Macroeconomic imbalances and comparative advantages in the Euro Area

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Abstract

We review critically the *Excessive Imbalance Procedure* proposed by European authorities and argue that current account imbalances are the wrong policy indicator in monetary union. Intra-Euro Area deficits are caused by shifts in relative factor prices and in a monetary union they can be sustained by revenue generated in the non-tradable sector. A superior measurement for comparative advantages is the relative return of capital. A new competitiveness indicator is calculated, which explains gains in trade shares. It is based on relative unit labour and capital cost levels and shows the beneficial effects from more centralized wage bargaining in the Euro Area. Improving cost competitiveness has positive effects for growth, but the consequences for public debt dynamics are ambivalent.

Executive summary

– The emergence of macroeconomic imbalances is seen as a major factor behind the recent European debt crisis. The European authorities established, in 2011, a surveillance tool in the form of the *Excessive Imbalance Procedure*. The paper criticises the implementation of the new policy tool by the European Commission which continues to take for granted the nation state policy framework, even where the national economies have been integrated into a single market with a single currency. This bias leads to policy recommendations that could severely undermine the very foundation of European economic integration.
– To speak of member states' '*external*' balances when these originate in large measure *within* the Euro Area does not make economic sense. It is a category mistake. The Euro Area is not a fixed exchange rate regime. Within a currency area the hard budget constraint is set by monetary policy and not by foreign exchange reserves. The open and unlimited access to central bank liquidity for banks defines a monetary union as a payment union, which is effectively an economic country.
– In a fully integrated economic and monetary union, capital and labour should be allocated efficiently according to micro-comparative advantages. The removal of the foreign exchange constraint has increased regional imbalances, which are financed by capital flows, domestic credit and changes in money balances. Current accounts no longer play the same role as between different currency areas, because cross-regional deficits are settled in the common currency and payments are made in cash or through the banking system. Current account surpluses are therefore not needed to repay debt accumulated by previous deficits, just as such surpluses are not needed within traditional nation states. Intra-Euro Area deficits can be financed by credit from the non-tradable sector, as long as debtors generate

sufficient income in domestic currency to service the debt. Excessive austerity can therefore damage the sustainability of debt *in* (not *of*) member states.

– A precondition for the effective and sustainable functioning of a monetary union as a payment union is the existence of an unrestricted payment mechanism. The large imbalances recorded in the European TARGET2 payment system are a consequence of the uncertainty and malfunctioning in the interbank market and are proof that the Euro Area institutions are robust in dealing with the crisis and do not threaten the economic functioning of the Euro Area. The imbalances will disappear when the banking system operates correctly.
– Intra-EMU macroeconomic imbalances affect the financial net worth of asset owners in different regions and, if they are not corrected rapidly, their slow adjustment may cause a deterioration of welfare, which could destabilise political support for the euro. For this reason, policies to improve competitive disadvantages are required.
– However, focussing on current account imbalances within the Euro Area is misleading. Current accounts are not appropriate indicators for competitiveness and suppressing these imbalances could prevent the Union from reaping the full benefits expected from the restructuring of the European single market economy. Since the beginning of European Monetary Union, relative factor prices have shifted significantly for some member states in the Euro Area and generated substitution effects. As interest rates and the cost of capital have fallen in the South, capital productivity has slowed down, while labour productivity has had a tendency to improve. In the North, the cost of capital has remained constant, while wages have fallen. Hence, a profound transformation of comparative advantages is taking place. While some member states show persistent current account deficits and others generate structural surpluses, their persistence signals that European Monetary Union is operating in line with what economic theories have predicted and is creating highly desirable efficiency gains.
– However, these developments are sustainable only as long as the non-tradable sector in peripheral member states keeps growing. Otherwise, the periphery will hollow out with massive migration of labour and capital. If the unmitigated market logic is socially not acceptable, the sustainability of the European Union may require a rethink about transfers from an equity point of view. Alternatively, competitive distortions would have to be removed.
– Competitiveness is reflected in the export performance of member

states, although a distinction must be made between intra-EU and extra-EU trade. Constant market share analysis for evaluating competitiveness in the EU shows moderate trade share losses for the Euro Area and losses more than twice as high for the opt-out countries. By contrast, the new member states have been the big winners in intra-EU trade.

– The trade performance can be related to cost competitiveness, which is measured with respect to labour and capital costs. Rather than using the usual indices for labour costs, the paper presents a new and original methodology to calculate equilibrium unit labour *cost levels*. Assuming that in equilibrium the rates of return on capital are equalized, it is possible to calculate a unit labour cost equilibrium benchmark. If actual unit labour costs are higher or lower than this theoretical equilibrium level, a country may be said to be over- or undervalued. This information is summarized by a unique new *Competitive Index*, which is calculated as *the difference between actual and equilibrium unit labour costs*. The paper shows that most Southern European member states are overvalued, and that most Northern member states, with the exception of Austria, are undervalued.
– The link between competitiveness in unit labour costs and wage bargaining suggests that the European "Golden Rule", according to which nominal wages should increase by the rate of labour productivity growth plus inflation, as frequently suggested by authorities, gives the wrong policy recommendation, because it stabilises profit margins but does not adjust to changes in capital productivity, so that the return on capital will reflect competitive distortions. When capital efficiency slows down after interest rates are cut, *more wage restraint would in fact be required, despite an increase in labour productivity. But this is unlikely to be the response of wage bargainers*, because the accommodating monetary policy will contribute to faster growth, higher employment and therefore a tighter labour market. Thus, the long run trend of lower interest rates in the Euro Area is likely to have caused the lasting deterioration of relative cost competitiveness in the South.
– If the blind market logic causes significant distortions to sustainable wage-setting, other mechanisms need to be found to curtail the disturbance. Evidence from data on wage bargaining institutions and unit labour costs sends a clear and coherent message: more centralized wage bargaining by coordinating wages across sectors, extending collective bargaining and strengthening trade unions *improves* competitiveness within the Euro Area.

- With respect to economic growth we find that private investment drives economic growth in the Euro Area, while public investment is not significant. However, competitiveness and the yield curve (monetary policy) have become highly significant in European monetary union. Hence, improving cost competitiveness can make an important contribution to stimulating growth, employment and other macroeconomic variables.
- Assessing the impact of competitiveness on fiscal policy in the Euro Area, we find no evidence of miracles in fiscal consolidation resulting from improved competitiveness. Pushing the *Excessive Imbalance Procedure* on top of the *Excessive Deficit Procedure* and the Stability and Growth Pact could have devastating consequences for peripheral countries in the European Union.
- The fundamental structural reallocation of labour and capital in Europe is creating gains and losses, winners and losers. In a social market economy, a government should correct such distortions in the common interest. One solution could to set up a European Treasury and devise a European industrial strategy. In addition, it may also be useful to set up a *European Economic Holding*, or *European Institute for Economic Reconstruction*, which would assist on a day-by-day basis with the implementation of an integrated European-wide growth strategy.
- Seven concrete policy recommendations can be derived from this analysis:
  1. Restructure Eurostat's reporting of macroeconomic accounts in such a way that a clear distinction is made between intra- and extra-Euro Area payments, assets and liabilities.
  2. Drop all undifferentiated references to current accounts and *net international investment position* (NIIP) from the scoreboard of the *Alert Mechanism Report*, as it is creating a distorting bias to the monitoring of intra-Euro Area imbalances and competitive advantages.
  3. Policy makers should be aware that in a currency union money flows are a tool that keeps the union functioning and at the same time corrects imbalances automatically in the long run. From an economic point of view, there is no need for fiscal transfers (a Transfer Union) to make monetary union sustainable, although it is crucial to ensure that banks have unrestricted access to central bank liquidity. Otherwise, the currency union would collapse.
  4. Stop talking about 'foreign' debt when it is effectively debt to other residents in the Euro Area and forget about the need to shift in-

centives from non-tradable to tradable sectors. Instead, maintain balanced and equitable growth within all member states without imposing excessive restrictions.

5. The Eurosystem should explain once and for all that TARGET2 imbalances are a sign of strength of the currency area, as they compensate for the malfunctioning interbank market. Providing liquidity to commercial banks and guaranteeing that payments are made under all circumstances is the *conditio sine qua non* of European Monetary Union.
6. Rebalancing wage costs in Europe requires higher wages in the North, but lower wage increases in the South. Otherwise price stability would be threatened and the ECB would be forced to pursue tighter monetary policies. More inter-regional transparency is needed and may be achieved by better coordination between trade unions.
7. The European Commission should start publishing regularly a competitive indicator using the new methodology and base its evaluations in the Alert Mechanism Report on the data obtained at this level, rather than using indicators which can reflect rates of change only, and not competitiveness levels.

Foreword

Between the threatened collapse of the global financial markets in the autumn of 2008 and the June 2012 European Council meeting, the EU held some 20 summit meetings exclusively devoted to crisis resolution. The summit on 28–29 June 2012 took place against the backdrop of a dramatically worsening economic environment, with the EU entering the second recession in four years and Spain and Italy becoming once again the target of speculative attacks. In this situation, business as usual would have meant a worsening of the crisis and perhaps total collapse of the euro.

Starting in early 2010, the crisis of the global financial system turned into a systemic balance-of-payments crisis in the Euro Area, since when the European leaders have adopted an approach of doing consistently 'too little, too late'. Up until now, largely misguided analyses of the underlying causes on the part of both the Council and the EU Commission have led, inevitably, to wrong policy responses. Across the board, and without any further differentiation being made among the crisis countries in the periphery of the euro area, deficiencies in (price) competitiveness, together with the propensity for public spending and ensuing high levels of public debt, have been identified as the ills at the roots of the euro crisis. Only now has it begun to occur to policy makers that effective crisis management must, first and foremost, target a decoupling of public from private-sector debt, and that austerity measures alone will lead to ever higher levels of public deficits and debt.

The European Council has taken some first and cautious steps towards a further deepening of the political and economic integration of the Euro Area. Growth-enhancing measures are to complement the Fiscal Compact, and a Banking Union with a single European banking supervisor are part of a new master plan for a Fiscal and Political Union. So far,

however, all efforts on the part of Europe's Heads of State and Government to still the conflagration of the euro crisis have been characterized by a lack of consensus as to what kind of crisis it is that we are dealing with.

Until the victory of François Hollande at the recent French presidential elections, the prevalent view – moulded predominantly by the French and German governments – was that the sovereign debt crisis is the result of a growing macroeconomic divergence among member states. As such, a stronger surveillance of national fiscal policies, alongside structural reforms aimed at restoring competitiveness and sound economic growth, were considered the panacea for overcoming the crisis. Meanwhile, however, and due also to the near collapse of the Spanish banking system, another explanation of the debt crisis is beginning to gain political currency: from this new perspective, what Europe is primarily experiencing are severe liquidity and solvency crises of its banking system that can be stopped only by a lender of last resort that would be in a position to calm the markets and in this way prevent an avalanche of sovereign defaults.

As long as this polarization of the debate persists, the Europeans will be in no position to develop a crisis resolution strategy that transcends mere crisis management. Structural reforms are necessary but will deliver their results only in the longer term, failing to address the immediate crisis. To achieve results in both the present and the future, Europe will have to bridge the gap between the two predominant views concerning the root causes of the crisis, and to agree on a strategy that assures market access to liquidity, while at the same time continuing to pursue the objectives of gradually consolidating budgets and enhancing competitiveness.

In this study of *Macroeconomic imbalances and comparative advantages in the Euro Area*, Stefan Collignon outlines what he considers to be the key elements of such a comprehensive strategy for the Euro Area. According to his analysis, one of the key reasons why Europe's decision-makers have not so far chosen this road is that they confuse the Euro Area's political with its economic sphere. They continue, in other words, to take for granted the nation state as the policy-making framework, even though monetary union means that the economy has become integrated into a single market with a single currency. This biased view, so Collignon argues, has led to important policy errors insofar as it encour-

ages the belief that member states are in a position to solve policy problems on their own, when what is in fact required is 'a coherent European framework for centralized European macroeconomic policies'.

The emergence of macroeconomic imbalances among EU member states, and the establishment in 2011 of a new surveillance tool – labelled the Excessive Imbalance Procedure (EIP) – incorporating rules to prevent future imbalances, are at the core of Stefan Collignon's analysis. His argument, in a nutshell, is that the premises of the EIP are flawed, and its implementation misguided, because so-called 'foreign' debt is, effectively, debt to other residents in the Euro Area.

The author accordingly claims that current indicators used by the Commission fail to provide a correct or accurate assessment of imbalances in the Euro Area, and he thus devises a new 'Competitive Index', calculated as the difference between actual and equilibrium unit labour costs, which he recommends as an alternative and better indicator in the context of the Alert Mechanism Reports to be issued by the European Commission in the future.

This study is the result of a cooperation initiative among the Bertelsmann Stiftung, the European Trade Union Institute and the Friedrich-Ebert-Stiftung. The views expressed remain the sole responsibility of the author and do not necessarily concord with those of the editors whose wish, nonetheless, is that this study should receive broad dissemination so as to prompt a lively debate in Europe. The views expressed by Professor Collignon are indeed well-timed, offering, as they do, alternative tools with which to approach the Euro Area crisis and construct a new vision of European economic and social integration.

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Introduction

The European debt crisis started as a small local policy shock in Greece, but it has come to threaten the survival of the Euro and ultimately of the whole European project. Finding the proper policy responses is therefore crucial.

Yet without correct theoretical analysis, practical measures to overcome the euro crisis may fail or even make the crisis worse. This is what we have seen over recent years. The dominant policy consensus, which was strongly shaped by German policy makers and then gradually adapted by the European Commission and most member states, claims that the crisis is a consequence of excessive deficits and violations of the Stability and Growth Pact. This consensus sees the reasons for the lack of budget discipline either as political irresponsibility or as the desire to cover up for losses in economic competitiveness. The logical policy response is, therefore, on the one hand a tightening of the fiscal framework, and on the other hand structural reforms to restore competitiveness.

This policy consensus explains certain aspects of Europe's economic difficulties, but it ignores some important features of the crisis. First of all, there is a problem with timing. Structural reforms take a long time to implement and even longer to produce results. They are therefore unlikely to address the immediate crisis. Secondly, the consensual view articulates competitiveness within the Euro Area primarily in terms of current account imbalances and not in terms of relative prices and costs. However, as we will argue below, balance-of-payment flows in monetary union cannot be reduced to competitive advantages. Thirdly, tight budget discipline is needed in a boom, but in the recession it will aggravate the crisis and push up unemployment. Hence, fiscal austerity has short-term effects that could prevent the long-term objective from ever being reached. There is evidence that this is precisely what is happening in

Greece (Collignon 2012). Fourthly, the dominant policy consensus ignores the impact made by the financial crisis of 2008 on banks' balance sheets and the liquidity in Europe's imperfectly integrated financial markets. Policy makers have, therefore, often refused to bail out debtors in distress and failed to calm markets. Given these shortcomings, a broader view of analysing the crisis is needed.

There are two theoretical models for explaining the European debt crisis.[1] The fundamentalist interpretation focuses primarily on imbalances in macroeconomic *fundamentals*, such as budget deficits and current account imbalances between member states. It recommends sticking to the principles of 'a sound and competitive macroeconomic base and solid public finance' (Weidmann 2001). The remedy is, therefore, to implement 'painful reforms' and consolidate budgets, which would rebuild trust and confidence in financial markets (Issing 2009). The Commission (2010) has also argued that large macroeconomic imbalances have made the finances of EU and Euro Area member states more vulnerable to economic shocks, and it has therefore suggested that fiscal policy should not be viewed in isolation. In order to address this issue, the European Union has created the new *Excessive Imbalance Procedure*, which is to serve as a tool for surveillance and correction of unsustainable imbalances and persistent distortions in competitiveness.

Alternatively, *monetarists* explain the European debt crisis as a liquidity crisis. Their argument goes as follows: a small local liquidity shock causes a sudden deterioration in a specific class of asset values. For example the Lehman bankruptcy represented such a shock which caused many asset prices to collapse; it was followed by a second shock when the newly elected Papandreou government revealed that its predecessor had lied over budget deficits and, as a consequence, the value of Greek government bonds fell rapidly. These shocks placed the banks' balance sheets in difficulties and reduced their equity.[2] When banks started to distrust each other's creditworthiness, their need to hold highly liquid assets spilled over into the financial system as a whole. Financial institutions and investors then responded by selling less liquid assets and this

1. These two views resemble the debate between *economists* (mainly in Germany) and *monetarists* (mainly in France) in the 1980s
2. Write-offs of losses for banks after the Global financial crisis have amounted to 10-20 percent of banks' net worth. See Collignon 2011b

reinforced the collapse of asset prices. At that point a full-blown systemic financial crisis becomes inevitable. Banks will now restrict their lending and the ensuing credit crunch will turn the financial crisis into an economic crisis that will affect the entire 'real' economy. The resulting output and revenue losses will increase budget deficits and public debt ratios, thereby further undermining trust and confidence in the economic situation (Chacko et al. 2011; Collignon et al. 2011). In this case, a crisis must be stopped by a lender of last resort who restores trust and confidence and ensures that markets remain liquid. Only a lender of last resort can provide the liquidity necessary to prevent the crisis from turning into a default avalanche. Thus, although the views of fundamentalists and monetarists are not mutually exclusive, they have very different implications for policy.

This paper is an attempt to bridge the gap between monetarists and fundamentalists. Unless the short-term problems of Europe's financial crisis are dealt with immediately, the time required to overcome Europe's structural weaknesses may run out. We therefore need to articulate a strategy that will assure markets' access to liquidity, while the consolidation of public finances and the elimination of competitiveness gaps will be achieved only gradually. However, building bridges requires an open mind and new thinking. Though policy makers claim to have learned from past mistakes, they stick too often to old ideas. This is due not only to diverging interests, such as the need to protect national tax payers, and so on, but also to the application of inappropriate economic theories in the context of European integration.

Ultimately, Europe's policy problems result from a conflict between political correctness and economic logic. Political orthodoxy maintains that member states are sovereign, while from an economic point of view they are provinces in Euroland. Governments believe that they can ignore the external effects that their policies exert on all others, while welfare optimization requires that, in an integrated market with a single currency, these externalities be regulated in the common interest. This inconsistency has, no doubt, deepened the Euro-crisis. Despite governments' attempts to muddle through, this conflict between old political thinking and new economic requirements will not be solved until either the EU has been dismantled and every state returned to the nation state logic, or a fully integrated and democratically controlled macroeconomic policy framework has been set up. *Tertium non datur*.

In this paper, I take it for granted that the arguments in favour of European integration are far more convincing than those calling for a return to *Kleinstaatlerei*. However, I will argue that, despite their best intentions, European authorities have implemented reforms that remain stuck in old thinking and unlikely to solve Europe's crisis. The reason is a misperception of how monetary union works. In the first part of this paper I will critically discuss the policies, institutions and mechanisms of monetary union, as well as the nature of macroeconomic imbalances in the Euro Area. In the second part, we will move on to focus on cost competitiveness in the Euro Area as the more relevant concept for explaining and correcting imbalances. In the conclusion we will look at possible developments for the future.

1. How European Monetary Union works

Introduction

In this chapter, we will look first at the Euro Area's governance and the European Commission's approach to removing macroeconomic imbalances. We will then discuss the usefulness of balance of payment concepts for assessing macroeconomic imbalances in European Monetary Union and finally describe how current account deficits are financed in monetary union.

1.1 The Excessive Imbalance Procedure, national statistics and the chauvinistic bias

Europe's new economic governance

Let us start with governance issues. One key lesson from the crisis has been that more attention needs to be paid to macroeconomic imbalances and divergences in competitiveness between EU countries (European Commission 2012). Nevertheless, European authorities have implemented a number of important reforms which are even broader than this. [3]

First, under pressure from financial markets, liquidity problems were tackled by setting up three emergency facilities (Collignon 2011). The *European Financial Stability Mechanism* (EFSM) allows the European Commission to borrow on financial markets on behalf of the Union under an implicit EU budget guarantee in order to support EU member

3. For a summary see Fischer and Hofmann 2011.

states under the regulation of balance of payment of non-Euro Area member states.[4] It has a budget of Euro 60 billion. In addition, the *European Financial Stability Facility* (EFSF) was set up in May 2010. Its purpose is to provide loans to Euro Area member states with difficulties in accessing the primary market, to recapitalise banks when needed and to intervene in the secondary markets.[5] The EFSF was authorized to borrow up to 440 billion in funds guaranteed by Euro Area member states, to which the € 60 billion of the EFSM should be added, while additional funding to the International Monetary Fund of at least 250 billion was secured as a safety umbrella for distressed member states. This meant that the crisis mechanism created in May 2010 amounted to total funds of 750 billion euros. While support for Greece was provided from the EFSM, the first Euro Area member state to use the newly established EFSF facility was Ireland, in November 2010. The total Irish package of financial assistance amounted to 85 billion euros. In April 2011, Portugal also negotiated a rescue package, which was formally agreed in May 2011, amounting to 78 billion euros, 26 billion of which were financed under the EFSM, another third by the EFSF, and the final third by the IMF. All three rescue packages were conditional on fiscal consolidation strategies and adjustment programmes.

The EFSF has had already had two lives. The original EFSF (EFSF-1) was decided in May and set up in June 2010. However, it soon became clear that to obtain AAA rating for bonds issued to finance the EFSF, cash guarantees had to be given, which handicapped the fund's lending capacity. In December 2010 the guarantee commitments were increased from 440 billion to 780 billion. Finally, in December 2010, the European Council created a permanent crisis mechanism, the European Stability Mechanism (ESM). This is expected to be merged in 2012 with the EFSF and to replace the latter as a permanent intergovernmental institution. Its purpose is to provide loans to the Euro Area member states and it may exceptionally intervene in debt primary markets.

However, as the frequent changes to the arrangements show, these 'monetarist' remedies have often come too late or have not gone far enough, because fundamentalists have been willing to accept only measures that

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4. The legal basis for the EFSM is article 122 TFEU and the Council regulations no. 407/210 of 11May 2010.

5. EFSF, available at: http://www.efsf.europa.eu/attachments/efsf_guideline_on_interventions_in_the_secondary_market.pdf [accessed 01.03.2012].

were consistent with their own fundamentalist view while rejecting the liquidity explanation. Thus, the simple and elegant solution of issuing Eurobonds to deal with the liquidity shock has been vetoed repeatedly by the German government. In addition, chaotic communication by governments has aggravated uncertainty in financial markets, because loose talk by member states has often put into doubt their political commitment to safeguard the euro (Collignon et al. 2011).

Second, fiscal policy has been tightened. While monetarists have always been running behind the curve, fundamentalists were successful in imposing reforms to deal with policy misbehaviour. They strengthened fiscal discipline by improving the coordination of national budget policies and reducing discretion in enforcement of the Stability and Growth Pact (SGP).[6] They created the *European Semester*, which sets in motion a communication cycle between member states' budget planning processes. They have also adopted a 'reverse voting mechanism' to facilitate the imposition of sanctions against violations of the SGP (European Parliament 2011). Furthermore, in December 2011, the European Council agreed on a new fiscal pact, the so-called *Euro Plus Pact*, which will be adopted under a separate Treaty by 25 member states (not the UK or the Czech Republic). Governments are also expected to introduce 'debt brakes' into their national budget processes, often through constitutional amendments. It remains to be seen whether these new procedures, which are essentially a form of voluntary policy coordination among sovereign member states, can ever deliver consistent fiscal policies. However, this is not the object of this paper.[7]

Third, macroeconomic imbalances have become part of policy makers' 'common concerns'. These reforms are aimed at restoring competitiveness by correcting imbalances in the Euro Area, because it has been noticed that member states with difficulties regarding public (Greece, Portugal, Italy) or private (Spain, Ireland) debt have also run large current account deficits. The fundamentalist thesis is that current account imbalances reflect a lack of competitiveness and unsustainable national

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6. For details see European Commission 2010 and European Council 2010.

7. For an assessment of the sustainability of public debt in Europe, see Collignon 2012; for a critique of Europe's intergovernmental governance see Collignon 2003; 2008; Collignon and Paul 2008. ECB president Jean-Claude Trichet (2011) has proposed the creation of a European Treasury, which could reduce the excessive surplus of intergovernmentalism, although such an institution needs to be firmly grounded in the democratic legitimacy of Europe's citizens.

macroeconomic policies. In principle, this reflects progress in the economic governance of the Euro Area. Ignoring how macroeconomic developments in member states have affected the Euro-aggregate has always been a major weakness in Europe's economic governance (Collignon 2008). Even the European Commission, whose purpose it is to 'promote the general interest of the Union and take appropriate initiatives' (TEU, art.17), has often looked at the Euro Area as if it were an assembly of states instead of treating it as an integrated monetary economy. Hence, the devil is in the detail. In principle, it is a good idea to monitor macroeconomic developments in the Euro Area, but the practical implementation of the idea matters substantially for finding ways out of the crisis.

All these reforms together amount to a substantial transformation of the Euro Area's economic governance. Yet most of them have been ad hoc responses rather than a carefully considered policy framework. They are still far from a genuine 'economic government'. Some of these measures may make a real difference, some may be irrelevant, and some could be harmful. The fiscal policy rules imposed under the new pact have already been scrutinized widely and are far from being convincing from a theoretical or empirical point of view. However, the newly created *Excessive Imbalance Procedure* has been little discussed. We will see that, in a currency area, not all imbalances are unsustainable and some may actually turn out to be benign. Nevertheless, the issue of imbalances within the Euro Area is for real; we therefore need to clarify their causes and role in a currency union before solutions can be prepared.

The Excessive Imbalance Procedure

Macroeconomic imbalances take many forms: they may appear as inflation differentials, diverging cost levels, increasing income gaps between regions, unemployment clustering, and social inequalities. In international economics, imbalances are frequently associated with balance-of-payment items, such as current account deficits and capital flows, which contribute to changes in foreign currency denominated assets and debt. The Maastricht Treaty initially stipulated monitoring of macroeconomic developments in the Euro Area under the Broad Economic Policy Guidelines (BEPG). This has proved to be too weak. At the end of 2011 the so-called 'six pack' legislation produced a sprawling package of new rules intended to (1) tighten economic coordination among Euro Area governments; (2) prevent governments from building up excessive debts and

(3) monitor economic imbalances between member states in order to send early warnings at the build-up of asset bubbles (Commission 2010).

We will concentrate our discussion on this third point.

The major innovation is the *Excessive Imbalance Procedure* (EIP), which aims at preventing and correcting macroeconomic imbalances. This new instrument is largely a copy of the *Excessive Deficit Procedure* (TFEU, art. 126), which was translated into secondary legislation by the Stability and Growth Pact (SGP). Like the SGP, the EIP has two 'arms', a corrective and a preventive one.[8] The *corrective* arm closely resembles the Stability and Growth Pact. Once the EU Commission has formally established that a member state's imbalance is 'excessive' and the Council has agreed, a non-interest bearing *deposit* amounting to 0.2% of GDP will be imposed. This deposit would be converted into a *fine* in the event of non-compliance with the Commission's recommendation to correct the imbalance. If a member state repeatedly fails to act on recommendations or does not present a corrective action plan sufficient to address excessive imbalances, it will have to pay a yearly fine. The fine should, as a rule, be equal to 0.1% of GDP of the member state concerned. Hence the corrective arm looks fairly constraining. However, it is somewhat paradoxical to copy the *Excessive Deficit Procedure* to deal with macroeconomic imbalances, given that fundamentalists claim that the EDP has not been able to prevent the sovereign debt crisis. Why should such a procedure work for avoiding macroeconomic imbalances?

The *preventive* arm is part of the 'European Semester' when member states are coordinating their budget plans. At its core stands the annual Alert Mechanism Report (AMR), which will identify countries and issues for which an in-depth review is deemed necessary. Based on a scoreboard, the European Commission examines economic indicators that identify what it calls 'internal and external imbalances'. Different thresholds apply for Euro Area and non-Euro Area member states. Here is a list of these indicators: (see European Commission 2012 and 2012a)

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8. See: Regulation (EU) No 1175/2011 of the European Parliament and of the Council of 16 November 2011 amending Council Regulation (EC) No 1466/97 on the strengthening of the surveillance of budgetary positions and the surveillance and coordination of economic policies; and: Regulation (EU) No 1176/2011 of the European Parliament and of the Council of 16 November 2011 on the prevention and correction of macroeconomic imbalances.

External imbalances and competitiveness:

- 3-year average of the *current account balance* as a percentage of GDP, with a threshold of +6% and - 4% of GDP;
- *Net international investment position* (NIIP) as a percentage of GDP, with a threshold of 35%; [the NIIP shows the difference between a country's external financial assets and external financial liabilities];
- 5-year percentage change of export market shares measured in values, with a threshold of 6%;
- 3-year percentage change in nominal *unit labour cost* (ULC), with thresholds of +9% for euro area countries and +12% for non-euro area countries;
- 3-year percentage change of the *real effective exchange rates* (REER) based on HICP deflators, relative to 35 other industrial countries, with thresholds of -/+5% for Euro Area countries and -/+11% for non-Euro Area countries.

Internal imbalances:

- Private sector debt as a percentage of GDP with a threshold of 160%;
- Private sector credit flow as a percentage of GDP with a threshold of 15%;
- Year-on-year changes in deflated house prices, with a threshold of 6%;
- Public sector debt as a percentage of GDP with a threshold of 60%;
- 3-year average of unemployment rate, with a threshold of 10%.

