

Oesterreichische Nationalbank (Ed.)

## Proceedings

# Toward a Genuine Economic and Monetary Union

Workshops - Proceedings of OeNB Workshops, No. 21

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OESTERREICHISCHE NATIONALBANK  
EUROSYSTEM

# WORKSHOPS

Proceedings of OeNB Workshops

Toward a Genuine Economic  
and Monetary Union

September 10 and 11, 2015

The issues of the “Workshops – Proceedings of OeNB Workshops” comprise papers presented at the OeNB workshops at which national and international experts – including economists, researchers, politicians and journalists – discuss monetary and economic policy issues. One of the purposes of publishing theoretical and empirical studies in the Workshop series is to stimulate comments and suggestions prior to possible publication in academic journals.

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**Opinions expressed by the authors of studies do not necessarily reflect the official viewpoint of the OeNB.**

# Editorial

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*Edmond Alphandéry*  
*Chairman of the Euro50 Group*

*Franz Nauschnigg*  
*Helene Schuberth*  
*Oesterreichische Nationalbank*

Europe's Economic and Monetary Union (EMU) is still an unfinished business, even if we take the various post-crisis reforms into account. While many of these repair measures have certainly contributed to cooling down the crisis, they basically shifted the crisis features from external to internal imbalances, i.e. from current account divergence to unemployment. Moreover, flexibility-enhancing reforms have not yet delivered prosperity and convergence – two major promises of EMU.

The so-called *Five-Presidents' report*<sup>1</sup> is a reasonable roadmap to EMU completion built on a broad consensus. It proposes to gradually complement today's rule-based framework with further sovereignty-sharing and common institutions in four areas: *Economic Union*, *Financial Union*, *Fiscal Union* and *Political Union*. The report is realistic enough to distinguish between two stages: In stage one, up to 2017, reforms should be pursued within the existing legal framework and should comprise the completion of Banking Union, the start of the Capital Markets Union, and the establishment of national Competitiveness Authorities and a European Fiscal Board, etc. In the second stage, from mid-2017 (i.e. after the British referendum and elections in Germany and France) until 2025, more far-reaching reforms should involve a Treaty change. At the end of this process, a democratically accountable euro area treasury should be in place.

To spur academic debate on this roadmap, the *Oesterreichische Nationalbank (OeNB)* in cooperation with the *Euro50 Group* organized a workshop on September 10 and 11, 2015, which looked at creative suggestions for reforms through the lens of economic theory.<sup>2</sup>

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<sup>1</sup> Juncker, J.-C., D. Tusk, J. Dijsselbloem, M. Draghi and M. Schulz. 2015. Completing Europe's Economic and Monetary Union. European Commission. Brussels.

<sup>2</sup> For further details, see the workshop program and presentations at [www.oenb.at/en/Monetary-Policy/Research/workshops/toward-a-genuine-economic-and-monetary-union.html](http://www.oenb.at/en/Monetary-Policy/Research/workshops/toward-a-genuine-economic-and-monetary-union.html).

- One workshop contribution proposed a common unemployment insurance (or re-insurance) system that compensates for dismantled national automatic stabilizers particularly in countries that were under financial stress. In line with the Five Presidents' report, such a system should not lead to permanent or unidirectional financial transfers but rather help bridge asymmetric shocks or unsynchronized cycles among Member States. Any insurance can only work if every contributor sees a chance to benefit (including greater stability of the whole system).
- Another idea was to introduce a productivity-oriented wage-setting rule, very much inspired by the Austrian tradition of social partnership. OeNB economists proposed a “trinity rule” that takes productivity increases, the ECB inflation target and external imbalances duly into account.
- The Capital Markets Union was defended as a means to make the euro area less dependent on banks. Nevertheless, there were warnings against repeating the mistakes of EMU creation, when too much emphasis had been placed on (financial) market-based risk-sharing, which laid the foundations of the crisis via debt accumulation and asset price bubbles. We should definitely think harder about ways to ensure that cross-border investment flows contribute to smart, inclusive and sustainable growth.
- The workshop also discussed controversial issues such as shared debt management. Joint issuance of sovereign bonds would have merits in stabilizing government debt markets, supporting monetary policy transmission and fostering financial stability and integration. However, it might require a Treaty change and the consideration of potential moral hazard. Meanwhile, synthetic eurobonds could be a feasible alternative when it comes to dealing with the debt overhang and stabilizing debt markets. These securities would be designed as a basket of national bonds where each country only guarantees its own share in the basket.
- Another proposal was to introduce a golden rule for public investment that exempts important hard and soft investment (in infrastructure, technology, skills, etc.) from fiscal rules (Stability and Growth Pact). Investment is still extremely low in the euro area, thus putting a break on growth. The Juncker Investment Plan is a move in the right direction, but its implementation possibly not (fast) enough.
- The Five Presidents' report did not explicitly refer to a budget for the euro area, but it is difficult to imagine a treasury that does not dispose of its own fiscal capacity. There would be the need for financing European public goods and supporting structural reform efforts in individual Member States that benefit the euro area as a whole. Financing could be ensured through the treasury's own resources (European taxes), which would grant some degree of independence, limit harmful tax competition and target cross-border externalities (e.g. carbon tax).

While the desirability and feasibility of individual proposals were debated, workshop participants seemed to agree that the smooth functioning of a full-fledged



currency union requires a fiscal and economic policy framework that combines both risk reduction and risk-sharing; in other words: discipline and solidarity.

After years of recession, the economic conditions for adjustment and institution building in the euro area have improved with the policy mix becoming more supportive. Now, however, the main risk for the euro lies in the social and political realms. The longer it takes for reforms to pay-off for ordinary citizens, the more difficult it is to convince them that an “ever closer union” is in their very own interest. Progress toward a genuine EMU will take time, but time is a scarce resource. Let us use it efficiently.

## Workshop summary

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*Andreas Breitenfellner*  
*Oesterreichische Nationalbank*

*Lukáš Veselý<sup>1</sup>*  
*European Parliament*

While the monetary dimension of Europe's Economic and Monetary Union (EMU) was fully implemented in 1999, the economic dimension is still work in progress. But how much pooling of decision making is really necessary? And, how should such a shared stewardship be designed to ensure a smoothly functioning EMU? In early September 2015, international experts discussed these questions at a workshop organized by the Oesterreichische Nationalbank (OeNB) in cooperation with the Euro50 Group, which drew more than 180 participants.

The starting point for the debate was the *Five Presidents' report* "Completing Europe's Economic and Monetary Union" released in mid-2015, in which the presidents of the European Commission, the European Council, the Eurogroup, the European Central Bank and the European Parliament presented a long-awaited road map for deepening EMU. To put EMU on a more solid foundation, they propose gradually complementing today's economic and fiscal rules with further sovereignty sharing within common institutions. This process encompassing two stages in which the four areas economic, financial, fiscal and political union should be strengthened is slated to culminate by 2025 in the establishment of a euro area treasury for collective decision making.

Through the lens of economic theory, the workshop looked at various EMU reform proposals, covering, for instance, compensatory mechanisms for stabilizing Member States' economies during asymmetric shocks, productivity-oriented wage-setting rules, financial integration, shared debt management, golden rules for public investment and a budget for the euro area. Almost all of the 20 presented papers had been selected from a pool of around 50 high-quality submissions received in response to a call for papers. Notwithstanding some disagreement on the desirability or feasibility of several proposals, a consensus emerged about the need for a fiscal and economic policy framework that combines risk reduction (discipline) and risk sharing across the euro area countries (solidarity).

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## What governance for the euro area?

In his opening remarks, OeNB Governor *Ewald Nowotny* stressed that – on the eve of the EU finance ministers’ first debate of the Five Presidents’ Report – both the topic and the timing of the workshop were right on target. In his view, the fact that the so-called sovereign debt crisis occurred in Europe – by far not the only indebted region – was connected to EMU’s incomplete institutional setting. The four pillars of the Five Presidents’ report zero in on exactly such unsolved issues. While progress on banking union has already been remarkably smooth, achieving a fiscal union will be more challenging as budgetary policies are the crown jewels of parliamentary democracy. Nowotny cautioned that the proposed reforms will meet with a reality that varies greatly among Member States, warning against alarmist voices that call for immediate radical change under the threat of broad failure. In the EU, change takes time as it could be vetoed by any single Member State. In light of this important fact, Nowotny commended the step-by-step approach taken by the authors of the Five Presidents’ Report, who wisely distinguish between two stages: (1) changes within the existing legal framework and (2) a long-term perspective involving a Treaty change.

