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CURRENT ACCOUNT IMBALANCES AND THE EURO AREA

ALTERNATIVE VIEWS

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Alternative Views*

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Abstract

The critical role of current account imbalances (CAI) is widely shared in the consensus narratives of the European crisis that followed the Great Recession. On the basis of this interpretation, new EU initiatives were introduced, in particular the so-called "Six Pack" adoption in 2011 and the establishment of the European Semester procedure to improve policy coordination in the EU beyond fiscal matters. This package includes the Macroeconomic Imbalances Procedure (MIP) that broadens the EU economic governance framework to include the surveillance of unsustainable macroeconomic trends. Although the widening of the CAI in the Euro Area is a matter of fact, and the consensus narrative contains elements of truth, alternative views have been put forward on mainly three issues: i) their relevance, ii) their causes and connection with the crisis, and iii) their policy implications. The aim of this paper is to examine these controversial points about the causes, meaning and consequences of CAI, and discuss the alternative policy prescriptions that emerge.

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1. Introduction

In the first decade of the euro's existence, many euro-area countries witnessed a build-up of macroeconomic imbalances. These vulnerabilities proved to be highly damaging once the financial crisis set in. The ongoing unwinding of the accumulated macroeconomic imbalances is a protracted process and the adjustment is proving to be particularly painful in terms of growth and employment (EU Commission 2010, p. 7).

The critical role of macroeconomic imbalances (MI) is widely shared in the consensus narratives of the European crisis that followed the Great Recession (e.g. Kuenzel and Ruscher 2013, Gros 2013, Sinn 2014, Baldwin and Giavazzi 2015, Beatrice and Sondermann 2018). MI came as a surprise to policymakers, who had generally expected that European integration would have reduced divergences among countries (Acocella 2016). In particular, the Maastricht criteria emphasised *nominal* convergence (defined in terms of nominal variables such as interest rates, inflation, exchange rates, government deficits and debt). In contrast, *real* convergence (defined in terms of convergence of real GDP per capita levels, convergence of unemployment rates, and so on) was left to market forces, and did not involve the control of criteria or indicators. However, the facts disproved this strategy.

The build-up of MI raised new EU initiatives that culminated with the so-called "Six Pack" adoption in 2011 and the establishment of the European Semester as a procedure to improve policy coordination in the EU beyond fiscal matters, thus encompassing also structural issues. The package includes the Macroeconomic Imbalances Procedure (MIP) to be enacted by the Commission.

The recently adopted Macroeconomic Imbalance Procedure (MIP) broadens the EU economic governance framework to include the surveillance of unsustainable macroeconomic trends. The aim of the MIP is to identify potential risks early on, prevent the emergence of harmful imbalances and correct the excessive imbalances that are already in place. It has a broad scope and encompasses both external imbalances (including competitiveness trends) and internal imbalances (EU Commission 2010, p.7).

Like the Stability and Growth Pact (SGP), the MIP consists of three components: surveillance (guided by the scoreboard of 11 indicators), preventive arm (alert and policy prescriptions in the face of mounting imbalances), and corrective arm (mandatory corrective actions and eventually sanctions). As the previous quotation explains, the MIP is intended to prevent imbalances *within* countries, as well as *across* them. The two dimensions are unified under the overarching aim of sparing other countries from the fall-out from unsustainable national policies.[1]

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[1] Article 2(1) of Regulation No 1176/2011 defines an imbalance as "any trend giving rise to macroeconomic developments which are adversely affecting, or have the potential adversely to affect, the proper functioning of the economy of a Member State or of the Economic and Monetary Union, or of the Union as a whole". Additional clarity is given in the Commission compendium,

The indicators chosen by the European Commission concentrate on a small number of fields that range from micro to macro, from real to financial variables, which give a first, rough indication of the possible existence of imbalances in a country.[2] The type of imbalance the MIP tries to identify is related to the ability of a country to service its private, corporate, or public debt. The procedure is influenced by the analysis of origins of the crises, although each of the eight most affected countries underwent their own set of problems (D'Antoni and Mazzocchi 2013). Indicators are not compared between countries, but are read against thresholds defined *ex-ante* by the Commission by way of a scoreboard. Differently from the SGP, the MIP's thresholds are not meant as legal limits. Exceeding the thresholds is not a breach of law, and does not lead to sanctions.[3] However, sanctions may be imposed in case of lack of corrective action, independently of any indicator level.[4]

Within the MIP framework a prominent role is assigned to current account imbalances (CAI). The MIP provision is that policy actions are particularly needed in countries showing persistently large current-account deficits and competitiveness losses[5], whilst in countries that accumulate large current-account surpluses, policies should aim to identify and implement measures that help strengthen their domestic demand and growth potential. The threshold associated to the CAI are not symmetrical, and countries are required to follow consistent adjustment programmes in the presence of a CA surplus of 6% of GDP or of a deficit of 4% of GDP. This is because in the MIP framework a current-account surplus is not expected to be a clear and present danger for stability. Nevertheless, large current account surpluses

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where it is specified that "the main rationale for a supranational surveillance mandate builds on the fact that macroeconomic imbalances in one country have relevance also for other countries". Therefore, "the analysis concerns primarily country specific issues, but implications for the euro area and the EU need also to be addressed" (EU Commission 2016).

[2] The MIP scoreboard initially comprised 10 indicators, but in late 2012 an indicator detecting vulnerabilities of the financial sector was added. Some authors criticized this addition, since it can apparently penalize the catching-up of financial markets such as those of the new EU members (Bobeva 2013).

[3] The indicators' thresholds are solely meant to help trigger an in-depth review (IDR). Once a country is suggested for an IDR, the European Commission undertakes a country-specific analysis and ultimately assess whether macroeconomic imbalances exist, and if they do, whether they are excessive or not (EU Commission 2013). The finding that imbalances do exist but are not excessive results in a preventive Country Specific Recommendation addressed to the member state concerned by the Council of the EU. On the contrary, excessive imbalances will trigger the corrective arm of the MIP; launching an Excessive Imbalance Procedure, requiring the member state to submit a Corrective Action Plan.

[4] If the Member State fails to correct the imbalances a financial sanction up to 0.1% of the GDP can be applied. So far, no Member State has yet reached this stage, although most of the EU countries are on the list as experiencing imbalances.

[5] As stated by Mario Draghi "[…] current account imbalances could be justified for any country, including those participating in a monetary union, and they do not necessarily reflect a loss of competitiveness. But increasingly, larger current account deficits have resulted from significant losses of national competitiveness, signaling domestic macroeconomic imbalances and deeper structural problems" (Draghi 2013).

can bear vulnerabilities, especially in cases of a sudden collapse of world trade (as experienced by Germany, among others, in 2008), and may point to imbalances within a country, which might lead to spill-overs that require correction (e.g. through structural reforms). Although the MIP scoreboard consists of a wide range of indicators, the CAI provision seems stated unconditionally, that is to say CAI are to be corrected independently of the constellation of other indicators that surround them and may interact with them. To the extent that CAI are related to competitiveness issues, the MIP intersects with the Euro Plus Pact, another package of warning indicators and recommendations prompted by the crisis and approved in March 2011.

Although the widening of CAI in the Euro Area (EA) prior to the crisis is a matter of fact, and the consensus narrative contains elements of truth, alternative views have been put forward on mainly three issues: i) their relevance, ii) their causes and connection with the crisis, and iii) their policy implications. The aim of this paper is not to discuss the MIP in itself, the specific indicators in the scoreboard or its implementation (see Moschella 2014 for an assessment). It is rather to examine the above-mentioned controversial points about the causes, meaning and consequences of CAI in the EA, and discuss the alternative policy prescriptions that emerge.

2. Relevance. Why are current account imbalances so important in the Euro Area?

In the first place, the whole issue of CAI, as it has been encapsulated in the MIP, seems to have questionable normative foundations.

CAI are deemed important for mainly three reasons: 1) they signal divergent real and nominal growth paths, 2) they signal divergent competitiveness (mainly in terms relative unit labour costs), 3) they imply large cross-border borrowing that may give rise to sudden balance-of-payments crises. This signalling capacity attributed to CAI is quite controversial, however (Acocella 2016). This is not surprising since the question "Does the current account matter?" (Obstfeld 2012) is still under discussion among international scholars, and the analogy between EA member states and stand-alone open economies is questionable (Pisani-Ferry and Merler 2012, Collignon 2014).

Most of the time open economies, or regions within the same national boundaries, follow different growth paths, with different rates of growth of prices, wages, population, capital, employment. These differences quite naturally lead to large trade and capital flows. One classic argument in favour of free mobility of persons, goods, and capitals is precisely that it allows open economies to take different economic trajectories while having access to wider pools of resources. Large transfers of resources, mostly market-driven, are vital to the functioning of open economies. From this point of view the CAI in the EA can be seen as part of the general phenomenon of globalisation resulting in the so-called "global imbalances", i.e. large and persistent CAI at the world level (Lane 2103, Obstfeld 2012)

Of course, it is also important to be aware that different economic trajectories, and the ensuing transfers of resources, may embed long-term troubles as to their sustainability. Identifying pathological CAI is however a difficult task as testified by the ongoing debate on the global imbalances at the world level. The MIP scoreboard certainly seeks to come to terms with the complexity of CAI diagnostics. However, having a detailed list of indicators is not *per se* a failsafe way to make a good diagnosis, unless the interplay between the indicators is deeply and correctly understood.

