

AIECE GENERAL MEETING

8-9 May 2014

Dublin

Current account imbalances and the core-periphery “dualism” in the EMU

Tatiana Cesaroni and **Roberta De Santis**
tatiana.cesaroni@bancaditalia.it, rdesantis@istat.it

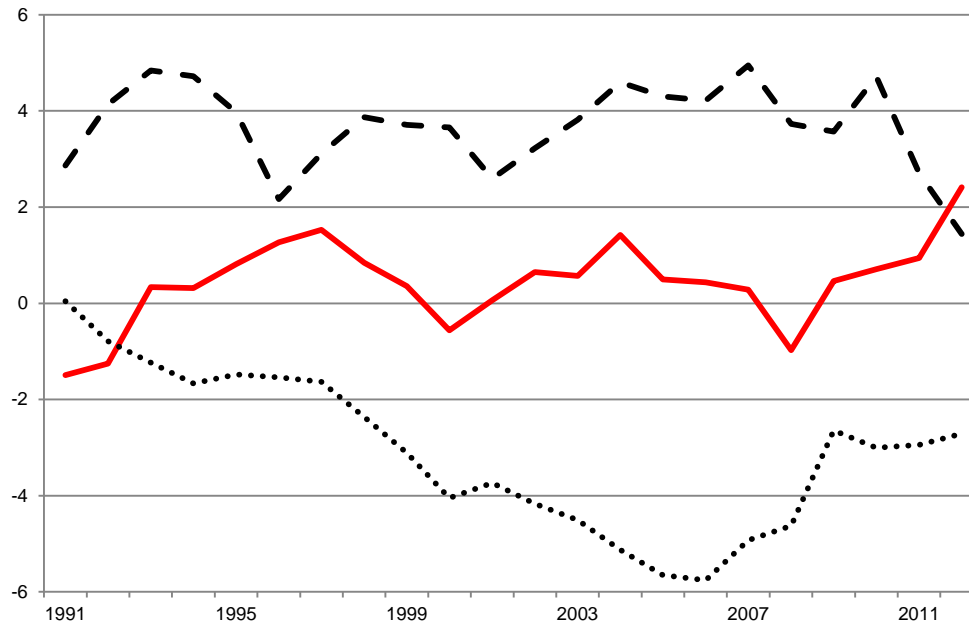
- There is strong evidence that since the second half of the '90 CA performances among members have been progressively diverging.
- Whereas in a small group of countries (i.e. Spain, Greece, Portugal, Italy?, Ireland) deficits became large and persistent, another group of countries (mainly Germany, Belgium, Finland, The Netherlands and Austria) registered significant surpluses. This evidence reflects what in the recent literature has been called European “*core periphery dualism*”
- The heterogeneous behavior of CA within EMU is considered a risky factor for the EMU future sustainability

- The objective of this paper is to investigate the so called EZ “core periphery dualism” with a particular focus on the role played by the European Financial Integration Process. (Single European Act, Single Market Program , EMU)
- To this end, we first analyze the “traditional” determinants of current accounts imbalances differentiating between 22 OECD members and the main 15 European Union (EU) members, we then perform a comparison between the (different?) behavior of the core and peripheral European countries.

- During the past two decades, huge capital inflows in certain euro area peripheral countries, were misallocated towards unproductive uses (i.e. to finance excessive public deficits or to finance unproductive investments such as real estate or to sustain private consumption)
- The easier access to international capital markets due to the process of European financial integration in some “peripheral” countries also generated demand pressures and contributed to push up inflation and the real exchange rates.
- While the CA of the EZ as a whole has remained almost balanced, starting from the second half of the ‘90 current account deficits in the peripheral countries have been complemented by growing surpluses in some core countries.

Some stylized facts (i)