*Paul De Grauwe*, Professor at the London School of Economics and Political Science (LSE), pointed out that the sovereign debt crisis originated from a classical boom-bust story. A misdiagnosis of government profligacy, however, led to excessive austerity in the periphery without fiscal stimulus in the center, which resulted in the euro area’s economic stagnation. De Grauwe identified three design failures of EMU that, following the euro’s introduction, weakened its members. First, a monetary union with national fiscal policies exacerbated “national animal spirits.” Second, monetary and fiscal stabilizers that had existed at the national level were stripped away from the Member States. Third, the interdependence of illiquid sovereigns and illiquid banks had led to a diabolical loop. De Grauwe sketched three areas where EMU is in need of a redesign. First, the ECB should act as a lender of last resort; as a matter of fact, its readiness to buy sovereigns’ debt in times of illiquidity has already proved spectacularly successful in calming bond markets. Second, coordination of macroeconomic policies should aim at redressing both losses in competitiveness and asset bubbles. The EU’s current Macroeconomic Imbalance Procedure (MIP), however, is being implemented in an asymmetric way by putting deficit countries rather than surplus countries under pressure, which creates a deflationary bias and contributes to stagnation. Third, a budgetary union is needed to pool national debt by shifting the balance of power back from financial markets to the states and public institutions; and to create an insurance mechanism that transfers resources to countries hit by negative economic shocks, while taking moral hazard duly into account. There clearly is a tradeoff between budgetary union and flexibility; but flexibility is unpopular and inappropriate in cases of demand shocks.

According to De Grauwe, the current integration fatigue has, by default, given rise to a hegemonic political union, where creditor nations rule, i.e. impose their economic policy preferences on debtor countries. Since such a union is unsustainable, a democratic process of political unification is necessary.

*Otmar Issing*, former Member of the Executive Board of the ECB and President of the Center for Financial Studies, noted that some elements of banking union have already fueled intense controversy. In his view, the Five Presidents' report does not make a case for a fully-fledged fiscal and political union, but only for steps in this direction, including a macroeconomic stabilization fund and a euro area treasury. Issing maintained that a partial transfer of national fiscal sovereignty must rely on arrangements for democratic accountability, legitimacy and institutional strengthening. A number of institutional arrangements presented in the said report, such as closer cooperation between the European Parliament, national parliaments and the European Commission, are indeed moves in the direction of a political union. However, limited transfer of fiscal sovereignty combined with limited democratic legitimacy is a dangerous path to follow. Issing warned that limited democratic legitimacy will prevail as long as the transfer of fiscal sovereignty is not based on changes in national constitutions.

## **Completing Europe's EMU – where do we stand?**

Representatives of all institutions that contributed to the drafting of the Five Presidents' report as well as two renowned academics gave insights into the various underlying perspectives and strategies in a policy panel.

*Othmar Karas*, Member of the European Parliament, advocated EMU deepening with a strengthened political union as its final goal. EU citizens do not accept inter-governmental quick fixes outside the Community framework as legitimate options. Input and output legitimacy must be improved by, among other things, transparent and clear rules, a European Monetary Fund instead of the “Troika,” stronger control by the European Parliament and improved accountability. While commending the Report, he insisted that the proposed competitiveness authorities require binding rules to be taken seriously.

*Jose Eduardo Leandro*, Principal Adviser in the European Commission, explained the rationale behind the Five Presidents' report: The incompleteness of EMU fuels doubts about its long-term viability, which in turn hampers the euro area's short-term recovery. Slow relative price adjustments and insufficient national fiscal stabilizers make some risk sharing indispensable. The report is sequenced to strengthen first private-sector risk sharing (financial union) and later public risk sharing, as further structural convergence will emerge. In mature currency unions like the U.S.A., 80% of shocks are smoothed across states, one-third of which

through fiscal channels, and the rest via financial, product and labor markets. Europe, in contrast, manages to smooth only 40% of shocks.

*Frank Smets*, Counsellor to the President of the ECB, said that the ECB has been playing a visible role in managing the crisis since 2010, thanks to its independence, supranational setup and clear mandate. However, the functioning of EMU came under question when other players delivered too little too late, given that democratic decision making takes time. EMU should move from a rules-based framework to institutional decision making. The proposal to create a treasury for the euro area points in that direction, requiring appropriate legitimacy and accountability. The banking union needs a Single Restructuring Fund (SRF) with a fiscal backstop and a European Deposit Insurance Scheme (EDIS), and should be complemented by a capital markets union (CMU) to strengthen private risk sharing. Weakening the banks-sovereigns link would reestablish market discipline over sovereigns by making the no-bailout rule credible.

*Christina Jordan*, Economic Advisor in the Cabinet of the President of the European Council, said that the Five Presidents' report strikes a balance between ambition and realism. The starting point is already strengthened economic governance notwithstanding implementation lags. Looking at Member States' developments had made it clear that the timing was just not right to reach agreement on a Treaty change. Therefore, the President of the European Council focused on the completion of banking union to weaken boom and bust cycles.

*Niels Thygesen*, Professor at the University of Copenhagen, argued that the Five Presidents' report goes beyond political realism and overemphasizes the need for solidarity. While banking union might be a good substitute for fiscal union, the former nevertheless requires some fiscal backup, at least temporarily, until contributions from the financial sector will have been built up. However, he questioned the need for deposit insurance against the backdrop of a credible bail-in rule. Expressing uneasiness about fiscal integration, he noted that already the Delors Committee (of which he had been a member) had failed to agree on a proper aggregate fiscal stance. He urged more short-term generosity, but, at the same time, emphasized long-term self-reliance.

*Waltraud Schelkle*, Professor at LSE, registered an unprecedented divorce between the pillars of EMU luckily tackled by the Five Presidents' report by advocating a minimum of joint fiscal stabilization. She preferred talking about risk sharing rather than solidarity just as insurance against accidents is needed rather than generosity in cases of self-inflicted harm. Risk sharing should be mandatory and cover unspecified contingencies, as the next crisis might not originate from the banking system. She suspected that some of EMU's design flaws actually were flaws by design as creditors benefitted handsomely from the southern overheating while avoiding most of the costs of the subsequent damage. Correcting these flaws implies a fiscal underwriting of the banking union, promoting diversity instead of

the home bias in sovereign bond markets, and reinsuring the SRF by a credit line from the European Stability Mechanism (ESM), which should have a banking license, as only unlimited capacity would discourage speculators.

The debate that ensued covered various issues, such as the importance of a clear long-term vision for investors, the interpretation of “structural” convergence, the rationale of insurance to limit contagion, the issue of how to gain sovereignty by sharing it, the danger of sovereign debt restructuring in the absence of a safe asset, the role of macroprudential policies to check imbalances, the need to streamline the European Semester and the urgency to start a proper public debate.

## **EMU governance**

*Jakob de Haan*, De Nederlandsche Bank, presented a paper titled *Reforming the architecture of EMU: ensuring stability in Europe*. The euro area crisis was not primarily driven by public debt but by diverging financial cycles and a lack of provisions for crisis resolution. Capital inflows to peripheral countries that were mainly used for nonproductive investment (housing) were mistaken for desirable financial integration. The subsequent rescuing of the financial sector impaired public finances more than a normal downswing in a business cycle would have. Although all major weaknesses of EMU had already been addressed at the EU level, clear imbalance criteria and enforcement instruments were still missing. De Haan outlined his preferred solution, namely to replace the Stability and Growth Pact (SGP) by Eurobonds and to give the European Council, rather than national sovereigns, the power to borrow in times of crisis. This would ensure compliance and allow for tackling asymmetric shocks with only a limited transfer of sovereignty.