As a matter of fact, there are two main approaches to CAI analysis, one that may dubbed "real" (focusing on trade flows based on some notion of "competitiveness"), and one "financial" (focusing on sources and effects of capital movements). The two approaches often appear as alternative, though they may well be complementary. Anyway, they are linked in the national accounts by this well-known identity chain:

Current account = Trade balance + Net foreign incomes =
National disposable income – Domestic absorption =
Private saving + Public saving – Total investment = Net foreign lending

Finally, countries belonging to the EA share the peculiar status of members of a monetary union, and the institutional framework is a key factor in determining the nature, cause, consequences and policy options of CAI (O'Rurke and Taylor 2013). Intra-EA CAI, which account for the bulk of the total and are the key concern of the MIP, are not the same phenomenon that may occur among independent monetary sovereigns (Pisani-Ferry and Merler 2012, Collignon 2014). Rather, it is natural, in the first instance, to look at single countries or long-standing federal systems, in comparison with which the question arises: if *internal* CAI are so dangerous, how is it that nobody in the US, Germany, or anywhere else gives them the same prominence as in the EA?

2.1 Some data

Here we report just a few comprehensive data as background for the subsequent discussion (see also Beatrice and Sondermann (2018) for an extended survey of data). For continuity and comparability, we only consider the early twelve members of the EA (the first-access eleven plus Greece). These also account for the largest share of economic activity in the EA.

Figure 1 presents the evolution of the CAs of the EA12 countries in nominal terms from 2000 to 2017. Table 1 reports summary statistics of CAs as percent of GDP for each of the EA12 countries from 2000 to 2017: the number of deficit years, the number of excess deficit and surplus years (according to the MIP indicator), and the cumulated CA from 2000 to 2008

– the year of the largest absolute total value of CAI – and from 2009 to 2017 to add a longer-term perspective.

Three are the outstanding features. The first is the progressive increase of total CAI in absolute value from almost negligible values when the euro was launched to some 406.5 billion euros in 2008. Afterwards they shrunk a bit to peak again to 411.2 billions in 2017. As a second feature, there is however a key difference between the two periods: CA surpluses and deficits remained roughly symmetric up to the crisis, resulting in almost zero EA12 balances, whilst from 2009 surpluses begun to exceed deficits producing a large and widening EA12 surplus. Since 2013 only France has been dwelling on the deficit side by a significant amount. The third feature is that over the period of symmetric imbalances the group of the deficit countries and of the surplus countries remained unchanged so that the EA12 as a single economy can consistently be split into a "deficit region" and a "surplus region". Identifying the deficit region as the countries with negative cumulated CA in 2008, it corresponds to the usual "Periphery" (Greece, Ireland, Italy, Portugal, Spain), while the surplus region contains the "Core" (Austria, Belgium, Finland, France, Germany, Luxembourg, Netherlands). Figure 2 shows the development of the aggregate CA as percent of the aggregate GDP of the surplus and deficit region as defined above.

Even these basic data raise interpretative problems with the true meaning of CAI. First of all, are CAI to be detected on a short or long time horizon? And consequently, when does a CAI alarm bell ring? While the problem of CAI usually refers to the intra-EA divide between surplus and deficit countries, large and persistent one-sided surpluses or deficits still indicate a serious CAI of the EA as a whole. Should we care about them or not?

On a yearly basis, the data in Table 1 and Figure 1 suggest that the CAI alarm, *if this means the development of abnormal intra-EA deficits and surpluses*, was a matter of few years (2004-08) and few countries. As a matter fact, violations of MIP thresholds have been very limited though concentrated in a systematic and persistent way, both on the deficit side (Greece and Portugal) and the surplus side (Germany, Luxembourg, Netherlands). As to the deficit region as a whole, the turning point was 2009, when its aggregate CA/GDP ratio begun to improve. Since 2013 the (former) deficit region has disappeared joining the surplus region except France that moved into the deficit territory.

In a longer-term view, we can spot countries which have been persistently (more than half of the time) in deficit (France, Greece, Ireland, Italy, Portugal, Spain) or in surplus (Austria, Belgium, Finland, Germany, Luxembourg, Netherlands). Since one main reason of concern with CAI is the implied build-up of cross-border debts and credits, cumulated CAI are more informative (Beatrice and Sondermann 2018). As shown by Table 1, at the climax of the (symmetric) CAI run-up in 2008, the top cumulated surpluses in terms of GDP were reached by the Northern small open economies (Belgium, Finland, Luxembourg, Netherlands) while

the largest cumulated deficits were recorded by Greece, Portugal, and Spain. The cumulated CAI of the deficit region as a whole peaked at 42.2% of GDP in 2012 and then improved by 8.6 points to reach a total cumulated deficit of 33.6% of GDP in 2017.

To sum up. With benefit of hindsight, the build-up of intra-EA CAI was concentrated in a few years (basically 2004-08) and a few countries (Germany and its small open satellites *vis-à-vis* Greece, Portugal and Spain). As of 2013, the EA split between a surplus and a deficit region has disappeared. The geography of cumulated CAI has only Greece, Portugal and Spain that qualify as long-term deficit countries by substantial amounts,[6] but in an overall context where CAI are no longer an intra-EA matter but mostly a matter of penetration in extra-EA markets. What are the lessons to be drawn from this long-term parable of intra-EA CAI? Are today's CAI still a problem as they were in 2008? Are they of a different nature? Do they need corrections? The official apparatus is rather silent on these questions.

In order to provide orderly material for the subsequent discussion, we will adopt as benchmark the 2000-2008 split of the EA12 in the deficit and surplus regions identified above. This was in fact the situation that gave rise to the CAI alarm in the EA, and it may be regarded as paradigmatic of the problems that such a peculiar configuration of internal CAI may create in a monetary union. Moving beyond, the data will show how the *formerly* deficit and surplus regions have evolved.

2.2 The real approach

The role of competitiveness as the driver of CAI is very popular and finds a place in several reconstructions of the EA crisis (e.g. EU Commission 2010, Sinn (ed.) 2012, CEPR 2015, Beatrice and Sondermann 2018). However, it has been subject to criticisms and qualifications, not because it is irrelevant – of course it is relevant – but with regard to *the precise definition and identification* of "competitiveness", and to its *causal importance in comparison with other concomitant factors*.

Current account and trade account

To begin with, the CA is the algebraic result of the net trade balance and net foreign incomes. In the EA12 the correlation coefficient between trade balance and CA at the country level is quite high (typically more than 0.8), but net creditors tend to have better CA than the

[6] Note that France presents an anomalous pattern with respect to the other surplus countries since from 2009 to 2017 it cumulates negative CAs reaching an overall −18.6% of GDP.

pure trade balance, and vice versa net debtors. Table 2 reports the average non-trade components of the CAs of the EA12 countries as percent of GDP before and after 2010 (a negative sign indicates a worse CA than the trade balance).

For instance, Ireland, which is one of the major hosts of foreign direct investments in the EU, shows a historical pattern of net payments of foreign incomes that worsen the CA by some 15% of GDP. Italy and Spain, in the phase of mounting CAI, had their CA deficits worse than trade deficits by more than 1% of GDP. The net revenues to Germany as net creditor after the crisis account for additional CA surpluses of about 1% of GDP per year. Competitiveness factors plausibly impinge on the former component whereas the latter is largely governed by other factors, such as the stocks of foreign assets and liabilities and the relevant (possibly different) rates of interest (see also section 2.3).

What does competitiveness mean?

A second preliminary question is that, as pointed out by Krugman many years ago (1996), it may not be necessarily true that the excess absorption relative to domestic resources mirrored in a CA deficit also entails a competitiveness deficit – whatever it means.

Competitiveness is a *microeconomic* notion that concerns firms' ability to contend market shares; its extension to countries is a semantic degeneration quite harmful to clean economic reasoning (Krugman 1996). To make a simple example, if BMW sells less cars in France and more in Germany, this does not mean that BMW is less competitive – let alone Germany – for the simple reason that BMW competitors are basically the same all over Europe (all over the world, actually). As we know from Adam Smith, the key to the *wealth of nations* is the productivity of their labour force, which has a major determinant in the dimension of outlet markets. Thus foreign trade is vital for productivity of small nations, but less so for large nations with vast domestic markets. This was in fact the fundamental reason that led to the creation of the European Single Market, a free market continental area comparable to the US. It is therefore puzzling the persistent concern that EA institutions and policymakers still attach to intra-EA net trade figures, which have now little substantial connection with the prosperity of the single nations and of the Union as a whole.

In fact, a broader meaning of competitiveness applied to countries is adopted by the World Economic Forum to compile the Global Competitiveness Index[7]:

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[7] The definition provided by the OECD (1992) is very similar. Economic competitiveness is defined as "*the degree to which a country can, under free and fair market conditions, produce goods and services which meet the test of international markets, while simultaneously maintaining and expanding the real incomes of its people over the long term*". In other words, competitiveness can be

We define competitiveness as the set of institutions, policies, and factors that determine the level of productivity of an economy, which in turn sets the level of prosperity that the country can achieve (World Economic Forum 2017, p. 4).

According to Békes and Ottaviano (2016), competitive regions are those able to breed or attract competitive firms, i.e. those that

hire more workers, offer better job security, pay higher wages, invest more (also in human resources), generate more revenues and profits, and therefore allow regions to raise more tax revenues for any given tax rate (pp. 36-37).

