain, Italy, Greece and Cyprus per 10 000 of population in 1995–2011**



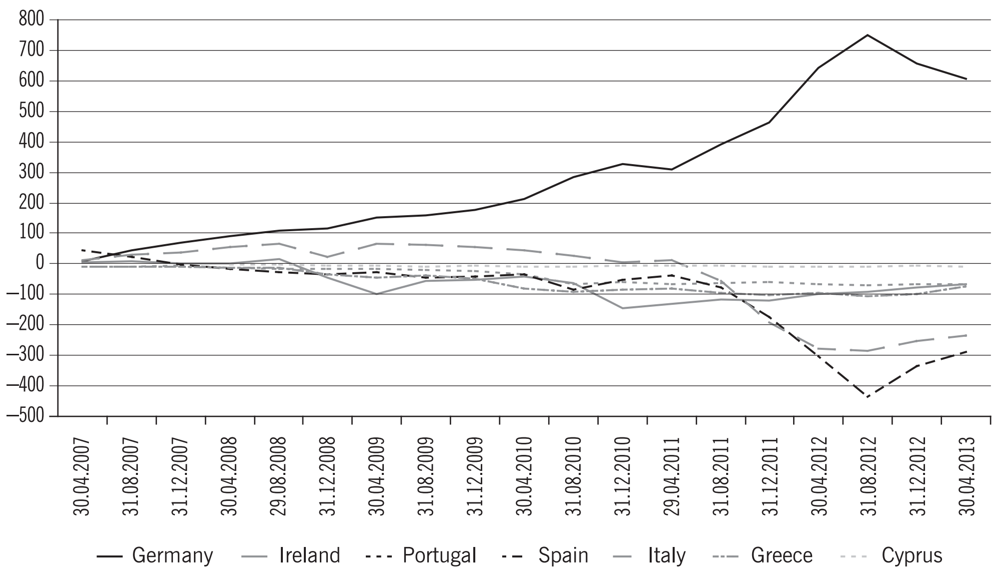
S o u r c e: based on the Eurostat data.

the financial crisis suggesting that to some extent it might have contributed to alleviating the situation on the labor markets of the troubled countries, but apparently much too little when one looks at unemployment rates there.

The Eurosystem and international financial assistance

The Eurosystem contributes to a large extent to determining how the rebalancing of the troubled countries proceeds as it is responsible for the monetary policy in the eurozone. But it is argued that the Eurosystem in fact also conducts fiscal policy. According to Sinn and Wollmershäuser [2012] voluminous money creation and lending by the national central banks of the peripheral eurozone countries at the expense of money creation and lending in the core eurozone countries, which gave rise to the Target balances (i.e. claims and liabilities of the eurozone central banks versus the Eurosystem being a measure of accumulated surpluses and deficits in balances of payments of the eurozone countries with the rest of the eurozone) constituted fiscal support understood as transferring the control of real economic resources and was a public capital flow helping the crisis countries just like the capital provided through the official facilities to assist the eurozone countries in difficulties (e.g. EFSF). The pattern of accumulation and scale of these imbalances is presented on Chart 14. According to the data compiled by the Ifo Institute the Target balances were generally limited in the first years of the euro and their marked growth started only in 2007 to reach the record values of 751,45 bn EUR worth of the Bundesbank claims and 434,43 and 286,56 bn EUR worth of liabilities of the Italian and Spanish central banks on September 31, 2012, while for the Irish central bank liabilities peaked at 144,55 bn EUR on December 31, 2010, for the Portuguese one at 73,53 bn EUR on March 31, 2012, for the Greek one at 107,33 bn EUR on November 30, 2012 and for the Cypriot one at 11,19 bn EUR on June 30, 2012.

CHART 14. **Target balances of the national central banks of Germany, Ireland, Portugal, Spain, Italy, Greece and Cyprus vis-à-vis the Eurosystem in 2007–2013 (bn EUR)**



S o u r c e: based on the data compiled by the Ifo Institute.

Table 2 presents how significant was the support for the troubled countries provided by the ECB policies that made the Target balances rise. We can see there that the rise in Target claims was equal to 84% of the German current account surplus in the period 2009–2012, which can be interpreted as follows: 84% of the current account surplus in Germany was used as a credit support for the troubled countries via the Eurosystem to finance current account deficits and/or capital flight in the troubled countries. The table shows that the capital flight worth of 436% of the Irish current account surplus in 2009–2012 was financed thanks to the rise in the Irish Target liabilities. One can also see there that the rise in Target liabilities allowed to finance 19% of the Cypriot current account deficit, 84% of the Greek one and 92% of the Portuguese one. In case of Spain and Italy one can interpret the situation presented as follows: in these countries the rise in Target liabilities allowed for the financing of the whole current account deficit and additionally capital flight equal to 103% of the current account deficit in Spain and 90% worth of current account deficit in Italy. The bottom row of the table shows the Target balances of the countries in relation to their GDP to illustrate the significance of the intra-Eurosystem support of the troubled economies. In fact the ECB policies that caused the rise in Target balances were the most significant mechanism of de facto fiscal support of the troubled countries after the outbreak of the financial crisis. This is illustrated in Table 3, which compares the Target balances and official international support (through bilateral loans, EFSF, EFSM, ESM and IMF) for the troubled countries. We can see there that for Ireland and Portugal the assistance provided through the ECB policies leading to the Target balances was more or less equal to official international assistance, the assistance to Spain and Cyprus was provided mainly through the ECB and in case of Italy only through the ECB. Only for Greece the assistance was provided mainly in the form of official international programs.