*Marek Dabrowski*, Center for Social and Economic Research (CASE) in Warsaw, presented a paper entitled *Monetary Union and fiscal and macroeconomic governance*. He suggested that further fiscal and political integration in EMU should be guided by a cost-benefit analysis based on the theory of fiscal federalism. Applying the principle of subsidiarity to EMU, he identified potential benefits only in the centralization of deposit insurance and bank resolution. In his view, monetary unions could exist with no or limited fiscal union, as the latter faces political constraints anyway. Within EMU, neither market discipline nor fiscal rules seem to work – despite strengthened governance arrangements – due to a collective action problem, as many countries exceed the 3% deficit threshold. His preferred solution would therefore be the restoration of the no-bailout rule, supplemented by clear and consistently enforced fiscal rules.

## Economic Union

*Stefan Ederer*, Austrian Institute of Economic Research (WIFO), presented his paper *Macroeconomic imbalances and institutional reforms in EMU*. Diverging unit labor costs within the euro area made the core relatively competitive vis-à-vis the periphery, with France in the middle. At the same time, domestic demand in the core made only a negligible contribution to growth, while it played a key role in the periphery. EMU exacerbated these trends through the real interest rate channel, a common exchange rate, the common monetary policy and uncoordinated wage setting. During the euro area crisis, deflationary adjustment and fiscal consolidation were applied in the south, but were not counterweighted by adequate policies in the north. An expansionary adjustment strategy would require a banking union, a lender of last resort, debt mutualization, coordinated wage policies, and an industrial policy in the south financed by the north.

*Andrew Watt*, Macroeconomic Policy Institute (IMK) in Düsseldorf, presented his paper *Quantitative easing with bite: a proposal for conditional overt monetary financing of public investment*. Conventional monetary policy has nearly been exhausted and fiscal policy too hamstrung by rules to deal with the current shortfall in aggregate demand. When other methods fail to prevent Europe's "Japanization," monetary financing, often regarded as a mortal sin, is an effective way to raise nominal GDP and reduce debt ratios. Its inherent risks could be avoided by careful policy design, and by giving the ECB the final say. Currently, central bank balance-sheet losses are not critical and inflation clearly is too low. Restricting asset purchases to secondary markets would ensure compliance with the Treaty ban on direct monetary financing. Given today's high fiscal multipliers, the ECB should purchase bonds issued by the European Investment Bank and, thus, finance new projects that reflect the Europe 2020 strategy.

## Financial Union

*Plamen Iossifov*, International Monetary Fund, presented a paper titled *Opting into the banking union before euro adoption*. In his view, banking union, which internalizes cross-border externalities in supervision, is still incomplete, as it lacks a common fiscal backstop and a common deposit guarantee scheme. A payoff matrix of opt-in by non-euro area countries includes upsides, such as access to the future common backstop, information on parent banks, an improved perceived quality of supervision, and better home-host coordination. The downsides are loss of control over cross-border intragroup flows, inadequate representation in the governance of the Single Supervisory Mechanism (SSM) and the Single Resolution Mechanism (SRM) as well as no access to ECB liquidity and direct bank recapitalization. Unequal treatment in banking union structures and foreign bank dominance fuel potential opt-in members' skepticism about joining. Hence, giving opt-ins a greater

role in the SSM and providing them with access to the ECB's foreign exchange swap lines would raise the attractiveness of an opt-in.

The paper presented by *Pawel Smaga*, Narodowy Bank Polski, dealt with a similar question: *(When) should a non-euro country join the banking union?* The main benefits of joining banking union are increased stability, trust and quality of supervision, improved home-host relations, a reduction of the bank-sovereign nexus, lower compliance costs as well as centralized liquidity and capital management. The flip side are no representation in the Governing Council of the ECB and no access to ECB backstops (as both are restricted by the Treaty), dominance by home country interests, complicated decision-making processes within the SRM, the insufficient size and mutualization of the SRF, the absence of a single deposit guarantee scheme and no exit option. Treaty changes could improve this unfavorable balance. However, the opt-in decision also depends on ownership in banking assets, the capacity of national resolution funds, previous crisis experiences and the perspective of euro adoption. Hence, according to Smaga, Poland, the Czech Republic and Hungary have basically adopted a wait-and-see position, while Romania, Bulgaria and Denmark seem to be more willing to opt in.

## Fiscal Union

This session was chaired by *Edmond Alphandéry*, former French Finance Minister and chair of the co-organizing Euro50 Group, who identified the need for a sovereign insolvency procedure as a key lesson from the Greek crisis.

*Ad van Riet*, ECB, presented his paper entitled *Market-preserving fiscal federalism in the European Monetary Union*. In theory, EMU was built on a “holy trinity” of a single market, a single currency and a single monetary policy combined with strong market discipline and a hard budget constraint. In practice, however, markets largely ignored diverging country fundamentals and hunted for easy yield in peripheral economies. In response to the euro area crisis, Member States adjusted their economies amid growing risks of policy renationalization and market fragmentation. While the governance framework for the euro area has already been enhanced to date, it still leaves some uncertainty about the integrity of the euro area. Hence, there is a need for a higher level of market-preserving fiscal federalism that builds on a hierarchy between European institutions and national governments and is subject to democratic control. This could foster sustainable economic convergence toward an optimal currency area.

*Margit Schratzenstaller*, WIFO, presented her paper *Sustainable tax policy beyond the tax ratio for the EU as a core element of a Fiscal Union*. Tax policy has, in her view, considerable potential to promote sustainable development along the lines of the Europe 2020 strategy. However, recent trends have been rather unfortunate, with the share of taxes on labor increasing and the share of taxes on



capital (and “sin” taxes) decreasing. Growing mobility of capital, goods and labor calls for EU-wide cooperation through coordination or harmonization of tax policies. Schratzenstaller highlighted that the long-standing proposal for a Common Consolidated Corporate Tax Base and more recent initiatives for country-by-country reporting should be complemented by minimum corporate tax rates (two-tier, favoring new Member States still undergoing a convergence process) as well as minimum rates for taxes that internalize negative externalities. Alternatively, the EU could directly levy taxes that cannot be effectively collected by individual countries, such as charges on air transport, the Financial Transaction Tax or an EU-wide carbon tax.

*Kurt Bayer*, WIFO, wrapped up the first day, pointing out the great variety of viewpoints on EMU’s institutional shortcomings, while he missed a discussion about its macroeconomic policy deficiencies. In his view, the EMU policy mix – rather than just being directed toward individual countries – should target the euro area as a whole, whose fiscal stance is still contractionary in the seventh year of stagnation. The frequent misdiagnosis of budget deficits as a simple matter of discipline ignores how they relate to economic growth.

## **Countering divergence through automatic stabilizers in EMU**

*László Andor*, Hertie School of Governance, and former EU Commissioner for Employment, Social Affairs and Inclusion, argued that Europe’s vicious circle of falling investment, economic stagnation, and erosion of human and physical capital cannot be broken without further reform of EMU. But as long as ever-greater surpluses in the core and internal devaluation in the periphery continue, Europe will remain stuck in its trap. The Five Presidents’ report rightly emphasizes divergence as the main threat to EMU’s very existence, but the proposals do not go far enough to reverse this development. Instead of relying on the IMF and ECB for euro area stabilization policies, he advocated deepening economic policy coordination to focus on policies optimizing growth and employment for the euro area as a whole. The legitimacy of more centralized EMU policymaking will require greater risk sharing and democratic accountability. Also, stronger common action is crucial to restore balanced economic prospects for euro area citizens. The euro area debt crisis has transformed European politics: far-right movements have been gaining in the north, and radical left movements in the south, and the pro-European mainstream has been shrinking while running out of political capital to undertake necessary EMU reforms. A dramatic cut in automatic stabilizers due to tightened economic governance led to the euro area recession of 2012–13, which was actually more brutal in terms of household incomes than the first recession of 2008–09. Unemployment and inequalities soared in particular in peripheral countries. Against this backdrop, then EU Commissioner Andor proposed a “Social Dimension of

EMU” in 2013, which mentioned a European automatic fiscal stabilization function. This proposal reflected his conviction that, without rules-based transfers, monetary union would disintegrate. Academic studies analyzed three main options for EMU-level automatic stabilizers: output gap-based schemes, a partial pooling of unemployment insurance systems and reinsurance for big shocks. Each of these options would have beneficial effects on economic growth and the most vulnerable euro area members, with each Member State deriving benefits over the cycle. Andor closed by saying that it is easier to change the Treaties than the laws of economics.