Hence, looking at *countries* as a whole, these indicators point to efficiency and productivity, of which the competitiveness of *firms* is just one dimension. This is not only a terminological issue. It may not be necessarily the case that competitive firms, regions, or countries in this sense are also strong net exporters, as testified by the ongoing research prompted by Melitz (2003) on the chicken-and-egg problem between firms' efficiency and export specialisation. The classic case in point is the United States, which has been running CA deficits since 1983 while showing all the characteristics of a globally efficient and "competitive" economy as testified by its top ranking (3rd in the 2017 Global Competitiveness Index of the World Economic Forum). By contrast, China has been running a giant CA surplus for years, but it would hardly qualify as a more competitive economy than the US (15th in the WEF ranking). If the United States may provide an example of an efficient and productive economy without strong net export capacity in the aggregate, Italy may provide the opposite case. That is an economy with a historically strong manufacturing sector with export vocation which has been entrapped in a low-productivity low-growth path for the last twenty years (between 2000 and 2015 Italy's real GDP grew 0.5% per year *vis-à-vis* real exports growing 2.2% per year; see Table 3).

Economic *vs.* political geography

The foregoing considerations are "consistent with the fact that in all countries more advanced areas co-exist with peripheral regions" (Bonatti and Fracasso 2017, p.14). As shown by these authors, there is growing tension between the correct micro-notion of competitiveness and its macro-extension to the countries as defined by national boundaries. Each national country has its own disparities, while it shares forerunning and laggard regions with others. Disparities at the national level are therefore the result of the relative weight of

assessed as the ability of a country to operate in a competitive environment whilst maintaining an internal balance, namely the standard of living of its population (de Vet 1993).

domestic forerunners and laggards, which creates serious problems, foremost for policy purposes, if disparities are simply read at the national level as is usually done.

The divorce between political and economic geography is further amplified by the increasing irrelevance of conventional trade accounting testified by the new literature on so-called "global value chains" (e.g. Timmer et al. 2013, Alfaro et al. 2015, di Mauro et al. 2016). Gross trade flows, which are more important than net ones, are increasingly the result of cross-border dis/integration of production processes.

> Because of the emergence of global value chains, trade imbalances within the Eurozone are to a large extent an endogenous result of the international organization of production at the firm level. It is therefore better to disregard intra-Eurozone imbalances and focus on the total (Di Mauro et al. 2016, p. 1).

In 2000 intra-EU exports amounted to 2.2 times extra-EU ones, in 2015 1.6 times.[8] Figure 3 shows the intra and extra-EU trade balances of the surplus and deficit region as percent of the respective regional GDP from 2000 to 2015. The two regions present different patterns. For the deficit region, intra and extra-EU outlets appear to be complements (they are positively correlated), whereas for the surplus region they seem substitutes, (they are negatively correlated). In the 2000-08 period, the deficit region suffered from worsening trade balances both within and outside the EU, while they improved in tandem afterwards. By contrast, in the first period the surplus region over-compensated the fall of extra-EU world trade with larger intra-EU surpluses; subsequently, the region switched back to extra-EU trade as the main source of surpluses, "in particular *vis-à-vis* China, Central and Eastern Europe and oil exporters" (Chen et al. 2013).

Some studies have pointed out that the gap in the trade pattern between the two regions was significantly due to different adjustments to external opportunities and shocks (Chen et al. 2013, Esposito and Guerrieri 2014). The adjustment of the deficit region after the 2012 crisis was accomplished mostly outside the EU, also because the generalised export-oriented policies reduced the size of the "domestic" EU market. Overall, Table 3 shows that since 2000 almost all EA12 countries have recorded a greater year average growth rate of total exports than GDP, a fact that still needs an explanation in the narrative of the competitiveness problem that plague the CAI problem of the EA.

Gauging price competitiveness

The conventional price-competitiveness argument is generally based on aggregate indicators such as real effective exchange rates or real unit labour costs (RULC). With reference to the surplus and deficit region, Figure 4 shows the path of the respective RULC since 1999

[8] Disaggregated data for the sole EA are not available.

= 100. As a matter of fact, the widening of CAI after 2005 coincided with a growing gap between the two regions' RULC. It can also be seen that this gap was due to the fall of the surplus regions' RULC (mostly driven by Germany) rather than by a rise in the deficit region. During the crisis RULC increased sharply everywhere as a typical effect of the recession. Subsequently RULC in the surplus region flattened, whereas they fell dramatically in the deficit region. Indeed, there were no longer any deficit countries (except France) in 2017. However, the straightforward use of these indicators in relation to competitiveness and CAI has been subject to several criticisms.[9]

Gros and Alcidi (2011) point to a critical factor in price indices and the role in the conventional narrative: the choice of the base year. This choice may be misleading unless there is robust evidence that in the base year accounts are in equilibrium. Moreover, accounts may not be in equilibrium for all countries in the same year; each country ought to be examined separately, whereas conventional aggregations such as those exemplified above may be misleading. Fisher (2007) addresses these problems by means of various measures of equilibrium real exchange rate finding that the competitiveness gain of Germany *vis-à-vis* some Southern countries between 1999 and 2005 can be seen as a *re-equilibration process* of previous divergences in the opposite direction.

More importantly, are RULC a sufficient indicator of price competitiveness in relation to trade? Limitedly so. RULC capture the efficiency of the production system, which is an element in the key variable that eventually determines trade performance: relative prices in the outlet markets. A closer proxy for this key variable is the real effective exchange rate (REER), which in fact, for any country *i* embodies the RULC as follows:

$$REER_i = \sum_j \omega_{ij} e_{ij} \frac{ULC_i}{ULC_j}$$

where *j* denotes the trading partners, ω_{ij} are the bilateral trade weights, e_{ij} are the bilateral nominal exchange rates, and ULC_i/ULC_j are the bilateral relative ULC. Esposito and Messori (2016) provide an accurate analysis of the determinants of the REER of the EA countries, where they disentangle the evolution of the wage *cyclical* component from the *structural* productivity component of ULC_i/ULC_j.

It should be added that, as far as intra-EA trade is concerned, nominal exchange rates are fixed, but export nominal prices are not. A one-to-one "pass through" from costs to final prices implicitly assume perfect competition. It is questionable that this assumption characterizes EA trade appropriately, and indeed it is largely relaxed in advanced international trade studies

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[9] Not only for the EA countries. Empirical research across industrialized countries and the United States finding poor relationship between price indices and CAI goes back to Rose (1991), and Bachman (1992). More recent work by Bahmani-Oskooee and Kara (2003) using cointegration models for several industrialized countries finds weak and unsystematic relationships.

(Melitz 2003, Melitz and Ottaviano 2008). Reference to imperfect competition models, or incomplete pass-through models where changes in costs may be more or less absorbed by changes in mark-ups, would make the empirical analysis more complete. Changes in mark-ups are an integral part of cost-quantity adjustment processes as well as of the structural characteristics of the EA economies, of the markets where firms compete, and of possibly different managerial strategies (e.g. Wood 2014, Amici et al. 2018).

Figure 5 shows the evolution of the export price index of the deficit and surplus region and their ratio from 2000 to 2015. The picture appears quite different from that of the RULC in Figure 4: export prices in both regions largely followed the same path with roughly a constant ratio.

It seems difficult to see how such small divergences in export prices of the two regions can explain the large swings in their CAI.[10] This, however, should not come as a surprise in light of the initial consideration that export firms compete in highly integrated outlet markets. If the underlying ULC diverge in the home countries, the realignment of prices can be obtained by means of the pass-through policy of firms. As a consequence, divergent ULC are an indicator of tensions at the level of the profit-wage balance within the export industries more than an indicator of price competitiveness relevant to trade flows (see also below). Praet (2018) proposes to shift the focus of micro-divergences from ULC and export prices to the evolution of margins and profitability, showing that this divergence may be substantial even among countries with similar cost-price paths.

Following Amici et al. (2018), we have computed the difference between the regional rate of change of the export-price index and of the ULC index as a proxy for the margin policy of the two regions. As can be seen from Figure 6 the evolution of margins, setting 1999 = 100, is quite similar in *both regions* (they display a positive correlation of 0.75), with some evidence of the buffer role of margins with respect to changes in ULC. After an initial contraction, margins grew up until the crisis, *faster* in the *surplus* region which means that firms were partly appropriating their ULC relative decrease. After the collapse in 2008-09, margins were recovered at a sustained pace in both regions, now *faster* in the *deficit* region replicating the earlier margin policy in the surplus region. Amici et al. (2018) provide detailed evidence of these phenomena, concluding that changes in profitability are correlated with changes in relative export performance whereas the relationship is unclear between export and prices, and export and ULC.

Finally, if Zemanek et al. (2009), and Belke and Dreger (2011) support the conventional view, an extensive amount of literature raises the well-known issue that price competition is less and less important in explaining trade patterns among industrialised countries (see above

[10] During the run-up of the CAI, export prices were increasing slightly *slower* in the *deficit* region.

the point on global value chains, and, with reference to the EA, Gros 2011, ECB 2012, Giordano and Zollino 2015).

Price competitiveness and the macroeconomy

Wyplosz (2013) raises yet another matter of debate as he disagrees with the *causal chain* competitiveness loss → CAI → debt crisis because "simultaneity does not imply causality" (p. 2). Instead, Wyplosz concentrates on the unsustainable financing of domestic absorption in deficit countries (see below). He also argues that if real effective appreciations of deficit countries played any role, this is more on the *extra*-EA front, than on the internal front, owing to the appreciation of the euro and other shocks. Wyplosz's arguments epitomise the view that changes in RULC, and price competitiveness factors in general, do play a role in the development of CAI, but, for the various reasons expounded above, not as the exclusive prime mover, and not in any univocally detectable way.