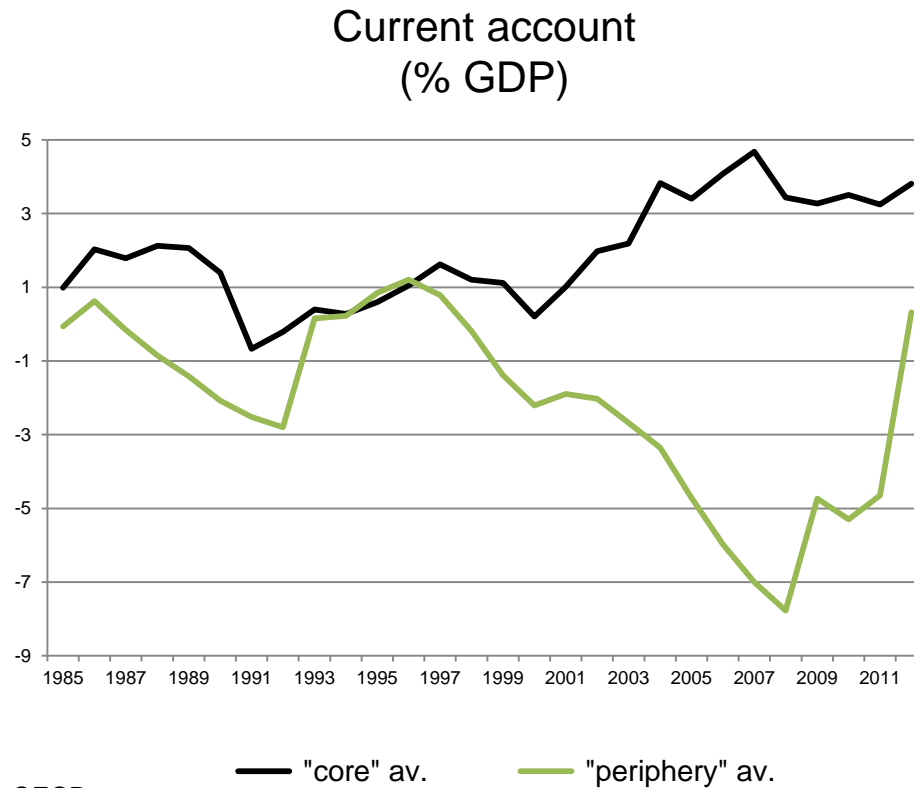
Current account
(% of GDP)



Source: OECD

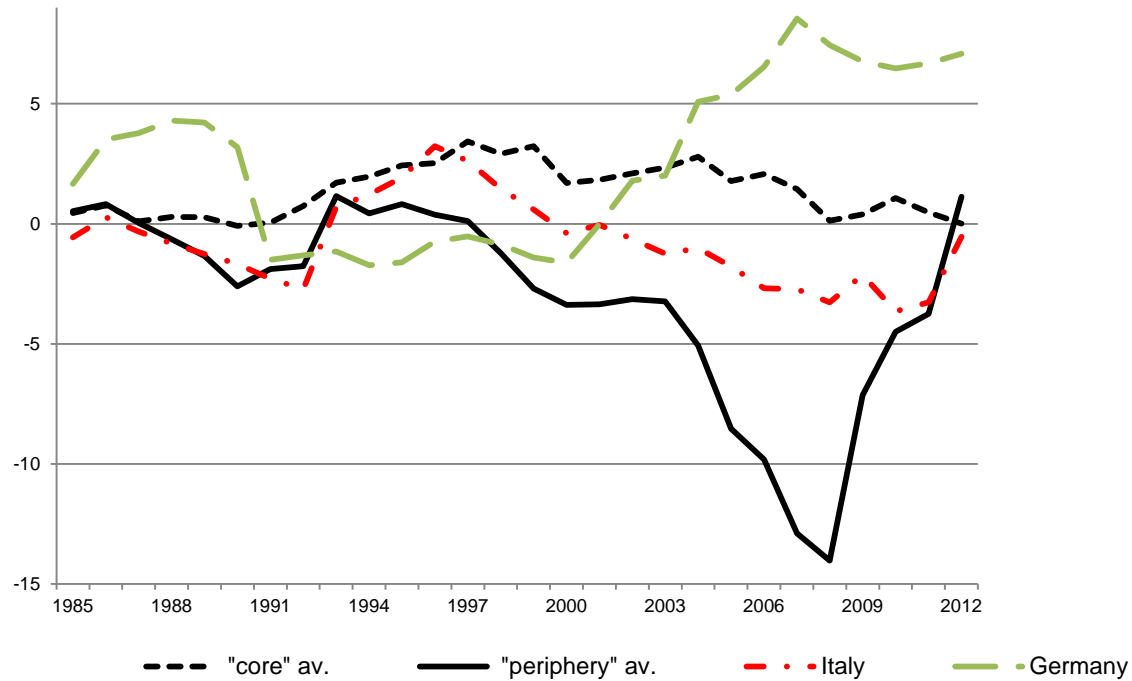
— EZ USA - - Japan

Some stylized facts (ii)



Some stylized facts (iii)