The major problem with this *Excessive Imbalance Procedure* is that it conducts policy surveillance using tools familiar from international economics but which have lost their significance in the Euro Area. The reason for this problem is a misunderstanding of the functional mechanism of a currency area. Monetary union is often discussed as if it were a fixed exchange rate system with a same currency denomination.[9] Some

9. An amazing example of such distorted views is the Sinn and Wollmershaeuser (2011) paper which places EMU on the same footing as Bretton Woods. If already important economists within the EU do not fully understand how monetary union works, the confusion is even worse outside Europe. In 2009, a leading Chinese investment banker told me that Chinese decision-makers knew Obama and the US Constitution, but did not understand how Europe was governed. After the debt crisis erupted, an ECB board member was asked at a public meeting in Kyoto in 2010 whether it 'was not time to devalue the Greek currency *within* the euro'!

commentators believe that it should be possible to take a holiday from such a system, just as member states used to join and exit the European Exchange Rate Mechanism (ERM) (Feldstein 2010). But this is wrong. Monetary union is not a currency board. The difference in the functioning of fixed exchange rate mechanisms and a single currency is explained in detail below. My point here is that, with the exclusion of unit labour costs, none of the 'external' indicators on the score board are providing a correct assessment of imbalances in the Euro Area.

The proposed indicators use concepts derived from national statistics,[10] which are no longer consistent with the functioning of monetary union. For example, to speak of member states' 'external' balances when a large share of the statistically recorded transactions originate from within the Euro Area makes only very limited economic sense. There is nothing 'external' about imbalances within the same currency area. Why should one care about current account balances between Germany and Italy, but not between Bavaria and Saxony or Sicily and Lombardy? This question is at the core of the Euro crisis, but few observers address it correctly and the implicit answers contained in the EIP are mistaken.

Similarly, the notions of *Net international investment position* (NIIP), or *net foreign asset* or *external debt* of a 'country' are irrelevant in a monetary union. Why should one call 'domestic debt' a credit given to a local firm by a Greek bank which gets its money from the ECB, but 'foreign debt' a credit to the same borrower from a German bank which also gets its money from the ECB? From a macroeconomic point of view this makes no sense, for the entire banking system has equal access to base money. From a microeconomic point of view it may, of course, be reasonable to assess the solvency of banks in national jurisdictions, at least as long as banks are controlled by national financial supervision; but this has nothing to do with macroeconomic imbalances. Hence, applying the familiar notion of *external* balances to members of monetary union confuses economic, political and juridical concepts and prevents us from taking the right decisions for overcoming the crisis, because it creates a chauvinistic bias for policy makers in the Euro Area.

10. By 'national' statistics we do not refer to the way they are collected, but to the conceptual issue of whether or not the recorded transactions are inherently national in character.

Old thinking and chauvinism

Dictionaries define *chauvinism* as 'prejudiced belief in the superiority of one's own gender, group or kind', or 'a blind belief in national superiority'. Hannah Arendt (1945) said of chauvinism that it 'almost naturally springs from the old idea of the national mission [(...) which] might be interpreted precisely as bringing its light to other, less fortunate peoples that, for whatever reason, have miraculously been left by history without a national mission'. Some statements made during the European debt crisis would doubtless fit such a description.

However, Ravenscroft (2005) has defined chauvinism in a simpler way by describing it as 'a bias in favour of the familiar'. This is the sense in which I will use the term chauvinism in this paper. Chauvinism keeps people stuck in old patterns of thinking.

The 'bias in favour of the familiar' results from *taking for granted the nation state framework for policy making, even if the economy has become integrated in a single market with a single currency*. The bias can lead to important policy errors because it supports the idea that member states can solve policy problems on their own, when in fact a coherent European framework for centralised European macroeconomic policies is required. For example, it is has sometimes been argued that bailing out distressed debtors was not desirable because 'every government has to make order in its own house'. The implication here is that member states are the appropriate institutional framework for keeping the European house in order because national governments are familiar with what is good for their people. However, on the same basis, the European house has many flats, and someone should be responsible for the common parts. National governments are much less familiar with the latter, and Europe has no authoritative agent to manage them. Hence, the familiar idea that member states are in charge of governing Europe has become an obstacle to the improvement of European welfare.

Chauvinism is an attitude that feeds the resistance to more decision-making at the European level and is often justified on grounds of the *subsidiarity principle*. In reality, however, the resistance to setting up a macroeconomic government at the European level constitutes a violation of the subsidiarity principle which states that a central authority should perform those tasks which cannot be performed effectively at a more immediate or local level. Economic theory has argued for over half

a century that macroeconomic stabilisation policies need to be centralised at the same level as monetary authority (see Musgrave and Musgrave 1973). Retaining competences for macroeconomic policies at the familiar national level is therefore contrary to subsidiarity.

Given 400 years of European history, we are all perfectly familiar with nation states, but after only 10 or 12 years of existence the euro is hardly yet a familiar institution. Half a century ago, Europe needed to heal its wounds from two disastrous world wars, crimes against humanity and intolerable dictatorships. Overcoming the shadows of the past required European policies to be firmly grounded in the democratic legitimacy of nation states and it is, therefore, not surprising that the mechanisms of a unified currency area are often misunderstood and that policy making is biased in favour of nation states. This bias must be overcome by lucid analysis, for otherwise chauvinism will generate economic and social instability. Prisoner dilemmas and moral hazard will systematically generate coordination failure. Efficient policies for managing the integrated market and the Euro Area thus become increasingly hard to achieve. These diminishing returns from 'output legitimacy', in other words, from the fact that people have consented to European integration because their welfare was improved, are gradually undermining the acceptance of the European project and could ultimately destroy the European Union (Collignon 2003).

In fact, the bias in favour of the familiar confuses the European political with the economic sphere. The political sphere is characterised by institutional and political heterogeneity, where national constituencies legitimize and impose different political constraints on member states. This heterogeneity creates a holistic sense of 'us' against 'them' and an attachment to separate identities instead of unified interests; it prevents thereby the emergence of genuine European democratic legitimacy. The economic sphere, on the other hand, is defined by monetary homogeneity, because the European Central Bank sets a common domestic budget constraint for the entire Euro Area by determining money supply. At the same time, the ECB's foreign exchange reserves constitute the Area's common external budget constraint. These political and economic spheres often interact inconsistently in the context of Europe's intergovernmental policy framework. The conflict between the two spheres is fairly obvious with respect to budget policies, where the Stability and Growth Pact has become nearly synonymous with coordination failure; but the inconsistency is now also dominating the proposals for avoid-

ing excessive macroeconomic imbalances, because the chauvinistic bias justifies the assumption that the member states in the Euro Area are still subject to *separable* national budget constraints. This is wrong. To understand why, we need to recall the meaning of the concepts of current accounts and balance of payments.

1.2 Current accounts in EMU: a category mistake

Conceptual issues

According to the IMF Balance of Payment Manual (1993:6), 'the balance of payments is a statistical statement that systematically summarizes, for a specific time period, the economic transactions of an economy with the rest of the world'. The trouble starts here. What is an economy? If we assume with chauvinistic bias that an *economy* is a *country* is a *state*, then we focus on the juridical aspect of an economy. The IMF (1993:7) takes that approach here: 'a country's economic territory consists of a geographic territory administered by a government'. However, that does not help in the European context, for while there is agreement that the Euro Area is not administered by a government, one could argue that it should be. In fact, the state-like nature (or not) of the EU has long been debated, without any conclusion having been reached.

By contrast, if we focus on the *payment* aspect of the economic transactions, then *money is the distinguishing category*.[11] The balance of payments records payments for goods, services and financial assets which need to be converted from *foreign* into domestic currencies. *What is 'foreign' is determined by the fact that foreign currency is not accepted as a domestic means of payment*. Which of these two interpretations of the balance of payments one uses depends on the purpose. For the economic analysis of a functioning market economy, the monetary aspect should dominate. For policy-related interference by governments and regulators in the economy, one may have to refer to jurisdictions.

Payments in foreign currency for economic goods and services are recorded, after conversion into domestic values, in the *current accounts*

11. Keynes (1930) famously defined money as a means of payment which is 'the ultimate asset that extinguishes debt contracts'.

of the balance of payments; a payment received is a credit, a payment going out a debit. The changes in financial assets and liabilities appear in the *capital accounts*.[12] The net difference between these two flows determines the changes in foreign reserves. Current account payments are related to 'real' transactions, such as imports and exports, but also factor income for labour and capital, or governments transfers like foreign aid, and so on. Cohesion and structural fund payments in the European Union are such transfers. The financial flows recorded in the capital accounts refer to foreign direct investment, portfolio investment and other financial transactions of the domestic economy with the rest of the world. Net foreign reserves are assets in the balance sheet of the central bank and their liability counterpart is central bank money or base money (MO).[13] MO consists of banknotes (cash) and deposits which commercial banks hold with the central bank. (See Box 1.)

Box 1 **Balance of payments and money**

For a given economy, the demand and supply of foreign currency is determined by the following payment streams: demand for foreign currency is derived from the need to pay for imports and also for foreign financial assets, in other words, for capital outflows; supply of foreign currency is obtained by selling goods and services abroad (and receiving income for labour and capital), that is, exports, plus foreigners buying financial assets denominated in domestic currency, namely, capital inflows. Hence, we have:

Demand: $IM + K_{out}$
Supply: $EX + K_{in}$

At a given exchange rate, the excess supply of foreign currency is accumulated by the central bank and shown in its balance sheet as the change in net foreign assets:

12. The nomenclature of the IMF distinguishes between financial accounts and capital accounts. The former cover most of the items, which traditional theory calls capital flows, while the IMF capital account records mainly capital transfers, which are usually very small compared to other BOP transactions, except in rare cases where a country is the beneficiary of substantial debt forgiveness.

13. In the Euro Area, governments have a claim on ECB reserves in proportion to their share capital.

$$\Delta NFA = EX + K_{in} - (IM + K_{out}) = (EX - IM) + (K_{in} - K_{out})$$

where (EX – IM) stands for the current accounts and ($K_{in} - K_{out}$) for the balance of capital accounts. A surplus in the capital accounts is equivalent to foreign borrowing, a deficit of foreign lending.

Excess of supply of foreign currency would lower the price of foreign currency and cause the domestic currency to appreciate in value. The central bank could stabilise the exchange rate by buying up the excess supply of foreign currency and as a consequence it would issue central bank money. Inversely, if there is excess demand for foreign currency, the exchange rate would depreciate or the Central bank will need to sell net foreign assets. This is clear from a simplified central bank balance sheet:

Central bank balance sheet

Assets	Liabilities
Net foreign assets (NFA)	currency
net lending	
to domestic banks	commercial bank deposits

If the Central bank buys NFA and keeps net lending to domestic banks constant, Mo will increase. The opposite happens if it sells foreign assets. It could, however, sterilise the purchase of NFA by reducing net lending to the domestic economy by exactly the same amount by which NFA have increased.

If the current account balance is in deficit, payments for foreign goods or services have exceeded the income received from the sale of goods and services abroad. This is possible only when foreigners grant credit to domestic operators, or when the latter are able to use previously accumulated foreign assets to make payments. However, a large portion of these foreign assets constitute credit claims on foreign economies. Thus, it takes two to tango: every borrower must have found a lender and every surplus creates a deficit somewhere else.

Granting credit to an importer is equivalent to a foreigner acquiring a claim on the domestic economy, in other words, buying a financial asset denominated in domestic currency. Note that in balance-sheet terms,

the inflow of capital is equivalent to a net increase of liabilities to non-residents. It follows that, if foreign reserves are to remain constant, an excess of imports over exports, that is, a current account deficit, implies a net import of capital, in other words, a surplus in the capital balance. The sum of current accounts and capital accounts is then zero. Similarly, a current account surplus implies an outflow of capital, which means an increase of asset claims on the rest of the world. The net position of external liabilities and assets is the economy's *net international investment position* (NIIP) vis-à-vis the rest of the world.

In the old days, when payments were settled by transferring gold, a current account surplus was identical to an inflow of gold reserves, which simply increased the country's assets. Surplus countries got rich, because they accumulated gold and silver (*specie*), deficit countries became poor because they lost money.[14] For example, in the fifteenth and sixteenth century, Florence ran huge current account surpluses by exporting wool and silk textiles and earned gold and silver in return which was generously spent (*con larghezza*) on the Brunelleschis and Michelangelos of the time. Once the trade surplus disappeared, Florence's glory was over. Today, the payment function of *specie* has been replaced by 'capital flows', in other words, by claims and liabilities recorded in balance sheets, and it is sometimes suggested that the capital balance is simply the mirror of the current account. This view implies that any current account deficit is financed by an inflow of foreign capital, although an economy could also make payments in excess of foreign income by running down previously accumulated foreign reserves if capital flows are insufficient to finance the current account deficit.[15] Technically, it is therefore not the sum of current accounts and capital flows, but the *balance of payments* that is always zero, because the change in foreign reserves is the balancing item, which drives a wedge between the current account and capital balance.

With the liberalisation of capital markets, cross-border movements have developed their own logic and dynamics and are often dissociated from current account transactions. Investors respond rapidly to all kinds of economic and political news and this makes capital movements highly

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14. Early mercantilist writers were concerned about the loss of money caused by payment outflows. See Leigh, 1974. Interestingly, the mercantilist logic derives from the assumption that the supply of money is fixed at the world level, while trade imbalances redistribute it across countries. We will see that this is exactly the same mechanism that operates in monetary union.

15. In the opposite case, it would accumulate foreign reserves.

volatile. If central banks were to refuse to intervene in foreign exchange markets and stop buying or selling foreign currency, the exchange rate would also become highly volatile. This is incompatible with a stable competitive environment in a single market. Hence, with free movements of capital, central banks have to become very active players in foreign exchange markets, especially if the currency is relatively small. But this need for activism increases the risk of running out of reserves when the economy is hit by substantial shocks. Such shocks can therefore cause large exchange rate distortions. The European Monetary System, which functioned from 1979 until the start of monetary union in 1999, tried to solve this problem by granting participating central banks unlimited short-term credit. China and other Asian economies have learned the lesson of the Asian Financial Crisis in the late 1990s and have accumulated large reserves ever since. The reason is that a sudden or sustained outflow of funds may reduce foreign reserves to a point where the central bank can no longer guarantee domestic agents the access to foreign currency. This is equivalent to a case of insolvency with respect to claims on foreign currency. Markets will devalue the domestic currency and this effectively constitutes a market-induced 'haircut' of the value of domestic asset relative to foreign currency. Hence, the balance of payments is important for investors in countries with different currencies, *because the net foreign financial asset position determines the country risk, which is ultimately a currency risk*. Country risk means here that each and every debtor and creditor is equally affected by macroeconomic developments.

Using national statistics from the balance of payments and current accounts to assess macroeconomic imbalances between member states in a currency union is problematic, because these statistics do not differentiate between domestic (the euro) and foreign currency; they aggregate intra-Euro Area and external cross-border payments and therefore mix up what needs to be distinguished. This can lead to wrong conclusions about the sustainability of current account deficits. The proper distinction is between Euro Area and Non-Euro Area payments. Unfortunately, in spite of the need for these statistics, Eurostat does not report them. The *Excessive Imbalance Procedure* is therefore based on a conceptually mistaken information set. It commits a category mistake.[16]

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16. A category mistake is a semantic or ontological error by which a property is ascribed to a thing that could not possibly have that property.

The proper way of assessing macroeconomic imbalances would require distinguishing three forms of payments: (1) local payments within the same state; (2) intra-Euro Area cross-border payments between member states and (3) external payments in foreign currency. The main distinction of what is 'internal' and 'external', including what is external debt, must be derived from the function of money and not from familiar conventions about statistical reporting. In this context, monetary policy sets the ultimate budget constraint by keeping domestic base money scarce,[17] while local and intra-Euro Area payments will allocate *money deposits and wealth* across 'regions'; external payments will determine the aggregate foreign reserve position of the Euro Area.

Box 2 shows how the three payment streams are connected. Within the same currency area, the surplus of one 'region' must always be equal to the deficit of another. Furthermore, imbalances in commercial transactions between firms can be compensated (or reinforced) by transfers between households (for example, remittances of wages and profits) or governments. In the European Union regional policy transfers are the most important element of such intergovernmental transfers. As far as the external balance of the Euro Area's current accounts is concerned, the surplus of one region can balance the deficit of another, so that net foreign assets of the Euro Area remain fairly constant.

Box 2 **Current accounts in the Euro Area**

Let us assume that the Euro Area consists of two jurisdictions or regions, i and j. In each of them, firms, households and governments make payments in the same currency locally and across borders from one region to the other; by contrast, external transactions are made in foreign currency. Assume we can aggregate these three sectors for each 'region'. The payments can then be represented by Table 2.1.

17. Technically this means that the ECB must control the supply of money in such a way that the long-run real interest rate is positive, reflecting liquidity preference. Otherwise, money may lose its function as the final-settlement asset. See Manning, 2009: 32 and Riese 2004.

Table 2.1

	Region			
Expenditure	**i**	**j**	**x**	
Fi	Fii	Fji	Fxi	
Fj	Fij	Fjj	Fxj	Firms
Fx	Fix	Fjx	Fxx	
Hi	Hii	Hji	Hxi	
Hj	Hij	Hjj	Hxj	Households
Hx	Hix	Hjx	Hxx	
Gi	Gii	Gji	Gxi	
Gj	Gij	Gjj	Gxj	Government
Gx	Gix	Gjx	Gxx	

Here *F* stands for firms, *H* for households, *G* for governments; payments are made from the first index to the second, hence *Fii* are local payments made by firms in region *i* to other firms in the same region; *Fji* are payments made by firms in *j* to firms in region *i*. Hence, for each sector, the diagonal represents local payments. The first row in each sector records payments to region *i*, the second to region *j* and the third payments in foreign currency to the rest of the world *x*.

The current account balance for each of the two regions as recorded by familiar national accounts is then defined as:

(2.1) CA_i: [(Fij+Fix) – (Fji + Fxi)] + [(Hij + Hix) – (Hji + Hxi)] + [(Gij + Gix) – (Gji + Gxi)]

(2.2) CA_j: [(Fji + Fjx) – (Fij + Fxj)] + [(Hji + Hjx) – (Hij + Hxj)] + [(Gji + Gjx) – (Gij+ Gxj)]

For each 'region' the current accounts are the net payments of the three sectors into the rest of the currency area and into the rest of the world. But written in this way, the confusion between domestic and foreign currency (which is indexed by x) is evident. The distinction between intra and external balances becomes clearer if one writes:

(2.1a) CA_i: [(Fij – Fji) + (Hij – Hji) + (Gij – Gji)] + [(Fix – Fxi) + (Hix – Hxi) + (Gix – Gxi)]

where the first square bracket represents trans-border payments within the Euro Area and the second external payments in foreign currency.

The current account balance for the currency area as a whole is totally dependent on foreign currency transactions:

(2.3) $\mathbf{CA_{i+j}}$: $[(Fix + Fjx) - (Fxi + Fxj)] + [(Hix + Hjx) - (Hxi + Hxj)] + [(Gix + Gjx) - ((Gxi + Gxj)]$

which is the sum of net payments between domestic firms, households and governments and the rest of the world. If we ignore transfers from factor income and between governments, it is immediately apparent that the current account deficit with the non-Euro Area of one region can easily be balanced by the surplus of another:

(2.4) $\mathbf{CA_{i+j}} = (Fix - Fxi) + (Fjx + Fxj)$

However, the balance of cross-border transactions within the Euro Area is a mirror image between the two member states:

(2.5) intrabalance $(Fij - Fji) + (Hij - Hji) + (Gij - Gji) = -[(Fji - Fij) + (Hji - Hij) + (Gji - Gij)]$

In other words, the surplus of one member state in the Euro Area is identical with the deficit all the other member states have with the first. Furthermore, it is clear that if the deficit is driven by commercial transactions between firms (Fij – Fji), it can be balanced by a surplus of factor income (households) across borders (Hij – Hji), or by net transfers from government to government (Gij – Gji). This is the reason why it is often argued that imbalances need a fiscal transfer union. However, this focus on current accounts neglects the role of capital flows, which are the mirror image of commercial transactions.

Standard economic textbooks assume that the domestic economy is identical with an autonomous jurisdiction, which implies that different jurisdictions (countries) have different currencies. The relation between such economies is defined by the exchange rate regime and, given that the exchange rate depends on supply and demand of foreign currency,

it is the net foreign assets accumulated by the ECB that determine the 'country' risk for the Euro Area as a whole. National current account positions with the rest of the world are relevant only insofar as they contribute to the aggregate.

That the country risk depends on exchange rates is clear when one considers that current account deficits increase the stock of *external indebtedness (liabilities) in foreign currency* and therefore lower an economy's net assets, in other words, the *net international investment position* (NIIP). Thus, with persistent current account deficits, the external debt, that is, debt denominated in foreign currency, will grow until the question arises concerning whether and for how long the accumulation of such debt will remain sustainable.[18] The problem becomes acute when foreign lenders are no longer willing to grant credit to the domestic economy or even *withdraw their capital, because this will drain the central bank's reserves*. It was pointed out above that if a government wishes to stabilise the exchange rate relative to an important trade partner,[19] the central bank will have to buy the excess inflow of foreign currency and accumulate reserves, or, in the opposite case, to use existing reserves to accommodate the excess demand for foreign currency. This means that central bank controls external relations by means of exchange policy; but clearly, national central banks no longer can or need to do so in monetary union.

I have discussed this mechanism of foreign reserves and balance of payments so extensively because it helps us to understand how differently a monetary union works from a fixed exchange rate policy. Within a currency area, the problem of foreign reserves does not exist. By definition

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18. For example during the crisis of the European Exchange Rate Mechanism in 1992-3, the UK and Italy ran out of foreign reserves and the foreign exchange markets adjusted to the excess demand for foreign currency by devaluing sterling and lira. By contrast, the Banque de France also ran out of reserves, but the Bundesbank was willing to lend unlimited amounts to France, because it rightly considered that France was able to repay these loans.

19. The need to avoid exchange rate instability in Europe's Single Market is the main argument for the existence of a single currency. See Padoa-Schioppa 1987.

20. In an influential article, De Grauwe (2011) has argued that members of the Euro Area effectively issue debt in a foreign currency because they cease to have control over the currency in which their debt is issued and can no longer force the central bank to buy their debt. However, in this case, the issue is not whether the euro is domestic or foreign currency, but simply that the central bank is independent and money supply therefore exogenous for policy makers. In other words, De Grauwe challenges the idea that the ECB determines the hard domestic budget constraint in the Euro Area.

there is no exchange risk when every actor uses the same currency and payments between different jurisdictions are no longer 'foreign'.[20] A payment from Hamburg to Rome is as much a domestic euro transfer, as a payment from Boston to San Francisco is a domestic dollar transfer. There is also no exchange rate.[21] A euro is a euro. There are no German or Greek or Irish euros.[22]

In this respect, a currency area functions somewhat like the species-flows mechanism in the old gold standard: a transaction is finished when money is paid. This becomes perfectly clear when one considers cash payments. If I take cash out of my bank account in Pisa, it makes no difference if I buy a book in Rome or Paris. The book seller here or there will simply put the money into his own banks and the 'current account deficit' between Pisa and Rome or Pisa and Paris is settled by the transfer of cash. I do not have to go and teach in Rome or Paris in order to pay back the Pisan current account deficit. By contrast, what makes a difference, if I buy a book in London and therefore affect the trade balance between the Euro Area and the UK, is that, within the Euro Area, euros are the accepted legal settlement asset, while outside the Euro Area they are not.

The example of the cash payment is intuitively simple and shows the basic structure of how a currency area works. Modern economics, however, are based on bank transfers and this fact makes payment operations more complex, although this complexity does not change the logic. Domestic money (M1 or M3) is supplied by the banking system when banks grant credit to their clients. However, banks need liquidity reserves (M0), which they obtain when the central bank grants them credit. With fiat money, liquidity reserves are based on trust (that is, credit); they are no longer derived from the exchange of goods against gold and silver. As a result, within a given monetary economy there is a *specific credit risk for each debtor*, who has to repay a credit in the same currency, but there is no collective country risk. Individual borrowers may become

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21. Relative prices may, of course, differ and this is sometimes called the real exchange rate. I will argue in the second part of this paper that relative cost conditions are crucial for assessing competitive advantages and remedying macroeconomic imbalances. However, explaining relative prices within the same currency area is fundamentally different from economies with different currencies.

22. Such rather adventurous interpretation is found in the paper by Sinn and Wollmershaeuser, 2011.

insolvent and unable to repay their debt and this failure could spill over to other banks. This contagion problem is particularly important when a sovereign debtor loses creditworthiness, because local banks often hold a large part of their jurisdiction's government debt in their portfolio. Nevertheless, *the credit risk is individual and not holistic*. If economic agents in a member state of the Euro Area collectively spend more than they earn, they get credit from banks in domestic currency, because any solvent commercial bank has in the last resort access to the refinancing mechanism of the central bank. Hence, no 'member state' can ever run out of reserves, because foreign reserves are collectively owned by the Eurosystem and individual banks must hold minimum reserves in domestic currency.

This is the reason why the balance of payments has changed its nature in European monetary union. And the flows recorded for individual member states have lost their informational function. This raises the following question: how does monetary union work if it must be institutionally distinguished from a fixed exchange rate system?

What is a monetary union?

What defines the currency area? The answer is simple: a currency area is the territory where credit contracts can be enforced and extinguished by paying the legally defined and generally accepted currency. This currency – that is, base money – is issued by the central bank. To be precise, it is created when the central bank gives a credit against collateral to a commercial bank or buys outright financial assets, such as foreign assets. Either banks hold this money as deposits on their central bank account, or they exchange deposits against bank notes which they supply to their clients. Hence money proper is the liability of the central bank.

Banks and holders of bank notes use this central bank liability as the ultimate settlement asset when they make payments. In fact, a payment is nowadays defined as the transfer of the central bank liability which is 'legal tender'. In early economies, 'specie' (gold and silver) was the settlement asset, but soon merchants understood that they could make payments without having to hand over metal. They deposited the settlement assets with a trustworthy bank, which issued 'banknotes' against them. Transferring these certificates was effectively 'as good as' settling in species. Over time banks started to accept claims on each other and

payments could be made more securely by having a bank of banks – in other words, a central bank – so that the payments from one bank to another became book transfers on the ledger of the central bank. Banks also realised that they could use the deposits of their clients in the same way to make payments. They could then net out the payments received and sent out to other banks on behalf of their clients, and then needed to settle (in other words, to pay) only the net amounts owed to another bank. Nevertheless, the ultimate settlement asset is always the liquidity commercial banks get from the central bank. We call this liquidity base money (M0) and the deposits used for settlement of the broader public are either called 'narrow' (M1) or 'broad money' (M3).

The Euro Area functions exactly as any other currency area, even if its legal framework is not established by a state, but by a treaty concluded between different states. When European Monetary union started on 1 January 1999, the euro became legal tender in the participating member states (TEU, art. 3.4). Previously existing monetary laws in member states were abrogated. The European Central Bank (ECB) was set up as the ultimate organ and head office for the conduct of monetary policy. The existing national central banks (NCB) were effectively merged with the ECB to form the *Eurosystem*.[23] In business, a merger is a combination of two companies where the less important company loses its identity and becomes part of the more important corporation, which retains its identity. This is precisely the status of NCBs, which the ECB uses for the execution of its policies, even if the national central banks are the shareholders of the ECB.[24]

The Eurosystem is the only institution to issue money. The Treaty (TFEU art.126.1) stipulates: 'The European Central Bank shall have the exclusive right to authorise the issue of euro banknotes within the Union. The European Central Bank and the national central banks may issue such notes. The banknotes issued by the European Central Bank and the na-

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23. A broader cooperative framework, the European System of Central Banks (ESCB), was also set up for non-participating central banks in EU member states.

24. TFEU, 282.1: 'The European Central Bank, together with the national central banks, shall constitute the European System of Central Banks (ESCB). The European Central Bank, together with the national central banks of the member states whose currency is the euro, which constitute the Eurosystem, shall conduct the monetary policy of the Union.' See also TFEU, Protocol No 4, *On the Statute of the European System of Central Banks and of the European Central Bank, art 1*. The Eurosystem did not exist as a genuine organ before the Lisbon Treaty.

tional central banks shall be the only such notes to have the status of legal tender within the Union.' But the ECB and the Eurosystem also function as the *bank of banks*, as article 17 of the Protocol says: 'In order to conduct their operations, the ECB and the national central banks may open accounts for credit institutions, public entities and other market participants and accept assets, including book entry securities, as collateral.' In addition, the Treaty (TFEI, art 127.3) and its Protocol 4 (art. 3) explicitly stipulate the joint task to 'promote the smooth operation of payment systems'.

The Treaty is also clear how money is created (Protocol 4, article 18.1): 'In order to achieve the objectives of the ESCB and to carry out its tasks, the ECB and the national central banks may:

– operate in the financial markets by buying and selling outright (spot and forward) or under repurchase agreement and by lending or borrowing claims and marketable instruments, whether in euro or other currencies, as well as precious metals;
– conduct credit operations with credit institutions and other market participants, with lending being based on adequate collateral.'

Finally, the ECB has legal personality and is independent from all other institutions.[25] While NCBs are 'the sole subscribers to and holders of the capital of the ECB' (Protocol, art. 28), the ECB is liable for all actions of the Eurosystem, and profits and losses are the distributed to the shareholders of the ECB in proportion to their paid-up share capital (Protocol 4, art. 33): 'In the event of a loss incurred by the ECB, the shortfall may be offset against the general reserve fund of the ECB and, if necessary, following a decision by the Governing Council, against the monetary income of the relevant financial year in proportion and up to the amounts allocated to the national central banks in accordance with Article 32.5.'