For instance, attention should be paid to the implications that the differences in the RULC of the various countries have on profit margins and consequently on the distribution of income within the various countries. In the period under consideartion, the distribution share of wages decreased throughout the EU, but it declined more markedly in countries such as Germany and Austria, where - at the same time - the propensity to save, especially by companies, increased (Inchauste and Karver 2018). Since the propensity to consume for wage earners is generally higher than that for the higher income brackets (Hein and Vogel 2008; Stockhammer et al. 2009), the imbalanced distribution towards profits caused weak internal demand. This led to a slowdown in import demand and thus to a further increase in the trade surplus. The subdued domestic demand in the core Europe had its counterpart in the strong domestic demand growth in several peripheral countries, particularly in Spain, Ireland and – to a lesser extent – Greece. The European Commission (2010) suggested a precise temporal scan which, for the latter group of countries, first of all sees an increase in domestic demand with a worsening of the current account stance. Only later we observe a loss of competitiveness in these countries, with a strengthening of the negative effects on the ability to export and a further deterioration in the balance of payments. These divergences in domestic demand have long remained underexposed in the current debate, but seem quite plausible drivers of the CAI in the EA.

Therefore, the CA has to be understood as essentially a *macroeconomic* phonemenon to be consistently nested into the national accounts recalled at the beginning of this section. Both RULC and CAI are endogenous in the macroeconomic process driven by capital movements. This leads us to the financial approach to CAI.

2.3 The financial approach

The core reality behind virtually every crisis is the rapid unwinding of economic imbalances. In the case of the Euro Zone Crisis, the imbalances were extremely unoriginal – too much public and private debt borrowed from abroad. From the euro's launch till the crisis, there were big capital flows from EA core nations like Germany, France, and the Netherland to EA periphery nations like Ireland, Portugal, Spain and Greece (CEPR 2015, p.1).

Looking at intra-EA capital movements, Sinn (2014) used the colourful image that "a party was going on in the South". But the obvious question is who brought the bottles. The idea, quite common among populist leaders, is that the bottles were stolen in the wineries in the North. Yet this is nonsense. First because in an integrated system capitals freely flow where investors expect higher return. Second because there cannot be excess spending without borrowing, nor lending without excess saving.

These basic forces that are unleashed by financial liberalisation *create by themselves* the kind of complementarities between surplus and deficit countries that we observe *ex post* in the international accounts, and that in the EA case have been documented and investigated by a vast amount of literature (e.g. ECB 2011, Chen et al. 2013, Lane 2013, Borio and Disyatat 2015). As an exemplification, Figure 7 shows the change in the saving-investment balance reflected in the CA as percent of GDP from 1999 to 2007 in the major deficit countries *vis-à-vis* Germany. Investment is split between "housing" (constructions + dwellings) and "other" (non-residential constructions + machinery and equipment).[11]

Country patterns differ markedly. Germany stands out as a country where not only national savings increased (5.9 points of GDP), but total investment was reduced (–2.2), thus adding to, instead of absorbing, excess national resources. However, reduction was mostly in the housing sector whereas other investments rose moderately. In deficit countries, we observe a mirror image: a *fall* in private saving and a *rise* in total investment mostly driven by the housing sector at the expense of other investments. Contrary to widespread beliefs, the public sector played a negligible role (not a positive one as in Spain and Ireland).

Understanding how these forces shape the macroeconomic processes in the way we observe *ex post* is not an easy task. The long-standing question of causality between the CA and the mirror capital inflows/outflows of the country remains controversial.[12] However, today financial capital moves far more massively and quickly than other factors and goods, hence the hypothesis that capital movements cause CAI, rather than the other way round, has become more likely.

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[11] Eurostat definitions.

[12] A long-lived, almost forgotten, literature dating back to the classical theory of the balance of payments addresses this problem, also known as "the transfer problem" (Tamborini 1995, Brakman and Van Marrevijk 1998).

In the early years of the EA, Blanchard and Giavazzi (2002) argued that the rise of CAI, far from being a problem, was the right *modus operandi* of highly integrated free markets channelling capitals and goods from lower-return allocations in mature economies to higher-return allocations in emerging economies.[13] CAI would take care of themselves as the emerging economies would catch up with the mature ones. Struggling for market deregulation and integration and then evoking self-sufficiency indeed appeared an oddity. Blanchard et al. (2015) revisit the question, investigating whether capital inflows are contractionary of expansionary by means of a portfolio model. Hobza and Zeugner (2014) present evidence of expansionary inflows (contractionary outflows) for the EA. Gabrisch and Staehr (2014) provide a Granger causality test for the EA and conclude that, statistically, RULC and CA adjustments are caused by capital movements rather than the other way round:

> Increasing capital flows from the core to the periphery of Europe may partly explain the deteriorating cost competitiveness in many countries in Southern and Central and Eastern Europe as well as the improving cost competitiveness in many countries in Northern Europe. The reversal of these capital flows after the outbreak of the global financial crisis may lead to ensuring changes in cost competitiveness (p.2).

Thus, the financial approach, though co-existent in the consensus narrative with the real approach, leads to different views of the causes, consequences, and we shall see, policy implications of CAI in a monetary union. As Borio and Dysiatat (2015) conclude their study,

> Large current account imbalances are useful indicators that can signal elevated macroeconomic risks, but they must be complemented by examination of gross flows and gross positions to fully assess financial stability risks. That said, we go further and argue that inferring the scale and directional flows of capital and financing from current account positions, as typical interpretations of open macro models assert and as has become popular in the policy debates, is misleading. Net resource flows and financing flows are distinct concepts. This is mirrored in the divergence between gross and net capital flows. The patterns of cross-border capital flows that finance real activity cannot be inferred from current accounts, which simply reflect the expenditure outcomes of such financing (p. 29)

3. Current account imbalances and the crisis

In the previous section we examined alternative views of the CAI problem in the EA. Accordingly, also different explanations of the relationship of the CAI with the crisis have been put forward. Here we provide a brief account of them.

3.1 Was the EA crisis a crisis of balances of payments?

[13] In the intertemporal model *à la* Obstfeld and Rogoff one instead has that capitals and goods flow from the net saver ("patient") country to the net consumer ("impatient") one.

A critical dimension attributed to CAI in international economics literature is their connection with sudden balance-of-payments crises. A country with a large and persistent CA deficit also needs net external borrowing which may come to a "sudden stop" in anticipation of the country's inability to serve foreign debt (Calvo 1998), as observed in various balance-of-payments crises in emerging economies, and as it apparently happened in some EA deficit countries (Gros 2013, Sinn 2012). Gros (2013) showed a strong (nonlinear) correlation between sovereign-debt spreads and cumulated CA deficits/GDP, rather than sovereign debt. Evidence has also been produced of large cross-border disinvestments and "re-nationalisation of capitals" (Pisani-Ferry and Merler 2012, Lane 2013, Ehrmann and Fratzscher 2015, Croci Angelini et al. 2016). Yet this view has been discussed under various aspects.

As usual, correlation is not causation. One point is that, in the relevant countries, private debt, public debt and foreign debt have moved in tandem (Beatrice and Sondermann 2018). Another is that the "sudden stop" analogy mechanically applies to the EA countries the basic principles of open economy macroeconomics as if the EA were a system of fixed exchange rates where each country's reserve of foreign currencies is binding. This analogy falls short of a convincing and complete explanation (Pisani-Ferry and Merler 2012, Wyplosz 2013, Collignon 2014). Recall that a balance-of-payments crisis is the inability of a country to pay claims in *foreign currency* to another country. The rationale for the sudden stop in a monetary union cannot be the anticipation of a balance-of-payments crisis because no such crisis *strictu senso* is ever possible in a monetary union – which, by the way, is a good reason to join the Union especially for small open economies.

To be very sketchy on this point,[14] a monetary union is first and foremost a payment union. All residents in the union's area are allowed to settle their payments in the single legal tender issued by the union's central bank. National currencies no longer exist. From this point of view, for each and all member states and the union as a whole, there is no "special status" whatsoever that makes cross-border transactions different from within-border transactions. The international accounts that matter are those of the union as a whole, which result from the extra-union transactions of the single countries.

What happens if a country of the EA, say Greece, runs a balance-of-payments deficit with the rest of the Union, say Germany? It certainly does not face a shortage of "foreign currency". What actually happens is a net fall of euro balances in Greece *vis-à-vis* a net increase in Germany. Intra-EA (im)balances of payments are the channel through which a given stock of euros offered by the ECB circulate across countries. Then two adjustment mechanisms are possible:

- euro balances return to Greece via cross-border bank branches or inter-bank lending or

[14] A detailed treatment is provided by Goodhart (1989); see also Tamborini (2001).

• money supply falls in Greece and rises in Germany

The normal mechanism is the first one, which in a well-functioning monetary union works smoothly most of the time. If this mechanism stops working, one should first explain why. At first sight, the well-known issue of liquidity shortage *vs*. counterparty insolvency is relevant, and the freezing of the EA inter-bank market after the Lehman shock played a key role in the Europeanization of the US financial meltdown (Abbassi et al. 2014). Once this happens, it is the general duty of the union's central bank to step in as lender of last resort, so that somehow additional euro balances are constantly re-injected into the deficit country.[15] Likewise, the deficit country may record increasing liabilities in the clearing accounts *vis-à-vis* the surplus country – the infamous Target 2 system. Thus, it is argued, one cannot complain against these operations and at the same time maintain that deficit countries face balance-of-payments crises. These operations may present negative side effects (e.g. a constant growth of money supply and excess inflation at the union's level), but they certainly grant the ability to claimants in the surplus country to receive their payments in euros from their counterparties in the deficit country.[16]

In the absence of recycling, or alternative money market operations, the second adjustment mechanism is anything but the time-honoured price-specie flow mechanism in the classical theory of the balance of payments, where the common stock of euros is the equivalent of the world stock of gold. The unrecycled transfer of money from Greece to Germany is accompanied by a reduction of expenditure, and possibly wages and prices, in the former country *and their parallel increase in the latter.* This will over time improve the trade balance in Greece and worsen it in Germany, so that the initial payment imbalances will tend to take care of themselves by Greece recovering euro balances from Germany through the trade channel.