## Automatic stabilizers

*Francesca Carta*, Banca d’Italia, presented a paper titled *A feasible unemployment-based shock absorber for the Euro Area*. In order to design a centralized shock absorber that stabilizes the business cycle, while being compatible and marked by limited cross-country redistribution, 72 different schemes were simulated and evaluated. The proposal builds on a notional euro area-wide unemployment insurance mimicking national-level insurance schemes by transfers at the macro level. It deals with problems of asymmetric information and moral hazard, recognizes subsidiarity considerations and restricts coverage to short-term unemployment and major shocks. The empirical results suggest that the best scheme would cover all unemployed at a replacement rate of 50% with a duration of up to eight months; its funding should be based on (dismissal) experience rating. Such a scheme would offer substantial stabilization without implying large and persistent cross-country redistribution; it could stimulate convergence in take-up rates and unemployment benefits across countries, with a positive impact on citizens.

*Mathias Dolls*, Centre for European Economic Research (ZEW), presented a paper entitled *An unemployment insurance scheme for the euro area? A comparison of different alternatives using micro data*. Counterfactual simulations for the EMU period quantified the tradeoff between automatic economic stabilization and cross-country transfers of a European unemployment scheme. The baseline features were: coverage of all new unemployed up to 12 months with a replacement rate of 50% and contributions from a payroll tax of 1.6%, which implied a relatively low budget of EUR 47 billion over the whole period. Such a scheme would have absorbed a significant fraction of the unemployment shock in the recent crisis in terms of household income, especially to the benefit of the young. Germany would have benefitted immediately after the introduction of the euro – the southern countries after 2008. A contingent benefit scheme that is only activated in the event of big unemployment shocks influences whether Member States are permanent net contributors or net recipients.

## Coordinated wage policy

*Paul Ramskogler*, OeNB, delivered a presentation on *The trinity of wage setting in the European Monetary Union – a policy proposal*. He showed that in a currency union wage divergence results in external and domestic effects as nominal unit labor costs (ULC) are correlated with both current account balances and real GDP growth. The “golden rule” of internal stability seems to be insufficient for external stability in a heterogeneous EMU. Hence, he proposed a trinity wage benchmark comprising (1) an internal wage target (in line with productivity growth), (2) price stability (using the ECB target) and (3) a symmetrical external balance benchmark related to current account sustainability. Applying this model would have led to a lower divergence in current account imbalances and nominal ULC, with wages rising faster in Germany and more slowly in peripheral countries. While acknowledging the autonomy of social partners, nominal wage rigidities and non-price factors of competitiveness, this trinity rule will help achieve transnational stability within the currency union.

*Bernd Brandl*, University of Durham, presented the paper *The effects of institutional instability in collective bargaining: A long-term analysis of changing collective bargaining actors and structures*. The accelerated institutional reforms in collective bargaining (CB) structures evident since 2008 have often proved erratic and inconsistent. CB structures have differed widely for historical reasons: the corporatist perspective of the 1970s was later challenged by the “hump-shaped theory” implying optimality of either decentralized or centralized systems, followed by preference for coordinated intermediate systems and, finally, by a pluralistic consensus. The new European economic governance, however, merely pushes toward a decentralization and weakening of CB. Institutional reforms do not take transaction costs into account (loss in trust, efficacy). Empirical analysis has confirmed that instability is costly in terms of inflation and unemployment. Facing risks and uncertainty, policymakers should avoid repeatedly changing CB structures.

## Capital market union

*Régis Breton*, Banque de France, presented a paper on *Monetary union with a single currency and imperfect credit market integration*. A monetary union is defined as a currency union plus a credit union. In EMU, retail credit markets largely remained in national domains and, as the crisis unfolded, a reversal of financial integration set in. Insufficient credit integration, however, undermines the benefits of the single currency. Governments cannot force banks to unify their credit policy if they are afraid of holding assets subject to different jurisdictions that might not automatically cooperate for collateral seizure across borders. When credit integration is insufficient, a currency union could be associated with higher

cross-border default incentives leading to more credit rationing and welfare losses. Reducing barriers to cross-border credit markets restores the optimality of the currency union.

*Joseba Martinez*, New York University, presented a theoretical paper titled *Does a currency union need a capital market union?* He examined whether banking union provides adequate insurance against asymmetric shocks. Assuming an idealized banking union with perfectly functioning credit markets (no spreads), credit-constrained borrowers and incomplete market clearing through prices, deleveraging shocks could have real economic effects. Whether a capital market union is a significant improvement over banking union depends on the type of shock: while banking union is key in a simple deleveraging shock, a capital market union offers added value in another normal type of shock. During major financial crises (at the zero lower bound of interest rates), a capital market union does not make much of a difference as such events call for more heavy weaponry.

## Debt management

*Giancarlo Corsetti*, University of Cambridge, presented the paper *A new start for the eurozone: dealing with debt*. Despite severe fiscal retrenchment, euro area debt levels have not gone down and the risk premium genie is not yet completely back in the bottle. Worries about debt sustainability entailed growth problems and externalities for other Member States. Therefore, Corsetti proposed to designate a revenue source for debt buy-back through a temporary special redemption fund that is politically accountable at the euro area level. Dealing with legacy debt, this fund would bring all euro area countries out of the vulnerability zone in exchange for coordinated fiscal effort. It would issue partial Eurobonds, i.e. safe assets, to avoid sovereign market segmentation. Alternatively, the ECB could require from banks a diversification rule on euro area debt holdings in proportion to their share in euro area GDP. Financial markets would then issue risk-free synthetic assets in line with these ratios.

*John Muellbauer*, Nuffield College, Oxford, presented his paper entitled *Conditional eurobonds and eurozone reform*. He held that all it takes to switch the policy focus from austerity to productivity is rules-based risk spreads as derived from countries' fundamentals. Given the lack of democratic institutions for a fiscal union, technical solutions that create incentives through quasi-market signals are required. He proposed conditional eurobonds for all new borrowing that come with a collective underwriting guarantee and administratively set risk premiums based on economic fundamentals (i.e. unit labor costs, public and private debt, growth and inflation as well as house prices). Modeling how these fundamentals affect future growth showed a positive impact of competitiveness and low relative inflation, and a negative one of fiscal austerity and overshooting housing prices. In contrast, debt

levels proved relatively unimportant for growth until they became very high. Muellbauer's proposal would reward labor and product market reform.

## Public investment

*Achim Truger*, Berlin School of Economics and Law, presented his paper titled *Implementing the golden rule for public investment in Europe*, stating that the golden rule for debt-financed public investment is compatible with intergenerational fairness, as the following generation will also benefit. Although a pragmatic definition of public investment could comprise education, childcare, social work and integration, he took traditional investment in national accounts (mainly tangible assets) as a starting point. There is a clear economic case for public investment, as it boosts short-term growth through a high multiplier and its implied marginal (long-term) returns are substantial. In the EU fiscal framework, net public investment could be deducted from relevant deficit numbers of the Stability and Growth Pact. Since such a change would require a unanimous Council decision, a "silver rule" (labeled by WIFO Director Karl Aiginger) could in the meantime help governments undertake fiscal expansion by building on flexibility within the existing rules.

*Zsolt Darvas*, Bruegel, presented a paper titled *In sickness and in health: protecting and supporting public investment in Europe*. He proposed an asymmetric golden rule which would apply in a deep recession but not in good times. In his view, a golden rule is justified as public investment has declined dramatically during the crisis in the EU, while expanding in the U.S.A. and in other economies. Multipliers tend to be larger in recessions (exceeding 2 in deep recessions), which means that investment cuts are self-defeating. Arguments against the golden rule should also be taken into account, though, as it tends to maintain deficits for too long, leads to distortions toward physical infrastructure, renders it difficult to select the items it refers to, might incentivize cheating and involves insignificant amounts. Applying the rule only during a recession lowers the risk of reclassification. A more ambitious version would be a European instrument for cyclical stabilization.