Hence, there can be no doubt that the Euro Area is a currency area as I have defined it. The monetary economy functions exactly like any other economy, whether it be in Switzerland, the UK or the USA. The legal

25. Art.282.3: 'The European Central Bank shall have legal personality. It alone may authorise the issue of the euro. It shall be independent in the exercise of its powers and in the management of its finances. Union institutions, bodies, offices and agencies and the governments of the member states shall respect that independence.'

status of the euro is unambiguous: it is the liability by the Eurosystem as a whole and not by national central banks. It is therefore a serious mistake to interpret money flows within the Euro Area as if they were international transactions recorded in the balance of payments. Worse, to regard European monetary union as equal to Bretton Woods or similar fixed exchange rate arrangements is simply absurd. In fact, European Monetary union is effectively an economic country and member states have become economic provinces of Euroland.

Because it is the bank of banks, the ECB must provide equal conditions of access to the liquidity of the Eurosystem for all commercial banks in the Euro Area. When, for example, a Greek borrower receives a credit, it does not make a difference whether the lender is a Greek, French or German bank, because all these banks either use their local euro-deposits, or borrow from each other in the interbank market or refinance themselves with the ECB under (essentially) identical conditions. By contrast, if a British bank wishes to lend to a Greek borrower, it has to go through the exchange market, convert sterling deposits into euros and this changes the nature of the operation, either by generating exchange rate risk or by affecting the balance of payment. *Hence, the open and unlimited access to liquidity for banks defines European Monetary union as a domestic economy*.

But this has important implications. Maybe the most important is that the familiar distinction between tradable and non-tradable goods loses its importance for the adjustment of imbalances within the currency area. There is no longer a need to switch expenditure from non-tradable to tradable goods. Standard international theory defines the equilibrium real exchange rate as the relative price of tradable to non-tradable goods that results in the simultaneous attainment of internal and external equilibrium. Internal equilibrium means non-tradable goods clear with unemployment at its 'natural' level. External equilibrium is attained when the intertemporal budget constraint, which states that the discounted sum of an economy's present and future current account balances has to be zero, is satisfied (Edwards 1989: 16). But clearly, if the currency union is behaving as an economic country, then the external equilibrium is defined by the intertemporal budget constraint for foreign currency and the equilibrium effective exchange rate is defined only for relative prices between the Euro Area and the rest of the world and not between member states.

This may seem counterintuitive. Most economists would argue that if 'Greece' borrows from 'Germany', it will have to generate future surpluses to pay back the loan, even in monetary union. However, in principle the same logic would apply to geographic units within nation states: If 'Berlin' borrows from the rest of 'Germany', the intertemporal budget constraint would require that 'Berlin' generates current account surpluses in the future, unless the debt is serviced by fiscal transfers. Yet no one cares about these imbalances within nation states. Rightly so, for this 'payback' argument misses the point that neither 'Greece' nor 'Berlin' ever borrows money. Behind these names stand individual borrowers, namely firms, households and public authorities. *Each of them has to satisfy the intertemporal budget constraint individually*, which simply means that the discounted sum of future income in domestic currency must equal the liability undertaken today. There is no collective risk for German lenders to 'Greece' or 'Berlin', because there is no exchange risk; there is only an *individual default risk*.[26]

That the familiar distinction of tradable and non-tradable goods is not relevant for adjusting cross-border imbalances within the Euro Area does not mean that relative cost issues between regions can be neglected. In the second part of this paper, we will look at these distortions. At this point it is important to clarify that a currency union is a payment union where all economic agents use the same means of payment. This has important consequences for the assessment of macroeconomic imbalances.

Do current accounts matter?

We have discussed earlier the conceptual implications of balance of payments and current accounts and argued that they have lost their function in monetary union. Nevertheless, since the beginning of the crisis, a growing number of economists have argued that even in monetary union national current accounts matter (See Giavazzi and Spaventa, 2010; Dullien, 2010; Alcidi and Gros, 2010). The European Commission seems to believe that reducing excessive imbalances of current accounts should be a policy priority. We will now look at their arguments.

26. Of course, there may be a systemic risk of contagion, which could be regionally concentrated when local banks keep a high concentration of local assets in their loan portfolio. As long as financial regulation is national based, there may be a positive correlation between individual credit risks on a member state basis, but this is different from a country risk.

Figure 1 **Current account positions relative to GDP**

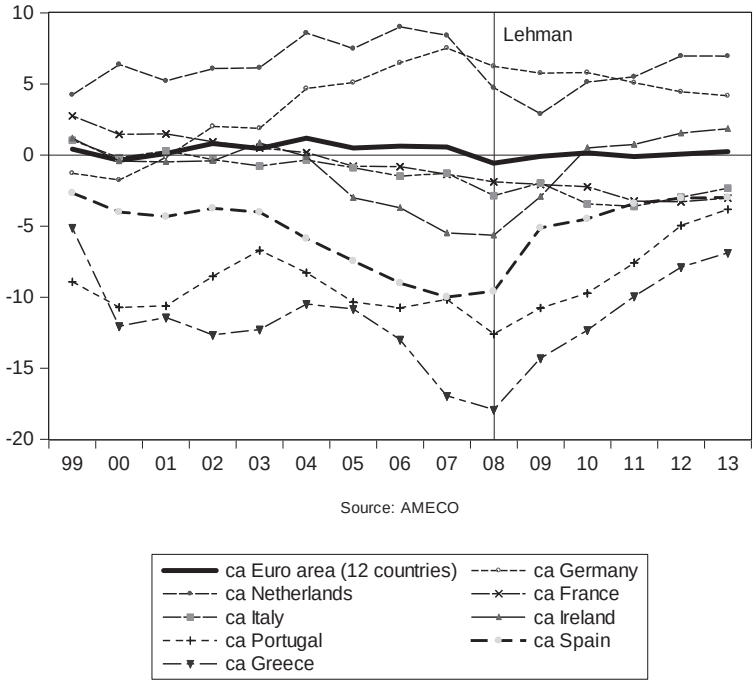

Figure 1 shows the evolution for the current account position as recorded by official statistical methods in some selected Euro member states. While the Euro Area as a whole was essentially in balance, there is a clear mirror image between Germany and the Netherlands in the North and Europe's South. Germany and the Netherlands have produced large surpluses, Greece, Portugal, and Spain even larger deficits. Italy and France witness long-run deteriorations in their position. In Ireland, the deficit was short (2004-2008), but large. The mirror image is also manifest in the post-crisis dynamics. The economies in Europe's South (within which I include Ireland) have started to narrow their current account deficits since 2008, Germany has reduced its surplus, while the current account balance between the Euro Area and the rest of the world has not changed substantially.

Initially, the ECB paid little attention to national current account statistics, correctly as I believe. However, there are four arguments which deserve consideration.

First, in the view of the Commission (2012a:9), these statistics indicate a loss in competitiveness that puts into question the sustainability of public debt. We will take up this argument in the second part of this paper and show that, although competitiveness does indeed matter in Europe, current accounts represent a highly dubious indicator in this respect.

Secondly, some economists claim that current account deficits reflect low gross national savings, so that less cash flow is available to service public debt and private investment. Countries with large deficits are therefore relying heavily on foreign capital inflows. This has two consequences: on the one hand, the return on capital in the regional economy would need to be higher in order to attract capital flows. On the other hand, a 'sudden stop' of capital inflows could make it impossible for firms and governments to refinance themselves on the markets and generate a debt crisis (Gros 2010, 2011; Kopf 2011). The Asian financial crisis is often quoted as an example of such a 'sudden stop'. However, while this model may explain financial crises in emerging economies, it is not suitable for explaining developments within the Euro Area, as I will show below.

Third, a stronger argument is related to default risks for public debt. We have seen that current account deficits accumulate external debt. Foreigners will ask for a risk premium when holding domestic debt, because in a democracy it is easier for governments to default on foreigners who have no voting rights than on citizens. Daniel Gros (2011: 2) provides some 'simple evidence' about the relationship between the risk premiums on long-term government bonds in February 2011 and the current account balance averaged over the last three years before the European debt crisis (2007-2009).[27] His simple scatter plot reveals non-linearity in the relation, which he interprets as resulting from risk adverse behaviour by foreign investors. However, as so often, simple evidence is not simple. I have reproduced Gros' scatter plot and the result can be seen as the red line of Figure 2.[28] When we look at the same relation with a lag of

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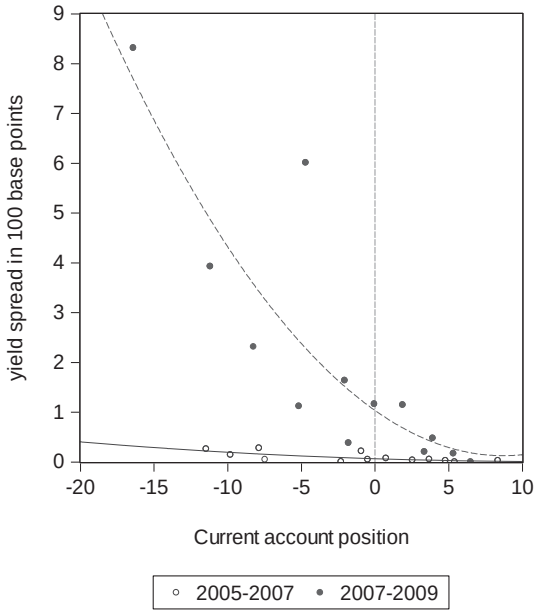
27. I find the one-year gap between the last current account and the spread date mysterious, but assume that Gros did not have the most recent current account data.

28. The regression result for 2011 is: $y = 0.012x2 - 0.2087x + 1.0359$ with $R^2 = 0.7419$ and the result for the same countries in 2007 is: $y = 0.0004x2 - 0.0093x + 0.0666$ with $R^2 = 0.4997$.

Figure 2 **Current accounts and bond spreads**



Source: AMECO and Bloomberg

three years, in other words, when we use risk premia for early 2007 and the average current accounts for 2004–2006, we get a very different picture: the risk premia are significantly lower and the relation is essentially linear. Thus, the huge spreads between yields on Greek and German public debt cannot be explained by large current account deficits. The above mentioned monetarist model of a liquidity crisis following shocks does a much better job (See also Collignon *et al.*, 2011).

The fourth – and maybe the queerest – argument about why current accounts matter refers to credit and debit positions in the balance sheets of national central banks. Recently, large imbalances have emerged within the ECB's payment system, called TARGET2, and they

29. FAZ, Die Bundesbank fordert von der EZB bessere Sicherheiten; http://www.faz.net/aktuell/wirtschaft/schuldenkrise-die-bundesbank-fordert-von-der-ezb-bessere-sicherheiten-11667413.html [Accessed 01.03.2012]

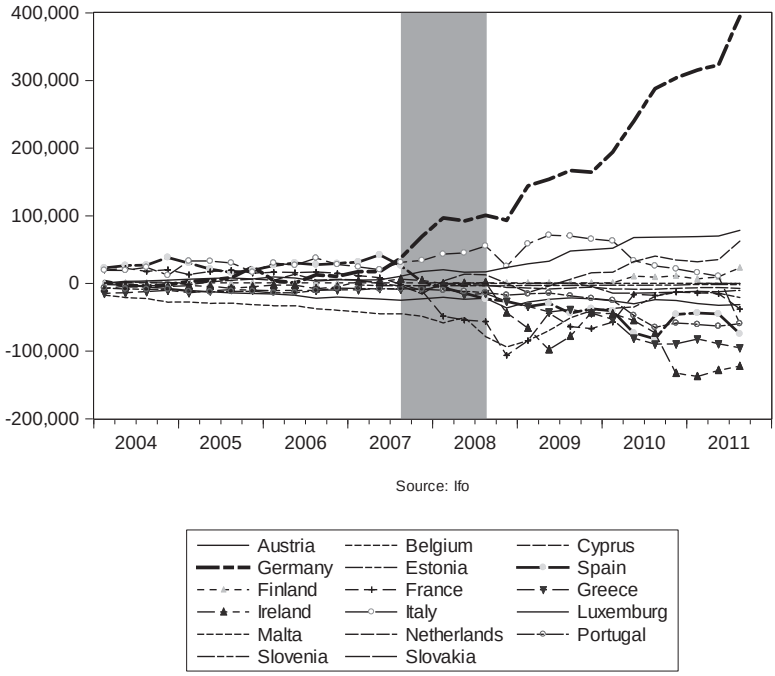
are thought to represent a risk to national central banks. This argument was first developed by Hans-Werner Sinn at the Ifo Institute in Munich (Sinn and Wollmershaeuser 2011) but apparently it has now also reached the President of the Bundesbank Weidmann, who is reported to have written a letter of concern to ECB President Draghi.[29] While some of the claims by Sinn have been dismissed by serious analysts, TARGET2 imbalances do highlight an important mechanism for the functioning of European Monetary union and document how payment imbalances are settled in monetary union even in situations of severe financial instability.

TARGET2 is an acronym for the second generation Trans-European Automated Real-time Gross-Settlement Express Transfer System through which payments by both public and private market participants are recorded, cleared and settled in the Euro Area. The system is operated by the ECB. While the net balances of other members are settled daily or even in an intra-day fashion, Euro Area NCBs can build up gross and net claims and liabilities vis-à-vis TARGET2 over time, in principle without limit. In other words, Euro Area NCBs can borrow from or lend to other Euro Area NCBs through TARGET2. This arrangement is a constitutive feature of European monetary union.

In recent years, a sharp and sustained rise in target imbalances has been observed. Figure 3 shows that until 2007, these balances had exhibited alternating signs and remained within fairly narrow bounds (Deutsche Bundesbank 2011). In August 2007, the US subprime crisis spread to Europe and severe tensions emerged in the Euro interbank market (De Socio, 2011); after the Lehman crisis in September 2008 these tensions sharpened and the European interbank market effectively froze. Commercial banks lost trust and confidence and stopped borrowing from each other; they turned to the Eurosystem for liquidity instead. Since then the Deutsche Bundesbank has accumulated huge TARGET2 credits, while all other NCBs with the exception of Luxembourg, the Netherlands and Finland have gone into debt. The Banca d'Italia used to be a lender as well, until Italy came under pressure from financial markets in late 2011.

Sinn (2011) argues that TARGET2 balances are a measure of cumulated payment imbalances made by the banking system. He claims that they reflect a member state's record of current account deficits 'with other Eurozone nations' (!) that have not been financed by inflows of private or

Figure 3 **TARGET2 balances**



public capital but rather by the National Central Bank's money creation. He then concludes that the TARGET2 payments system has been operating as a 'hidden bailout' whereby the Bundesbank has lent money to the crisis-stricken Euro Area members via the Target system and claims that TARGET balances are similar to Eurobonds. Notice the chauvinistic confusion: while the argument deals with intra Euro Area payment balances, no distinction is made between current accounts and public budget deficits;[30] 'nations' are bailed out, not specific debtors. Sinn and Wollmershaeuser (2011:1) go even further when they write that in order 'to finance the balance-of-payments deficits, the European Central Bank

30. Sinn 2011 first claims that TARGET balances 'reflect past current account balances', and at the end of the paper links these balances to the issuing of Eurobonds by the European Stability Mechanism.

(ECB) tolerated and actively supported voluminous money creation and lending by the NCBs of the periphery at the expense of money creation and lending in the core.' In other words, current account deficits in the 'periphery' have imposed detrimental policies on and for Germany, because, by financing these deficits, banks in the periphery force their NCBs to 'print' money and crowd out credit in Germany. According to these authors, 'the crowding out of refinancing credit is well known from the times when the Bretton Woods System forced the European central banks to maintain a fixed exchange rate vis-à-vis the US dollar' and they warn: 'The European Monetary union is stuck in a severe balance-of-payments imbalance of a nature similar to the one that destroyed the Bretton Woods System'. The policy implication drawn by Sinn's analysis is therefore to impose limits on the amount of credit that is accumulated through TARGET balances.

Sinn's argument has been thoroughly questioned. The Deutsche Bundesbank (2011:34) has clarified that TARGET balances are, on the one hand, 'affected by credit institutions' operations on the money and capital markets and, on the other, by transactions carried out by the non-banking sector, which generates payments via the banking system. (...) For the purposes of the balance of payments, an increase in TARGET2 claims is considered to be a net capital export'. Similarly, Buiter *et al.* (2011:13) have concluded at the end of a thorough analytic paper that TARGET2 net balances of NCBs: (1) cannot be automatically linked to current account deficits; (2) do not automatically reduce central bank credit to commercial banks in other member states (and any reduction of central bank credit should not be interpreted negatively, as implying reduced funding for banks and their customers); (3) should not be interpreted as a measure of the risk exposures of the NCBs of TARGET2 creditor countries; (4) cannot be directly capped without putting into question the basic functioning of the Eurozone currency union. Finally, Jobst (2011) has taken into account the circulation of bank notes and found that (1) large imbalances can (and do) arise even without current-account deficits (Sinn) or banking crises (his critics) just because of the normal functioning of the Euro Area; (2) banknotes have to be included in the analysis and may change the nature of the imbalance; (3) the Bundesbank had considerable debts within the Eurosystem before 2007; (4) therefore Sinn's and Wollmershäuser's recommendations to limit TARGET imbalances are not merely impractical but are actually incompatible with a monetary union.

This criticism is correct in destroying the chauvinistic bias in Sinn's analysis. The Eurosystem must be seen as an integrated whole and not as a fixed exchange rate system where National Central Banks operate for their own account. The euro is a single and not a common currency.[31] A closer look in the next section will show that these TARGET2 (im) balances are dependent on how payments are effected within the Euro Area. Artificially limiting or suppressing these TARGET balances would destroy the mechanism which holds European monetary union together. Before making risky policy recommendations, one needs to understand how the payment system works.

1.3 Financing imbalances in EMU

Balance of payment adjustments

In a fixed exchange rate zone, the balance of payment theory explains that a current account deficit must be financed by an inflow of capital or the use of foreign reserves. If the country runs out of foreign reserves, the exchange rate will adjust. This theory links current account imbalances to competitiveness. If a country is uncompetitive, its exchange rate is overvalued. Exports are stagnating, imports increase and the current accounts become negative; foreign direct investment will be low, because the return on capital is unattractive. Foreign investors perceive the risk of a devaluation of their assets and pull out their capital. The central bank will then lose reserves and let the exchange rate depreciate until competitiveness is restored. Everyone lives happily ever after, until another crisis occurs. Note, however, that domestic wealth and income will be devalued relative to the rest of the world. This adjustment mechanism is therefore the story of the happy poor.

The story is different if the deficit is caused by high investment that causes economies to catch up with the rich. This requires the exchange rate to be competitive and the return on capital high. The capital inflow will then finance the current account deficit and hopefully contribute to improved efficiency, higher productivity and growth. An undervalued exchange rate will help the poor to get jobs and the rich to get richer be-

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31. For the early policy debates around a single and a common currency, see Collignon and Schwarzer 2003.

cause investment is profitable. Note that in this case many of the rich are foreigners building up claims on the domestic economy. However, as the efficiency of the physical and human capital stock improves, exports will hopefully overtake imports, the current accounts turn into surplus and domestic capitalists get rich too. This optimistic model of development has been practised successfully by Asia in recent decades, and by Europe and Japan in the 1950s and 60s.

In the Euro Area there is, of course, no exchange rate. Nevertheless, cross-border intra-Euro Area capital flows are important, even if we have no statistical records to measure them. In fact, these flows are desirable because they deepen European integration and improve the efficient allocation of capital in the large European economic space. Capital flows will respond to regional differences in costs and profitability. Hence, the issue of competitiveness continues to exist, even if there is no exchange rate. For example, as we will see below, in terms of unit labour costs it is mainly the rich in the North that are today undervalued, while the poor in the South are overvalued. We will need to explain why this is so, but here we are first interested in clarifying whether such overvaluations and the resulting imbalances are sustainable and for how long.

Evidence from emerging economies and the related 'sudden shock' theory shows that sustaining current account deficits by capital inflows is a fragile strategy. *However, the fragility is due to the existence of different currencies, for the risk of asset devaluation creates an incentive to pull out of an overvalued economy*. While the central bank could try to lean against the wind by selling foreign reserves or raising interest rates, this strategy cannot be sustained in the long run. Macroeconomic imbalances always stand under the shadow of the exchange rate risk.

In monetary union, the adjustment mechanism is different. Capital flows freely between the regions. An imbalance between payments coming in and going out of a given region does not affect the *foreign* reserves of the central bank; instead it moves money balances (deposits and cash) from banks in one region to another, and the shifts in the regional distribution of this money stock can compensate private capital flows.

To understand this clearly, assume a region in the currency area is uncompetitive. The cost of production is higher than in other regions. There is, therefore, no incentive to invest and the regional economy will grow less than the Euro Area average and regional unemployment will

rise. Thus the overvaluation creates unhappy poor; but if the overvaluation is due to a sustained rise in asset prices, as was arguably the case in Spain and Ireland, it may also create some rich happy wealth owners. No doubt, some adjustment in the cost structure is ultimately necessary, but both the unhappy poor and the happy rich may fear that they will become poorer. This could delay adjustment.

The literature has identified two mechanisms for dealing with such imbalances: fiscal transfers and labour market flexibility. Fiscal transfers may provide direct income support through welfare programmes. This strategy makes the poor happy, but it is expensive, and this will not please the rich who must pay for it. For example, the high costs of transfers to the new *Bundesländer* could explain why a European Transfer Union is so unpopular in Germany. More importantly, pure income support is unlikely to change supply-side conditions and correct cost distortions, although targeted transfers, such as structural funds in the EU, could help to improve a poor region's competitive conditions. In any case, the efficiency of transfers is more likely to improve within a currency area, for transfers and capital inflows from abroad might otherwise cause the exchange rate to appreciate and this would sharpen the distorting costs effects of the overvaluation.[32] The efficiency of fiscal transfers as an adjustment tool will, therefore, depend importantly on whether an EU member state is part of the Euro Area and also on the way the Transfer Union is structuring incentives towards improving productivity.

The issue of labour market adjustment has two dimensions. In the American context, the mobility of the labour force across state borders has been emphasised (Blanchard and Katz, 1992) and this has often been taken as the defining criterion for an optimal currency area. However, changes in labour costs are an alternative adjustment channel. We will discuss this in detail below. Evidence suggests that this mechanism is less efficient in the Euro Area than in the United States or within Germany (Dullien and Fritsche 2008). Nevertheless, even if imbalances in the Euro Area are persistent, a currency union is economically more robust than a fixed exchange rate area because the imbalances are automatically financed. In fact, the flow of capital and money is a third channel through which current account imbalances can be made to persist. Remember from Box 2 that the intra-Euro Area current account balances

32. For some new member states, such as the Czech Republic, this may be a problem.

are mirrors. This means, unless German financial institutions (which include the Bundesbank) would provide finance to the deficit areas, German industry could not export to those countries. They might sell cars in China, but not in Portugal or Greece. This is a simple matter of making payments and has nothing to do with competitiveness. Unless someone pays for a nice BMW, it is irrelevant how good or cheap the car is. In a single currency area, the money to make payments is generated by the banking system. We will therefore now explain how the payment mechanism works in EMU.

Transfers and payments in monetary union

It is impossible to understand the functioning of a monetary economy properly without having understood that money is the settlement asset in the payment system between banks (Manning *et al*. 2009). As we said above, payments are made when banks settle their claims by transferring base money, and broad money is created when banks give credit. The banking system in the Euro Area collects deposits and savings and allocates this money to profitable investment. Yet the system as a whole can only obtain money – liquidity – from the ECB. Individual banks may be short of the required liquidity or have a surplus, and because the size and distribution of payment flows between economic agents and their banks are subject to some randomness, banks usually lend or borrow in the interbank money market. If they credit their customers' accounts during the day, before the final settlement has occurred, they effectively extend credit to each other. They are therefore exposed to a credit risk. The ESCB has minimised this settlement risk by building up the so-called TARGET2 system. However, during the recent crisis, banks' trust in each other took a beating and the preference for liquidity increased. As a consequence, the interbank market has become dysfunctional and banks went directly to the ECB in order to obtain liquidity. This had immediate consequences for the structure of payment flows that are reflected in the cumulated TARGET2 balances between central banks.

To explain how this payment union works, we will first look at an example of purely local transactions. Let us assume a hairdresser in Thessaloniki takes out a credit from Alpha Bank to refurbish her shop and pay some local workers. Economists call this a transaction in non-tradable goods. After the completion of the work, she re-opens the shop in the hope that more people will be attracted and the hairdresser will pay back

her loan out of the additional income. Thus, all is well. From a monetary point of view, Alpha Bank's balance sheet has been extended by giving a credit. The bank loan has increased bank deposits in Greece,[33] therefore M1 has grown, and, because there will be more business, GDP has increased as well. Yet banks need to hold a fractional minimum reserve of liquid cash in relation to their deposits; Alpha Bank will therefore need to borrow the necessary liquidity. Let us assume, this is done by borrowing from the Bank of Greece (BoG), which is an integral part of the Eurosystem.[34] Thus, *ceteris paribus*, M0 is growing in the Euro Area as well. In conclusion, the Greek economy has grown in the non-tradable sector; money supply has increased as well, but there is no change in the trade balance or in the price level.

We will now look at the case of a transaction between Greece and Germany. We assume our hairdresser buys new dryers, produced in Germany. This has the following consequences for the real economy. The German exporter sends the equipment and a bill to Greece. The trade balance now turns negative in Greece and positive in Germany. The balance of payment records a capital inflow, because the German supplier has extended credit to the Greek client. Assuming the dryers are made on order (not sold from inventory), GDP grows in Germany, because of an export boom and the higher income will increase German net worth: in other words, Germans get richer. In Greece, GDP remains unchanged, because the bank loan from the hairdresser's bank is spent on German goods. Of course, our hairdresser is making net investment in the sense that she is increasing the Greek capital stock, but this may increase Greek GDP only in the future, not the present. Thus, the efficiency of the average Greek capital stock[35] will first drop and hopefully increase in the future. While the Greek capital stock increases, the German exporter obtains a claim on the hairdresser's assets for the same amount. Hence, the hairdresser's assets and liabilities both increase, but her wealth (net worth = assets – liabilities) is unchanged. National statistics, however, will record a 'foreign' liability, which reduces the net international investment position (NIIP) because our hairdresser has no claim on German assets.

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33. The loan is a non-liquid asset for the bank and it puts the money in the hairdresser's bank account, which is a bank liability for demand deposits.

34. Alpha Bank could also borrow in the interbank market. We keep the discussion of the implications for case 3.

35. The average efficiency of the capital stock (ACE) is defined as the ratio of GDP to capital. See the analysis below.

How can the hairdresser pay her German supplier after the trade credit expires? The easiest way is to pay cash directly. However, it is more likely she will ask her bank to make the payment on her behalf. Let us assume that the hairdresser finances this investment again by a loan from Alpha Bank, and asks the bank to make the payment to the German exporter. At first she will then have a new liability to her bank, but also cash (an asset) in her bank account. The subsequent payment to Germany will lower her liquid assets again, but also extinguish her liability to the exporter. Hence, she ends up with a real asset (the hairdryer) and a liability to her Greek bank (the loan). As a mirror image, the balance sheet of the German exporter becomes more liquid as his claim on the Greek hairdresser (receivables) is replaced by cash in the German bank. How does the hairdresser pay back the loan to her bank? As there is no extra income in Greece (*ceteris paribus*), she has to service the loan from profits resulting from higher productivity. This is an important difference to the previous case.[36] If our hairdresser were not able to improve productivity, she would have to reduce her consumption and save more in order to service her debt.[37] If her reduced consumption generated a negative externality via the accelerator, it could slow down growth.[38] Nevertheless, in either case, the hairdresser's debt can be serviced by income generated within the non-tradable sector and does not necessarily require a future current account surplus.

This raises the question: who will pay the 'Greek' debt to the German supplier? It is no longer the hairdresser, because she has transferred her liability to Alpha Bank. The exporter still has a claim that will be extinguished only when the money has arrived in his German bank account. The transaction is somewhat similar to payments in specie of gold or silver in the old days. To put it differently: The Greek current account deficit is Germany's surplus, which is identical with a German financial claim on Greece, *and this claim is settled not by goods, but by domestic money* in other words, euros. Money being the liability of the Eurosystem, if represents claims on the European economy as a whole. Thus, what was a specific claim on the hairdresser's assets in the trade credit contract, has been turned into a 'generalized claim' on the GDP of Euro-

36. On this subject, see also Giavazzi and Spaventa 2011.
37. This is in fact the mechanism by which government debt is serviced, because taxes reduce private consumption.
38. Given that the capital stock has increased, but output has not, and the average efficiency of the capital stock would have declined. The effect is the same as an increase of interest rates.

land, because euros can be exchanged and used anywhere for purchases. German exporters are happy to hold money; they do not need haircuts or feta cheese when they sell hairdryers or cars. If they get more money than they wish to hold, they may lend it to Irish property developers or their banks will return it to the ECB.

By asking her bank to make a payment, our Greek hairdresser is shifting her liability to Alpha Bank, which now needs to make the payment. There are several ways in which the bank can settle this liability, in other words, extinguish the Greek debt. None of them are comparable to foreign exchange transactions. To show how this mechanism works, we can distinguish three cases.

1. Cash transfers

First of all, either the hairdresser herself or Alpha Bank could take cash and send it by courrier to Germany. This would reduce the hairdresser's liquid assets and the bank's liabilities, because the hairdresser has less money in her bank account. Money supply (M1 and M3) in Greece would be reduced and in Germany increased, the overall balance for the Eurosystem remains unchanged. Given that more than 80 percent of the Eurosystem's liquidity consists in banknotes, this form of payment may actually be less quaint than it appears. We do not have data on the circulation of bank notes, but European central bankers have always been aware that there is a very likely net flow of bank notes from the North to the South due to the payment habits of tourists.