An important friction here may be wage-price rigidity, which may translate itself into a contraction of economic activity and employment in the deficit country, the extent of which also depends on the symmetric adjustment in the surplus country (Schmidt-Grohe and Uribe 2016). This prospect may worsen the expected return to investments in the deficit country,

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[15] Not by chance, the supply of euros for each country and the system as a whole is neither finite nor inelastic as gold, unless the ECB so wishes. Greece loses euros towards Germany, say because the Greek banks are unable to recover euro reserves from the German banks, to the extent that the ECB refrains from increasing the total money supply, that is, it does not lend specifically to the Greek banks.

[16] "The scale of current account adjustment would surely have been larger in the absence of cross-border ESCB liquidity flows (as reflected in Target 2 balances) and official EU/IMF funding to Greece, Ireland and Portugal […] Large official gross flows also allowed private-sector foreign investors in creditor countries to exit from positions in the high-deficit countries by declining to rollover expiring claims. In the absence of large-scale official flows, foreign investors would plausibly have incurred larger valuation losses through sharper declines in asset values and more extensive debt write-downs" (Lane 2013, pp. 21-22).

and boost the capital reversal. Hence, all in all, the rationale for the sudden-stop problem in a monetary union cannot be the non-fact that the deficit country as a whole might run out of euros, *but only the riskiness of investments as in any other financial relationship*, which, notably, may be procyclical. From this point of view, three are the possibly relevant factors that will be discussed below: a) non-performing loans to non-performing countries, b) global risk, c) redenomination risk (euro-exit) (Lane 2013).

3.2. Capital misallocation and other risks

Factor a) mentioned above (non-performing loans to non-performing countries) is key to the financial approach to the EA crisis. In fact, a possible link between the financial and the real side of the CAI may be provided by way of the allocation of capital. The different patterns of housing and other investments in Germany and deficit countries seen in Figure 7, epitomise the argument that, contrary to the earlier Blanchard-Giavazzi analysis, external borrowing was misallocated to consumption or non-preforming sectors (Giavazzi and Spaventa 2011, Lane 2013, CEPR 2015). At one point it seemed, or financial investors believed, that previous investments were no longer sustainable. The sudden stop of capital inflows into deficit countries precipitated the painful macroeconomic adjustment in those countries. If the "capital misallocation" view makes a point, then the bug in the Blanchard-Giavazzi prediction was the efficient capital markets hypothesis. More to the point, therefore, is an analysis of the cross-border debt sustainability, which should be more careful, and disaggregate, than is usually done.

As scholars in international finance teach, net figures may be highly misleading (Obstfeld 2012, Hobza and Zeugner 2014, Borio and Disyatat 2015, Chen et al. 2013, Lane 2013).

The stock of net foreign debt D_t of a country is the result of its gross foreign assets A_t and liabilities L_t,

(1) $D_t = L_t - A_t$

that can also be written

(2) $D_t = (L_{t-1} - A_{t-1}) + (\Delta L_t - \Delta A_t)$

Likewise, the gross financial flows *vis-à-vis* the CA are

(3) $CA_t = \Delta A_t - \Delta L_t$

so that we can consistently write $D_t = (L_{t-1} - A_{t-1}) - CA_t$.

Moreover, the net foreign capital incomes that enter the CA are the difference between interests received on assets and interests paid on liabilities, i.e.

(4) $CA_t = X_t + (i_{At}A_{t-1} - i_{Lt}L_{t-1})$

where X_t is the trade balance. Therefore, we can finally write

(5) $L_t - A_t = (1 + i_{Lt})L_{t-1} - (1 + i_{At})A_{t-1} - X_t$

In the first place, generally, the two relevant interest rates are not equal, and may change differently. For a net debtor country *vis-à-vis* a net creditor, $i_{Lt} > i_{At}$ may be the typical pattern, with net interest payments. However, assets may also be held with larger debtors that pay higher interest rates, so that foreign interest revenues may occur.[17]

Secondly, any CAI can be matched by any combination of changes in assets and liabilities with the same net sign. In the standard net accounting this information is completely lost. For instance, the same net debt increase in *t* may be matched by selling assets as well as by issuing new liabilities. The two cases have different repercussions on the future evolution of the non-trade CA. On the other hand, net debt may remain constant while assets and liabilities grow at the same pace. Along this financial balanced growth path, the trade balance may be whatever is consistent with the sum of these two other components of the CA.

We can also reformulate expression (5) in terms of GDP ratios, denoted with small-case letters. Dividing all terms by the current GDP Y_t, and denoting the nominal growth rate of GDP as $Y_t = (1+n_t)Y_{t-1}$, we obtain

$$d_t \equiv l_t - a_t = \frac{1+i_{Lt}}{1+n_t} l_{t-1} - \frac{1+i_{At}}{1+n_t} a_{t-1} - x_t$$

For *n* sufficiently smaller than 1, this can be approximated by the following expression

$$\text{(6)} \qquad \Delta d_t \equiv \Delta l_t - \Delta a_t = (i_{Lt} - n_t) l_{t-1} - (i_{At} - n_t) a_{t-1} - x_t$$
$$= (i_{Lt} l_{t-1} - i_{At} a_{t-1}) - n_t (l_{t-1} - a_{t-1}) - x_t$$

Therefore, the key drivers of the foreign debt/GDP ratio are

- the composition of assets and liabilities
- interest rates on outstanding assets and liabilities
- the nominal growth rate of GDP
- the trade balance/GDP ratio.

Various scenarios are possible.

A sustainable debt/GDP ratio (e.g. $\Delta d_t \leq 0$) may be the result of the combination of sufficiently high growth relative to net interest payments, *for a given assets and liabilities composition*, and for a given trade imbalance. This formulation provides a link with the "capital misallocation" view, with a caveat. Sustainability requires that previous capital inflows (embedded into l_{t-1}) have been employed to sustain growth (higher n_t) *and/or* competitive exporting sectors (larger x_t), *though not necessarily both*. As said above, there is no necessary connection between domestic efficiency and net exporting capacity. Hence, the sheer fact that foreign capitals flow into domestic and "non-tradable" sectors, or in any case that there is no boost to *net* exports (e.g. because imports grow faster than exports), does not necessarily

[17] This has been the case for foreign holders of the Greek sovereign debt after the initial haircut.

imply that foreign debt becomes unsustainable. Think of the US external imbalance "*conundrum*" in these terms: if the economy remains on a sufficiently (domestic driven) high growth path, this may compensate a persistent trade imbalance in such a way that foreign investors satisfy themselves with a low interest rate even in the face of a (moderately) growing foreign debt. This was by and large the situation of the early EA "tigers" (Ireland, Spain, Portugal, even Greece) which until the crisis were on a praised sustained growth path relative to low interest rates. Hence, the allegation that the pre-crisis capital flows/CAI pattern was misguided and bound to fail ought to be investigated more carefully on the basis of disaggregate data like those in expression (6) (see below).

By contrast, unsustainability of foreign debt is very likely the product of a combination of low growth *and/or* large trade deficit, in the face of which foreign investors call for higher interest rate in a vicious circle. It may be argued that the crisis did depress growth, and *prospective* growth, to such an extent that these countries were shifted by foreign investors from the sustainable to the unsustainable scenario. This also triggered the rise of risk premia, in a typical self-fulfilling doom loop (Della Posta 2017). However, if this is the case, the role of previous CAI cannot be assessed separately from the recession shock and its subsequent management.

More importantly, the interest rate on assets, and to some extent the interest rate on liabilities, too, are affected by factors that are not under full control of the domestic agents. The factors b) (global risk) and c) (redenomination risk) driving capital movements are relevant here. Empirical researchers have found that these factors played a prominent role in the EA sudden-stop episodes, thus limiting the argument that the sudden stop was triggered by the specific problems of borrowing countries.

Remembering that "the euro area was in the vanguard of the financial globalisation boom, with the elimination of intra-area currency risk additionally stimulating international financial integration, over and above the global factors that were at work across the set of advanced economies" (Lane 2013, p. 1), it should not be surprising that capital flows managed by global players display significant common drivers. Among these, aggregate risk indicators, such as the VIX index measuring the implied volatility of S&P 500 index options, figure prominently (Caceres et al. 2010, Forbes and Warnock 2012, Favero and Missale 2012). Figure 8 reproduced from Lane (2013), shows that the post-Lehman contraction of cross-border assets of EA banks was common across all world locations.

Finally, there is still one way in which the germs of a true balance-of-payments crisis can be inoculated in the minds of cross-border investors in a monetary union: the expectations of an *exit from the union* and the return to the national currency – precisely the threat behind President Draghi's "whatever-it-takes" famous speech. Di Cesare et al. (2012), among others, provide evidence of the resurgence of the exchange-rate risk component of risk premia across

the EA. But these expectations, as the success of Draghi's promise testifies, have a lot do with the way in which the crisis has been managed rather than with cross-country balances of payments.

4. Policy implications

In consideration of the previous critical points, some deficiencies are pointed out in the official policy recommendations concerning both the long-run goal of real convergence, and the short-run adjustment of CAI.

Admitting that large and persistent CAI in a monetary union may signal problems that call for correction, what are the right indications?