## Fiscal capacity

*Paolo Pasimeni*, European Commission, presented a paper entitled *The economic rationale of an EMU fiscal capacity*. He proposed a fiscal capacity linked to the Member States' intra-EMU external positions in order to cope with EMU's tendency to endogenously create imbalances and with its inherent deflationary bias. The negative correlation of the twin divergences in current account positions and unemployment rates among euro area countries suggests a cruel tradeoff in EMU: either growth with imbalances, or balance without growth. Although exports from

surplus to deficit countries benefitted from a “transfer union by financial markets” in the pre-crisis period, the adjustment after the “sudden stop” was asymmetrically undertaken by deficit countries alone. The resulting procyclicality and the lack of countervailing expansion in surplus countries evidenced EMU’s inherent deflationary bias. Resolving this dilemma, a fiscal capacity financed by surplus countries would mitigate external imbalances and help correct them as well as improve demand management of the euro area aggregate.

*Agnès Bénassy-Quéré*, Paris School of Economics, gave a presentation on *Making sense of the fiscal union: a budget for the eurozone?* Of the key functions of fiscal federalism (allocation, stabilization and redistribution), the Five Presidents’ report focused only on stabilization. So far, EMU has featured procyclical discretionary fiscal policy, heterogeneous automatic stabilizers, asymmetrical fiscal discipline and no instrument for the aggregate fiscal stance. There are three options: First, national policies could be improved by a symmetric notion of discipline (requiring deficits in surplus countries) or by allowing for some discretion (steered by a European Fiscal Board). Second, the ESM could automatically extend precautionary credit lines. Third, a federal instrument for macroeconomic stabilization could make countercyclical expenditures and back stabilization mechanisms (banking union, labor mobility), or it could even be a fully-fledged budget for allocation (e.g. refugees) and redistribution (humanitarian support for countries under stress).

In her wrap-up, *Sonja Puntischer-Riekmann*, Salzburg Centre of European Union Studies, referred to her upcoming research project on Member States’ preferences for the future of EMU, arguing that political discourse matters as much as, if not more than, economic reasoning when it comes to the feasibility of EMU reform. She recalled that with any reforms proposed in recent years, progress has been limited and resistance severe. She agreed with President Juncker’s statement that there is too little union in this Union. Too much focus has been put on comparing national positions instead of promoting the narrative of the euro area as a whole. Placing too much emphasis on electoral concerns will lead nowhere as there will be an election somewhere in Europe at any given time. It would be much more fruitful for political leaders to explain to their constituencies what needs to be done. Integration by stealth is probably over. Hiding in epistemic communities will not make Eurosceptic parties go away. Instead, it is time to engage in a thorough public debate.

## Opening address

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*Ewald Nowotny*

*Oesterreichische Nationalbank*

Obviously, the title of our workshop *Toward a Genuine Economic and Monetary Union*, implies that Economic and Monetary Union (EMU) is not genuine yet. But despite all its deficiencies, let us not forget that EMU and the euro are major achievements. For its member states, EMU has anchored price stability and increased cross-border trade and financial integration. Even during the financial crisis, the number of countries sharing the euro increased to 19, and is set to grow further. For the European Union as a whole, the single currency is a symbol of a peaceful Europe, a keystone of economic integration and political unity. And for the world, the euro has become a major player in the international monetary system and the global economy.

Yet, during the global financial crisis, EMU was seriously put to the test. The fact that the so-called “sovereign” debt crisis (which incidentally had also been caused by private debt accumulation) occurred in Europe and not in other regions with even higher debt levels is certainly related to the incomplete institutional setting of EMU. While the monetary part of EMU was fully implemented in 1999, the economic counterpart is still an unfinished business.

But how can we ensure the smooth functioning of EMU? The recently published *Five Presidents’ report on Completing Europe’s Economic and Monetary Union* tries to address this question. The five presidents in question are those of the European Commission, the European Council, the Eurogroup, the European Central Bank and the European Parliament. Their proposals rest on *four pillars*: First, an *Economic Union* that promotes convergence, prosperity and social cohesion; second, a *Financial Union* that integrates banking and capital markets regulation; third, a *Fiscal Union* that guarantees sound public households; and fourth, a *Political Union* that strengthens democratic accountability, legitimacy and institution building.

As an aside, let me point out that the structure of the *Five Presidents’ report* varies slightly from that of the preceding *Four Presidents’ report*, published during the height of the crisis in 2012 by the same institutions except for the European Parliament. In that report, the four pillars of genuine EMU were listed in the following order: a Banking Union followed by a Fiscal, an Economic and a Political Union. There may be political economy considerations behind the fact that the Five

Presidents prioritize Economic Union, as buoyant economic activity facilitates the implementation of ambitious reforms. Apparently, the renewed dip in economic activity observable since 2013 has hampered European citizens' appetite for further deepening of EMU and indeed strengthened disintegrative forces across the EU. Moreover, the progress made in recent years in the fields of Banking and Fiscal Union may justify their "downgrading" in the current report.

This workshop builds on our conviction that such a comprehensive framework deserves academic scrutiny from various disciplines and a broad public debate. Let me just make some personal comments on the issues at stake.

I would like to start with some reflection on Monetary Union – a fifth pillar the Five Presidents implicitly seem to take for granted. In the run-up to the crisis, the question was raised whether a one-size monetary policy can fit it all, as some countries were enjoying an economic boom while others were still struggling against economic contraction. This uniformity of monetary policy should not be overemphasized at the current juncture, however, as almost all euro area economies still have a negative output gap. But sooner or later, some countries will be forced to adopt fiscal, macroprudential or structural policies that counteract a monetary policy stance that might be inappropriate for them in particular, while the ECB can and must only target the euro area aggregate with its monetary policy.

Currently, the Eurosystem's monetary policy helps improve the otherwise lackluster outlook for economic growth and price stability in the euro area. Low or even negative interest rates favor spending over saving. Asset purchases (or quantitative easing) help fix the monetary transmission mechanism. The provision of long-term liquidity to the banking sector supports lending to the private sector. Forward guidance affects long-run interest rate and inflation expectations.

Let us not forget that the ECB's readiness to do "whatever it takes to preserve the euro," as announced in mid-2012, was undoubtedly the decisive element in re-establishing confidence in sovereign bond markets – a precondition for recovery. Additionally, the ECB is the key player in the Single Supervisory Mechanism (SSM), a core element of Banking Union. Moreover, it is one of the institutions involved in the assistance programs for Member States under financial stress. All this made some commentators fear that the ECB, as "the only game in town," might be stretching beyond its mandate. More importantly, however, it underlines the need for other or new institutions to step in and relieve the ECB from some of its responsibility. Actually, this is the central message of the Five Presidents' Report.

The rationale behind a genuine EMU as a complement to the ECB's monetary policy comes from the *Optimal Currency Area (OCA)* theory, which states that within a monetary union, the lost mechanism of exchange rate adjustments must be replaced by that of labor and capital adjustment if countries are affected by asymmetric shocks. Hence, the justification of structural reforms in labor and



product markets. They should increase the flexibility of wages and prices while taking into account the autonomy and responsibility of social partners.

Another element to improve the resilience of EMU would be stronger business cycle synchronization through economic and financial integration; but here the evidence is sobering. Yet, while the OCA theory concentrates on asymmetric external shocks, what seems to matter more are really asymmetric trends. This is to say that since the introduction of the euro, member states have systematically built up external imbalances as a result of unsustainable debt accumulation and asset bubbles.

Here comes in another element of the OCA theory: the role of risk-sharing mechanisms. Given the lack of fiscal risk-sharing, however, this role has been more or less explicitly delegated to financial markets. Unfortunately, however, financial market participants insufficiently understood the risks they were taking. The rest of the story is well known: A dramatic stop of private financing flows required economies under stress to quickly adjust their external imbalances via improved competitiveness at the cost of internal disequilibria, notably high unemployment. The negative spillovers have been felt all over the euro area during the double dip recession, albeit at different degrees.