2. Transfers within the same bank

Alternatively, the hairdresser may ask her bank to make the payment transfer. To understand how this works, we need to keep in mind that a payment flow is a change in the stocks of assets and liabilities. The original credit by Alpha Bank to the hairdresser has increased the bank's assets (a claim on the Greek economy) and its liabilities (the hairdresser's deposit account). To make the payment, the bank now debits the hairdresser's account (whereby it reduces money balances held in Greece) and transfers it to Germany, where it will ultimately increase German deposits and M1. Hence, the transfer only shifts money balances, but does not affect the aggregate money supply which is relevant for monetary policy. However, in practical terms, making a payment is a rather complex operation. In the simplest case the German supplier would have a bank account with the German branch of Alpha Bank. The Greek branch would then debit the hairdresser's account and credit the suppli-

er's account in Germany. Thus, it would simply switch liabilities between clients within its own balance sheet.

3. Transfers financed by the Eurosystem

It is more likely, however, that Alpha Bank makes the payment to another German bank, say Deutsche Bank. It must therefore shift the liability it has against the hairdresser to a German bank. Let us assume Alpha Bank uses the ECB's TARGET2 payment system. This means that Alpha Bank keeps an account with the Bank of Greece (BoG) and Deutsche Bank with the Bundesbank. The cash balances held by the two banks with the central bank are part of the Eurosystems's base money supply (M0). They are an asset for the commercial bank and a liability of the Eurosystem. When Alpha asks the BoG to make a transfer to Deutsche Bank, it effectively requests the Eurosystem to debit its account and to credit Deutsche's. This reduces the liability of BoG to the Greek banking system and effectively reduces Alpha Bank's liquid assets; instead Alpha Bank has a less liquid claim (the loan it granted to the hairdresser). On the other hand, the credit increases liquidity for Deutsche Bank. This is how base money is transferred from Greece to Germany.

However, for technical reasons, the two banks have their accounts in two separate central banks, which are integral parts of the euro system. For bookkeeping reasons, the money must therefore also be shifted from the BoG to the Bundesbank. Both central banks have an account with the ECB's TARGET2 system. The BoG will therefore ask the ECB to debit its TARGET account and to credit the Bundesbank's account. This means that the liability it had toward Alpha has now been shifted to the TARGET2 system. The Bundesbank will in return credit Deutsche Bank, which will then credit the exporter's account. Hence, the Bundesbank has a positive and the BoG a negative TARGET balance. The balancing item for the Bundesbank is a liability to Deutsche Bank (M0). By definition, this liability is Deutsche's asset balance with the Eurosystem, which is balanced by the bank's deposit liability (M1) to the exporter.

In order to be able to contract a liability to the BoG, Alpha Bank must provide adequate collateral. If it were to default, the BoG would seize the collateral and if the collateral would also default, the loss would go to the ECB's shareholders. Hence there is a risk to the Eurosystem, which does not exist if the trans-border payment is made in cash or within the same bank.

This transaction has the following *Gestalt*: By granting a loan to the Greek hairdresser, Alpha Bank has initiated a process which ends with increased supply of broad and narrow money and higher income in Germany. Within the Eurosystem, a TARGET liability has arisen for the Bank of Greece, and a TARGET claim for the Bundesbank. The increase in Bundesbank liabilities to German banks is not matched by central bank loans to the banking system, but by the TARGET2 balance in the Bundesbank's balance sheet. Thus, as one would expect in monetary union, national central banks no longer hold exclusive claims on residents of national economies; because they are now part of the Eurosystem, they hold, directly or indirectly (via TARGET2), claims against the Euroland economy. In other words, money supply in Germany is no longer a Bundesbank decision but is the market-induced outcome of payments for goods, services and financial transactions.

4. Transfers financed by the banking system

Contrary to the hairdresser's bank deposits, Alpha Bank's liability to the BoG does not come without costs. A profit-oriented bank will seek to minimise these costs. As an alternative to borrowing from the central bank, Alpha could borrow on the interbank market, which means, in our simplified model, that it borrows from Deutsche Bank. In this case, the payment from the Greek hairdresser to the German supplier via TARGET2 is similar to our previous case, although this time Alpha obtains the required liquidity not by borrowing from the BoG but by obtaining a credit from Deutsche Bank. Deutsche Bank has excess liquidity, which it will lend to Alpha, provided Alpha is solvent and trustworthy. Lending to Alpha is in effect the same as buying a security from Alpha. The payment process is therefore analogue to the hairdresser buying dryers, only it works in the opposite direction. Deutsche Bank uses the liquidity it holds in its account with the Bundesbank and makes a payment to Alpha. The Bundesbank will debit the ECB TARGET2 account and the ECB credits BoG, which credits Alpha. This operation will therefore simultaneously reduce the Bundesbank's TARGET2 claim and the BoG TARGET2 liability. M0 has been reduced in Germany and by the same amount increased in Greece. As in the cash transfer, total base money is unchanged.

Next, Alpha takes this money to make the payment for the hairdresser to the German supplier, and this transaction proceeds back in the same ways as in case 3. As a consequence, we have two opposite movements on the TARGET2 system, which partly offset one other. It may seem strange that borrowing in the interbank market to pay for Greek net im-

ports implies such complicated operations, but whether banks choose case 3 or 4 depends on risk and return considerations. In normal times, the interbank market is the main source of finance, but in the recent crisis when the insolvency risk increased for banks all over Europe, the ECB had to assume financing the payment mechanism, without which a monetary union could not exist.

The logic of this example does not apply to current account transactions alone, but also to the payment for financial securities. However, given that granting a credit is always equivalent to buying security, the effect on TARGET balances from financing the net imports into Greece are very different when Greek banks borrow on the interbank market rather than from the Eurosystem.

These examples explain the sudden accumulation of TARGET2 balances in the Eurosystem since 2007: with the tensions in the euro interbank market during the financial crisis, banks stopped borrowing from each other and have relied instead on the 'open discount window' of the central bank. By acting as a lender of last resort to the banking system (but not to governments), the ECB has fulfilled its function as the 'bank of the banks'. It has thereby guaranteed the functionality of European monetary union. As an unintended consequence of this reliance on the ECB, large TARGET2 balances have been building up, but they are without effect for the real economy or for inflation, which is the ECB's primary policy objective. In other words, the large TARGET2 balances are the statistical expression of lack of trust between banks and tensions in the money market; they are not a sign of unsustainable current account imbalances or sudden stops of capital flows. In this context it is inevitable that the largest TARGET2 balances are accumulating in the balance sheet of the Bundesbank, because Germany has the largest current account surplus in the Euro Area, which is used to finance the deficits of German partners. No doubt, a reduction of German surpluses, which may have merit in itself, would also reduce TARGET balances. Nevertheless, the existence of these balances within the Eurosystem is not a danger to the sustainability of the euro. On the contrary, the TARGET2 imbalances have held the Euro Area together during the financial crisis. What is really needed is to improve the functionality of the interbank market.

In order to restore trust and stability in the Euro Area's financial markets, the ECB has implemented a number of unorthodox policy measures with the aim of ensuring sufficient liquidity in the European banking system.

These measures were needed to preserve the ECB's technical capacity to maintain price stability. The two main tools were the Covered Bond Purchase Programme (CBPP) and the Securities Markets Programme (SMP). In December 2011 and February 2012, it injected a total of nearly a trillion euros into the banking system. These operations have started to calm some market segments, although they are also likely to increase payment flows between banks and the Eurosystem and will therefore further push up TARGET2 imbalances. This seems to worry Bundesbank President Weidmann, although the Bundesbank (2011:35) has officially emphasized that 'there is no immediate change in the level of risk to NCBs due to the rise in the TARGET2 settlement balances. An actual loss would occur only if and when a Eurosystem counterparty defaults and the collateral it has posted does not realize the full value of the collateralized refinancing operations despite the risk-control measures applied by the Eurosystem. Any loss would always be borne by the Eurosystem as a whole, and shared among the national banks in line with the capital key'. The Bundesbank's concerns are not trite. For our example has shown that the generation of the Eurosystem's assets in the money creation process is primarily localized in deficit member states. This means that the collateral for monetary operations is largely composed of securities, which have been repeatedly downgraded by rating agencies. Hence, if a local borrower were to default, especially if this should be as a consequence of a sovereign default, the National Central Bank might hold worthless securities. On the one hand this causes losses to the national Treasuries, on the other it makes the conduct of monetary policy more difficult, because the ECB has fewer assets to pull in liquidity, should it considers this to be necessary in the interest of price stability.

There is an elegant answer to this problem: improve the quality of collateral in peripheral economies of the Euro Area by swapping local sovereign debt against a European debt security. How this could be done, I have described elsewhere (See Collignon 2011a; 2011b and 2011c). However, in our context of macroeconomic imbalances, one should be aware that the financial repression of TARGET2 imbalances, as proposed by Sinn, would immediately cause the breakup of the Euro Area because the payment system is the pillar of any monetary economy.

Empirical evidence

Our analysis has shown that the mechanism through which the sustainability of monetary union is ensured despite persisting regional imbal-

ances consists in the payment mechanism. It defines a currency union as a payment union. A trade or current account deficit within the Euro Area is either financed by credit or by shifts in money (in other words, bank deposit) balances. How important is this mechanism? Empirical evidence is difficult to obtain because of the statistical bias toward familiar national records, which amalgamates intra and extra Euro Area flows: in other words, it records data as per our equation (2.1) and not as per (2.5) in Box 2, and also because balance of payment statistics do not distinguish between credit and money payments.

Nevertheless, Figure 4 gives an (imperfect) indication for these flows. The chart shows quarterly current accounts, financial (capital) flows and the net effect of the two (called *net*). The bars indicate the change of TARGET2 balances per quarter. If the net effect of current account and financial flows is zero, cross-border net borrowing has financed the resource deficit. This implies that the imported increase of local real assets is balanced by non-resident claims, so that the net worth of local residents is unchanged. However, a positive net balance of current accounts plus financial flows means that local residents have borrowed more than they have obtained by importing resources and their net worth is reduced. Inversely, a negative net balance implies domestic residents buying foreign securities, and this means excessive savings are placed in financial claims on the wealth of others. Figure 4 also shows that the net flows of credit and changes in net worth are not significantly correlated with changes in TARGET2 balances, which is what we argued above. Figure 5 reveals the *cumulative* effect of the net flows of assets and liabilities. It indicates that the current account deficits in Portugal and Greece were largely financed by capital inflows. By contrast, Spain and possibly Ireland 'overborrowed' (a rise in the net balance of Figure 4), and this credit inflow fuelled the property boom but reduced citizens' net worth. Italy ran a current account deficit but borrowed little and at times became even a net lender. By contrast, Germany 'oversaved': that is, it not only lent to finance its net exports, but lent even more to the rest of the world (its chart in Figure 5 has a tendency to fall). Remember, however, that these data represent national account which amalgamate payments from Euro and non-Euro Area states and do not reflect cash payments. Finally, we find a steady balance of overborrowing, probably for government debt, in Greece and Italy, and a lesser tendency to this effect in Portugal.

We have documented the fact that payments across borders within the same currency area shift money balances from one jurisdiction to an-

Figure 4 **Balance of payments flows in selected Euro Area member states**

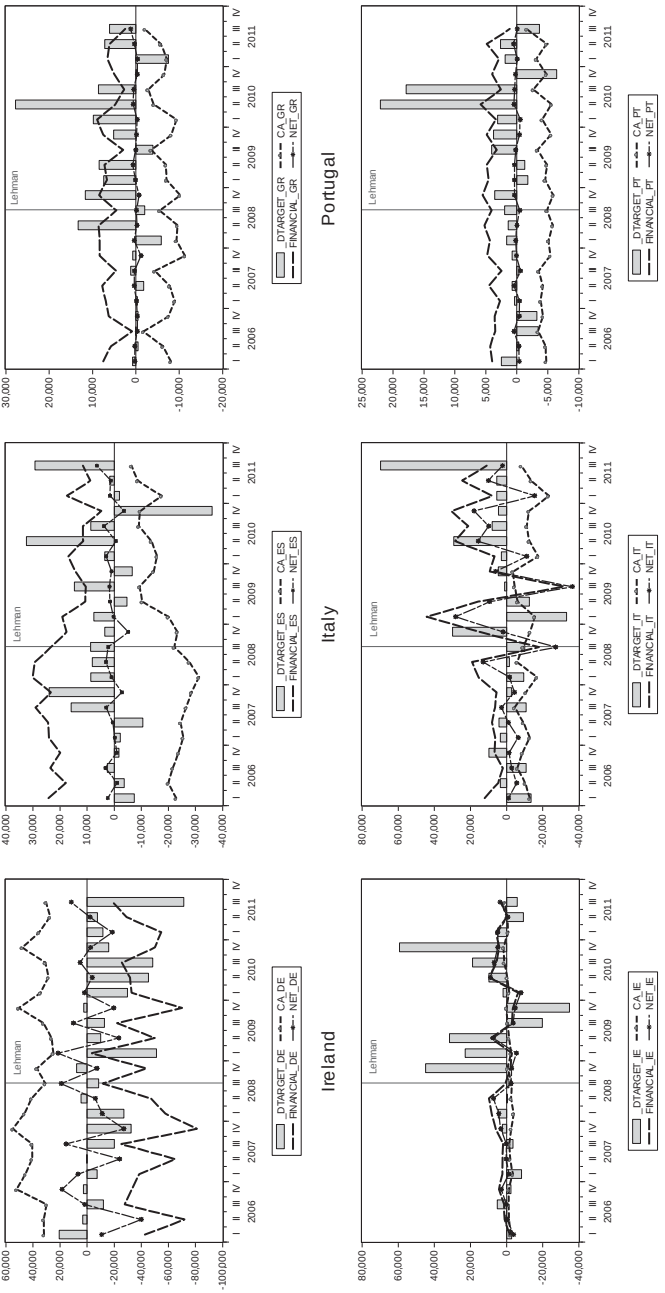
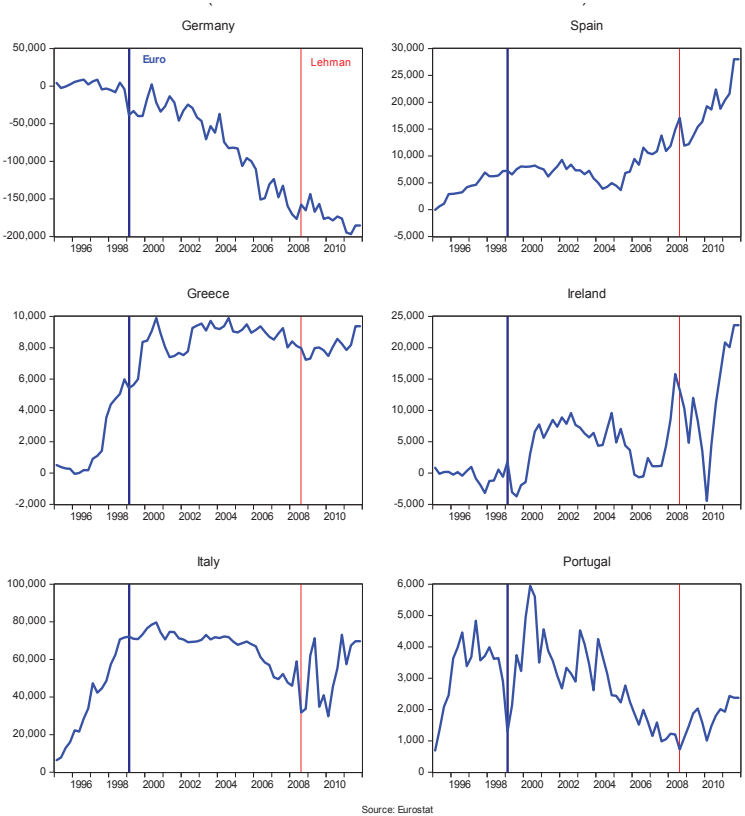


Figure 5 **Cumulative net balance of payments**



Source: Eurostat

other. Figure 6 shows the share of deposits by residents in the national banking system as a percentage of the Euro Area's total. Given that cash is only a small portion of monetary aggregates M1 or M3 (contrary to base money M0), these shares are a good proxy for shifts in the distribution of money balances, even if we have no data for banknotes. No uniform pattern can be observed from Figure 6. The pointed vertical line in August 2007 signals the beginning of troubles in the interbank market that were reinforced by the Lehman bankruptcy in September 2008 (the thick vertical line). Germany has increased its share, confirming its status as a safe haven. The Netherlands seem to have played a similar role after Lehman, but Luxembourg has not. Of the large southern member states, Italy and Spain do not seem to be affected by a substantial

outflow of money. By contrast, Ireland was immediately affected by the liquidity crisis in 2007. Portugal has seen a continuous decline in its deposit ratio that mirrors the huge current account deficits. But Greece benefitted from monetary inflows even after the financial crisis started and this changed only when the Papandreou government revealed the truth about Greek public debt in 2009. Since then, the capital flight from Greece has drained out liquidity.

The shifts in the distribution of money have real economy consequences. Less money available means less demand, lower income, falling inflation, reduced growth, deteriorating public finances and growing unemployment. By contrast, large money inflows are likely to raise local inflation, stimulate regional growth and therefore improve public finances and employment. These two opposing tendencies should reduce macroeconomic imbalances in the long run. To test whether this hypothesis holds in monetary union, we estimate a simple quantity equation for the deviations of the share of national deposit holdings in the Euro Area's total. We assume that there is a long-run equilibrium relation between a member state's price level, money supply (measured by deposits), GDP and a constant, all relative to the Euro Area, and we estimate an error-correction model for a panel of 16 Euro member states. The results are shown in annex 1. The estimates are statistically significant and confirm the assumption that an excessive outflow of money will dampen inflation and economic growth in Euro member states.

We can therefore conclude that monetary union generates its own adjustment mechanism, which resembles the old specie-flow mechanism and makes the system simultaneously robust and flexible. However, the adjustment process may take a long time. The coefficient for the error-correction term in our estimate is between 0.06-0.07, which means it takes 10 years to halve a disequilibrium. This slow adjustment could cause what Olivier Blanchard (2006) once called 'rotating slumps'. One may argue that Germany's long stagnation from 2000 to 2006 and subsequent rebound was the mirror image to Southern Europe's boom until 2007. However, how deep the slump may turn out and how long it will last, is the real issue that needs to be addressed by the *Excessive Imbalance Procedure*. Using erroneous concepts and statistics will not help in this task. We will therefore now turn to the analysis of imbalances in the Euro Area's real economy.

Figure 6 **National bank deposits as a share of total Euro Area**

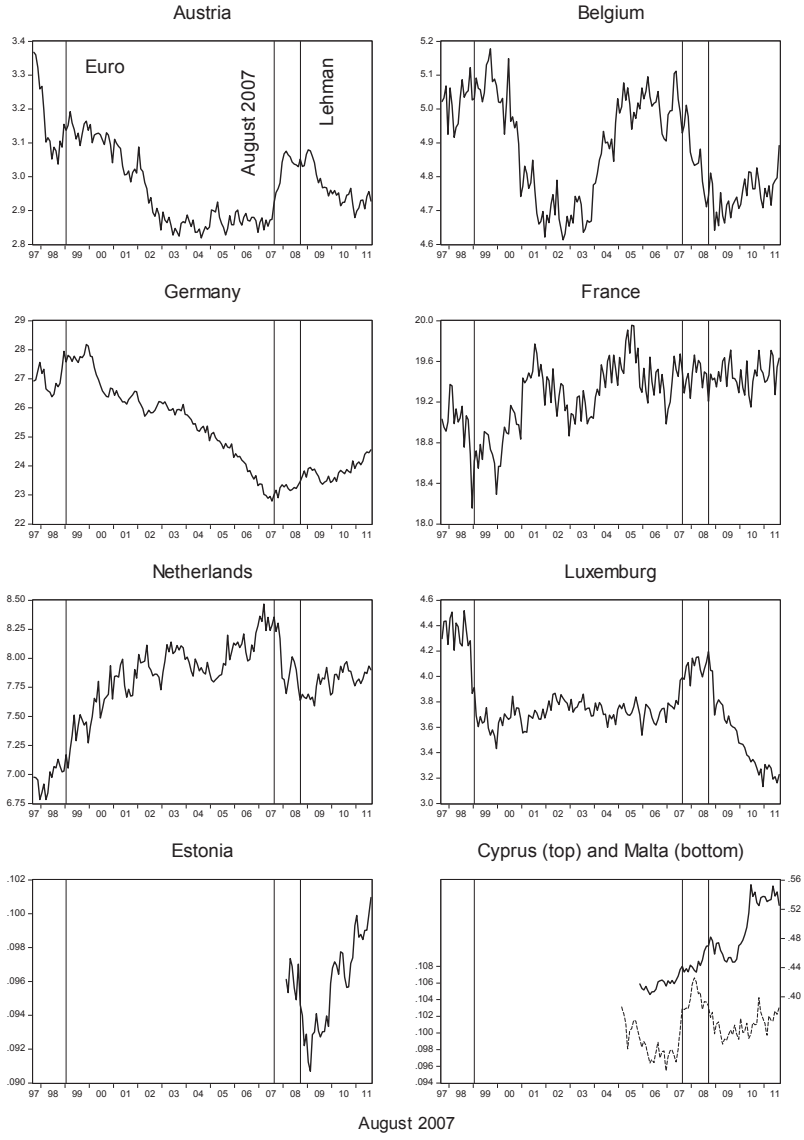
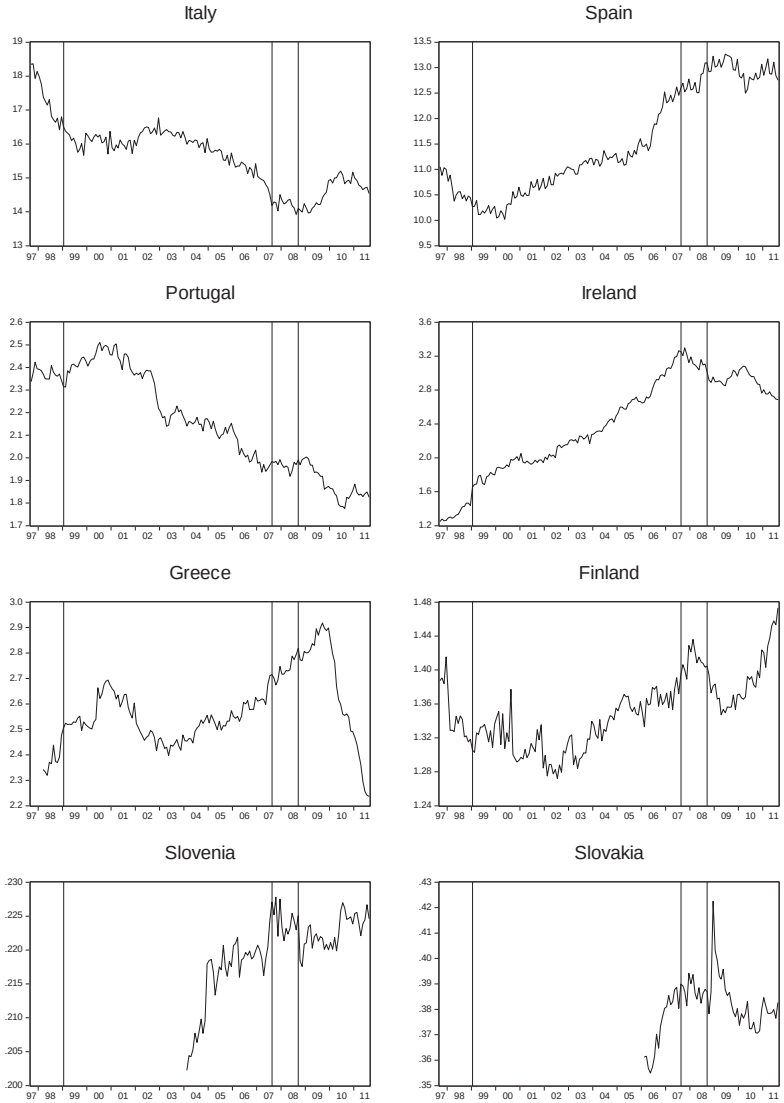


Figure 6 **National bank deposits as a share of total Euro Area** (cont.)



2. Cost competitiveness: the real issue

This chapter will first deal with the consequences of monetary integration for the real economy of the Euro Area. We will then develop a new index for competitiveness based on unit labour cost levels. Finally, we draw some conclusions for policies that aim at reducing macroeconomic imbalances.

2.1 The economic consequences of the euro

Current accounts and competitiveness

The emergence of macroeconomic imbalances in the Euro Area is often explained by the loss of competitiveness. Ten years after the Lisbon Strategy sought to make Europe 'the most competitive economy in the world' (European Council 2000), this is the sad state of European affairs. The failure of the Strategy highlights the risks of designing policy instruments on the basis of inappropriate theories. A salient example is the so-called Open Method of Coordination, which was meant to be the instrument by which Europe would reform its economy through voluntary cooperation and peer pressure while maintaining the familiar framework of sovereign nation states. Some observers thought it was a 'new vision and the revolutionary potential of soft governance in the European Union' (Tucker 2003; see also Regent 2003; Hodson and Maher 2001). However, it has produced few results. Voluntary policy coordination works only in win–win situations because each actor then has the potential incentive to increase welfare.[39] By contrast, competitiveness

39. This is only a potential improvement, for asymmetric information constraint could prevent the attainment of such Pareto-improved outcome.

is always a win–lose situation, which means that the incentives for individual actors are not conducive to engaging in cooperative behaviour. If voluntary cooperation is not forthcoming, therefore, some form of centralized agency is required to preserve the common interest (Collignon 2008; 2003), for, otherwise, partial interests will prevent the realisation of collective welfare. For example, Kevin Featherstone (2005) has explained that 'soft' coordination at the EU level has failed to affect, 'hard' politics in Greece (see also Hatzopoulos 2007). Clearly, the soft governance of the Lisbon Strategy, with its Open Method of Coordination and many other coordination instruments including the Macroeconomic Dialogue[40] and most prominently the Stability and Growth Pact, has failed to deliver the structural reforms necessary for improving Europe's competitiveness.

Yet we have to be careful. Competitiveness is a dubious concept, as Paul Krugman (1994) famously pointed out:

> The view that nations compete against each other like big corporations has become pervasive among Western elites. (...) As a practical matter, however, the doctrine of 'competitiveness' is flatly wrong. The world's leading nations are not, to any important degree, in economic competition with each other. Nor can their major economic woes be attributed to 'losing' on world markets. Yet theorists of competitiveness, make seemingly sophisticated arguments, most of which are supported by careless arithmetic and sloppy research. Competitiveness is a seductive idea, promising easy answers to complex problems. But the result of this obsession is misallocated resources, trade frictions and bad domestic economic policies.

Many European policy makers have fallen precisely into Krugman's trap of sloppy thinking. They often affirm that Europe's South has lost competitiveness and the North has gained it. That is true, but as discussed above it is not true that these two developments are totally independent, as policy discourses in surplus countries often claim. For example, in an early phase of the Euro crisis, the German Finance Minister Schäuble responded to his French counterpart Lagarde, who had urged Germany to boost domestic demand and reduce current account surpluses, that

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40. The Macroeconomic Dialogue is a forum for discussion between the European Central Bank, the Council, the Commission and the European social partners. See: http://ec.europa.eu/economy_finance/eu/med/index_en.htm[Accessed 01.03.2012]

German firms were competitive because of their own corporate decisions and the preferences of consumers around the world. Countries in economic trouble had to blame only themselves because they spent years living above their means and the financial and economic crisis had only exposed their weaknesses.[41] In other words, Germany was right to remain 'competitive', while the South had to make efforts to copy the German model. However, demands that the South should increase its competitiveness, while the North must not become 'less competitive' are logically inconsistent. Competitiveness is a relative concept. As we saw in Box 2, the deficit of one economy is always the surplus of another. If Southern member states ran deficits, it is because the North (mainly Germany) has financed them by surpluses. If one assumes that current account positions measure competitiveness, the German view would be untenable. The only way in which Europe's South could reduce such deficits and the North simultaneously maintain surpluses is by generating a current account surplus for the Euro Area as a whole. But increasing imbalances in the *global* economy is hardly a desirable strategy in today's macroeconomic environment (see Collignon et al. 2010).

Net exports – that is, the difference between exports and imports – can be an indicator of the capacity of an economy to sell abroad and this may reveal competitive advantages. An economy may generate large export volumes because it has specialized on supplying products for which there is high demand from abroad. For example, the relatively price-insensitive demand for German products is often explained by technological advantage – '*Vorsprung durch Technik*'. It is also possible that the firms in a given country have developed good commercial relations in rapidly expanding foreign markets. Again, it is said that German exports into booming China and Asia are strong, while Southern Europe is hardly present in these markets. Such trade flows are signs of competitiveness that reflect entrepreneurial skills, although competitiveness is also supported by a broader economic environment, such as infrastructure, labour costs, human capital, and so on.

No doubt trade flows may under certain circumstances be a relevant indicator of competitiveness, but the same is not necessarily true of current account balances. First of all, current accounts are often wrongly

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41. Der Spiegel, http://www.spiegel.de/international/europe/0,1518,683567,00.html [Accessed 01.03.2012]

identified with net exports. Secondary, even net exports do not always reflect a country's export capacity, because the trade balance depends also on imports, which are a function of aggregate demand. Furthermore, current account statistics include factor incomes and remittances and other transfers between countries. If these payment flows compensate each other, the current accounts do indeed reflect net exports, but this is not necessarily always the case.

Table 1 shows that for some countries, such as Germany, the current account position and net exports correspond neatly; but for others, like Luxembourg and Ireland, this is not the case. A closer look reveals that in Germany the primary factor income (essentially profits from foreign investment) of €+33.5 billion is large (more than a quarter of net exports), but it is closely balanced by net transfers of €–32.4 billion to the rest of the world, so that the net balance of factor income plus transfers is close to zero. In Ireland and Luxemburg, by contrast, two countries which have attracted significant foreign investment in the past, net primary income is strongly negative (firms are repatriating profits), while transfer payments are irrelevant. Especially in small member states the export performance depends sometimes on very small groups of firms (chemical exports from Ireland to Germany; Nokia in Finland). Hence the current account position reflects not only export capacity, but also factor income and therefore the ownership structure of capital and the distribution of skills in the labour force.