The MIP implicit goal is that all EA countries aim at a zero CA, *and they should actively correct imbalances*. This prescription sounds reasonable as a long-run benchmark, but, as pointed out above, it begs two key preliminary issues. First, what are the market forces behind the unwinding and rewinding of CAI. Second, the accurate analysis of whether CAI are sustainable or not in the context of a monetary union. The large MIP scoreboard seeks to capture these underlying factors, but, as the literature discussed in the previous sections testifies, they interact in complex, country-specific and time-varying ways that can hardly be encapsulated in once-and-for-all algorithms.

As to the first issue, according to the critical arguments reviewed above, the shift in the approach to the EA crisis from a systemic capital market failure to a problem of national balance-of-payment crises has proved to be harmful. It was recalled above in section 2.2 that, in the absence of recycling operations, the adjustment of payment imbalances in a monetary union may mimic the classical "price-specie flow" mechanism. The flow of money balances from the deficit to the surplus country, say triggered by the sudden withdrawal of capital, generates the required *symmetric* adjustment in general cost-price levels. The deficit country deflates while the surplus country reflates. The general principle still holds in the case that some "frictions" also produce real effects on output and employment. Hence two problems emerge. The first is the reliability of the classical mechanism, the second is the role of fiscal policy in the adjustment process (Saraceno and Tamborini 2018).

As to the first problem, it is well known from the history of fixed exchange-rate systems, that the symmetry of adjustment stipulated by the classical mechanism generally failed to materialise undermining their long-run stability (Eichengreen 1992, O'Rourke and Taylor 2013). The bulk of the burden of adjustment has typically fallen on deficit countries. Yet, starting from a given distribution of deficits and surpluses, it is not possible that all deficits are corrected unless all surpluses are also corrected or a net surplus with the rest of the world is created.

This fallacy of composition is even writ large in the MIP regulations in that the limit to CA surplus (6% of GDP) is higher than the limit to CA deficit (4% of GDP).[18] As seen in Figure 2 and Table 1, the adjustment of the countries forming the deficit region started in 2009 and is still in progress. The large asymmetry of the adjustment, which fell onto the deficit countries almost entirely with no sign of correction on the other side – as a matter of fact the surplus region from 2009 to 2017 went on cumulating positive CA by the amount of 31.9% of GDP (a remarkable 3.5% per year compared with 2.6% of the previous period). This asymmetry was naturally reflected in the CA of the EA12 as a whole which from 2009 to 2017 cumulated CA surpluses totalling 20.4% of GDP compared with 4.3% of the previous nine years.

A number of studies testify that the CAI rebalancing was driven by this asymmetric adjustment mechanism (e.g. Croci Angelini and Farina 2012, Storm and Naastepad 2015, Esposito and Messori 2017). A simple indicator that captures these results is provided by the nominal GDP of the deficit region relative to the one of the surplus region presented in Figure 9. It was 48.3% in 2000, it peaked to 55.6% in 2007 in the run-up of CAI, and recoiled to 46.6% in 2017 (notably *less* than in 2000). Esposito and Messori (2017) in particular show econometrically that the bulk of the adjustment took place through domestic deflation and demand contraction rather than by means of recovery of competitiveness factors. An analogous conclusion is reached by Beatrice and Sondermann (2018).

The second problem concerns the role of fiscal policy in the process. According to the balance-of-payments view of the CAI crisis, fiscal consolidation by the deficit countries was *necessary* in order to enforce the *inevitable* domestic adjustment mechanism.[19] In section 3 we already saw the criticisms to the idea that the deficit countries faced a proper balance-of-payments crisis. Even leaving this point aside, the prescription of fiscal consolidation has been questioned.

In the first place, fiscal policy can be thought of as *one* instrument, which should therefore be targeted to *one* objective. As a matter of fact, fiscal consolidation has been invoked *both* for regaining control on public debt *and* for fostering the adjustment of CAI. Yet these two objectives are different in nature. The former relates to *future* sustainability of public debt, the latter to the reduction of *current* domestic absorption. Moreover, if the sudden-stop view of the crisis is correct, then policymakers should have anticipated that the capital reversal out of deficit countries would have generated (at least in part) the required adjustment by itself with no need of further fiscal doses (Saraceno and Tamborini 2018). Indeed, "turning to fiscal

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[18] The initial scoreboard used by the Commission had the same 4% trigger point for the CAI, whether this was a surplus or a deficit. However, this was later changed into an asymmetric trigger (De Grauwe 2012)

[19] "To come out of the crisis, the [deficit countries] now need to depreciate in real terms, i.e. reduce wages and prices relative to their trading partners, a painful process that *requires harsh austerity programs*" (Sinn 2011, our italics)

policy, a macro-prudential framework entails a "leaning against the wind" strategy in relation to the financial cycle as well as the output cycle" (Lane 2013, p. 33).

The combined effect of asymmetric adjustment, fallacy of composition and fiscal consolidation has probably magnified the adjustment fatigue. In a simulation paper, in't Veld finds that

> the deflationary impact of [fiscal] shocks leads to an improvement in competitiveness, but while this could help boost exports if one country was acting alone, under EA-wide consolidations these benefits are partly lost" (in't Veld 2013, p. 8).

As noted by Micossi (2016), in comparison with the Bretton Woods system – the best performing international monetary system to date – the conceptual and policy framework enshrined in the MIP represents an astonishing regression to the previous misconceptions. As a consequence, "the eurozone is afflicted by a strong deflationary bias and, therefore, under current trends, deep economic and social strains will continue to project a dark cloud over its future survival" (Micossi 2016, p. 1).

If, according to the financial approach, the origin of the EA crisis is traced back to where it came from, namely the Europeanization of the global financial meltdown, then the implications are two: 1) tracking CAI *per se* is misleading, whereas we should monitor the underlying financial relationships, the working of financial markets, and the resulting degree of weakness or resilience of the system, 2) in parallel, the assessment should be extended to the institutional environment and the crisis management tools that are available.

If cross-border loans are misallocated to faltering economic units, the problem is between lenders and borrowers as in any ordinary risky transaction; if the borrowing units are "too big to fail" the problem should be upgraded to the federal level. Consider this sentence in the authoritative CEPR paper about the consensus view building:

> When the euro institutions were set up, nothing was put in place to monitor large intra-EA capital flows. The ECB and national central banks in both the surplus and the deficit countries failed to realise what the huge intra-EA credit flows were financing (…) The risks of credit imbalances can be diminished by surveillance and avoiding the accumulation of excessive imbalances. But the risks will never disappear. Booms and busts are woven into the fabric of Europe's economic system (CEPR 2015, pp. 12, 13)

Now recast this sentence in any existing large federal economy like the US. What instrument or institution can we find there with the task of monitoring large internal capital flows, whatever this means? Did the Federal Reserve, or any state branch, or any federal institution realise how the huge credit flows that preceded the subprime crisis were allocated? Probably, the recommendations addressed to the EA are valid for the US too. Yet among the lessons drawn from the crisis by the US authorities there is no idea of a MIP to be applied at the state level. Instead, one can find a revision of the Greenspan-Bernanke doctrine of the exclusion of financial variables from the central bank's reaction function, and the need of

greater attention to financial cycle indicators and to the systemic level of banking regulation – the so-called macroprudential level (Bernanke 2010, Caruana 2010, Borio 2012, Friedman 2014). Indeed, what instruments and powers can any sub-federal institution have in order to monitor, control *and regulate* cross-border private borrowing and lending? Who was responsible for the huge *bad loans* of Northern private banks to Irish or Spanish or Greek borrowers? Did the borrowers', or lenders', governments have the entitlements and instruments to intervene? Will the EA national governments have such entitlements and instruments in the future?

At the end of the day, what made the difference between the US and the EA in the face of the financial crisis is that the Lehman crack was tackled as a federal problem, not one of the State of New York. Unfortunately, the national responsibility straightjacket is hindering progress also on this ground.

> Europe looks too slow to decide to take on its own shoulders the burden of adjusting debts and disequilibria that are also the result of the imprudence of British, French and German bankers, creditors and investors, the lack of European financial supervision, the contagion of the Greek mess, the very controversial and, therefore, badly defined responsibility of the ECB for financial stability, the insufficient size and autonomy of the [ESM], and other EU's faults as well. Insisting on an individual country approach to systemic problems, with a punitive attitude providing help only with much trumpeted "strict conditionality", is a non-solution and a stimulus to international contagion (Bruni 2013, p.148-149).

5. Conclusions

The focus on intra-EA CAI emerged from the post-crisis consensus view has raised various critical and alternative views. In this paper, the controversial issues have been identified with the relevance of CAI in a monetary union, their causes and connections with the crisis, and their policy implications.

As to the relevance of CAI, reference to existing federations suggests that nobody thinks of a federation as a collection of independent open economies tied in a fixed exchange rate regime, because in a full-fledged federation financial integration is complete and safeguarded by *federal institutions*. CAI mirror capital flows from lending to borrowing territories, and the overall phenomenon could hardly develop if financial markets were not highly integrated. But integration creates interdependence. One cannot advocate financial liberalisation and integration, and then dream of a system of disconnected countries each with full sovereignty over "its own" finance.

The most relevant information conveyed by the CA for a stand-alone country (in a fixed exchange rate regime), i.e. its ability to pay foreign claims in foreign currency, is irrelevant in a well-functioning monetary union. As explained above, in general there is no clear and univocal relationship between a country's CA and the underlying pattern of growth,

convergence/divergence with other countries, general efficiency of the economy, sustainability of foreign debt, exposure to sudden stops of foreign investment. Each of these factors may be important in itself, but reference to CAI as a catch-all indicator may lead to seriously misplaced policies – as already happened.