TABLE 2. **Comparison of Target balances with current account balances and GDP volumes in Germany, Ireland, Portugal, Spain, Italy, Greece and Cyprus**

Country	Germany	Ireland	Portugal	Spain	Italy	Greece	Cyprus
Change in Target balances in 2009–2012 (bn EUR)	540,0	-34,8	-47,1	-301,8	-274,9	-62,9	-1,0
Target balances at the end of 2012 (bn EUR)	655,7	-78,6	-65,0	-336,8	-251,5	-97,2	-7,4
Current account balances in 2009–2012 (bn EUR)	644,2	8,0	-51,2	-148,8	-144,7	-74,9	-5,3
GDP in 2012 (bn EUR)	2644,2	163,9	165,2	1049,5	1565,9	193,7	17,9
Change in Target balances in relation to current account balances in 2009–2012	84%	-436%	92%	203%	190%	84%	19%
Target balances at the end of 2012 in relation to GDP in 2012	25%	-48%	-39%	-32%	-16%	-50%	-41%

S o u r c e: based on the Eurostat data and the data compiled by the Ifo Institute.

TABLE 3. **Target liabilities and official international assistance in Ireland, Portugal, Spain, Italy, Greece and Cyprus (bn EUR)**

	Target liabilities*	Official international assistance**
Ireland	67	57 (EFSF, EFSM, IMF)
Portugal	62	66 (EFSF, EFSM, IMF)
Spain	281	41 (ESM)
Italy	199	—
Greece	64	215 (EA countries bilateral loans, EFSF, IMF)
Cyprus	8	3 (ESM, IMF)

* Data for Ireland, Portugal, Greece and Cyprus as of the end of May 2013, for Spain and Italy as of the end of July 2013.
** Data as of the beginning of August 2013.

S o u r c e: data of the Ifo Institute.

The financial assistance provided to the eurozone troubled economies in the form of Target credit and official assistance programs was substantial. This assistance alleviated the adjustment process in these countries, which explains to a large extent why the rebalancing proceeded as it is presented in the first part of the article. If the assistance had not been provided, the troubled countries would have experienced much more dramatic fall in their GDP and much higher unemployment. They would also have recorded stronger adjustment in their balances of payments, inflation, unit labor costs and real effective exchange rates. But political consequences of such an alternative variant of adjustment might have already caused the disintegration of the eurozone in line with the dramatic scenarios presented for instance by ING [2011] or UBS [2011].

Conclusions

The first part of the article has shown an ambiguous picture of adjustment in the six eurozone troubled countries. Some of the presented flow statistics, i.e. current account balances and private credit flows, seem to evidence that rebalancing has been largely achieved. Unfortunately when one looks at GDP dynamics and unemployment rates together with indicators of price developments (inflation, nominal unit labor costs, real effective exchange rates) rebalancing seems more Keynesian than classic in character. Other indicators presented in the first part of the article, i.e. general government balances and debts, private debts and net international investment positions evidence either no rebalancing or even deterioration. All in all the situation should be interpreted as follows: the rebalancing in the troubled countries was either at most limited or actually their economies continued to fall out of balance.

To make matters worse, migrations were either not much supportive for rebalancing of the troubled economies or they did not provide any dent to unemployment at all. If such a situation persists, the social consequences of the eurozone systemic crisis will be particularly painful thus increasing the probability of political changes putting at risk further participation of the troubled countries in the monetary union or even the existence of the eurozone itself.

Even though after the outbreak of the financial crisis Germany did not reduce its current account surplus, the troubled countries were provided with significant international assistance first of all from other eurozone member states, i.e. largely from Germany, and mainly in the form of the ECB policies causing the rise in Target balances. This assistance slowed down the rebalancing making the pain in the troubled countries less acute than it would otherwise have been without this assistance. But this assistance does not change the fact that these countries in the end have to go through painful price adjustment relative to the rest of the eurozone if they do not want to leave the monetary union. What is more, this assistance does not come without political risk and it cannot be prolonged forever. Voters in countries that are expected to foot the bill in some way (first of all Germany) may finally decide against the monetary union. We should not also expect voters in the troubled countries to consistently support the eurozone membership, especially when they perceive the euro as a source of economic hardship and associate it with foreign pressure on their countries.

For a few years the eurozone has been in the process of a deep institutional reform. Whether these efforts will be successful in a sense that the eurozone will not disintegrate and the troubled countries will eventually return to economic growth at full employment remains to be seen. But first they need to go through painful adjustment. Leaving the eurozone in turn bears the risk of dramatic economic slump together with political turmoil. One or the other way is not an optimistic scenario, especially in the short term. We should not expect the deep eurozone problems to be easily solved in a *deus ex machina* fashion. It seems that the troubled countries will not enter a period of economic prosperity any time soon. Rebalancing effort is still ahead of them, no matter if they chose to meet the challenge inside or outside the eurozone.

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