In a fully integrated economic and monetary union, capital and labour should be allocated efficiently according to micro-comparative advantages. The capacity to attract foreign direct investment (FDI) could then be a sign of competitiveness. However, as Table 2 indicates, FDI flows simultaneously in and out of countries and these flows depend more on the level of economic development and the related vertical integration of transnational corporations than on competitiveness. The European Union has a net outflow of FDI, but Portugal has a net inflow. The gross value of accumulated FDI into the rest of the world relative to GDP is above the EU average in France, the UK and especially in Ireland; in Germany, Italy, Portugal and Greece it is below the average. The net position is negative for the EU and most member states, meaning that European firms have invested more abroad than foreign firms have invested in the EU. In Portugal it is the opposite. But does that mean that Portugal is more competitive than the rest of the EU? This seems hardly convincing. A priori, it is difficult to identify a causal link between FDI and competi-

Table 1 **Current accounts as % of GDP, 2010**

	Current account	Net exports	Factor income and transfers
Luxembourg	8.4	34.1	–25.7
Netherlands	5.2	7.2	–2.0
Germany	4.8	4.7	0.1
Estonia	4.1	5.3	–1.2
Austria	3.0	5.0	–2.0
Belgium	1.7	2.4	–0.8
Finland	1.3	2.5	–1.3
Euro Area 12	–0.4	1.3	–1.7
Euro area 17	–0.5	1.2	–1.7
Slovenia	–0.7	0.9	–1.6
Ireland	–1.1	19.3	–20.4
Slovakia	–2.9	–0.3	–2.6
Italy	–3.2	–0.8	–2.4
France	–3.3	–2.6	–0.7
Malta	–3.9	1.9	–5.9
Spain	–4.8	–2.1	–2.7
Cyprus	–6.1	–4.1	–2.1
Greece	–10.6	–7.3	–3.3
Portugal	–10.7	–8.0	–2.8

Source: Eurostat.

tiveness, as many other factors like market proximity, product processes, exchange rate volatility, and so on influence FDI decisions by firms. Yet capital flows will affect the current accounts when they finance trade deficits and/or affect the transfer balance. As we have discussed, in separate currency areas, they condition the exchange rate and therefore relative costs for exports and imports. Given that in the EU capital and labour should flow freely across different jurisdictions, these flows will also accentuate payments for factor income: workers will remit wages, firms return profits. In addition, cross-border social transfers for social pensions and health care will also increase in aging societies when pensioners move from the North to warmer climates in the South. As a consequence, divergences between current account statistics and net

Table 2 **Foreign direct investment: stocks**

	1995 (USD billion)	2010 (USD billion)	% change	1995 (% of GDP)	2010 (% of GDP)	% change
European Union						
In	1151.5	6890.4	498.4%	11.3	42.5	276.1%
Out	1324.1	8933.5	574.7%	13.5	55.0	307.4%
Net	–172.6	–2043.1	1083.7%	–2.2	–12.5	468.2%
Germany						
In	165.9	674.2	306.4%	6.6	20.4	209.1%
Out	268.4	1421.3	429.5%	10.6	43.0	305.7%
Net	–102.5	–747.1	628.9%	–4.0	–22.6	465.0%
France						
In	191.4	391.0	104.3%	12.2	39.1	220.5%
Out	204.4	925.9	353.0%	13.0	59.1	354.6%
Net	–13.0	–534.9	4014.9%	–0.8	–20.0	2400.0%
UK						
In	199.8	1086.1	443.6%	17.3	48.4	179.8%
Out	304.8	1689.3	454.2%	26.3	75.3	186.3%
Net	–105.0	–603.2	474.5%	–9.0	–26.9	198.9%
Italy						
In	65.3	337.4	416.7%	5.8	16.4	182.8%
Out	106.3	475.6	347.4%	9.4	23.2	146.8%
Net	–41.0	–138.2	237.1%	–3.6	–6.8	88.9%
Ireland						
In	44.1	247.1	460.3%	65.9	121.3	84.1%
Out	16.8	348.7	1975.6%	25.1	171.1	581.7%
Net	27.3	–101.6	–472.2%	40.8	–49.8	–222.1%
Spain						
In	110.2	614.5	457.6%	18.5	43.7	136.2%
Out	36.5	660.2	1708.8%	6.1	46.9	668.9%
Net	73.7	–45.7	–162.0%	12.4	–3.2	–125.8%
Portugal						
In	18.9	110.2	483.1%	16.3	48.2	195.7%
Out	3.6	64.2	1683.3%	3.1	28.1	806.5%
Net	15.3	46.0	200.7%	13.2	20.1	52.3%

Table 2 **Foreign direct investment: stocks** (cont.)

	1995 (USD billion)	2010 (USD billion)	% change	1995 (% of GDP)	2010 (% of GDP)	% change
Greece						
In	11.0	33.6	205.7%	8.3	11.1	33.7%
Out	2.9	37.9	1206.9%	2.2	12.5	468.2%
Net	8.1	–4.3	–153.2%	6.1	–1.4	–123.0%

Source: UNCTAD.

exports are likely to increase in the Euro Area and that has little to do with competitiveness within the European Union. On the other hand, the free flow of capital and labour may lead to economies of scale and agglomeration effects, which can further accentuate competitive divergences. As a result, current accounts are inappropriate for measuring export competitiveness.

Nevertheless, competitive advantages have shifted significantly within the EU over the last two decades. This transformation of the European economy was intended and wanted, but its consequences were neither anticipated nor are they taken into account by policy makers. The creation of the European Single Market in 1992 and European Monetary union in 1999 had a clear purpose: to improve Europe's productive capacity and competitiveness in the global economy. The Cecchini Report (1988) had identified significant welfare gains from 'more Europe', and reality has not been disappointing: in fact, the European economy has outperformed these earlier forecasts.[42]

However, there is a problem: European unification has created winners and losers. The gains from greater market integration are not equally distributed and this fact is generating a growing army of Eurosceptics. The tradable goods sector in manufacturing has generally benefitted from economies of scale, but other sectors have suffered, especially those which depend on low-productivity, low-skilled labour and produce non-tradable goods. These shifts in the distribution of welfare gains are typical for efficient market economies. Kaldor (1939) has shown that, in

42. EU Commission in 1992 White Paper (Growth, Competitiveness, Employment).

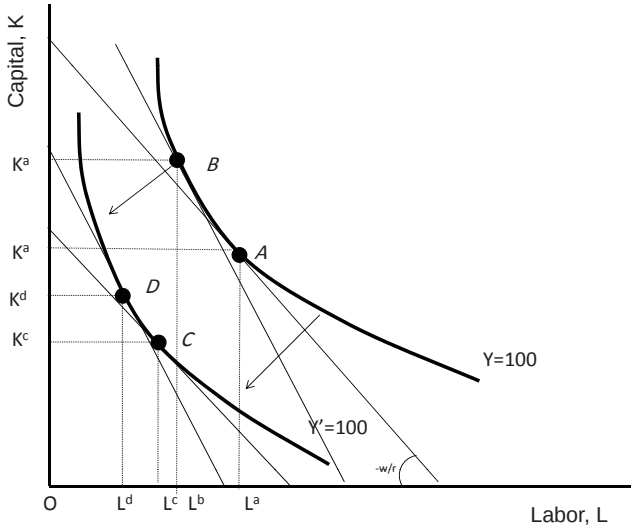
a welfare-maximising economy, winners should compensate losers. Inspired by the German model, the European Union has paid lip service to this idea by declaring in the Lisbon Treaty that it is a Social Market Economy, but at the same time it has resisted a Transfer Union, where rich 'countries' pay for the poor. This resistance is understandable. Structural funds in the EU budget are the main mechanisms for compensating losers, and they are funded by national taxes. Quite naturally, national tax payers ask: what do we get in return? This question will not go away until there are European tax payers in other words, until the EU budget is financed by own resources. However, regional transfers address the need for social equity only imperfectly, because they cannot distinguish sharply between losers and winners and therefore between legitimate transfer receivers and donors. To understand the distributional dynamics, we need to look at the causes behind the transformation of the European economic tissue. We will first sketch a theoretical model and then analyze the empirical evidence.

A theoretical model

It is a rarely acknowledged fact that the European economy has effectively started to behave like any other fully integrated economy, such as the United States. This mode of functioning is the direct consequence of the removal of trade barriers in the single market and of the abolition of exchange rates and financial uncertainty within the Euro Area. In a single market with monetary stability, factors of production are allocated according to comparative advantages. Investors seek to combine capital and labour in such a way that costs are minimised in the EU. Relative factor prices of labour and capital are increasingly determining the allocation of factors of production and this transforms traditional production models. Economic theory teaches that higher wages and/or lower interest rates should encourage the substitution of labour by capital. This means that for the same level of output, investment will rise, while employment creation will slow down. As a consequence, labour productivity will increase and capital productivity will fall.

We may illustrate this by a simple text book model. Figure 7 shows the logic of the substitution of factors of production in accordance with relative factor prices. The vertical axis gives the amount of capital, the horizontal axis the amount of labour, and the inward-bending iso-cost curve indicates the possible combinations of capital and labour required to

Figure 7 **Relative factor prices and shifts on the production function**



produce a given amount of output. Total factor productivity increases, when we move from the higher iso-cost curve to the lower curve at the left, because less capital and less labour are now required to produce the same amount of output.

In theory, any point on the iso-curve is efficient. The question is then: where will an economy find itself on this curve? The answer depends on relative factor prices. Profit maximising firms will chose a combination of capital and labour, at which the total costs are minimized, and this depends on the relative price of these two factors of production. The relative price ratio of labour to capital is indicated by the tangent of the line that touches the iso-curve at point *A*. If relative factor prices change because capital becomes cheaper and labour more expensive, the economy moves from point *A* to a new tangent point *B*, provided total factor productivity does not change. As a consequence, more capital and less labour will be used to produce the same output, which means that the capital productivity will fall and labour productivity will increase. In this case, a fall in capital productivity would be associated with a rapid accumulation of capital.

Although the accumulation of capital would be associated with diminishing returns, it may also improve production technologies in general, so that Total Factor Productivity increases. The economy then moves from a higher to a lower iso-cost curve. These shifts may take a variety of adjustment paths in response to changes in the relative cost of capital and labour. For example, a movement from point A to Point D increases both capital and labour productivity, although capital productivity would improve less. The opposite effect obtains when capital (labour) becomes relatively more expensive (cheaper). In reality, an economy may see simultaneously movements on the iso-curve, and shifts of the curves themselves. This makes it a priori difficult to explain the *empirical* productivity variations observed in Europe.

Since the beginning of European monetary union in 1999, relative factor prices have shifted significantly for Southern member states in the Euro Area. With the single currency, interest rates and the cost of capital have converged to the low levels which had characterized Germany before EMU. As a consequence, the cost of capital has fallen and the average capital efficiency (ACE)[43] has slowed down, while labour productivity has improved. In the North, on the other hand, the cost of capital has remained fairly constant, while wages have fallen relative to the Euro Area. Such a shift in relative factor prices would have moved the equilibrium points of the North and South in the opposite direction, so that and the average capital efficiency has risen in the North and fallen in the South. The inverse movement must have taken place for labour productivity. Clearly, these trends must have had consequences for the relative competitiveness of the member states.

Empirical evidence

Figure 8 gives a two decades overview over the average efficiency of the capital stock (ACE) of major member states of the Euro Area. The levels of average efficiency vary substantially; with Northern Europe, often, but not always, performing better. Over the last decade, capital productivity

43. The concept of average capital efficiency (ACE) used in the empirical part of this paper is an approximation of capital productivity. It is calculated as the ratio of the nominal value of output (GDP) to the value of the economy's capital stock. It therefore represents capital productivity multiplied by the ratio of the GDP deflator to the capital goods deflator. In the long run, this latter ratio should be one, so that ACE is a good proxy for capital productivity.

Figure 8 **Average efficiency of capital**

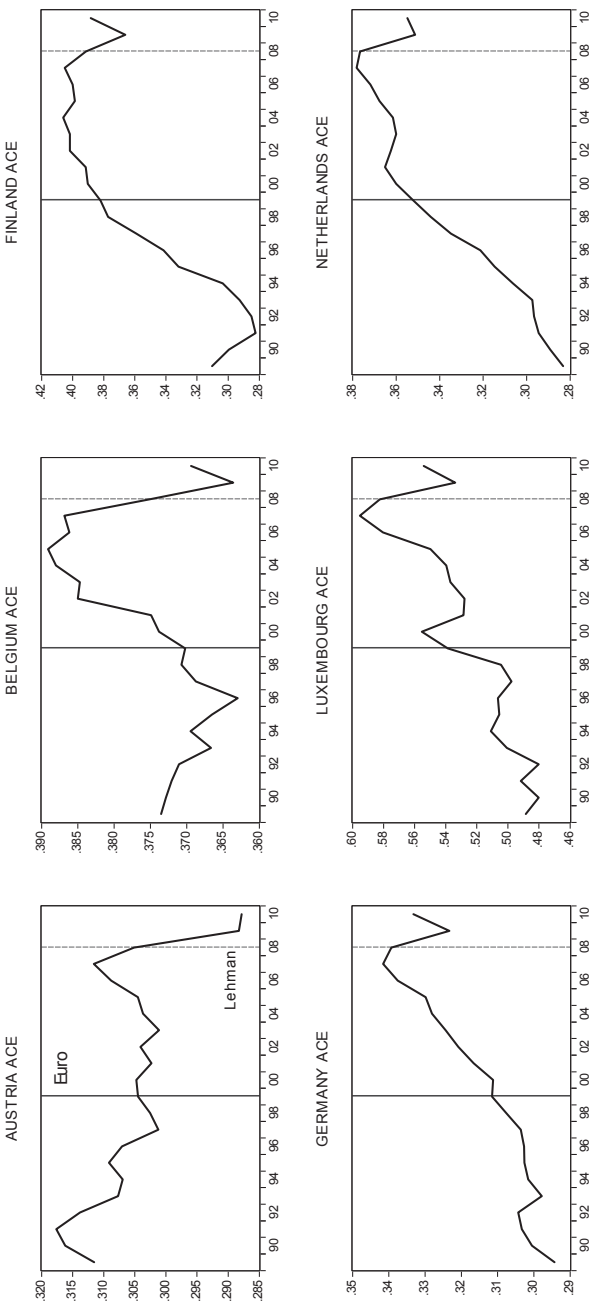


Figure 8 **Average efficiency of capital** (cont.)

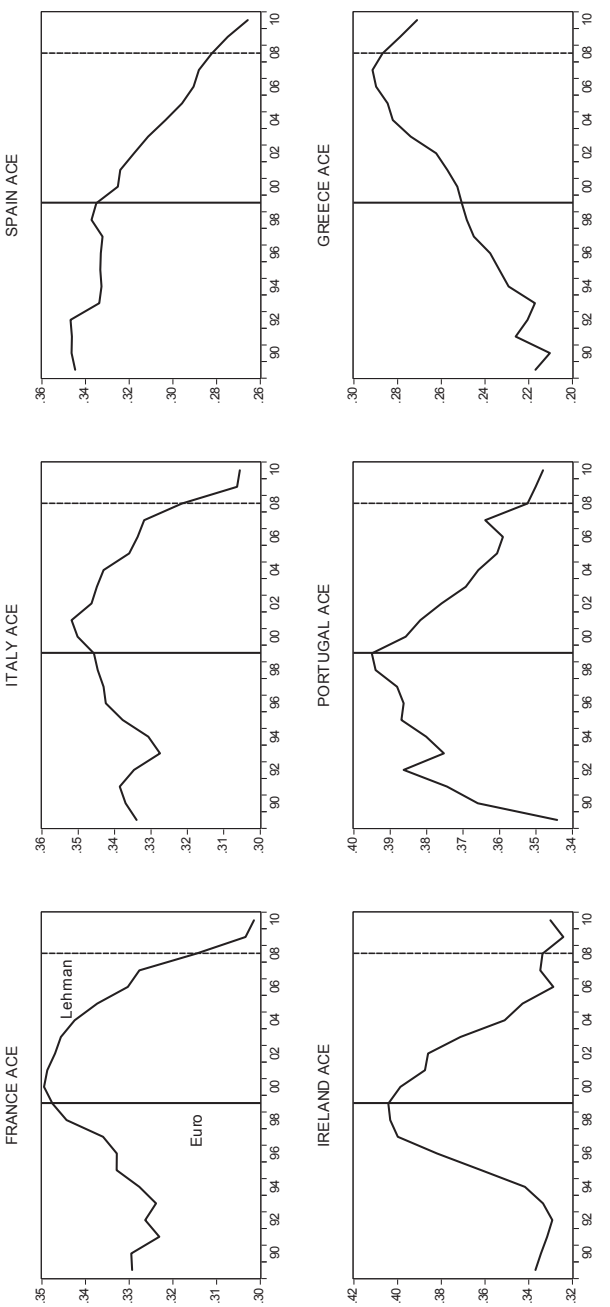
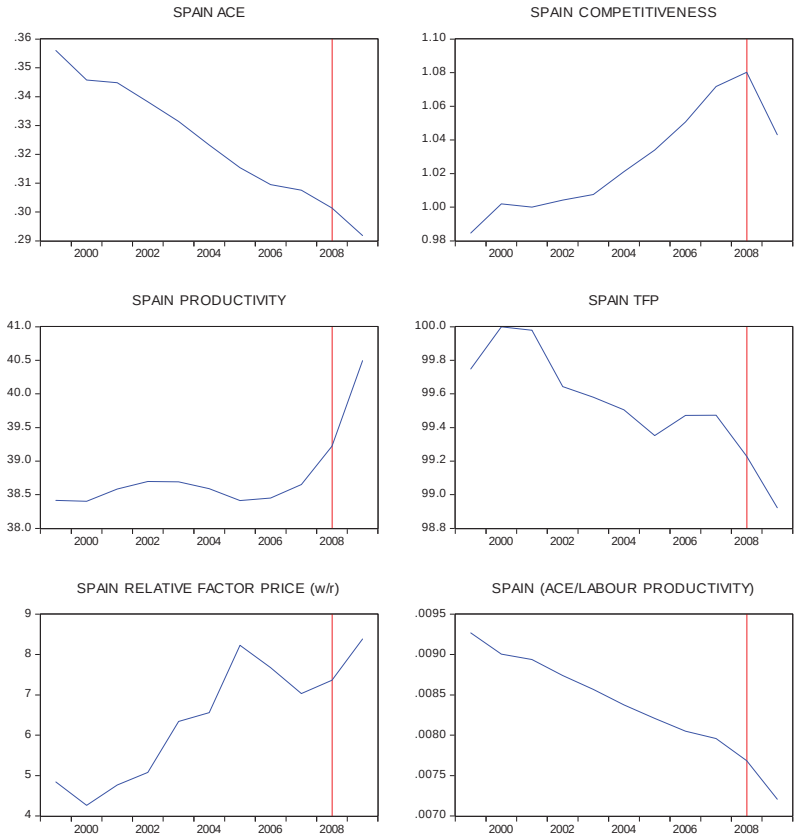


Figure 9 **Spain's shifting production function**



has been high in the Benelux countries and Finland. It has remained stable in Austria, rising again in the Benelux countries and Finland, but also in Germany and Greece; it had a tendency to decline in France, Ireland, Italy, Portugal and Spain. With the exception of Greece, capital productivity has therefore developed as one would expect, given our theory: when interest rates came down in the South after the start of monetary union, the resultant over-accumulation of capital generated diminishing returns on capital. The local economies have adjusted to this new factor price relation. Nevertheless, we observe that capital productivity was negatively affected by the financial crisis in all Euro member states. At this point it is too early to say what effect the European debt crisis with

large yield spreads will have for the allocation of capital in the Euro Area, but is likely to increase ACE in the South.

Spain is an interesting case for our hypothesis because Total Factor Productivity (TFP) has remained stagnant over the last decade, which means that we can observe movements on the iso-curve in Figure 7. Figure 9 gives some evidence for the adjustment dynamics in Spain. TFP has been constant over the first decade of the Euro (the movements have remained in the one percentage point range). We would expect the reduction in interest rates after the introduction of the euro to have caused a move on the iso-curve to the left where capital productivity is lower and labour productivity higher. This is what the ACE and productivity panels in Figure 9 confirm. The two lower panels also indicate the shift on the iso-curve to the steeper tangent line, because relative factor prices for labour (w) and capital (r) have increased, while the productivity of capital relative to labour has fallen. The figure also indicates a loss in competitiveness before the Lehman crisis, but we will discuss that in detail below.

The shifts in relative costs of capital and labour have, therefore, transformed the comparative advantages in the Euro Area. The Spanish example is impressive for the clarity with which it confirms our theoretical model, but similar movements have taken place in all Southern member states, even if shifts in Total Factor Productivity have blurred the picture. Thus, while our model would lead us to expect that labour productivity in the South has risen more than in the North, this is not always true. In many Southern economies, labour productivity and total factor productivity have both deteriorated *relative to the Euro Area average*. This could be a consequence of differences in national TFP relative to the Euro Area, but there is also evidence for sectoral shifts in comparative advantages, which may have counterbalanced the logic of higher labour productivity. For example, in Spain, the accumulation of capital was concentrated in the real estate sector, where labour productivity has remained stagnant. After 2008, this sector was in recession, jobs were eliminated and productivity has increased. There are three explanations of how the structural shifts in relative factor costs may have affected the competitiveness position of member states.

First, in some Southern economies, most dramatically in Ireland and Spain, and to a lesser degree in Portugal and France, the low interest rates have led to property booms that have accelerated the accumula-

tion of capital without technological change. As a consequence, the three variables of average efficiency of capital, labour productivity and Total Factor Productivity have stagnated and even fallen relative to the Euro Area average. Second, in some other member states, especially in Germany, labour has become cheaper, but not capital. This has increased employment. However, it has not lowered productivity, because new investment has improved capital productivity by incorporating technological change, while labour productivity still benefits from the improved quality of the capital stock. This development is particularly pronounced in the manufacturing sector, which benefits from economies of scale in the large European market and the global exports sector (see CER 2011 for evidence). Third, in Greece, probably as a consequence of the Olympics in 2004, significant investment in infrastructure has improved both ACE and TFP. According to our model above, this investment has also benefitted labour productivity. It is interesting to note, however, that the improvement in Greek labour productivity was mostly concentrated in tourism (CER, 2011). Thus, until the financial crisis in 2008 ended the story, Greece seemed to be on the way to take off with accelerated catch-up growth. In this respect, Greece is a very different story from Portugal, where all indicators have deteriorated over the last decade.

These developments have consequences for competitiveness and wage bargaining. *Ceteris paribus*, higher ACE would reduce the cost of capital and higher labour productivity would lower wage costs per unit of output. However, whether this will actually be the case depends on nominal wage settlements. We will discuss wage-setting rules below. What matters here is that assuming a constant wage share, higher capital efficiency will improve profitability and therefore competitiveness. However, *when ACE is falling, a constant wage share is not enough to sustain the return on capital* and the economy will be losing competitiveness and market shares. Hence, the shift in relative factor costs induced by European monetary union with its implication for capital productivity has transformed the competitive advantages of member states and caused a profound process of structural re-allocation of resources across Europe. Firms in Germany and the Netherlands are emerging as the major exporters in manufacturing, while Italy and France are gradually deindustrialising.

As a result of this transformation, some member states will show persistent current account deficits, while others will generate structural surpluses. These imbalances are a feature of Europe's brave new world

in monetary union. They resemble developments we know from other large economies like the USA. These imbalances are the result of a functioning market economy and although they are socially problematic, they are economically sustainable. As was shown in the first part of the paper, the current account deficits within the Euro Area can be financed by the European banking system and they will remain sustainable as long as debtors are able to service their debt. The problem is that national policies affect the economic conditions for entire jurisdictions and thereby increase, or lower, the risk of failure for firms operating within these regions. In this respect, the most important policy variable is wage-setting.

The broad picture is that current account imbalances reflect the new resource allocation in a fully integrated European market. Net exporters into global markets like Germany will provide foreign exchange reserves for the Euro Area, while the European banking system will finance the current account deficits within the Euro Area. Not every region needs to have the same production mix, nor is it absolutely necessary that all current account imbalances within the Euro Area be eliminated. In fact, the heterogeneity and persistence of imbalances within the Euro Area is a sign of economic efficiency, because it proves that resources are allocated according to comparative advantages. By contrast, the bureaucratic procedure proposed by European authorities to avoid macroeconomic imbalances could reduce the danger of peripherization, but only at the price of lower efficiency and lower aggregate welfare.

The described development model is sustainable only as long as the trade deficit contributes to raise productivity, for otherwise the loss of net worth and money will endanger economic growth. The periphery will hollow out with massive migration of labour and capital. Italy's *Mezzogiorno* and Germany's *neue Bundesländer* are examples of such developments. Hence, there is always a question of whether the unmitigated market logic is socially acceptable in Europe. The sustainability of the European Union may require a rethink about transfers from an equity point of view. However, in today's chauvinist atmosphere, there is little appetite for European solidarity and a Transfer Union. Fortunately, there is an alternative route for preserving the cohesion of the European Union: the removal of competitive distortions. We will now first look at competitiveness and trade, then establish a new measure of competitiveness and finally draw conclusions for economic policies.

2.2 Competitiveness and trade

Competitiveness is about the relations between firms seeking profit for their shareholders, embedded in social frameworks. The economic, social, political and legal conditions under which they operate will influence their profitability. If the return on capital is affected by policy measures taken at the level of EU member states, differences in profitability will determine the volume and allocation of investment and employment in Euroland regions. Over time, the incremental micro-decisions by firms will accumulate to macroeconomic imbalances. We will first look at this environment and then analyze how it has translated into the trade performance of member states in the European Union.

The embeddedness of Europe's competitiveness

There are many determinants driving productivity and competitiveness. The World Economic Forum's *Global Competitiveness Report 2010–2011* (2010:4) has pointed out that 'understanding the factors behind [the] process [that drives competitiveness] has occupied the minds of economists for hundreds of years, ranging from Adam Smith's focus on specialization and the division of labor to neoclassical economists' emphasis on investment in physical capital and infrastructure, and, more recently, to interest in other mechanisms such as education and training, technological progress, macroeconomic stability, good governance, firm sophistication, and market efficiency, among others.' In order to measure these factors, the Report has set up score indicators, which give a synthesized overview of the conditions of doing business in the world. Detailed data are collected in 12 pillars for institutions, infrastructure, macroeconomic environment, health and education, goods, financial and labour market efficiency, technology, market size, business sophistication and innovation. The Global Competitiveness Report lists 139 countries, with Switzerland leading at the top (score 5.63) and Chad at the bottom (score 2.73). Table 3 shows the results for EU member states.

It is clear that business conditions are more favorable in Europe's North and West than in the South and East. For the Euro Area, there is a significant difference between the 11 member states[44] that joined EMU back

44. Germany, Finland, Netherlands, France, Austria, Belgium, Luxembourg, Ireland, Spain, Portugal, Italy.

Table 3 **EU27 Rankings, Global Competitiveness Index, 2010–2011**

Economy	Rank	Score
Sweden	2	5.56
Germany	5	5.39
Finland	7	5.37
Netherlands	8	5.33
Denmark	9	5.32
UK	12	5.25
France	15	5.13
Austria	18	5.09
Belgium	19	5.07
Luxembourg	20	5.05
Ireland	29	4.74
Estonia	33	4.61
Czech Republic	36	4.57
Poland	39	4.51
Cyprus	40	4.51
Spain	42	4.49
Slovenia	45	4.42
Portugal	46	4.38
Lithuania	47	4.38
Italy	48	4.37
Malta	50	4.34
Hungary	52	4.33
Slovak Republic	60	4.25
Romania	67	4.16
Latvia	70	4.14
Bulgaria	71	4.13
Greece	83	3.99
Averages		
EMU 11	23.3	4.95
EMU 17	39.1	4.60
Opt outs	7.7	5.38
CEEU 7	54.6	4.32

Source: World Economic Forum (2010).

in 1999 and the latecomers.[45] The three opt-out countries (UK, Denmark, Sweden), which are highly industrialized economies, also perform well. Core Europe is in the world's top 10 percent league, the catch-up countries are only better than half of their global competitors. Greece is performing worst in the EU, mainly because of a bad macroeconomic environment (rank 123 out of 139) and inefficient labour markets (rank 125). However, as we will see below, these competitiveness indicators say little about a country's trade performance or relative cost advantages. For example, Sweden, Finland, Denmark, the UK, France and Ireland all have lost market shares within the European Union (see below Table 4 and Figure 11).

If anything, the Global Competitiveness Report reflects the level of economic development in the world. Developed countries are more competitive. In recent years, many peripheral countries with lower than average income have joined the European Union, because they hope this will accelerate development. A detailed study of the Report reveals also that being part of the EU and the Euro Area is an important component of member states' competitiveness, either because member states benefit from factors such as market size, legal framework and monetary stability, or because the EU facilitates structural reforms like better infrastructure, technological readiness, innovation and business sophistication. Thus, the idea that a country such as Greece could fare better outside the Euro Area is not supported by facts.

While the conditions listed in the Global Competitiveness Report determine the context for investing in particular member states, they say little about what causes the actual imbalances in the Euro Area. For this purpose, we need a narrower concept of competitiveness.