A common thread across alternative views is that the right approach to the problems that may be created by capital movements across a monetary union is the so-called Banking Union, not the MIP. Unfortunately, so far the Banking Union remains an incomplete project. While the first two pillars – the Single Supervisory Mechanism and the Single Resolution Mechanism – are now in place and fully operational, a common system for deposit protection has not yet been established. More generally, the actions adopted so far are aimed primarily at reducing risks in each national financial systems, while all measures that could encourage the establishment of cross-border banking groups are almost absent.[20]

Overall, a possible common conclusion of the alternative views is that the MIP, together with other EA regulations, is conceived as a substitute for a (good) federal government that we do not have (want). The EA is caught in a maze of peculiar regulations not because it fails as an Optimal Currency Area, but because it fails as an Optimal Federal Area. Everyone was aware of this original sin from the very beginning, and with great regret one may say that the hope that the creation of the monetary union would have paved the way for other federal institutions has for now been lost.

[20] In November 2016, the European Commission proposed to waive the application of own funds and liquidity requirements where the same competent authority supervises parents and subsidiaries established in different countries participating in the Banking Union. Although the European Parliament had expressed its support for this proposal, in the final text agreed in December 2018 this provision was deleted due to the firm opposition of the majority of countries.

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Table 1. Summary statistics of CAs of the EA12 countries, 2000-17
(% of GDP)

	Years of deficit	Years of excess deficit	Years of excess surplus	Cumulated 2000-08	Cumulated 2009-17	Cumulated total
Austria	2	0	0	14.6	18.2	32.9
Belgium	2	0	0	35.4	7.9	43.4
Finland	6	0	3	49.1	-2.9	46.2
France	13	0	0	1.6	-15.5	-13.8
Germany	2	0	8	28.5	64.8	93.3
Greece	14	12	0	-86.7	-29.1	-115.7
Ireland	10	4	0	-15.4	-3.5	-18.9
Italy	12	0	0	-8.0	0.9	-7.1
Luxembourg	1	0	11	84.6	33.8	119.1
Netherlands	0	0	14	59.5	76.8	136.3
Portugal	12	11	0	-76.1	-15.8	-91.9
Spain	12	5	0	-50.3	0.0	-50.3
Deficit region	-	-	-	-30.8	-2.7	-33.6
Surplus region	-	-	-	23.3	31.9	55.1
EA12	-	-	-	4.3	20.4	24.8

Source: elaborations on Eurostat database AMECO

Table 2. Non-trade components of the CAs of the EA12 countries, 2000-17
(% of GDP)

	Average 2000-10	Average 2011-17
Austria	-1.2	-1.0
Belgium	0.2	-0.0
Finland	-0.6	-0.2
France	-0.0	-0.3
Germany	-0.7	0.9
Greece	0.5	0.6
Ireland	-14.7	-16.5
Italy	-1.1	-1.2
Luxembourg	-18.0	-26.8
Netherlands	-1.1	-1.5
Portugal	-0.0	-0.0
Spain	-1.8	-1.6

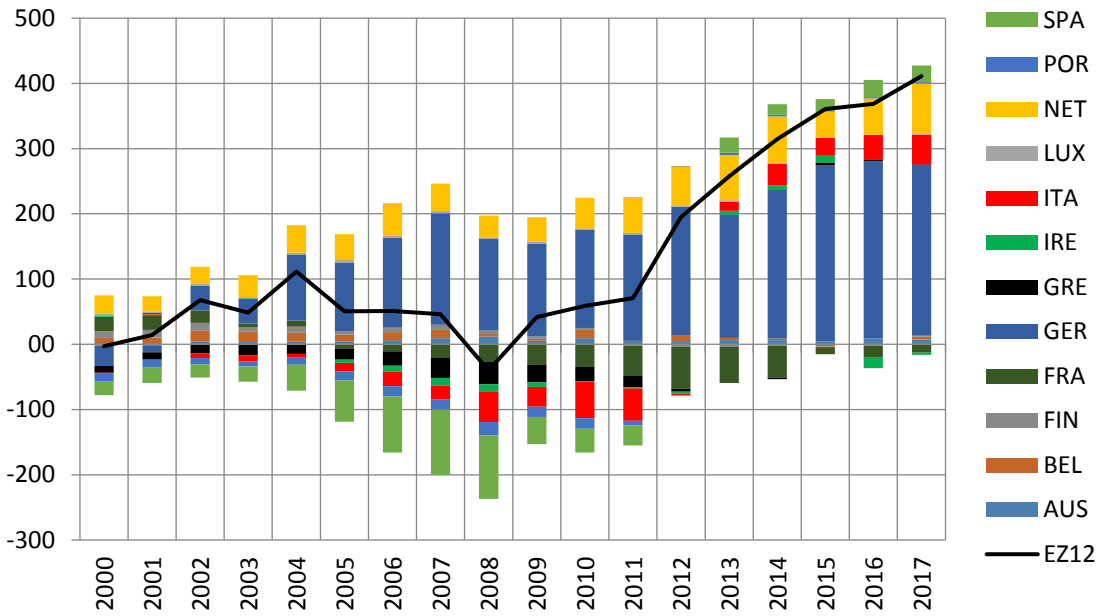
Source: elaborations on Eurostat database AMECO

Table 3. Average growth rate of GDP and exports of EA12 countries, 2000-17

	GDP	Exports
Austria	1.4	3.9
Belgium	1.3	3.3
Finland	1.2	1.6
France	1.1	2.3
Germany	1.1	5.6
Greece	0	3.7
Ireland	2.8	2.3
Italy	0.5	2.2
Luxembourg	2.8	2.4
Netherlands	1.1	4.3
Portugal	0.2	4.0
Spain	1.4	4.4

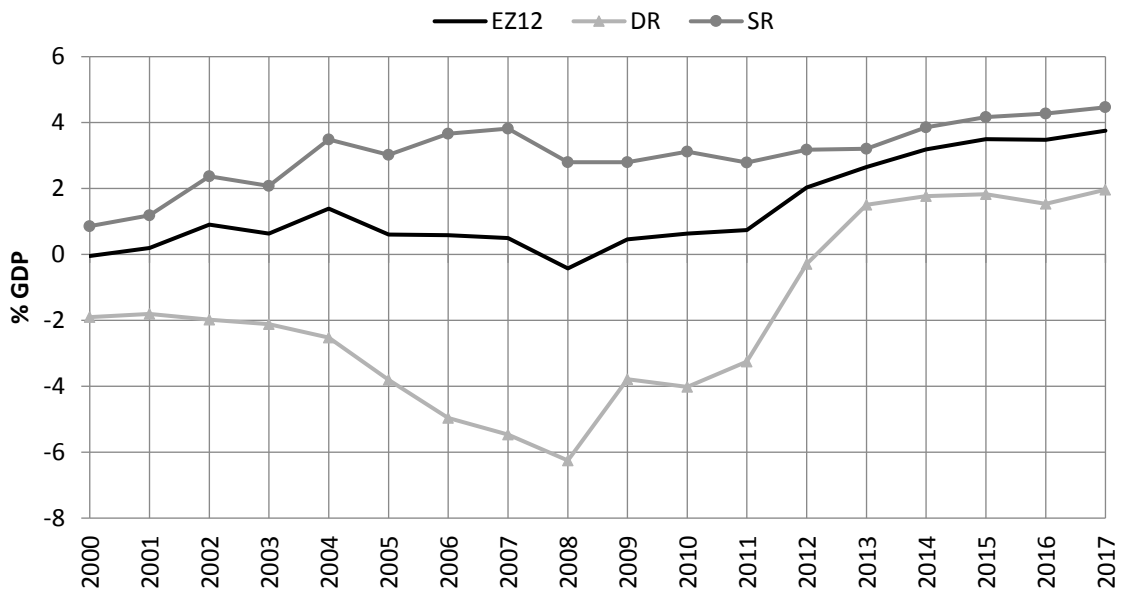
Source: elaborations on Eurostat database AMECO

Figure 1. Current accounts of the EA12 countries and EA12 as a whole, 2000-2017 (Billions of euros)



Source: elaborations on Eurostat database AMECO

Figure 2. CA/GDP ratios of the deficit region, surplus region, and EA12, 2000-2017



Source: elaborations on Eurostat, AMECO database.