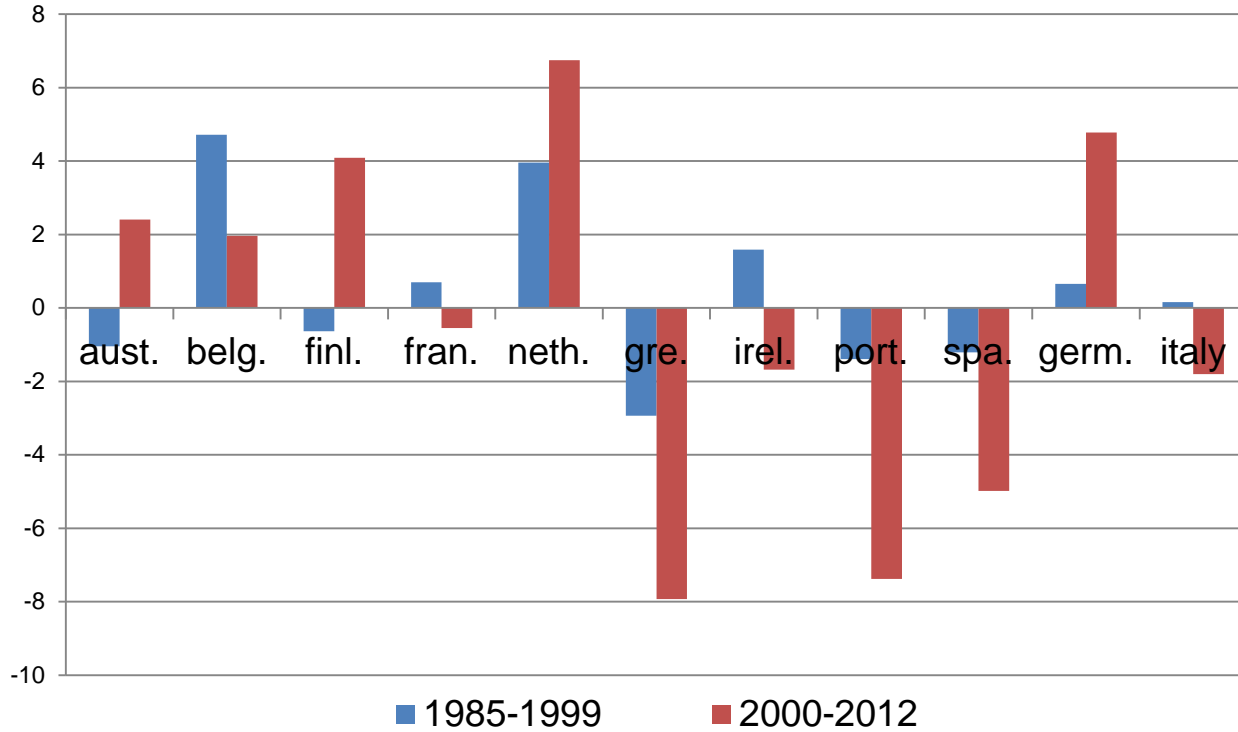
Current account (%GDP)



Source:OECD

Some stylized facts (vi)

Current account (%GDP)



Source: OECD

- Two main theoretical interpretations have been proposed:
 - i) The first one explains the EZ CA patterns in terms of structural changes determined by the financial liberalization Blanchard and Giavazzi (2002), Giavazzi and Spaventa (2010) and Schmitz and von Hagen (2011) (i.e. the Feldstein-Horioka puzzle doesn't hold in Europe)
 - ii) The second explanation focuses on loss of competitiveness due to nominal rigidities determined by labor market regulation the persistency of productivity gaps among EMU countries sectors (“Balassa Samuelson effect”) that are considered the main cause of trade balance disequilibrium.

- In this paper we focus on the first theoretical interpretation.
- If on the one hand the massive foreign capital allocation in the EU countries with higher expected return demonstrates that the EMU can be considered a well integrated capital market on the other hand the home bias reduction produced by the capital outflows from “core to peripheral countries” seems not to have produced convergence and catching up as neoclassical and OCA theories predict.
- Lack of Governance? Lack of OCA endogeneity properties in the EMU?

Data sources and sample selection (i)

- 22 OECD members, (11 main EZ economies) are selected in the sample. In the estimates we aggregate the EZ countries in two different groups: “core” (Germany, Austria, the Netherlands, Belgium, Finland) and “periphery” (Italy, Spain, Portugal, Ireland and Greece) according to the prevailing definition in literature.
- We use annual data coming from OECD, Milesi Ferretti (2011) database and World Bank.
- The time sample spans from 1986-2012. We selected as starting year 1986 in order to catch the impact of the financial integration process in EU improved substantially with the signature of the European Single Act (1986). 2012 is the latest available year for most of the series in the dataset.

- Following the prevailing literature we divide the explanatory variables of CA in three groups: i) macroeconomic fundamentals and control variables, ii) dummies, iii) financial integration and capital openness indicators.
- The first group includes: Income per capita, Public deficit ratio to GDP, Output gap, Oil balance, REEX.
- The second group includes: Dummies related to European economic integration such as EMU, EU, crises.