What can we learn from this crisis? Apart from market-based risk-sharing mechanisms, EMU needs a fiscal framework that combines risk reduction and risk-sharing, in other words: discipline and solidarity. While the ultimate shape of a genuine EMU will remain a matter of political preferences, it seems essential that some pooling of sovereignty takes place to ensure (1) sound national fiscal policies, (2) the joint provision of common public goods, (3) a credible backstop to break the vicious circle of weak sovereigns and banks, and (4) a shared emission of safe securities.

As a matter of fact our institutions will not become perfect, and their improvement is a permanent process of trial and error. Disagreement is a natural human feature, and concerns will be understandable when put into context; therefore, our workshop openly addressed skepticism as well. We believe that national central banks like the OeNB have a responsibility to encourage debate that goes beyond the deliberations of policymakers.

Not every aspect of the EMU reform project discussed during the workshop may seem realistic for the immediate future. In this context, I would like to highlight a few words about the timing and sequencing of this very important reform project. In particular, I would like to caution against those voices arguing that EMU needs to be fundamentally re-built, or even re-established from scratch, within the next two years and arguing that „otherwise it will fail“. This argumentation, in my view, is extremely dangerous as it puts our already substantial achievements of the past years at stake. Offering a contrasting perspective, I would like to recall Sir Karl Popper's piecemeal approach, and strongly argue for a step-by-step strategy. Fortunately, also the *Five Presidents' report* prudently envisages two different stages toward completing EMU. In a first step, changes would build on existing in-

struments and make the best possible use of the existing treaties, thus increasing their probability of being implemented in practice. Only in a second stage, in a rather long-term perspective, the *Five Presidents' report* proposes measures of a more far-reaching nature, requiring fundamental treaty changes. We should keep in mind that these days the political feasibility of substantial changes to the Lisbon Treaty seems rather limited, as it is not even clear how many members the EU might comprise in two years from now and as every single EU Member State may veto a suggested Treaty change. Thus, unrealistic reform proposals cannot be seen as constructive contributions to the project but are rather politically and psychologically dangerous.

To put it in the words of ECB Board Member Benoît Cœuré: “The EU is a union of democracies and it should be more trustful in the power of democracy to produce the solutions that will address the deep causes of the crisis.” Monetary integration is a means to the ends enshrined in Article 3 of the Treaty, which states that the European Union “shall promote economic, social and territorial cohesion.” Together, we can contribute to smart, inclusive and sustainable growth in a Europe where the single currency becomes a true common currency.

# Design failures of the euro area<sup>1</sup>

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*Paul De Grauwe*  
*London School of Economics*

Economists were early critics of the design of the euro area, though many of their warnings went unheeded. This column discusses some fundamental design flaws, and how they have contributed to recent crises. National booms and busts lead to large external imbalances, and without individual lenders of last resort – national central banks – these cycles lead some members to experience liquidity crises that degenerated into solvency crises. One credible solution to these design failures is the formation of a political union, however member states are unlikely to find this appealing.

The Greek crisis exposes the design failures of the euro area. These have long been known. Right from the start of the euro area many economists warned that these design failures would lead to problems and conflicts within the currency union, and that the euro area in the end would fall apart if these failures were not corrected. See, for instance, Feldstein (1997), Friedman (1997) or De Grauwe (1998).<sup>2</sup>

The first signs of the disintegration of the euro area are visible today. Grexit is temporarily avoided. The punitive program that is imposed on Greece is likely to lead to a Grexit. But that is unlikely to be the end. After Grexit the nature of the euro area will have been changed from a permanent union to a temporary one. This will destabilise the monetary union each time a recession produces rising budget deficits and debt levels. After Grexit there are likely to be more exits; an unravelling of the union.

“Visionary” European politicians brushed aside the warnings from economists in the 1990s that the euro was based on a flawed construction. Nothing would stop their great monetary dream, certainly not the objections of down-to-earth economists. What are these design failures?

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<sup>1</sup> This text has also been published in VoxEU.org – CEPR’s policy portal.

<sup>2</sup> See Baldwin (2015) for a list of VoxEU columns that discussed the flaws early on.

## The euro area is not an optimal currency area

The European monetary union lacked a mechanism that could stop divergent economic developments between countries. Some countries experienced a boom, others a recession. Some countries improved their competitiveness, others experience a worsening. These divergent developments led to large imbalances, which were crystallised in the fact that some countries built up external deficits and other external surpluses.

When these imbalances had to be redressed, it appeared that the mechanisms to redress the imbalances in the euro area (“internal devaluations”) were very costly in terms of growth and employment, leading to social and political upheavals. Countries that have their own currency and that are faced with such imbalances can devalue or revalue their currencies.

In a monetary union, countries facing external deficits are forced into intense expenditure reducing policies that inevitably lead to rising unemployment. This problem was recognised by the economists that pioneered the theory of optimal currency areas (Mundell, 1961, McKinnon, 1963, Kenen, 1969; along with later important contributions, including Bayoumi and Eichengreen, 1993, Krugman, 1993).

The standard response – based on the theory of optimal currency area thinking – is monetary union members should do structural reforms so as to make their labour and product markets more flexible.

By increasing flexibility through structural reforms the costs of adjustments to asymmetric shocks can be reduced and the euro area can become an optimal currency area. This has been a very influential idea and has led euro area countries into programs of structural reforms.

It is often forgotten that although the theoretical arguments in favour of flexibility are strong, the fine print of flexibility is often harsh. It implies wage cuts, fewer unemployment benefits, lower minimum wages, and easier firing. Many people hit by structural reforms resist and turn to parties that promise another way to deal with the problem, including an exit from the euro area.

From an economic point of view, flexibility is the solution; from a social and political point of view, flexibility is the problem.

There is a way to reduce the costs of the adjustment to imbalances in a monetary union if this adjustment can be made to operate symmetrically. Thus, if the inevitable austerity by the deficit countries can be compensated by fiscal stimulus in the surplus countries, the negative aggregate demand effects in the former can be compensated by positive demand effects in the latter (Wolf, 2014).

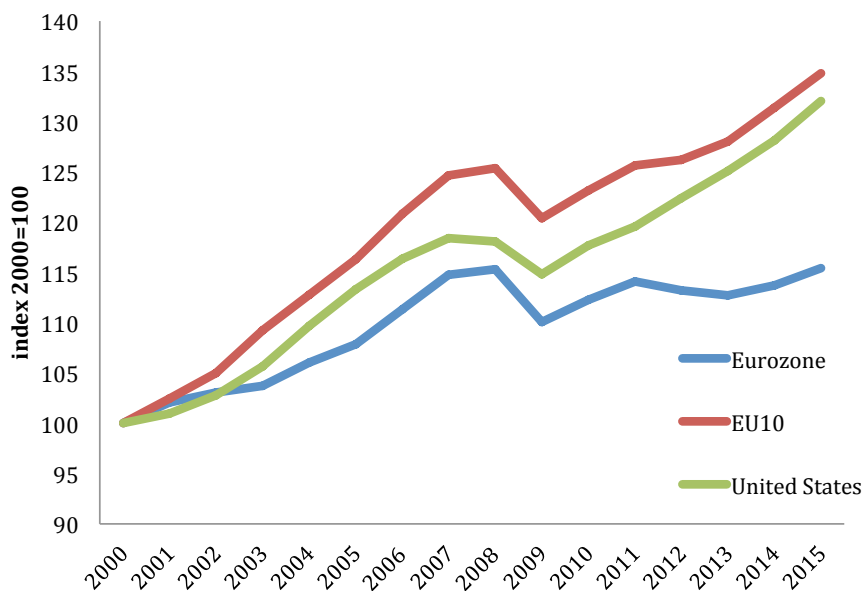
Such a symmetric adjustment mechanism did not operate in the euro area after 2010, when the large external imbalances in the euro area were exposed. The deficit countries were forced into austerity while the surplus countries tried to balance their budgets. The result has been to create a deflationary bias in the euro area.

This is illustrated in charts 1 and 2.