Figure 3. Intra-EU, extra–EU and total trade balance (% of GDP), 2000-17

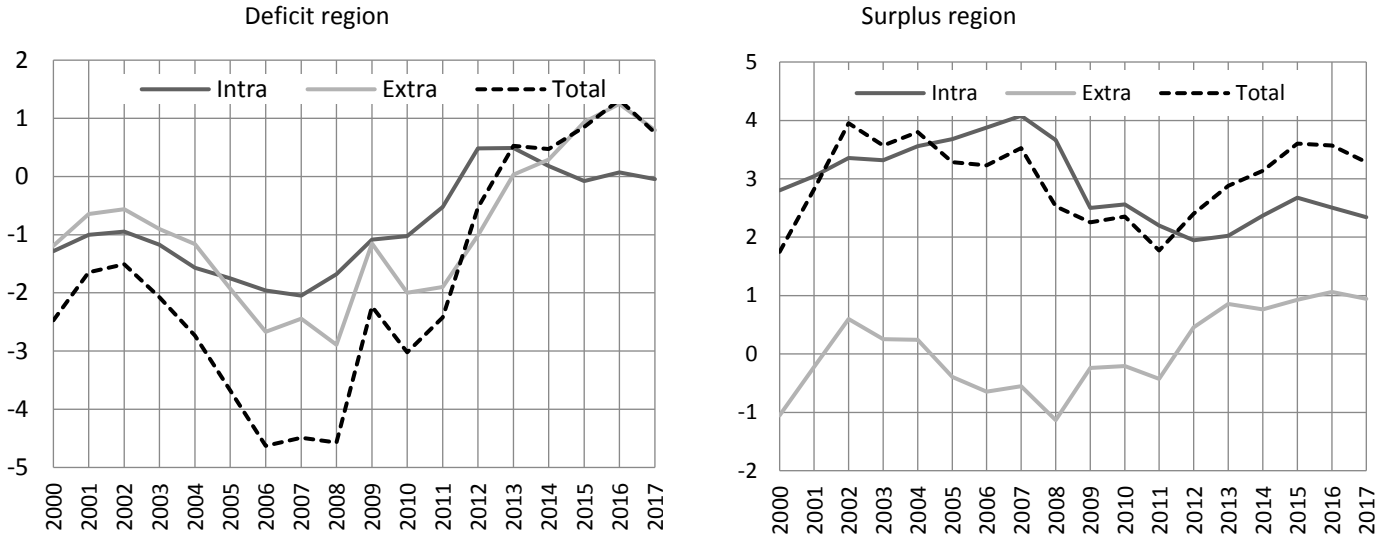
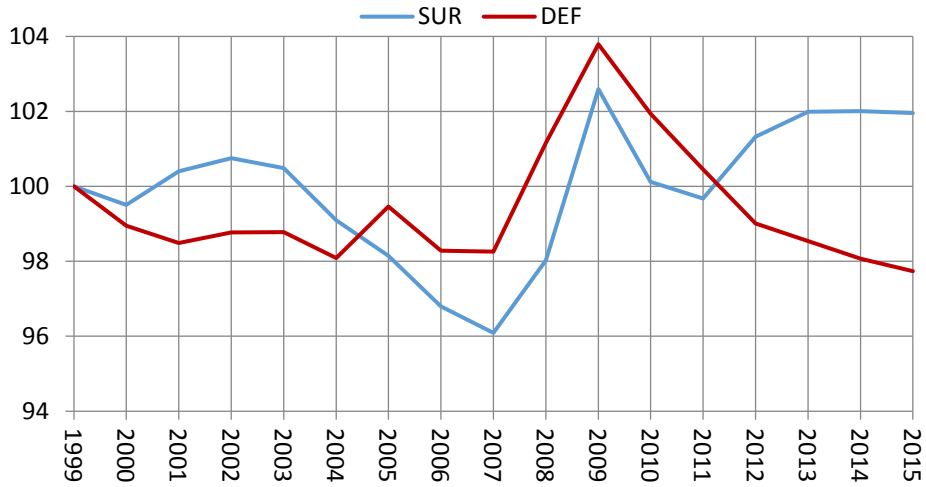
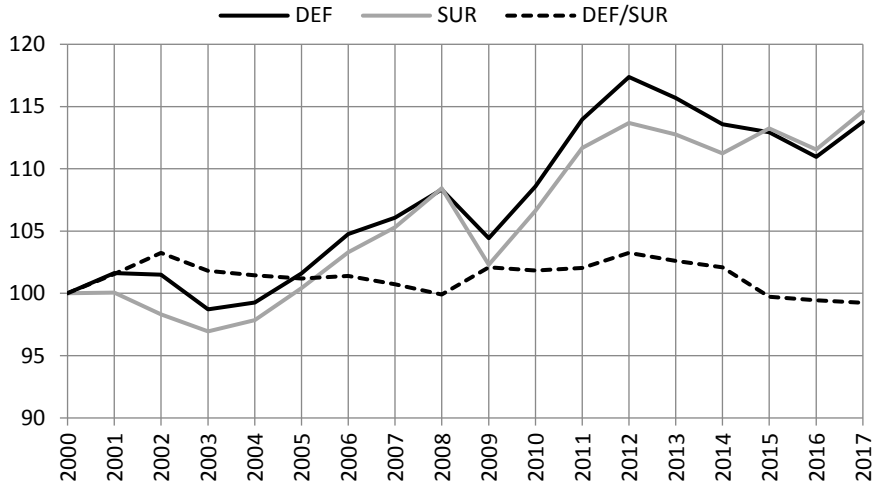


Figure 4. Real unit labour cost of the deficit and surplus region (1999=100)



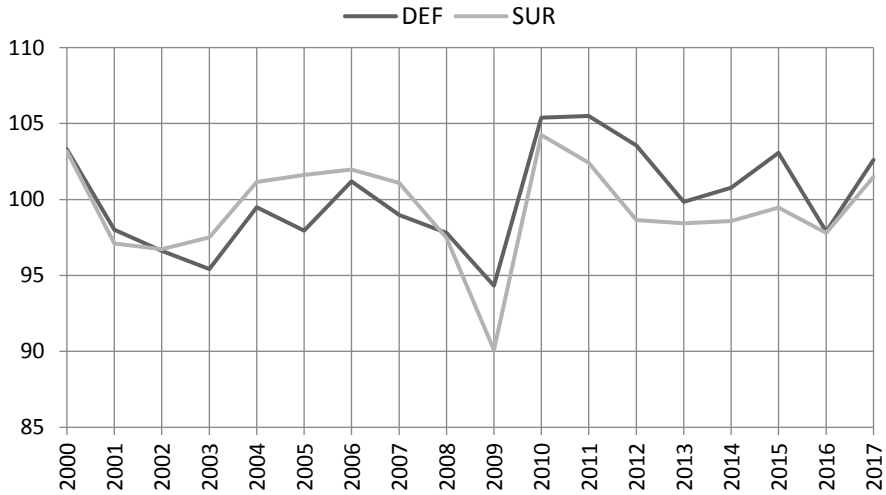
Source: elaborations on Eurostat, AMECO database.

Figure 5. Export price index of the deficit and surplus region, and their ratio 2000-17 (2000=100)



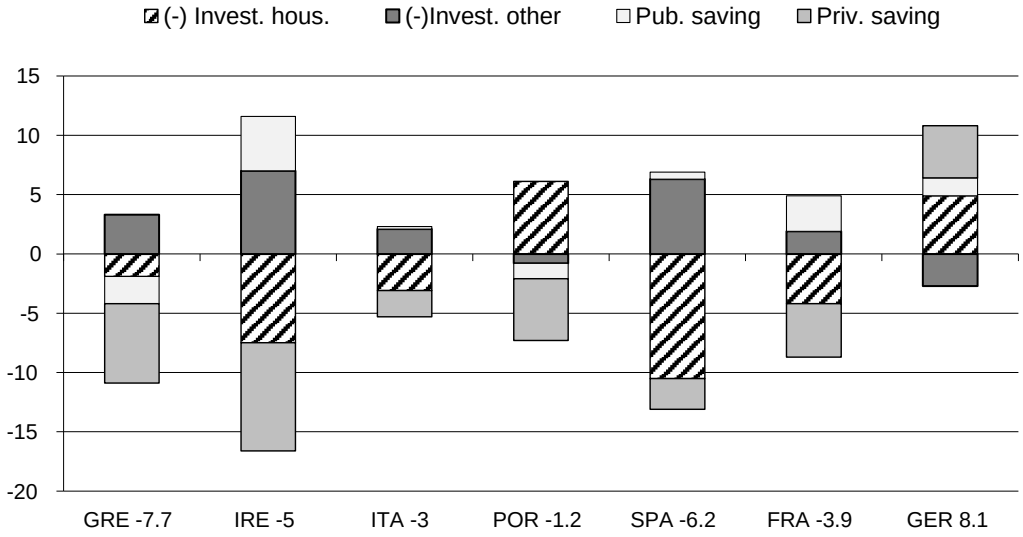
Source: elaborations on Eurostat, AMECO database.

Figure 6. Index of margins in the export sector in the deficit and surplus region, 2000-17 (1999=100)



Source: Amici et al. (2018) and elaborations on Eurostat, AMECO database.

Figure 7. Change in the saving-investment balance and in the CA (% GDP) from 1999 to 2007, selected EA countries

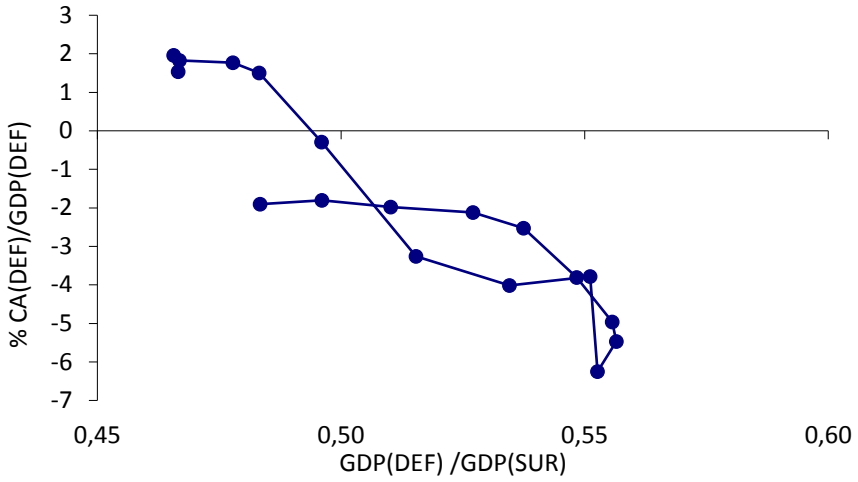


Source: elaboration on Chen et al. (2013), Table 1.

Figure 8. Euro Area cross-border bank assets (% of GDP)

Source: Lane (2013), p. 52.

Figure 9. The adjustment path of the deficit region's CA and its relative nominal GDP, 2000-17



Source: elaborations on Eurostat, AMECO database.