- In the third group we include:
- Financial openness indicators: this set of indicators captures the degree of financial market liberalization affecting cross country capital flows. (i.e. the Chinn-Ito index of capitals movement restrictions see Chinn Ito 2008).
- The index is the first principal component of the binary variables pertaining to cross border financial transactions based on the IMF's categorical enumeration taken from Annual report on Exchange Arrangements and Exchange Restrictions (AREAER).
- Higher values of this index indicate that the country is more open to cross border capital transactions.

The equation estimated is the following:

$$CA_{it} = \beta_{io} + \beta_1 * REEX_{it} + \beta_2 * b_{cycle.it} + \beta_3 * fin_{openit} + \beta_4 * budg_{defit} + \beta_5 * Z_{it}$$

where:

Ca_{it} : is the ratio of current account divided by GDP in nominal US\$ terms;

REEX: real effective exchange rate of the currency (-).

$B_{cycleit}$: is a proxy of the business cycle (-);

fin_{openit} : is an indicator of financial openness (?);

$budg_{defit}$: is the public budget deficit divided by the GDP (?);

Z_{it} : is a vector of control variables including, oil balance (-), income per capita (+), internal distance (-), area (?).

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- We use a panel data technique. A major motivation for this choice is the possibility to control for the correlated time invariant heterogeneity.
- To determine the econometric strategy we performed an Hausman specification test to check the presence of correlation between explanatory variables and individual effects.
- For a robustness check we also compare the results with other two estimators the Hausman and Taylor estimator (HT) and the “System GMM” estimator for dynamic panel data.
- The HT method is a 2SLS random effect model that allows dealing with correlation between regressors and unobserved individual effects. Using an HT estimator it is also possible to estimate parameters of time invariant regressors.

Preliminary estimates results

	OECD			EU		
N. of groups	21	21	21	14	14	14
N. of obs.	513			317		
	F-E	H-T	GMM-SYS	F-E	H-T	GMM-SYS
	1	2	3	4	5	6
Ca _{it} -1			0.89 ***			0.91 ***
Constant	10.18***	19.5***	0.80	18.5 ***	24.6 ***	-0.023 ***
budg _{def it}	0.25***	0.24 ***		0.12***	0.14 ***	
b _{cycle:it}	-0.33***	-0.33***	-0.18***	-0.25***	-0.25 ***	-0.15 ***
REEXit	-0.13 ***	-0.13***	-0.01*	-0.18 ***	-0.17 ***	0.003
fin _{openi}	1.77***	1.88***	0.35**			
fin _{openi_c}	-1.33***	-1.41***	-0.11	-0.07	0.22	0.04
fin _{openi_p}	-3.07***	-3.19***	-0.44 **	-1.1 ***	-1.15 ***	-0.23 **
EMU	-1.52 ***	-1.81 ***		-1.48 ***	-1.56	
Z _{it}						
Oil balance	-0.02***	-0.025 ***		-0.03 ***	-0.031 ***	
Income per capita	0.00 ***	0.00 ***		0.00 ***	0.00 ***	
Distance		-0.030			-0.1	
Area		0.000			0.00	
Hausman test	15.3**			43***		
Sargan overidentifying restriction test			212.48**			212.05**
Test for interaction terms (F or c2)	25.74***	18.99***	6.25 *	39.11***	13.54 ***	2.73*
Overidentification test (S-H c2)		3.95**			9.44*	4.23**

Preliminary conclusions (i)

- This paper analyses the determinants of CA imbalances among EMU countries. To this end, in addition to the traditional macroeconomic determinants we evaluated the effects of financial integration, competitiveness, business cycle and budget deficit.
- The robustness tests results show that REEX (-), business cycle (+) and budget deficit (+) are significant and with the expected sign in both OECD and EZ countries groups.
- According to our preliminary estimates financial integration played a role in explaining CA dynamics in the main OECD countries and especially in the EZ where the financial integration was more intense.

- The financial openness indicator seems to have a positive impact on CA imbalance for the OECD countries on average.
- However, disentangling the impact of financial integration for EMU core and periphery countries emerges that for both groups the financial integration had a negative impact and the magnitude of the effect was much greater for the peripheral countries than for the core.
- These results seem to be consistent with the negative and significant sign of the dummy EMU and corroborates the hypothesis that the deficit imbalances in the periphery could have been determined by capital inflows due to the financial integration process.

- i) Perform a cluster analysis to select in a statistically robust way the core and peripheral countries.

- i) Italy and Germany ?

- i) Introduce in the estimates «governance variables» (i.e. bureaucracy, corruption..)

Thank you for your attention