Chart 1 compares the evolution of real GDP in the euro area with real GDP in the USA and in the EU Member States not belonging to the euro area (EU-10). The difference is striking. Prior to the financial crisis, the euro area real GDP was on a slower growth path than in the USA and EU-10. Since the financial crisis of 2008 the divergence has increased even further. Real GDP in the euro area stagnated: in 2014 it was at the same level as in 2008. In the USA and EU-10, one observes (after the dip of 2009) a relatively strong recovery.

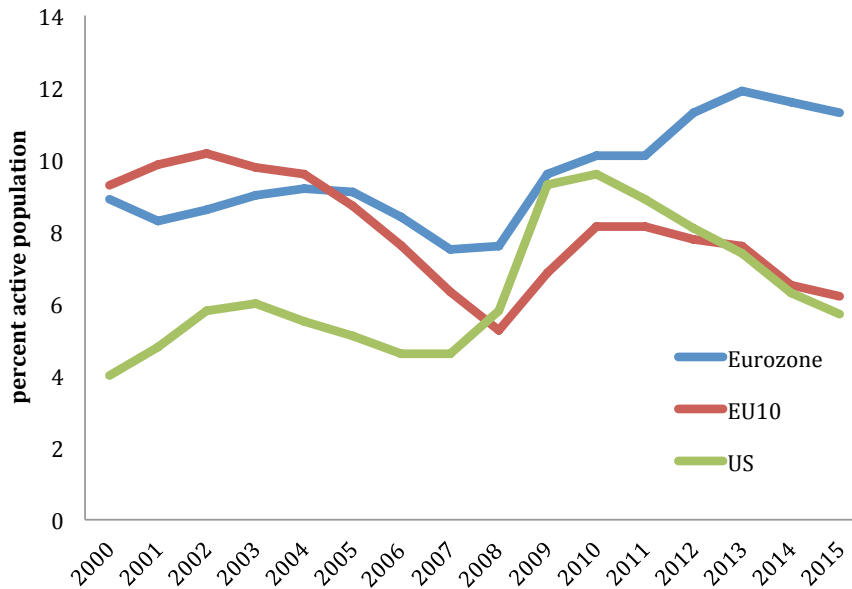
Chart 2 shows the evolution of unemployment in the same group of countries. We observe the same phenomenon. A recovery in the USA and EU-10 after 2010, evinced by the decline in unemployment. This contrasts with the euro area where unemployment continued to increase so that in 2015 it was almost twice as high than in EU-10.

*Chart 1: Real GDP in the euro area, EU-10, and USA (prices of 2010)*



Source: European Commission, Ameco database.

Chart 2: Unemployment rate in the euro area, EU-10 and USA



Source: European Commission, Ameco database.

Chart 1 and 2 also teach us that the euro area has failed dismally in delivering on the promises that were made at the start of the union; that is, that monetary union would lead to more economic growth and employment. The opposite has occurred. Member countries of the euro area have on average experienced less growth and more unemployment than the EU Member States that decided to stay out of the euro area. Such an outcome, if maintained, undermines the social consensus in favour of a monetary union.

## Fragility of the sovereign in the euro area

When the euro area was started, a fundamental stabilising force that existed at the level of the member states was taken away from these countries. This is the lender of last resort function of the central bank. Suddenly, member countries of the monetary union had to issue debt in a currency they had no control over. As a result, the governments of these countries could no longer guarantee that the cash would always be available to roll over the government debt. Prior to entry in the monetary union, these countries could, like all stand-alone countries, issue debt in their own currencies thereby giving an implicit guarantee that the cash would always be there to pay out bondholders at maturity. The reason is that as stand-alone countries they had the power to force the central bank to provide liquidity in times of crisis.

What was not understood when the euro area was designed is that this lack of guarantee provided by euro area governments in turn could trigger self-fulfilling liquidity crises (a sudden stop) that would degenerate into solvency problems. This is exactly what happened in countries like Ireland, Spain and Portugal.<sup>3</sup>

When investors lost confidence in these countries, they massively sold the government bonds of these countries, pushing interest rates to unsustainably high levels.

The euros obtained from these sales were invested in “safe countries” like Germany.

As a result, there was a massive outflow of liquidity from the problem countries, making it impossible for the governments of these countries to fund the rollover of their debt at reasonable interest rates.

This liquidity crisis in turn triggered another important phenomenon. It forced countries to switch-off the automatic stabilisers in the budget.

The governments of the problem countries had to scramble for cash and were forced into quick austerity programs by cutting spending and raising taxes. A deep recession was the result. The recession in turn reduced government revenues even further, forcing these countries to intensify the austerity programs. Under pressure from the financial markets and the creditor nations, fiscal policies became pro-cyclical pushing countries further into a deflationary cycle. In short:

What started as a liquidity crisis degenerated, in a self-fulfilling way, into a solvency crisis.

Thus, we found out that financial markets acquire great power in a monetary union. They can force countries into a bad equilibrium<sup>4</sup> characterised by increasing interest rates that trigger excessive austerity measures, which in turn lead to a deflationary spiral that aggravates the fiscal crisis, (De Grauwe, 2011; De Grauwe and Ji, 2013). This was the same problem as that identified by Calvo (1988) and Eichengreen and Hausmann (2005) in emerging countries that are afflicted by an “original sin” that forces them to borrow in foreign currencies.

Thus, in a monetary union, sovereigns singled out by financial markets cannot defend themselves unless they get help from other countries and from the ECB. But they are not willing to do this so easily.

The ECB recognised this problem when it started its Outright Monetary Transactions Program in 2012. This certainly helped to pacify financial markets at that time and avoided the collapse of the euro area. The issue arises of how credible the

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<sup>3</sup> Greece does not fit this diagnosis. Greece was clearly insolvent way before the crisis started, but this was hidden from the outside world by the fraudulent policy of the Greek government to conceal the true nature of the Greek economic situation (De Grauwe, 2011).

<sup>4</sup> The dynamics that lead to bad equilibria are similar to those analysed by Obstfeld (1986) in the context of fixed exchange rate regimes. See also Gros (2007).

Outright Monetary Transactions Program is for future use. The ECB has been unwilling to use it during the latest Greek crisis. This refusal was based on the view that the Greek government is insolvent and, therefore, liquidity provision by the central bank is not the right remedy. This can lead to doubts about the future willingness of the ECB to provide liquidity to future governments in times of crisis.

## Conclusion

The euro area crisis that emerged after 2010 was the result of a combination of two design failures.

- First, booms and busts continued to occur at the national level, leading to large external imbalances.

The lack of a smooth mechanism to correct for these imbalances created large economic and social costs.

- Second, the stripping away of the lender of last resort support from member states allowed liquidity crises to emerge when the booms turned into busts.

These liquidity crises then forced countries to eliminate another stabilising feature that had emerged after the Great Depression; that is, the automatic stabilisers in the government budgets. As a result, some countries were forced into bad equilibria.

As economists we should think harder about what happens to political systems when countries are forced into bad equilibria. As we have seen, in many countries where this happened, the political systems were badly shaken and extreme parties either increased in importance or came to power. In several of these countries the newly emerging political parties exhibit an open hostility to the monetary union and promise a better future outside the euro area.

When individual countries in a currency union get into debt problems, whether of their own making or not, they cannot stand on their own feet. They need the help of other countries and of the ECB. But this help is not unconditionally available. This leads to a potential for political conflicts between member states of the union.

Many argue that countries can avoid being pushed into a debt crisis by adhering to strict fiscal discipline. Surely this is the proper response to what happened in Greece. But it is not for most other euro area countries that experienced a debt crisis after 2010.

- This “discipline” view disregards a fundamental feature of a capitalistic system, which is that it is characterised by booms and busts; bubbles and crashes.

Booms are wonderful. Busts lead to misery for millions. In addition, they lead to dramatic increases in government budget deficits and debt levels even in countries following orthodox fiscal policies (Reinhart and Rogoff, 2009; Shularick and Taylor, 2012). I have argued here that the euro area is ill-prepared to face this instability of a capitalistic system.



The previous discussion points in the direction of a possible solution – it can only be provided by a political union. The latter does two things. Firstly, it can reduce too large divergences in macroeconomic policies that have often been the source of large economic imbalances between countries. Secondly, a political union provides for an automatic and silent assistance between countries.