Trade within the European Union

As a first step and starting with the conventional approach, we can relate competitiveness to the net export performance of member states, although we will now distinguish between intra-EU and extra-EU trade. Extra-EU trade will be affected by a long list of factors, but the dominant variable is the exchange rate to other currencies; by contrast, intra-trade

45. Greece, Cyprus, Slovenia, Malta, Slovakia, Estonia.

benefits from the removal of trade obstacles in the single market and from monetary stability in the Euro Area (Rose and Stanley, 2005).[46]

Figure 10 shows the main member states' trade performance over time. There are huge differences in the pattern of external net exports and intra-EU trade balances. Given the emphasis in the Macroeconomic Imbalance Procedure, we also show current accounts. The correlation between net exports and the current account balance is not impressive. Only Germany and the Netherlands, and to a lesser degree Greece, have improved their net exports consistently *within* the European Union since Monetary Union was introduced. By contrast, Spain, Ireland, Finland and France have seen their internal position deteriorate. In Germany, this internal improvement is matched by *external* net export growth, but not so in the Netherlands. Opposing intra and extra trends can also be witnessed in Austria. However, in Finland, France, Ireland and Spain net exports fall both within and outside the European Union. This could be interpreted as evidence that Southern Europe suffers from lack of competitiveness, although Italy and Greece have kept their net exports within the EU stable and Portugal has managed to do the same in extra-EU trade.

Yet net exports could be a distorted indicator for competitiveness, as exports and imports do not only respond to relative prices, but depend also on domestic growth and foreign demand. Some of these effects are quasi-automatic as growth may affect a broad range of imports and exports. However, entrepreneurial skills can push exports beyond this average performance. It is then more significant for the evaluation of competitiveness to look at shifts in market shares of exporters. The export performance reflects the economy's product mix, that is, whether it supplies goods for which there is demand, and also its position with respect to the growth of external markets. We can, therefore, distinguish two demand effects, one resulting from focussing on the right product specialization and the other coming from conquering dynamic export markets. Competitiveness in a more narrow sense is then determined by cost and other supply-side factors, which allow firms to expand market share over and above these two demand effects. We can identify each of these factors by using constant market share analysis and applying it to intra-EU trade as we are primarily interested in intra-European imbalances.

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46. We use the standard data provided by Eurostat. Ideally one would distinguish between the Euro Area and the European Union. However, the trade share of EU member states with volatile exchange rates is negligible.

Figure 10 **European trade balances**

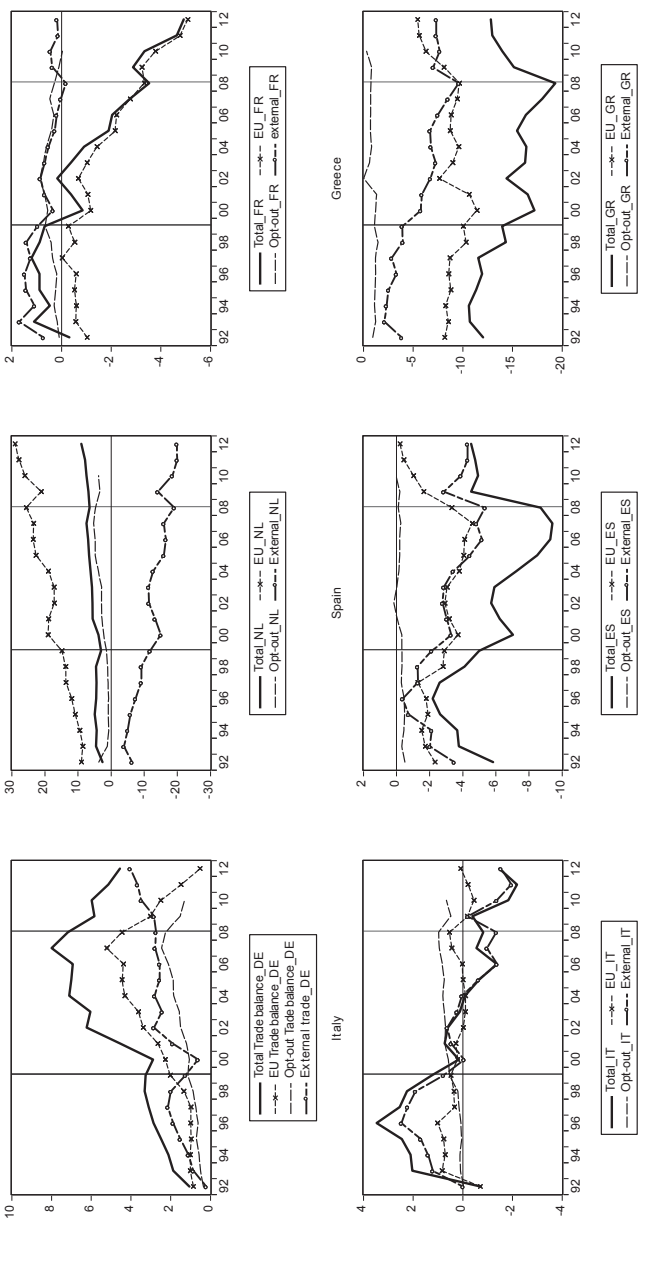
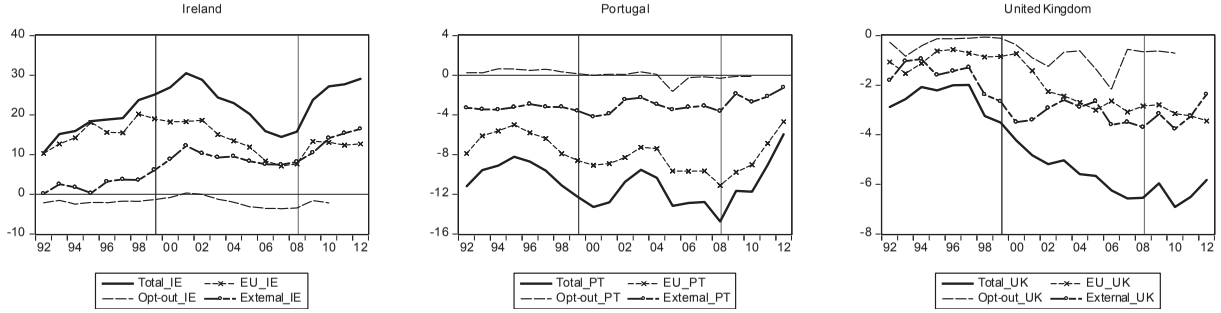


Figure 10 **European trade balances** (cont.)



Constant market share analysis is an old concept.[47] It decomposes the shifts in market share according to three effects.[48] The *product effect* describes the part of demand attributed to the commodity composition of the country's exports. It is positive, if exports are concentrated in sectors for which demand in the EU is growing above average. The *market effect* is the part of the variation attributed to the regional composition of the country's exports, net of the product effect. It is positive if demand in export markets is higher than what is expected given the product compensation. Finally, the *competitiveness effect* in a narrow sense is the residual, which captures the difference between the actual gain of market share and the growth that would have occurred, had the export shares in regions and products remained constant. This effect catches, therefore, a wide range of supply-side effects, from relative cost and price developments to environmental conditionings as measured by the Global competitiveness report. A positive value is always interpreted as an increase in competitiveness.

The table in Annex 2 shows that during the 12 years from 1999 to 2010, the most significant gains in intra-EU trade were made in the following product sectors: Mineral Fuels, Oils and Products of their Distillation; Bituminous Substances; Mineral Waxes (€+99.4 billion); Pharmaceutical Products (€+23 billion); Copper and Articles thereof (€+11.8 billion); Plastics and Articles thereof (€+10.2). The biggest losses occurred in the commodity groups of: Reactors, Boilers, Machinery and Mechanical Appliances; Parts thereof (€–90 billion); Vehicles other than Railway or Tramway Rolling-Stock, and Parts and Accessories thereof (€–65.7 billion); Other Products (€–30 billion); Electrical Machinery and Equipment and Parts thereof; Sound Recorders and Reproducers, Television Image (€–20.6 billion); Articles of Paper and Paperboard, Paper Pulp, etc (€–14.2). Thus, if a country had many specialized firms in the chemical sector (in a broad sense), its exports would have performed better than if it had had a large nuclear industry or car factories.

The second aspect is the demand coming from specific regional markets. Overall, trade within the European Union grew by 66.2 percent between

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47. An early statement of the CMS methodology can be found in see Richardson, 1971. For alternative formulations and refinements of the methodology, see Milana, 1988.

48. The literature points out that when one calculates changes of market shares over time, there is an interaction term, which is usually small if the growth rates are not too high. We have accounted for this term in the residual.

1999–2010. For the Euro Area as a whole, demand for imports (60.9%) has risen slightly less than for exports (62.1%). Not surprisingly, the strongest demand for trade originates in the new member states; it has been three to four times as high as the EU in total. The growth rates of exports and imports for individual member states are shown in Table 4.

These data confirm our conjecture of a profound transformation of the European economy: the biggest growth opportunities are in the new member states regardless of whether they have joined the euro or not. They nearly tripled their exports and doubled their demand for imports from other member states. By contrast, the opt-out states – UK, Denmark, Sweden – have lost out on these opportunities. It is interesting to note that Denmark, which has a quasi-fixed exchange rate to the euro, did better than the UK, where exchange rate volatility is a handicap for trade.[49]

The greatest stability in market shares has occurred in the Euro Area, which covers 79.4% of the intra-EU's exports and 77.4% of its imports. The new member states, however, have an export share of only 5% while they import 11.4%, marginally more than the opt-out countries (11.2%). In this environment, a member state would gain market share if its production system were able to respond to the fast growing demand for products or from import markets and would lose if its export industry were concentrated on stagnating sectors and markets. Finally, efforts to increase competitiveness are determined by local firms and by the framework conditions provided by member state governments. They are measured by what we call the *competitiveness effect*.

Table 5 gives the results of our constant market share analysis for the 1999–2010 period. While the Euro Area has made moderate losses in some market shares within the EU, the losses for the opt-out countries were more than twice as high in billions of euros. Relative to their GDP, the losses have been even more substantial. (See Figure 11.)

By contrast, the new member states have been the big winners in intra-EU trade. Overall, they have gained € 163 billion at the expense of the Euro Area (€ –49.2 billion) and the opt-out countries (€ –113.9 billion). If Slovenia and Slovakia were not counted as Euro Area members, the

49. For a theoretical model that would explain this outcome, see Collignon 2002.

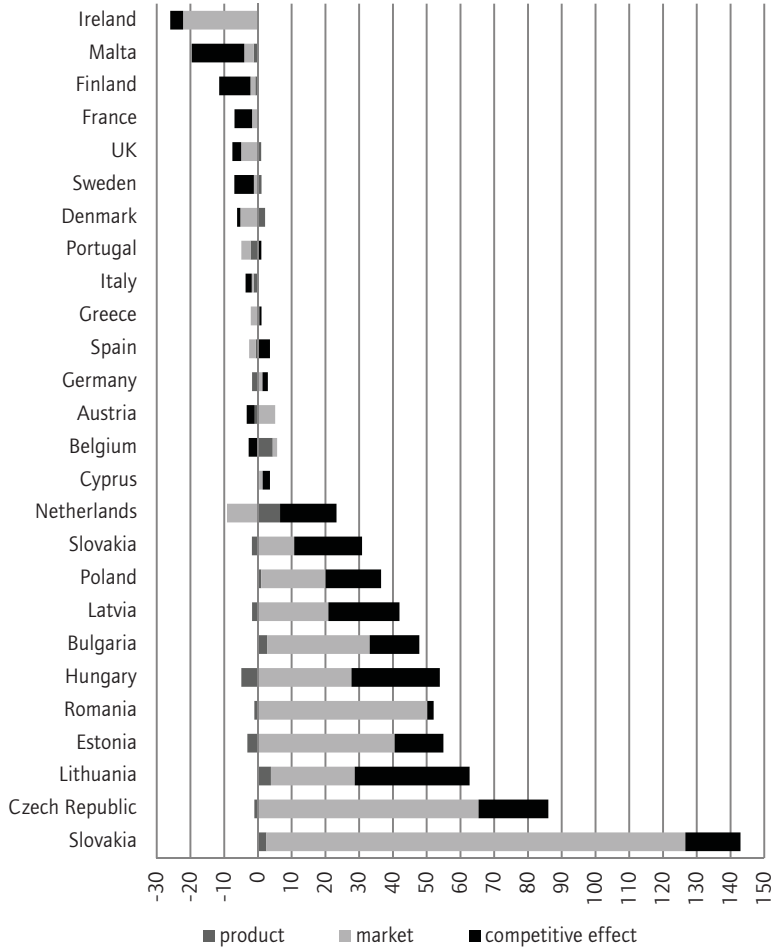
Table 4 **Growth of export markets in % 1999–2010**

Markets	Export growth	Import growth	Difference	Deviation from exports	Euro Area imports
Austria	73.6	83.6	–10.0	7.5	17.4
Belgium	71.9	77.3	–5.4	5.7	11.1
Cyprus	208.7	122.8	85.9	142.5	56.6
Germany	73.4	63.6	9.7	7.2	–2.5
Spain	74.2	45.4	28.8	8.0	–20.8
Finland	12.0	55.8	–43.8	–54.2	–10.4
France	19.8	55.4	–35.6	–46.4	–10.8
Greece	45.6	33.8	11.8	–20.6	–32.4
Ireland	14.0	21.7	–7.6	–52.2	–44.5
Italy	36.8	51.6	–14.8	–29.4	–14.6
Malta	–12.7	49.9	–62.6	–78.9	–16.3
Netherlands	98.7	60.2	38.5	32.5	–6.0
Portugal	42.2	36.1	6.1	–24.0	–30.1
Slovenia	167.8	97.5	70.3	101.6	31.3
Slovakia	386.3	349.8	36.6	320.2	283.6
Euro Area	62.1	60.9	1.2	–4.1	–5.3
Denmark	46.2	51.0	–4.8	–20.0	–15.2
UK	6.3	30.0	–23.7	–59.9	–36.2
Sweden	37.3	65.3	–28.1	–28.9	–0.8
Opt out	18.3	39.0	–20.6	–47.8	–27.2
Bulgaria	344.6	259.0	85.6	278.4	192.8
Czech Republic	286.1	232.5	53.6	219.9	166.3
Estonia	209.4	169.4	39.9	143.2	103.3
Hungary	179.8	119.1	60.7	113.6	52.9
Lithuania	407.3	222.3	185.0	341.2	156.1
Latvia	284.3	170.0	114.3	218.1	103.9
Poland	340.5	216.7	123.8	274.3	150.5
Romania	361.9	351.1	10.8	295.8	284.9
NMS	**281.8**	**208.4**	**73.4**	**215.6**	**142.2**
Total Intra-EU Trade	66.2				

Table 5 **Market share gains and losses, 1999–2010**

Billion €	Total	Product	Market	Competition
Austria	3.5	–1.9	10.1	–4.7
Belgium	7.6	11.3	3.4	–7.1
Cyprus	0.3	0.0	0.1	0.2
Germany	24.0	–35.3	26.8	32.5
Spain	5.8	–3.8	–11.2	20.8
Finland	–14.0	–0.9	–1.8	–11.3
France	–92.5	2.6	–24.0	–71.1
Greece	–1.4	0.6	–2.8	0.8
Ireland	–23.5	0.0	–20.0	–3.4
Italy	–41.5	–13.9	–6.7	–20.9
Malta	–0.7	0.0	–0.1	–0.6
Netherlands	54.4	25.4	–35.4	64.5
Portugal	–4.7	–2.6	–3.2	1.2
Slovenia	6.0	–0.4	2.2	4.2
Slovakia	27.4	0.5	23.8	3.1
Euro Area	**–49.2**	**–18.4**	**–38.8**	**8.1**
Denmark	–6.6	3.4	–8.5	–1.6
UK	–92.9	13.7	–69.8	–36.8
Sweden	–14.4	2.5	–2.9	–14.0
Opt out MS	**–113.9**	**19.7**	**–81.3**	**–52.4**
Bulgaria	5.9	0.3	3.8	1.8
Czech Republic	47.9	–0.6	36.9	11.7
Estonia	2.8	–0.2	2.2	0.8
Hungary	22.5	–2.3	12.8	12.1
Lithuania	6.5	0.4	2.6	3.5
Latvia	2.7	–0.1	1.4	1.4
Poland	57.5	1.5	30.0	26.0
Romania	17.2	–0.4	17.0	0.6
NMS	163.1	–1.3	106.5	57.9

Figure 11 **Gain/loss of market share as percentage of member states' GDP in 1999**



gains for new member states and the losses for the Euro Area were even bigger. These gains were mainly due to above average growth and demand in new member states and show that Central and Eastern Europe is a locally integrated growth pole. Not surprisingly, all these countries have improved the efficiency of their supply-side conditions. In fact, to achieve this is probably why they wanted to join the EU in the first place.

The Euro Area as a whole has also improved its supply-side marginally, with big differences between individual member states. However, the opt-out countries have lost competitive efficiency on the supply side and are badly oriented toward stagnating markets, while they have benefitted somewhat from their product portfolio. Overall, the impression is that being a member of the Euro Area provides stability and benefits trade.

With respect to individual Euro member states, we discover that France is the biggest loser of trade shares and this loss is mainly due to deteriorating supply side conditions. Italy is the second worst performer, losing on all fronts. The biggest winners are the Netherlands, followed by Germany. Both countries have greatly improved their supply-side conditions. Interestingly, this is also true of Spain, although it has suffered from stagnating demand in export markets. This may be a sign that a booming non-tradable sector (Spain's real estate bubble) could actually improve supply-side conditions for the tradable sector. By contrast, changes in the competitive supply-side position of Greece and Portugal (both positive) and Ireland (negative) have remained small.

Among the opt-out countries, the UK has experienced the biggest loss of market share compared to all member states in the Union. This is due to an excessive positioning in stagnating markets and a serious deterioration in British supply-side competitiveness – despite all the talk about Anglo-Saxon market flexibility. Among the new member states, Poland is the clear winner. Although all new member states have improved their supply-side conditions, some have suffered from a stagnating product portfolio, especially the Baltic republics.

The absolute euro amounts of gains and losses presented in Table 5 bias the picture towards large economies. In Figure 11 we relate the gains to national GDP. Now, Ireland is the biggest loser, mainly because of the market effect, while Malta, Finland, France and Sweden experience a significant worsening of their supply-side conditions. By contrast, the Netherlands and all of the new member states have managed to bring about improvements in their supply side, with their biggest advantage resulting from open markets in the EU. Germany's competitive gains are much less impressive when they are related to GDP. By contrast, supply-side improvements in new member states are rather small relative to GDP, while the losses remain substantial for France, the UK and Italy. Thus, our constant market share analysis confirms the shifts in comparative advantages discussed above and the fundamental trans-

formation of the European economy explains the deindustrialization of France and Italy.

The narrow 'competitiveness effect' in the constant market share analysis catches all effects other than demand for products and markets. It relates to supply-side conditions, especially changes in costs and relative prices. We must now deepen our understanding of these cost conditions.

2.3 Measuring cost competitiveness

Conventional measures of cost competitiveness, as used by the European Commission, calculate real effective exchange rates. The next subsection summarizes the evidence. The problem with these indices is that they cannot measure the competitiveness gaps as levels but only as rates of change. In the following subsection we will, therefore, develop an alternative indicator based on unit labour costs and the return on capital that is an indicator for unit labour cost *level* divergence.

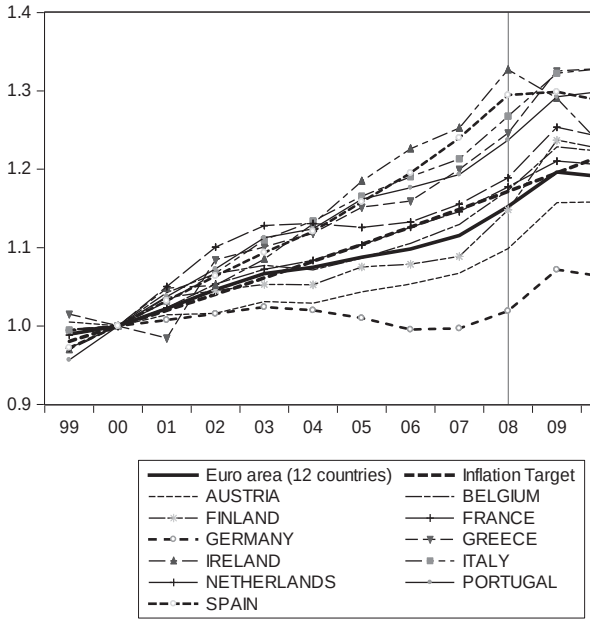
Real effective exchange rates

The most commonly used measure for competitiveness is an index of relative prices or relative inflation rates, which are usually based on some index starting at an arbitrary base year, often the year 2000.[50] The index will then show how annual changes in costs and prices build up over time. Such indices have also been constructed for unit labour costs (ULC), which signal differences in labour cost developments per output and are used for the score board in the *Excessive Imbalance Procedure*.

Figure 12 shows *nominal* unit labour cost indices in the Euro Area with the year 2000 as base. We also show the straight line, which indicates the ECB inflation target. Between Germany and Italy a cost gap of the order of 22% has developed and this is often interpreted as a sign of Italy's losing competitiveness. Similar arguments apply to other Southern States. The discrepancy between these labour cost indices results from different wage bargaining behaviour: unit labour costs reflect the difference between nominal wage increases and labour productivity. Hence

50. Recently, Eurostat has re-defined some indices with a 2005 base year.

Figure 12 **Nominal unit labour cost indices and inflation target**



the rise in the Italian index is the consequence of wage increases above the rate of productivity growth. On the other hand, in Germany nominal unit labour costs fell, because wage restraint was keeping remunerations behind productivity improvements. During the recession in 2008–2009, productivity fell in most member states and ULCs started to rise, but since then a correction has started.

However, competitiveness is a relative notion. Real effective exchange rate indices provide more information about relative price changes or labour cost developments, because they take into account not only the home country but also the costs developments in, and the relative weight of, the country's main trading partners. In the score board for the *Excessive Imbalance Procedure*, the European Commission (2011) has monitored Euro Area member states by looking at real effective exchange rates, which calculate the unit labour costs of a country relative to 35 trading partners.

Figure 13 **Real effective exchange rates based on unit labour costs against EU15**

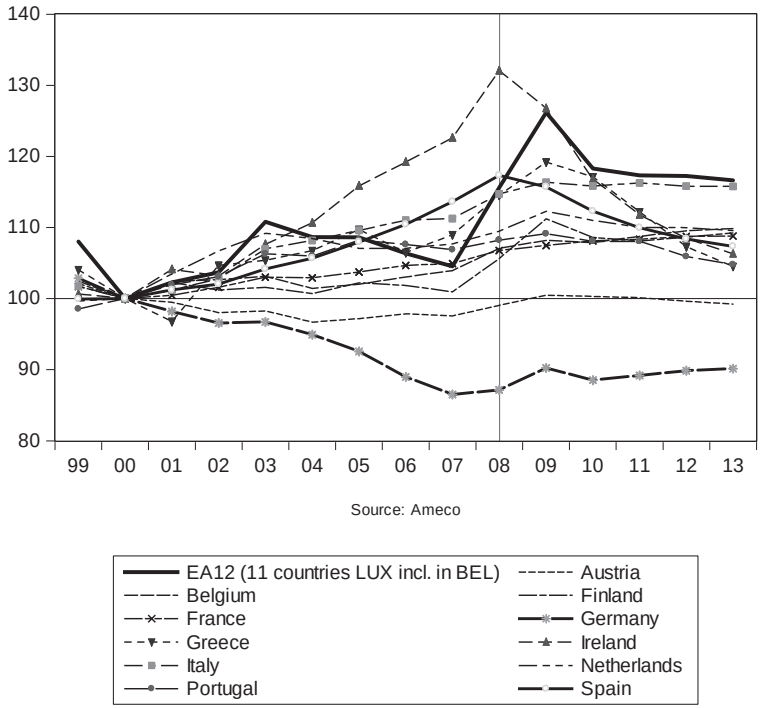


Figure 13 shows the development of *real effective exchange rates*, based on unit labour costs for the total economy relative to the rest of the former EU-15. An increase in this index reflects a loss in competitiveness. Given the relatively small variations in nominal exchange rates in the European Union, this index confirms the information of the nominal developments in Figure 12. However, it amalgamates intra-exports into the Euro Area with extra-exports in the rest of the world. The latter are subject to exchange rate variability, although this is less disturbing within the European Union than with the rest of the world, because most non-Euro Area member states seek exchange rate stability with the euro. Nevertheless, an index against 35 important trade partners, such as is used by the Alert Mechanism Report of the *Excessive Imbalance Procedure*, is easily distorted by exchange rate volatility, which is usually much larger than the changes in relative costs. Effective exchange rates

for the Euro Area member states are then largely driven by the euro-dollar rate and such an amalgam can hardly be an indicator for competitiveness *within* the Euro Area. The Commission's scoreboard does look at Euro Area indicators, but the data set is incomplete.

Another handicap of effective exchange rates is that they are based on some arbitrary base year and then measure *changes* over time. But cost competitiveness derives from *relative cost levels* and level discrepancies cannot be measured by these indicators. For example, the 22% gap between Italian and German ULCs does not necessarily mean that labour costs are that much higher in Italy, for it is possible that Italy was initially undervalued. We need therefore a different approach.

The profitability measure of competitiveness

What matters for competitiveness are *levels in relative costs* and these are determined by more than wages. Focusing on labour cost alone is not appropriate, even if wages make an important contribution to overall costs. Labour costs per unit of output depend on wages and productivity, but the other important factor in the total cost structure of an economy's production structure is the cost of capital. Hence, we need a standard of measurement where the competitiveness of firms reflects their *relative advantages with respect to labour and capital costs*.

Competitiveness should help firms make profits and thus is measured by rate of return on capital. We will follow standard theory and define *equilibrium levels* by assuming that in efficient markets the rates of return on capital are equalized. This does not mean that market dynamics will necessarily equalize returns on capital. We simply take profitability as the standard of measurement against which deviations from efficiency can be clearly asserted. Because arguably wage-setting and productivity are shaped by national debates and policies, we can use national macroeconomic data, and because we are interested in imbalances in the currency union, we will use the Euro Area average as benchmark. If the returns on capital in member states are higher than for the Euro Area, then the excess profits will indicate that the economy is more competitive than the rest. If returns are less, it means the economy lacks competitiveness.

We can calculate the return on capital for an economy as the operating surplus relative to the stock of capital, where the operating surplus is

the difference between GDP and the total wage bill. In other words, the return on capital is the profit margin (operating surplus divided by GDP) multiplied by average capital efficiency (ACE, that is, GDP divided by the aggregate capital stock of the economy). The operating surplus depends on prices (that is, GDP deflator) and on unit labour costs, which are determined by nominal wages and labour productivity. For a given level of unit labour costs, higher prices imply higher profit margins, hence larger operating surpluses and ceteris paribus higher returns on capital. This would imply that ULCs can rise until they reach the equilibrium of equal return on capital. From a neoclassical point of view, it may seem strange to see higher prices linked to higher competitiveness, but this is consistent with oligopolistic mark-up pricing and the fact that high profitability is considered a sign of high competitiveness.[51] However, the overall return on capital depends also on the productivity of the aggregate capital stock (ACE) and therefore, as pointed out above, on relative factor prices. Given this analytical framework, we can calculate the return on capital by using national income statistics for calculating unit labour costs and the average efficiency of capital. We then compare an individual member state's return to the aggregate return for the Euro Area and derive the implicit unit labour costs. Thus, our competitiveness measure depends on prices, unit labour costs and average capital efficiency.

From the benchmark of equalized returns on capital, we calculate the *equilibrium unit labour costs*, which would be consistent with equal returns on capital. If actual unit labour costs are higher or lower than this theoretical equilibrium level, we will say that a country is over- or undervalued with respect to the Euro Area. Thus, in equilibrium, unit labour cost levels relative to the Euro Area would yield the same return on capital. Box 3 shows the calculation.[52] When capital productivity is low, unit labour costs and the wage share must also be low *in equilibrium* in order to compensate for the low capital efficiency. But if capital productivity is high, unit labour costs can rise even if labour productivity is constant.

Figure 14 shows actual and equilibrium unit labour costs for some major member states of the Euro Area. The horizontal black line at the val-

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51. The distinction is based on the fact that our model assumes equilibrium as given by perfect competition in capital markets, while unit labour costs are set by labour markets and prices are set as a mark-up. By contrast, the neoclassical model assumes perfect competition in product markets and therefore takes prices as given.

52. I have developed this approach first in the context of several reports of Centro Europa Ricerche, Rome.

Box 3 **Defining equilibrium unit labour costs**

The rate of return is the operating surplus (net profit) per unit of capital. If we abstract from capital depreciation and taxes, it is

3.1 $$R = \frac{Py - wL}{P_k K}$$

If we call the Average Capital Efficiency (ACE) the nominal output produced by one unit of capital at current prices, that is:

3.2 ACE: $$k = \frac{Py}{P_k K}$$

we get the rate of return as the product of the profit share and ACE

3.3 $$R = k\sigma_k = k(1-\sigma_w) = \frac{Py - wL}{Py}\frac{Py}{P_k K} = \left(1 - \frac{w}{P}\frac{1}{\lambda}\right)k = \left(1 - \frac{ULC}{P}\right)k$$

Where λ= y/L is labour productivity and the profit share σk is the complement of the wage share

3.4 $$\sigma_k = \frac{Py - wL}{Py} = 1 - \sigma_w$$

Because of (3), the return on capital R improves when the average efficiency of capital and/or the profit share improve. The average efficiency of capital rises with the technological productivity of capital (y/K) or when prices for capital goods are less than the GDP deflator (P/PK). The profit share rises when the wage share falls, which implies that real wages rise less than labour productivity.

Equilibrium relations

Assuming efficient markets, R should converge in different countries. Thus, for country A and B we have

3.5 $$R_A^* = R_B^* \Leftrightarrow \left(1 - \frac{ULC_A^*}{P_A}\right)k_A = \left(1 - \frac{ULC_B^*}{P_B}\right)k_B$$

Or: $$\sigma_{KA}^* = \sigma_{KB}^* \frac{k_B}{k_A}$$

Hence, in equilibrium the differences in wage shares must reflect the relative value productivities of capital and the equilibrium path for ULC is

3.6 $$ULC_A^* = \frac{k_B}{k_A}\frac{P_A}{P_B}ULC_B^* - \left(\frac{k_B}{k_A} - 1\right)P_A$$

This formula allows also identification of the impact of price developments. Assuming the average efficiency of capital to be identical in the two economies, the ULC–gap would have to offset the inflation gap in order to maintain equal ROC

$$\frac{ULC_A}{ULC_B} = \frac{P_A}{P_B} \tag{3.7}$$

A deviation of actual from equilibrium ULCs implies different rates of return on capital:

$$\frac{ULC_A}{ULC_B} < \frac{P_A}{P_B} \Rightarrow ROC_A > ROC_B$$

ue 1 indicates parity between unit labour cost levels in a member state with respect to the Euro Area as a whole. Economists often assume that this line represents some form of economic equilibrium (Dullien and Fritsche 2008), but in a capitalist economy this is wrong, because labour cost parity ignores capital productivity. Our benchmark is the return on capital. The punctuated line shows our level of *equilibrium unit labour costs* at which the return of capital between Germany and the Euro Area would be equalized. The solid line shows the *actual unit labour cost* of Germany relative to the Euro Area. Hence the difference between the equilibrium and the actual line indicates the degree of over- or undervaluation of a member state's unit labour costs.

Over the past two decades, persistent overvaluations for Austria, Spain and Greece, and undervaluations for Belgium, Finland, Ireland, Italy, Luxembourg, Netherlands and Portugal can be observed. France and Germany are exceptions: France moves from undervaluation to overvaluation and Germany does the opposite. We note that the equilibrium level of unit labour costs is neither constant nor necessarily close to parity. The reason is, of course, that capital productivity has changed and/or inflation differentials have modified profit margins. From Figure 8 we know that ACE has fallen in Europe's Southern member states and risen in the North. Ceteris paribus this should have translated into higher equilibrium unit labour costs in Belgium, Germany, Greece, Luxembourg and the Netherlands, and into constant levels in Austria and possibly Finland where the effect was minor. It should also have lowered them in the other Southern states. However, we see such a drop in the equilibrium level only in France and Ireland, and a rise only in Belgium, Greece,

Luxembourg and the Netherlands. Most importantly, in Germany and Italy the equilibrium level remained constant after 2000, and in Ireland, Portugal and Spain it was rising instead of falling. These abnormalities must be explained by inflation differentials. In Germany, inflation (measured by the GDP deflator) was below the Euro Area average, in Italy, Portugal, Spain and Ireland, it was above. These price increases have provided a temporary relief for Southern countries, for capital seemed to yield a decent return despite a deterioration of the relative cost position. The interesting case is Greece. GDP-inflation was only marginally below the Euro Area average in 2007, while capital productivity had improved by 18.5 percent. Thus contrary to other Southern economies, Greece was on the right track before it was hit by the financial crisis.

These data modify the competitiveness picture painted by the simple indices used by the Commission for the *Excessive Imbalance Procedure*. A quick way to see the changes in competitiveness level positions is by taking the difference between the actual and equilibrium unit labour costs relative to the Euro Area. Figure 15 shows the thus constructed *Competitive Index*.[53] The zero line indicates that the return on the capital stock in a given member state is equal to the Euro Area. An *index number* above the zero line represents an overvaluation. For example, 0.1 means that the ULCs of a member state are 10% above equilibrium. An increase in the index is equivalent to a loss of competitiveness.

We noticed that since the start of European monetary union, most Southern European member states have lost competitiveness, while the North has improved it. Interestingly, France behaves as a Southern economy and Greece, which has improved ACE, has followed the German pattern. In most member states, the immediate impact of the financial crisis seems to have inverted these dynamics in the heat of the crisis, but most countries are now returning to the long-run trend. However, the value of this competitiveness indicator over the more familiar base-year indices lies in the fact that it shows the absolute levels of unit labour cost positions. Remarkable changes have occurred: most dramatically, in Ireland the index rose from an undervaluation close to –30% in 2002 to –5% in 2007. In the Netherlands, it went from zero to –10% and in Germany from +10 to –5%. Greece has improved from +21% in 2000 to +7% in 2007, but this was not enough to eliminate the overvaluation. Italy has

53. The index was first published by CER 2011.

Figure 14 **ULC relative to Euro Area: actual and equilibrium**

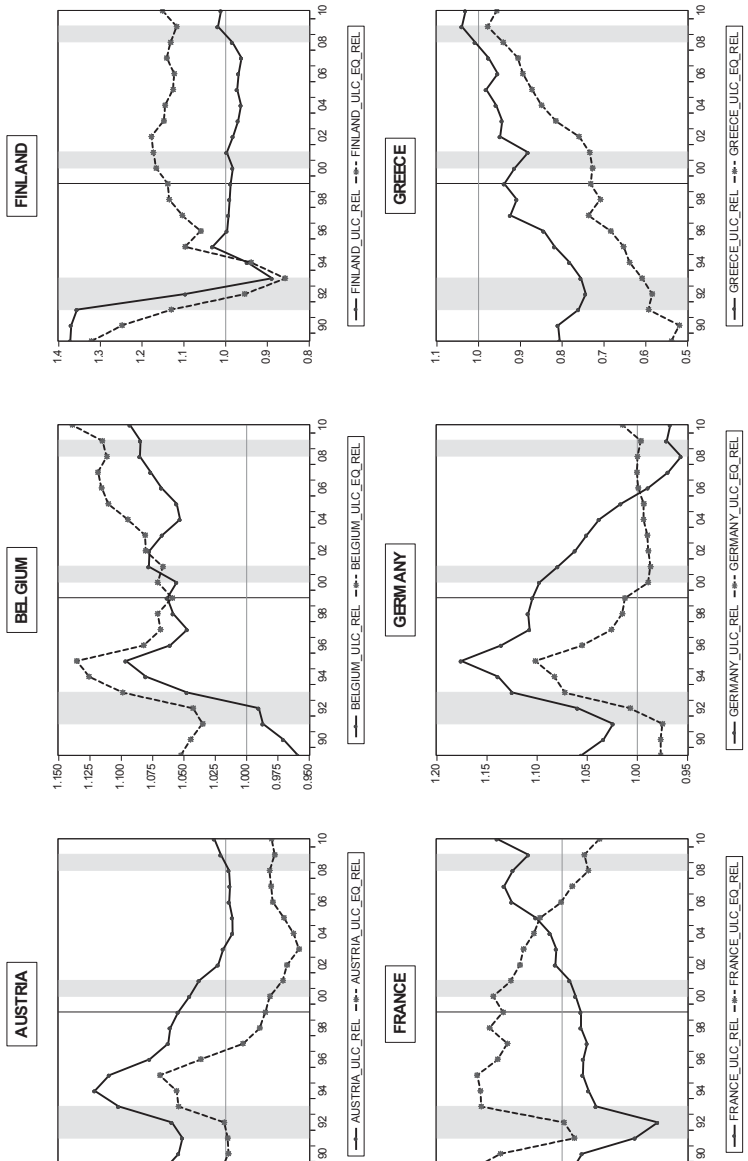


Figure 14 **ULC relative to Euro Area: actual and equilibrium** (cont.)

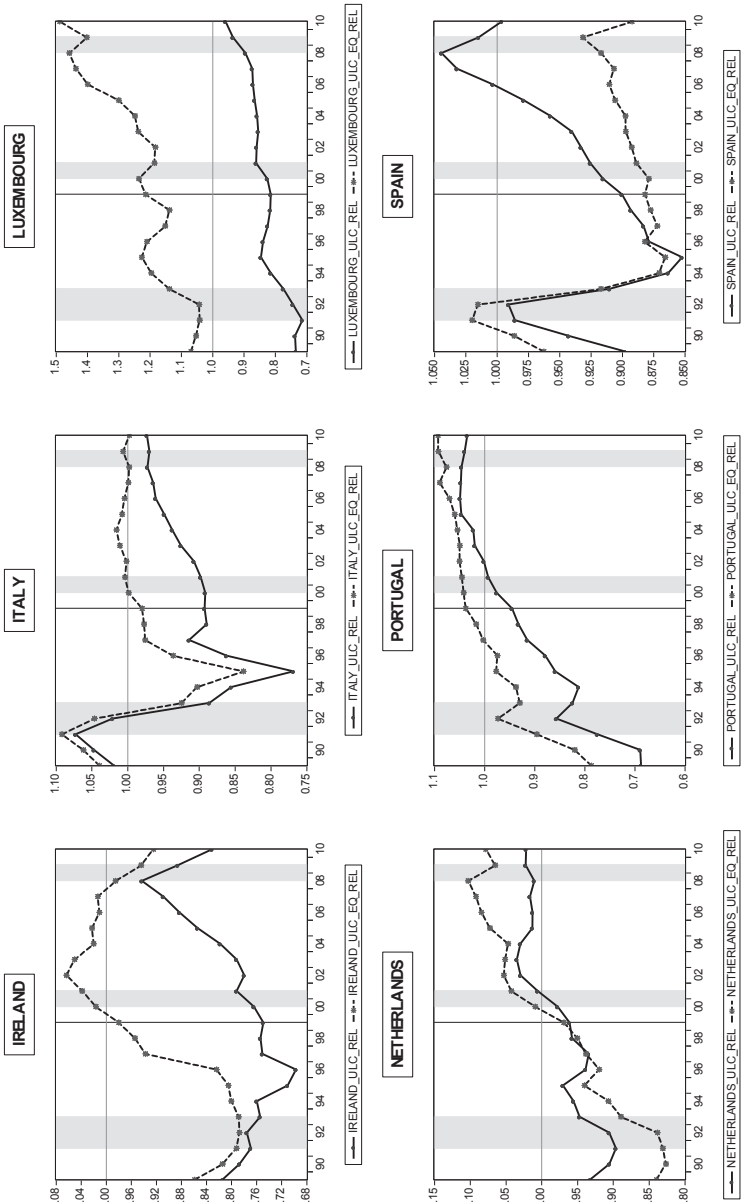


Figure 15 **The Competitive Index**

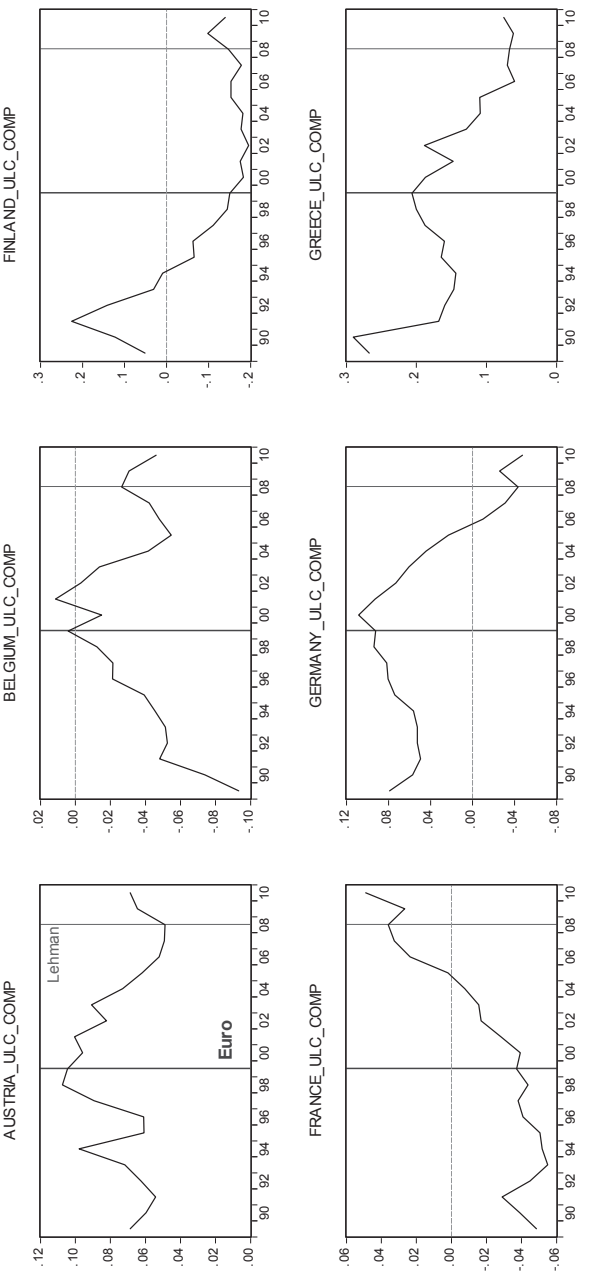
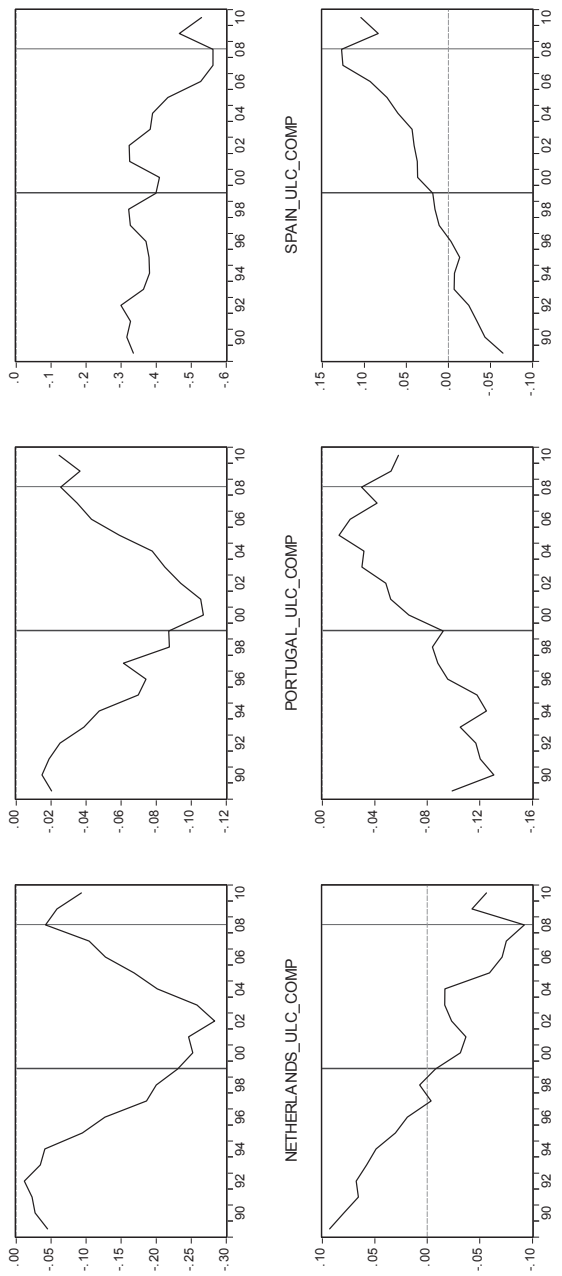


Figure 15 **The Competitive Index** (cont.)



continually lost competitiveness from –11% to –2.5%; it is, however, still weakly competitive. Finland has reduced its advantage from –20 to –10%, and Spain has increased its disadvantage from 2% to 12%. France is another sad story: the advantages of competitive disinflation of the 1990s have been lost with a swing of 8 percentage points that has pushed the economy into overvaluation.

These observations are in line with what the theory of relative factor prices would lead us to expect. They also conform to the constant market share estimates of supply-side competition. Hence, our Competitive Index performs well and would be a good policy tool for assessing the underlying causes of macroeconomic imbalances in the Euro Area.

2.4 Competitiveness and economic policy

Now that we have a measure for competitiveness, we can analyse the consequences for economic policy in the EU. First we look at how competitiveness can be affected by policy, and then at what are the consequences for growth and fiscal policy.

Competitiveness and wage-setting

We have argued that macroeconomic imbalances cannot be measured and evaluated by holistic concepts which are familiar from national accounts. Instead, they are the consequences of firms' management decisions that respond to competitive advantages and disadvantages and aggregate to macroeconomic data. Some of these advantages are firm-specific; some are dependent on institutional arrangements; some on direct government decisions. What matters in the end is how these conditions affect the return on the stock of capital in a society. In a single currency area, however, the credit risk of each firm or investor or debtor needs to be evaluated as an individual risk. This is why comparing returns on capital is important. If returns are insufficient, investment will slow down; if firms or households or governments cannot service their debt, defaults and bankruptcies will follow. If such developments are cumulated in specific regions, the fall in asset values could generate a liquidity crisis as described above.

While the elimination of the exchange rate risk has eliminated the country risk, national policies may still affect the economic environment through a range of economic policies, which contribute to the determination of price and cost relations. We have seen how changes in relative factor prices due to European monetary union have shifted the incentives for the accumulation of capital. Other factors such research and development, staff training, tax policies, etc., are also important. Yet in the long run, productivity will be the main driver for comparative advantages. In the short run wage-setting is the variable that can shift incentives. The two are nevertheless linked, because the long run always consists of a series of short-run events. This makes wage bargaining a key for avoiding excessive imbalances and rotating slumps and booms. The problem is that Europe has no tools for coordinating wage policies. The European labour market is neither atomised such that each worker receives a wage equal to his marginal contribution, nor is it centralised so that macroeconomic externalities could be internalised. We will now look at the implications of our analysis for wage bargaining and then at how competitiveness may influence economic growth and fiscal policies in member states.

With respect to wage bargaining, our measure of competitiveness suggests an interesting modification of traditional policy rules. If one accepts that unit labour cost developments anchor inflation in a currency area, there exists a simple rule for wage-setting: nominal wages should increase at the rate of labour productivity growth plus inflation, or rather the inflation target of the ECB. This is the famous '*Golden Rule*' or distribution-neutral wage formula. It ensures that the wage share stays constant in the long run and that the ECB can realise its primary objective of maintaining price stability. This is why it has been frequently reiterated by Europe's Macroeconomic Dialogue between social partners and European authorities (Commission, 2005; Koll, 2005).

However, while the Golden Rule is a good benchmark for determining how wage-setting can support price stability in the overall economy, it is insufficient to prevent competitive distortions between firms, sectors, and regions, because it ignores capital productivity. If we measure competitiveness by the relative returns on capital (or their equality to the Euro Area average), the profit margin should be adjusted downward and wages upward when the average capital efficiency improves: because the return on capital is the profit margin multiplied by the average efficiency of capital and the profit margin is the inverse of the wage share (in other

words, real unit labour costs), wages should increase by more than the sum of productivity and inflation if ACE improves as it did in the North. Inversely, if ACE slows down as it did in the South, real wage increases must remain below labour productivity improvements. This does not mean that real wages must not grow at all, for remember that if interest rates come down labour productivity will improve; but we need to keep in mind that, in a competitive environment, the margin of wage increases is constrained by capital productivity as well. *Hence the 'Golden Rule' has given the wrong policy recommendation to wage bargainers in Europe: because the rule stabilises profit margins, it has contributed to loss of competitiveness in the South and excessive gains in the North*. By not considering the externalities of relative factor price developments and ignoring capital efficiency, the Golden Rule will create competitive distortions, which translate into macroeconomic imbalances. In monetary union, these imbalances are financed by transfers in money balances, which will then cause a deterioration in the economic environment for growth and employment. This deterioration can be gradual (Portugal) or sudden (Greece, Ireland, Spain), but it will always have a mirror image in booming regions in the monetary union.

Uncoordinated wage bargaining is unlikely to prevent competitive distortions and macroeconomic imbalances, especially in European monetary union, where wages are determined in a predominantly national framework and the non-tradable sector is often a trend-setter. In this context the incentives for national wage settlements are inconsistent with the requirements of macroeconomic balances between member states. Because capital and labour productivities respond to relative factor prices, capital efficiency will slow down when interest rates come down and *despite an increase in labour productivity more wage restraint would be required to remain competitive. But this is unlikely to be the wage bargainers' response*, because the accommodating monetary policy will contribute to faster growth, higher employment and therefore a tightening in the labour market. This development will exert pressure for wages to go up.[54] Thus, the long-run trend of lower interest rates, which used to prevail in the South, is likely to have caused the lasting deterioration of relative cost competitiveness. This is precisely what we observed in most Southern European member states including

54. European labour markets generally respond to the Phillips curve dynamic. See European Commission 2011.

France. On the other hand, wage restraint shifts incentives in favour of labour accumulation, so that labour productivity slows down and capital productivity increases. That is what has happened in Germany and the Netherlands, where competitive positions have improved dramatically, and to a lesser degree in Austria and Belgium. Thus, even if the cost of capital is in principle (abstracting from debtors' default risks) the same in all member states of monetary union, collective bargaining has remained at national level and that gives member states an instrument to affect comparative advantages.[55] *Thus wage bargaining is important, but the Golden Rule can be counterproductive for rebalancing macroeconomic disequilibria*.

This is an unconventional result. It shows that the adjustment by peripheral countries to the stability standards of European monetary union has long-term consequences ignored by policy makers. Orthodox policy recommendations may generate economic and social tensions. It is the paradox of our time that monetary union was supposed to create a 'stability union', but the ignorant policies pursued by member states have effectively destabilized the Euro Area. What is needed instead are new and unconventional approaches that make the transition to a stable long-run equilibrium in the Euro Area politically acceptable. Unfortunately, the scoreboard proposed by the European Commission falls short. The answer is either some form of solidarity in a Transfer Union, or implementing ambitious programs for increasing productivity and restraining wage rises in countries which suffer from overvalued unit labour costs.

Some of these measures are, of course, part of the EU policy recommendations to member states. The problem is the priority given to current account adjustments. For example, the European Commission (2011:82) argues: 'In light of the overarching priority to ensure the rebalancing of EU economies, the Annual Growth Survey includes recommendations on wages, reflected where necessary in Country Specific Recommendations in the framework of the BEPGs and Employment Guidelines. 'Strict and sustained wage moderation, including the revision of indexation clauses in bargaining systems' were recommended for

55. The reference to member states does not necessarily mean governments. For example in Germany, wage bargaining is institutionally separated from government interference (*Tarifautonomie*). What matters is how the general legal, social and political framework contributes to outcomes of wage-setting.

countries characterized by large current account deficits.' The consequence of this one-sided effort of reducing 'excessive' current account imbalances is *excessive austerity*. The focus is on wage moderation, while the Commission does not take into account the need for wage *increases* in the North which would not only rebalance competitive advantages but more importantly also generate higher consumption and demand for Southern products in the North. Who protects European citizens against these excesses?

European authorities have recommended that adjustment in 'countries characterized by protracted recessions or stagnation (e.g. Greece, Spain, Portugal) would imply recovery via net exports and a correction of current account deficits accumulated in the past' (European Commission, 2011:85). But who is to buy these net exports in the future? The Commission seems to believe that the necessary adjustment can be achieved by shifting the relative prices and wages for non-tradable goods in favour of tradables, primarily by cutting wages in the non-tradable sector. In other words, the South must become more competitive than the North. However, Table 5 has shown that Greece, Spain and Portugal all have marginally improved their supply-side competitiveness in the Euro Area, while their biggest disadvantage was lack of demand from their major export markets. No doubt our competitiveness indicator reveals scope for further improvements in cost competitiveness, but an important dimension would be increases in labour and capital productivity due to higher growth and economies of scale. If the non-tradable sector is large, as in Greece, the policies recommended by European authorities will lower domestic demand and therefore slow down economic growth. This is the last thing Southern European member states need at this stage and the recommendations are clearly counterproductive. Instead, all sources of economic growth, whether they are located in the tradable or non-tradable sector, should be mobilized to solve the Eurocrisis. The policy recommendations by the Commission make sense only if one believes that monetary union works like a fixed exchange rate arrangement. We have shown that this is not the case and that growth in the non-tradable sector can contribute as much to economic growth as foreign trade.

If uncoordinated wage bargaining is unlikely to be able to prevent competitive distortions and macroeconomic imbalances, how could better coordination be achieved? European wage settlements are the result of market forces and collective wage bargaining and not of government

decisions; that being the case, what can be done to improve economic performance?

There is a huge literature on optimal wage bargaining institutions.[56] Following the line first explored by Calmfors and Driffil (1988), it is often argued that highly centralized and highly decentralized wage-setting systems are superior to intermediary systems in terms of macroeconomic outcomes. However, there are different methods of measuring centralization. One is the degree of *bargaining coverage*, in other words, the extent to which employees are covered by collective bargaining. Another is the *coordination* across bargaining sectors in terms of 'wage leadership' and 'pattern bargaining'. Finally, the strength of trade unions in terms of *union density* matters. Several indicators have been constructed to gather empirical evidence, of which, according to the European Commission (2011: 94), the database compiled by Visser (2009) is the most systematic and comprehensive. To find some clues about the relation between wage bargaining and competitiveness, I have plotted the Visser data against the CER competitiveness index and our constant market share analysis. Table 6 shows the correlation coefficients for different variables from the Euro Area. The second line below the coefficients indicates the probability that the evidence cannot reject the null hypothesis of zero correlation.

We find highly significant correlations (within the conventional 5% confidence interval) between wage bargaining institutions and competitiveness: the relation is strong for the average level of the CER index (over- or undervaluation) and union density, and for wage coordination and shifts in market share. A weaker correlation (within the 10% range) exists for bargaining coverage and the product effect and for wage coordination and the narrow competiveness effect in the Constant Market Share analysis. There are also some interesting dynamics between the competitiveness measures themselves. Not surprisingly, deterioration in unit labour costs lowers a country's capacity to gain market shares and supply-side improvements increase overall market share. However, it is also interesting that the product effect and the market effect of export demand are negatively correlated. There is also weak evidence, even if it is statistically not significant, that overvaluations of labour costs are negatively correlated with changes in the competitive position, which

56. For an overview see European Commission, 2011.

Table 6 **Correlations between labour market indicators and market share**

Correlation Probability	CER avg	Bargaining coverage	Coordination	Union density	Global	Market	Product	Competition	CER 99_2011
CER avg	1								

Bargaining coverage	0.187945	1							
	0.6031	-----							
Coordination	-0.205339	0.05481	1						
	0.5693	0.8805	-----						
Union density	-0.656385	0.2526	0.560213	1					
	0.0393	0.4814	0.0921	-----					
Total CMS	-0.072516	-0.292736	0.66288	0.084836	1				
	0.8422	0.4118	0.0367	0.8158	-----				
Market	0.121527	-0.298745	0.383919	0.296349	0.164272	1			
	0.7381	0.4018	0.2734	0.4057	0.6502	-----			

Table 6 **Correlations between labour market indicators and market share** (cont.)

Correlation Probability	CER avg	Bargaining coverage	Coordination	Union density	Global	Market	Product	Competition	CER_99_2011
Product	-0.071142	0.588379	-0.005494	0.038104	0.153148	-0.754549	1		
	0.8452	0.0736	0.988	0.9168	0.6727	0.0117	-----		
Competition	-0.107464	-0.438116	0.548152	-0.066645	0.956525	0.030208	0.092967	1	
	0.7676	0.2054	0.1009	0.8549	0	0.934	0.7984	-----	
CER 1999-2011	-0.21358	0.042544	-0.534957	0.012293	-0.556974	-0.34084	-0.017568	-0.441947	1
	0.5535	0.9071	0.1111	0.9731	0.0944	0.3352	0.9616	0.201	-----

Note:
Sample (adjusted): 1 11
Included observations: 10 after adjustments
Balanced sample (listwise missing value deletion)

means that in the long run cost distortions will be corrected. Thus, the evidence from these correlations and the sign of the coefficients[57] send a clear and coherent message: *more centralized wage bargaining by coordinating wages across sectors, extending collective bargaining and strengthening trade unions improves competitiveness within the Euro Area*. In other words, the deepening of the European social market philosophy, which assigns an important role to social partners, can make an important contribution to the improvement of competitiveness within the European Union. In this context, it is also interesting that the UK, where the role of trade unions and social partners has been reduced since the Thatcher years, has had the largest losses of market share in the European Union. Thus, the concept of wage flexibility, as promoted by European authorities, has an ideological twist that increases the risks of macroeconomic imbalances.

Competitiveness, growth and fiscal policy

The philosophy behind the Excessive Imbalances Procedure proposed by the European Commission assumes that loss of competitiveness influences economic growth in member states' economies. It also assumes that deteriorating competitiveness is one of the causes of the European debt crisis. The link between competitiveness and budget positions is economic growth. But how important is it? Economic growth is a complex concept and competitiveness is at best one of many variables that cause differences in growth rates. Economic theory has emphasised the role of physical and human capital accumulation for long-run growth, and of macroeconomic policies for the short-run cyclical dynamics. At least since David Ricardo we also know that comparative advantages in trade will influence productivity and growth. In order to find out how much an improvement of competitiveness could improve economic growth, we estimate a regression of economic growth on private investment, public investment, the yield curve (which catches the cyclical component of growth) and our competitiveness index. Our purpose is to isolate the influence of competitiveness and the yield curve, which catches monetary policies under EMU. Table 7 shows the results. We

57. Because the CER index measures overvaluation and loss of competitiveness with a positive sign, an improvement in competitiveness requires a negative sign. By contrast an improvement in market share has a positive sign.

Table 7 **Effect of public and private investment on GDP growth in Europe**

	EU15									NMS
	1971–2010			Pre EMU			EMU			1993–2010
$\Delta lnGDP_{t-1}$	0.136	0.283*	0.525***	−0.054	−0.090	0.310	0.100	0.672***	0.636***	0.025
	(1.27)	(1.95)	(3.79)	(−0.30)	(−0.41)	(1.20)	(0.81)	(3.74)	(3.90)	(0.20)
$\Delta(GovI/GDP)_t$	−0.003	−0.011	−0.009	−0.002	−0.003	0.001	0.018	0.003	−0.017	0.049**
	(−0.32)	(−1.01)	(−0.85)	(−0.20)	(−0.31)	(0.12)	(1.12)	(0.20)	(−1.24)	(2.01)
$\Delta(PrivI/GDP)_t$	0.008***	0.008***	0.005**	0.009***	0.009***	0.006**	0.015***	0.013***	0.009***	0.016***
	(3.98)	(3.62)	(2.53)	(3.53)	(3.41)	(2.16)	(5.89)	(4.50)	(3.74)	(4.04)
$\Delta yield_t$		−0.002***	−0.002***		−0.002**	−0.001		−0.003	−0.004**	
		(−2.66)	(−2.63)		(−2.57)	(−1.48)		(−1.16)	(−2.23)	
$\Delta lnComp_t$			−0.308***			−0.253***			−0.438***	
			(−6.28)			(−3.54)			(−8.32)	
Time dummies	no	no	no	no	no	no	no	no	no	no
R^2	0.380	0.425	0.493	0.335	0.341	0.410	0.483	0.642	0.738	0.338
N	511	456	456	315	274	274	196	182	182	152
Under id.	33.8***	29.7***	30.7***	13.9***	15.1***	9.3***	10.7***	10.2***	9.7***	5.4**
Weak id.	15.5***	12.1***	12.5***	5.5**	5.5**	3.1*	4.7**	4.9**	4.4*	2.0

Note: Fixed Effects Instrumental Variables estimates. T statistics in parenthesis; * significant at 10% level; ** significant at 5% level; *** significant at 1% level. Instrument used: lag 1 of DlnGDP, lag 2 of govI/GDP and privI/GDP. For under identification and weak identification we report the Kleibergen-Paap rk LM and Wald statistics.
Source: AMECO annual macroeconomic database.

find that private investment drives economic growth in the Euro Area, while public investment is not significant. However, competitiveness and the yield curve (monetary policy) have become highly significant in European monetary union.

It follows that the lower interest rates in the South at first caused a boom by accelerating investment, but that the subsequent reduction in capital efficiency and the deterioration in competitiveness caused by the shift in relative factor prices have structurally reduced the long run growth potential in the South, while the excessive wage restraint in the North has improved it. Hence, the profound restructuring in the European economy does not have consequences for today alone, but also for the future.

This observation poses interesting questions for the interaction between wage-setting and monetary policy. Lower interest rates generate an income effect through the investment multiplier; but they also cause a substitution effect, which lowers long term growth because the higher capital accumulation reduces capital productivity. It then becomes clear that accelerated economic growth is in the long run sustainable only if low interest rates are complemented by wage restraint, so that the substitution effect is neutralised. In order to avoid excessive imbalances, economic governance should therefore focus on creating greater integration of wage bargaining institutions, rather than telling member states to reduce demand and avoid current account deficits. This logic applies to any currency area, regardless of whether it is a monetary union or a nation state. Thus, the 'one size does not fit all' argument is not applicable to the economic problems described here.[58]

We conclude that in member states where growth is lagging behind the Euro Area average, improving competitiveness can make an important contribution toward stimulating growth, employment and other macroeconomic variables. However, assuming that capital and labour productivity respond to relative factor prices, there are not many policy instruments available to increase competitiveness. In the long run, improvements of Total Factor Productivity by technological innovation, R&D, education and the accumulation of human capital will raise growth rates. But in the short run, the main policy variable for influ-

58. For example, one may argue that the severe regional disparities in the UK have been sharpened since collective bargaining was abolished by the Thatcher governments.

encing growth differentials is wage restraint. Between the short and the long term, the restructuring of productive sectors and the specialised focus on sectoral comparative advantages will accelerate the adjustment process. For example, Greece has improved efficiency in tourism, Germany in manufacturing, but France and Italy have lost out in industry. Unless governments take counter-acting measures, these deteriorations will turn into persistent disadvantages and create a permanent economic periphery. Fostering economic growth and real convergence is more important than suppressing current account deficits. A purely market-induced process of social transformation will lead to the hollowing out of the economic periphery and will therefore not be politically sustainable. No doubt, economic policies aimed at improving competitiveness can support a more acceptable form of industrial restructuring and social cohesion, although European policy makers have so far focused mainly on competitiveness and paid less attention to social policies (Fischer and Hofmann 2011). Unfortunately, the *Excessive Imbalance Procedure* designed by the European Commission will not help to reduce social and economic tensions for the reasons we have discussed in this paper. Instead, Euroscepticism and chauvinist populism are fuelled by severe austerity programs, which will neither sustain growth, nor create jobs, nor improve Europe's debt problems. If there is one lesson to be drawn from the Greek adjustment experience, it is that austerity has overstepped the limits of the reasonable. It should be a warning to all European policy makers.

This brings us to the link between competitiveness and public debt. With the emergence of the European debt crisis, much attention has been given to the topic of how competitiveness might not only remedy 'external' imbalances but also improve budget deficits and lower public debt. The transmission mechanism from competitiveness to budget deficits can take three forms. (1) Competitiveness may raise economic growth, and therefore tax revenue, and this would contribute to lower budget deficits. (2) Improving competitiveness could also lead to lower revenue if the improvement is caused by lower taxes on wages. (3) If governments raise expenditure in order to subsidize firms, higher competitiveness would also cause budget balances to deteriorate.

In order to assess the impact of competitiveness on fiscal policy in the Euro Area, we simulate budget positions in the following way. We estimate separately revenue and primary expenditure functions dependent on external and internal demand in member states and on our competi-

tiveness indicator. Taking the difference between estimated revenue and primary expenditure gives us the *expected structural primary budget position*. Primary surpluses sufficient to service the debt are necessary to ensure debt sustainability (Collignon and Mundschenk 1999). We want to know whether improvements in competitiveness and growth can yield expected structural primary budget surpluses sufficiently high to service the debt. For this purpose, we have assumed three scenarios: the first scenario assumes the same growth rate and same competitiveness that has prevailed over the recent years. The second scenario assumes higher growth and half a percentage point improvement of competitiveness per annum. Finally, the negative scenario assumes lower growth and half a percentage point of competitiveness loss. Thus, the 'high' scenario is a highly optimistic view of growth and competitiveness, the 'low' scenario a very depressed view.

The following figures show the performance. Spain in Figure 16 is a typical case. One observes the dramatic loss of income after the Global Financial Crisis in 2008 which has turned primary surpluses into deficits. Under normal conditions, our estimates expect that primary surpluses will not return for approximately another five years. What about the sustainability of Spanish debt? The punctuated horizontal line indicates the primary surplus required to service the debt under conditions prevailing in 2010. Our chart shows that Spain will not be able to reach a position sufficient to service its debt under the moderate growth and competitive scenario. In fact, in the pessimistic scenario it will even take 10 years for Spain to return to a balanced primary budget, which means that public debt will rise substantially. However, with the improvement of economic growth and competitiveness, public debt would become sustainable and would stabilize in the early 2020s.

France is a worrisome case, as may be seen from Figure 17. Even with the medium scenario this country will not return to positive primary surpluses, and in fact under the low-growth low-competitiveness scenario they will even deteriorate further. But even if France were to improve its growth and competitiveness as stipulated by our model assumptions, this would not be sufficient to bring French debt dynamics under control. Hence, one has to be concerned about the capacity of France to sustain its public debt position.

Figure 16 **Spain**

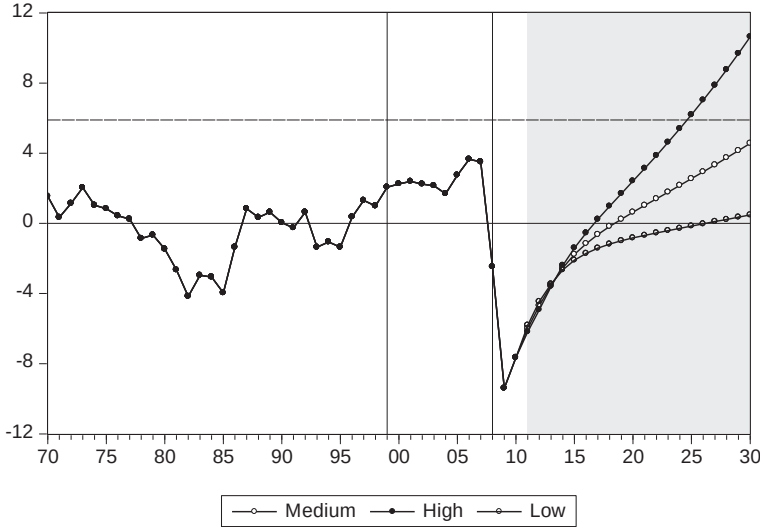


Figure 17 **France**

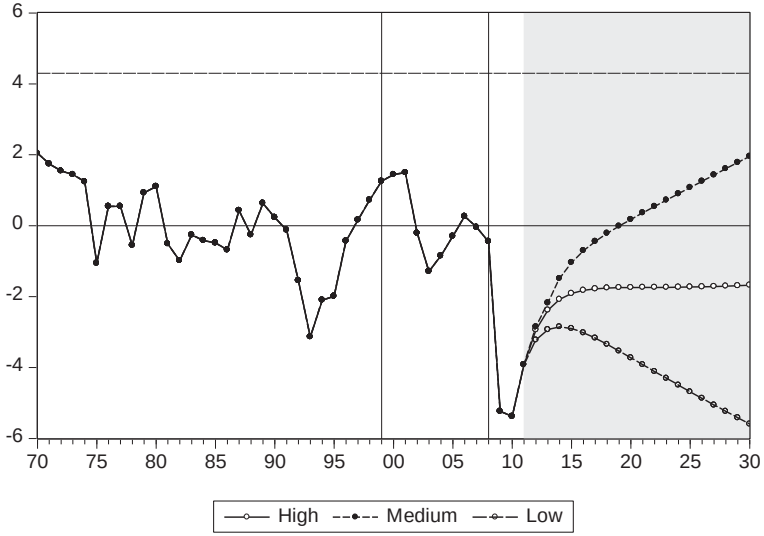
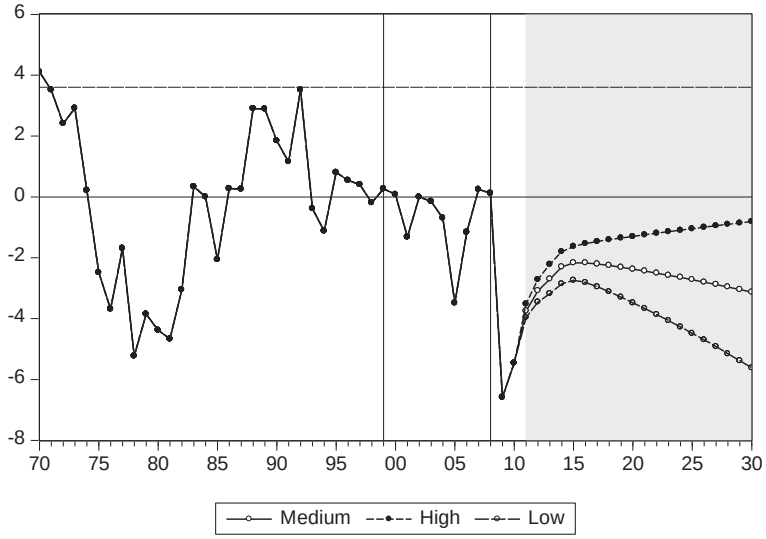


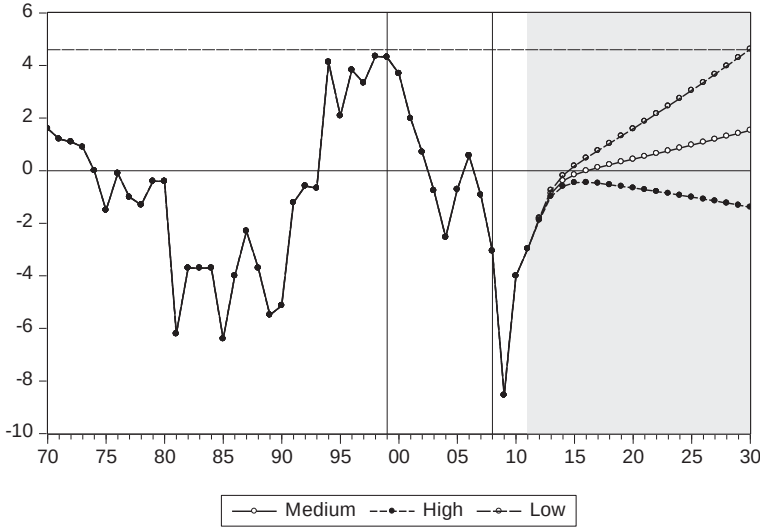
Figure 18 **Portugal**



Portugal is in a worse condition. In Figure 18, even the most positive scenario will not bring the primary budget position back into surplus, which means that Portuguese public debt is unsustainable.

Finally, Greece (Figure 19) is a weird case. The 'high' scenario performs worse than the 'low' scenario. There is a negative relation between competitiveness improvements and tax revenue, presumably because competitiveness is dependent on cutting taxes on wages. As a consequence, Greece could improve its competitiveness by keeping wages low or by cutting taxes on labour. On the other hand, Greece could also reach a primary surplus through taxing wages to a larger extent than is the case at present, but this would cause a deterioration of competitiveness. Thus, there is a perverse effect which indicates that the structure of the tax system in Greece will need a profound restructuring. In fact, the emphasis on VAT that has been requested under the adjustment programmes from the IMF and European Union has moved in the right direction in this respect.

Figure 19 **Greece**



These simulations of debt sustainability are, of course, no predictions. They show how improving competitiveness by lowering unit labour costs would affect structural primary budget positions, given the conditions and structure of fiscal policy that have prevailed over the last decade. The debt crisis has highlighted the need for budget consolidation and there is no doubt about the need for fiscal adjustment, although how this is best achieved should be subject to a critical European-wide debate and not confined within the closed circles of policy makers. The widely prevailing *pensée unique* of budget cuts and austerity is not the only solution. Greece demonstrates that balancing budgets is impossible without sufficient demand and GDP growth. In the end, a fundamental reform of the Euro Area's Stability and Growth Pact may be necessary to produce better results. However, our analysis is a warning against expecting miracles in fiscal consolidation as a consequence of improved competitiveness. Imposing the *Excessive Imbalance Procedure* on top of the *Excessive Deficit Procedure* and the Stability and Growth Pact without matching fiscal discipline by a coherent strategy of long term supply-side improvements and a short term balanced demand management could have devastating consequences for peripheral countries in the European Union.

Conclusion

Imbalances matter in monetary union, but not in the way they are portrayed by European authorities. Imbalances matter because they generate inequalities in wealth, income, jobs and skills; they condemn regions to a permanently peripheral status.

The Commission' *Excessive Imbalance Procedure* and its first *Alert Mechanism Report* focus on the correction of current account deficits (but hardly on surpluses) and external indebtedness, but these are concepts which have no significance in a monetary union. Current accounts are important in the relations between economies with different currencies, because deficits build up debt in foreign currency, which needs to be paid back by future earnings in foreign currency, generating future surpluses. The intertemporal budget constraint therefore correctly states that today's external debt must be equal to the sum of future discounted current account surpluses. In a monetary union, this logic does not hold, because today's debt is repaid in the same currency. The intertemporal budget constraint is therefore simply stating the obvious solvency rule that present debt must be paid back by future income and it does not matter where the income is generated. Revenue earned in the tradable sector has the same status as revenue earned in the non-tradable sector. This makes the current account statistics within monetary union redundant, although they retain their importance in the international context between the Euro Area and the rest of the world.

However, the policy focus on current account statistics is dangerous as it could lead to mistaken policy responses. The most dangerous interpretation is related to the so-called TARGET2 imbalances in the ECB's payment system. We have seen that these imbalances are the result of dysfunctional interbank markets that are a consequence of the financial crisis and widespread distrust regarding the solvency of banks. They do not necessarily reflect imbalances in the real economy. However, the European payment system is the nervous system of monetary union. Suppressing or limiting TARGET2 balances is equivalent to abolishing monetary union. Yet the fact that credit creation and collateral for monetary policy may become overly concentrated on debt from peripheral regions of the Euro Area does increase liquidity and default risks. The appropriate policy responses to deal with these risks are better financial supervision at the European level to avoid agency capture and a pooling of government debt, for example in the form of Union Bonds

(Collignon 2011a and 2011b), in order to strengthen the ECB's asset structure.

In a monetary union all debts are repaid in the same currency; current accounts and payment flows between regions and member states redistribute money balances across the Union. This redistribution is the real economy adjustment mechanism in the long run. It works through a monetarist channel, whereby the relative reduction in money balances generates a relative reduction in demand that translates into lower prices, less growth, rising unemployment and falling wages. Left to market forces alone, this adjustment will be slow and generate long drawn out regional recessions and social hardship. There are, however, policy options to reduce this painful process, although the focus on current accounts in the *Excessive Imbalance Procedure* is likely to make things worse.

It is important to understand the causes behind the emergence of macroeconomic imbalances over the last decade. Internal imbalances in the Euro Area are a market result rather than a consequence of government failure. Labour and capital are allocated according to their comparative advantages in an integrated single market with a single currency. Following the adoption of the euro, the convergence of interest rates to German levels has shifted the relative costs for capital and labour in the South and this has had profound consequences for the economic transformation of the Euro Area. It has accelerated capital accumulation in the South and, because of diminishing returns, lowered capital productivity relative to the North. The consequent reallocation of resources in the euro Area is a sign of the efficiency and not of dysfunctionalities of monetary union. It is important not to distort and inhibit the potential efficiency gains of the large European economy. The logic of the European single market and single currency can lead to long lasting current account imbalances, which would be desirable if they support real convergence in the EU. They are cause for concern only if they slow down economic growth. In any case, they are technically sustainable, because the intermediation of banks and financial institutions allocates savings and investments across the currency union. In that respect, the Euro Area works like any other large country.

A different question is whether these imbalances are desirable from a social equity point of view. This is a political question. The broad picture emerging from our analysis shows a fundamental structural reallocation

of labour and capital in Europe, which is creating gains and losses, winners and losers. In a social market economy, governments must correct such distortions in the common interest. In the interest of welfare and in line with art. 3 of the Treaty on European Union, the issue of Transfer Union deserves a more serious and mature debate than political agitation permits in the EU today. Such a debate should clarify to what an extent a Transfer Union is desirable, how it could be legitimized, and how it could be implemented in practice. However, how to answer these questions cannot be left to member states' governments, because nation states have, by definition, a chauvinistic bias in favour of the familiar, which may impede reaping the benefits of European integration. Economists describe this situation as Nash equilibrium, where every government takes decisions that are best for them individually, given what the others do, although the welfare of all would be improved if they changed their strategies collectively. Such a change is unlikely to occur in Europe, because policy makers are bound to national constituencies, while the collective welfare has a European constituency for which no agent or government exists. There are hard choices waiting for Europe. But the choice of a social model, in other words, between a liberal or a social Europe, must be decided by all European citizens jointly because the choice has a consequence for each citizen individually. Ultimately, the policy debate must take place in the European Parliament and citizens must choose through elections to the Parliament, for there is no other forum where they could deliberate and decide together.

In the economic field, competitiveness depends on more than wage-setting, although wages are a crucial variable in the adjustment process. While the link between wages and productivity has often been emphasized by academic researchers as well as by policy makers, the distribution-neutral 'Golden Rule' is insufficient as it neglects the important contribution of the average efficiency of the capital stock in European member state economies. As the efficiency of capital improves, unit labour costs can rise without loss of competitiveness. On the other hand, imbalances may need to be corrected by coordinated wage policies: overvalued member states must lower their unit labour cost position relative to the Euro Area; wages in undervalued economies can increase faster. In other words, Europe needs more coordination of wage-setting strategies. However, technological progress may be the most important variable to improve competitiveness in the long run. Yet improving TFP in the European Union has been a disappointing policy objective since the Lisbon Strategy and there is no reason why the *Euro 2020 Strategy*

will do any better, because the coordination failures generated by the intergovernmental system of governance in the Euro Area have not been overcome. One way to overcome the collective action problems inherent in Europe's economic governance could be to set up a European Treasury, as Jean-Claude Trichet has suggested, and to design a European industrial strategy that would be implemented – in the hopefully not too distant future – by an Economic Government.

Macroeconomic imbalances are not only a matter of relative costs and competitiveness. They also depend on aggregate demand and economic growth. While markets will always respond to incentives, governments must set up strategic orientations and ensure that the market incentives reflect these options. In this context, it may be useful to set up a *European Economic Holding*, or *European Institute for Economic Reconstruction*, which would assist on a day-by-day basis with the implementation and management of an integrated Europe-wide growth strategy. It could, for example, undertake big European investment projects for infrastructure improvements, such as fast trains, alternative energy networks, etc. In the United States, President Obama has called for a *National Infrastructure Bank* with similar intentions,[59] although in Europe the European Investment Bank (EIB) fulfills this function already. The European Economic Holding would differ from the EIB insofar as it would not operate as a financial intermediary, but as a European holding company that would own assets or shares of national companies that governments need to sell in order to raise finance and reduce their debt. The holding would seek to increase the efficiency of these companies by integrating them into a fully integrated strategy in the Single Market. In the past, proposals for Europe-wide infrastructure were often not realized because collective action problems blocked the implementation of coordinated policies between member states. This is also a handicap suffered by Commission President Barroso's 'Europe 2020 Project Bond Initiative'. By empowering a European agency to help Southern Europe to regain economic growth and combining this objective with a coherent and fully integrated economic-industrial strategy, the gridlock and mutual blockages of national governments could be overcome. Such an Economic Government would be far superior to the bureaucratic *Excessive Imbalance Procedures*, which coordinate nothing but civil servants, and produce little but mountains of paper. All of Europe would benefit.

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59. See: http://thf_media.s3.amazonaws.com/2011/pdf/wm3235.pdf [Accessed 01.03.2012]

This report on macroeconomic imbalances has been critical of some of the policies and actions envisaged or already taken by European authorities. While I do not doubt that these policies are inspired by good will to overcome Europe's problems, I am convinced that confused thinking and in particular misunderstandings of how European monetary union works can create even more damage. The spirit in which this critique is offered has been formulated in a different context by Sulak Sivaraksa (1998): '*Loyalty demands dissent*!'

Annex

Panel Error Correction Model for the relationship between HICP, M3 and GDP

The countries in the sample are those of the Euro Area 16 (for Estonia the sample was too small).

The cointegration vector is estimated through dynamic OLS with 4 lags and leads + fixed effects, year and quarter dummies and country specific trends. This is done in order to control for cross sectional dependency. See Mark and Sul 2003.

For the short run part we tried 4 different ECM: with and without time (year and quarters) dummies (column 2 and 4) and with the lagged dependent variable (columns 3 and 4, it is an IV estimate).

Annex **Table 1**

Cointegration vector Estimation method Dynamic OLS (4 lags and 4 leads) Dependent variable Relative HICP				
Relative M3	0.130**			
	[0.053]			
Relative GDP	–0.049*			
	[0.027]			
Constant	0.191			
	[0.201]			
Short-run dynamics	OLS-FE	OLS-FE	IV-FE	IV-FE
Error correction t–1	–0.063**	–0.060**	–0.075**	–0.065**
	[0.026]	[0.025]	[0.032]	[0.031]
Δ(Relative HICP)t–1		0.220	0.084	
			[0.415]	[0.350]
Δ(Relative M3)t	0.055**	0.053**	0.062**	0.056**
	[0.019]	[0.016]	[0.021]	[0.019]
Δ(Relative M3)t–1	–0.015	–0.012	–0.026	–0.016
	[0.016]	[0.015]	[0.026]	[0.022]
Δ(Relative GDP)t	–0.002	–0.001	–0.005	–0.001
	[0.011]	[0.009]	[0.011]	[0.008]
Δ(Relative GDP)t–1	0.005	0.005	0.005	0.005
	[0.009]	[0.008]	[0.008]	[0.007]
Constant	0.014**	0.014**		
	[0.006]	[0.005]		
Time dummies	No	Yes	No	Yes
R2	0.068	0.126	–0.072	0.085
N	609	609	609	609
Under identification1			21.903***	28.297***
Weak identification2			17.892***	21.418***

Standard errors in brackets; * significant at 10% level, ** significant at 5% level, *** significant at 1% level. 1 Kleibergen–Paap rk LM statistic; 2 Kleibergen–Paap rk Wald F statistic;
Variables:
relative M3=logM3i–logM3ea i=AT, BE, ..., SK;
relative HICP=logHICPi–logHICPea
relative GDP=logGDPi–logGDPea

Annex **Table 2**

Class	Products	Growth rate
1	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	99.4
2	Pharmaceutical products	83.9
3	Iron and steel	23.7
4	Copper and articles thereof	11.8
5	Plastics and articles thereof	10.2
6	Articles of iron or steel	6.3
7	Organic chemicals	5.6
8	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin	5.3
9	Toys, games and sports requisites; parts and accessories thereof	5.2
10	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	4.9
11	Miscellaneous chemical products	4.7
12	Rubber and articles thereof	4.6
13	Ores, slag and ash	4.2
14	Aluminium and articles thereof	4.1
15	Meat and edible meat offal	3.8
16	Miscellaneous edible preparations	3.5
17	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	3.0
18	Essential oils and resinoids; perfumery, cosmetic or toilet preparations	2.8
19	Residues and waste from the food industries; prepared animal fodder	2.8
20	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes	2.8
21	Preparations of cereals, flour, starch or milk; pastrycooks' products	2.4
22	Cocoa and cocoa preparations	2.3
23	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder	2.1
24	Railway or tramway locomotives, rolling-stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electro-mechanical) traffic signalling equipment of all kinds	2.0
25	Coffee, tea, mat+ and spices	1.9
26	Nickel and articles thereof	1.9
27	Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silkworm gut)	1.8

Class	Products	Growth rate
28	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates	1.7
29	Pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard	1.6
30	Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepared waxes, polishing or scouring preparations, candles and similar articles, modelling pastes, 'dental waxes' and dental preparatio	1.6
31	Fertilisers	1.5
32	Ships, boats and floating structures	1.2
33	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included	1.0
34	Zinc and articles thereof	0.9
35	Edible vegetables and certain roots and tubers	0.8
36	Lead and articles thereof	0.7
37	Cereals	0.6
38	Tin and articles thereof	0.4
39	Edible fruit and nuts; peel of citrus fruits or melons	0.4
40	Live animals	0.3
41	Clocks and watches and parts thereof	0.3
42	Products of the milling industry; malt; starches; inulin; wheat gluten	0.3
43	Other base metals; cermets; articles thereof	0.2
44	Fish and crustaceans, molluscs and other aquatic invertebrates	0.1
45	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations	0.1
46	Headgear and parts thereof	0.1
47	Arms and ammunition; parts and accessories thereof	0.1
48	Prepared feathers and down and articles made of feathers or of down; artificial flowers; articles of human hair	0.1
49	Musical instruments; parts and accessories of such articles	0.1
50	Products of animal origin, not elsewhere specified or included	0.0
51	Works of art, collectors' pieces and antiques	0.0
52	Manufactures of straw, of esparto or of other plaiting materials; basketware and wickerwork	-0.0
53	Vegetable plaiting materials; vegetable products not elsewhere specified or included	-0.0
54	Umbrellas, sun umbrellas, walking-sticks, seat-sticks, whips, riding-crops and parts thereof	-0.0
55	Sugars and sugar confectionery	-0.1

Class	Products	Growth rate
56	Silk	-0.2
57	Lac; gums, resins and other vegetable saps and extracts	-0.2
58	Albuminoidal substances; modified starches; glues; enzymes	-0.2
59	Preparations of vegetables, fruit, nuts or other parts of plants	-0.2
60	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof	-0.4
61	Beverages, spirits and vinegar	-0.4
62	Furskins and artificial fur; manufactures thereof	-0.4
63	Miscellaneous articles of base metal	-0.5
64	Cork and articles of cork	-0.5
65	Other made-up textile articles; sets; worn clothing and worn textile articles; rags	-0.8
66	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn	-1.0
67	Miscellaneous manufactured articles	-1.0
68	Tobacco and manufactured tobacco substitutes	-1.1
69	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery	-1.3
70	Salt; sulphur; earths and stone; plastering materials, lime and cement	-1.3
71	Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage	-1.7
72	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal	-1.8
73	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use	-2.1
74	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks	-2.2
75	Articles of stone, plaster, cement, asbestos, mica or similar materials	-2.2
76	Footwear, gaiters and the like; parts of such articles	-2.2
77	Carpets and other textile floor coverings	-2.4
78	Knitted or crocheted fabrics	-2.7
79	Articles of apparel and clothing accessories, knitted or crocheted	-2.8
80	Raw hides and skins (other than furskins) and leather	-3.0
81	Glass and glassware	-3.0
82	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans	-3.1
83	Wool, fine or coarse animal hair; horsehair yarn and woven fabric	-3.4
84	Ceramic products	-4.0
85	Wood and articles of wood; wood charcoal	-4.8

Class	Products	Growth rate
86	Photographic or cinematographic goods	-5.4
87	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, not elsewhere specified or included; illuminated signs, illuminated name-plates and the like; prefabricated buildings	-5.6
88	Man-made staple fibres	-5.9
89	Cotton	-6.5
90	Strip and the like of man-made textile materials	-7.3
91	Aircraft, spacecraft, and parts thereof	-9.6
92	Articles of apparel and clothing accessories, not knitted or crocheted	-9.7
93	Paper and paperboard; articles of paper pulp, of paper or of paperboard	-14.2
94	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	-20.6
95	Other products	-30.2
96	Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof	-65.7
97	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	-90.0

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