But there's the rub. Most euro area countries are not prepared to step into a political union because they do not want to create a system of automatic assistance. Their mutual distrust is too large to do this.

The conclusion, I draw from this today is the same as the conclusion I drew twenty years ago. If there is no willingness to step into a fiscal union (which can only exist in a political union), the euro has no future.

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# Pitfalls in the concept of a Genuine Economic and Monetary Union<sup>1</sup>

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On 5 December 2012, the President of the European Council in close cooperation with the Presidents of the European Commission, the Eurogroup and the European Central Bank published a report – in answer to an “invitation” by the European Council – entitled “Towards a Genuine Economic and Monetary Union”. Three years later on 22 June 2015, meanwhile five Presidents – the President of the European Parliament had been included – presented a follow-up report “Completing Europe’s Economic and Monetary Union”. “The Nature of a Deep, Genuine and Fair Economic and Monetary Union” is the title of the first chapter of this report.

“Europe’s Economic and Monetary Union (EMU) today is like a house that was built over decades but only partially finished. When the storm hit, its walls and roof had to be stabilized quickly. It is now high time to reinforce its foundations and turn it into what EMU was meant to be: a place of prosperity based on balanced economic growth and price stability, a competitive social market economy, aiming at full employment and social progress. To achieve this, we will need to take further steps to complete EMU.”

Under the headline Financial Union the report covers completing of the Banking Union and launching the Capital Markets Union. A Single Supervisory Mechanism (SSM) is now established. Proposals for the other pillars of the banking union – like a Single Resolution Mechanism (SRM) and a Deposit Guarantee Schemes Directive – have already raised an intense controversy.

The reference for identifying the present institutional arrangement in Europe or rather EMU as an “unfinished house” is a fully-fledged political union. The Report insists on parallel developments in the field of fiscal and political integration. It does not plead for a fully-fledged fiscal and political union, “only” for steps in this direction. These steps include inter alia a macroeconomic stabilisation fund, and a euro area treasury implying an increasing need for collective decisions on fiscal issues.

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<sup>1</sup> A revised and extended text will be published in *International Finance*.

The authors make clear that this partial transfer of national fiscal sovereignty needs arrangements for democratic accountability, legitimacy and institutional strengthening. A number of institutional arrangements are presented, in particular a closer cooperation between the European Parliament and national Parliaments including the Commission. All these are moves into the direction of a political union. However, the combination of limited transfer of fiscal sovereignty and limited democratic legitimacy is a dangerous path to follow. Limited democratic legitimacy will prevail as long as the transfer of fiscal sovereignty is not based on changes in national constitutions.

# Taking our Economic and Monetary Union forward

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*Christina Jordan*

*European Council, Cabinet of the President<sup>1</sup>*

In the debate about the future of Europe's Economic and Monetary Union (EMU), it is important to strike the right balance between ambition on the one hand and realism and pragmatism on the other. The Five Presidents' Report tries to do so. Over the last years, significant steps have been taken to put EMU on a more stable foundation. We have, for example, moved banking supervision to the European level, strengthened the EU's economic governance framework and, with the European Stability Mechanism, created a powerful financial firewall. These were major achievements. There is no need to belittle them. However, it is also clear that the fundamental difficulty with our monetary union remains. There is one monetary policy in the euro area, but 19 sovereign economic policies that are subject to coordination; the euro area is not a federation and is unlikely to become one any time soon. We need to tackle the challenges this set-up poses and show ambition in addressing them. Yet, in doing so, we also need to be realistic. Steps that are necessary theoretically and appealing intellectually are often not possible politically, at least not in the European Union we live in today. Rather than giving false impressions or creating too high expectations, we should be honest about this.

Likewise, in drawing up the Five Presidents' Report, it has been important not to transform the debate on the future of EMU into a premature debate about Treaty change. To be clear, over the longer term, EMU might benefit from institutional changes that would require Treaty change. The report refers, for instance, to a binding process of convergence "towards similarly resilient economic structures throughout the euro area". This would eventually imply the sharing of sovereignty over policies of common concern. However, we should not put the cart before the horse. Before we start considering opening the Treaties, there needs to be at least broad agreement among the euro area countries on what a new institutional arrangement would look like. This is why the report, while giving a sense of direction for the future of EMU, puts a lot of emphasis on short-term measures that can be implemented under the current Treaty.

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<sup>1</sup> The views expressed herein are solely those of the author and do not necessarily reflect the views of the President of the European Council or of the Council.

Progress on deepening EMU needs to be made on many fronts. However, if I had to single out just one element from the report by the five Presidents, I would choose the completion of the banking union as the key priority. The crisis taught us that, for the euro area countries and monetary union as a whole to be resilient, Europe needs a financial architecture that further weakens the dependency of banks on sovereigns and vice versa. It goes without saying that the most immediate priority needs to be the transposition and implementation of what has already been agreed. All Member States have to transpose the directives on bank recovery and resolution and deposit guarantee schemes, respectively, and properly implement them. The Single Resolution Fund needs an adequate bridge financing mechanism until the fund itself has the necessary capital and a credible common backstop. Yet, we must also start constructing the third pillar of our banking union, a common European insurance for bank deposits. Concerns regarding a mutualisation of risks stemming from diverging national policies that impact on banks' equity cannot be an excuse for inaction. Rather, they should spur the ongoing work on reducing the risks in national banking systems and establishing a real level playing field for banks.

## Completing Europe's EMU – Where do we stand?

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*Othmar Karas*

*Member of the European Parliament*

For a long time, I have been a strong advocate for a deepening of the Economic and Monetary Union. These steps are necessary to reach the political union, as our final goal.

We see today that Europe is accepted in all the areas, where we act on the ground of community law. When we act outside of this on intergovernmental agreements and short-time solutions, people do not accept the solutions and we have a problem of democratic legitimacy and transparency.

In the last years, we had neither institutional, nor legal, nor political EU instruments available for the euro area to tackle the crisis we faced. Because of the urgency of the crisis executive powers took the dominant role over representative powers, such as the European Parliament. But we have to be aware that the democratic accountability of the instruments will show, if our reactions to a future crisis will be accepted by the people.

As long as we do not have European answers for our problems, people will question the membership instead of the policies. Only with the necessary European tools, we can engage in a truly European future.

Therefore, we need to draw the lessons learned from the past for the future steps of the European Union. From the Parliament's side this means that we have to improve the input legitimacy, as well as the output legitimacy. A better input legitimacy means that there have to be transparent and clear rules for the participation of the different institutions. In my work as Rapporteur for the Troika Report, I concluded that we need a European Monetary Fund on the basis of Union law. It would combine the financial means of the European Stability Mechanism (ESM) and the expertise and experience that the Commission has acquired over the last few years in this field.

The enhanced output legitimacy means that we need a stronger involvement of the European Parliament when it comes to the control of the results of political actions. Under the current treaty this means improving the accountability and the oversight of the European Parliament. Only with these measures there will be a democratic process and legitimacy of the actions in the eyes of the European people.

But we must not shy away from bigger changes than that. I am glad the so called Five Presidents' report, by the Heads of the European Institutions, on completing

Europe's Economic and Monetary Union delivered a roadmap for these changes. But the proposed Competitiveness Authority, for example, will only boost the economic convergence in the euro area, if we have binding rules for its outcome. A process without the necessary legal means to enforce it, will not be taken seriously.

Jean Monet said: "Europe is created in the crisis, and it will be the sum of the solutions to be found for these crises." The solutions must be bold and decisive steps on the way to an economic, fiscal and social union.

A more converged Europe is a stronger Europe, because it can anticipate a future crisis in a better way and react quicker when it is necessary.



# From divorce to a union of unions: too much of a good thing

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## 1 The paradigm shift in the GEMU reports

The Four and Five Presidents' reports constitute a paradigm shift in how the monetary union should be governed. While the old paradigm was based on an "unprecedented divorce between the main monetary and fiscal authorities" (Goodhart, 1998: 410), the paradigm outlined in these reports on a Genuine Economic and Monetary Union (GEMU) envisages a "union of unions". This is progress as it acknowledges that non-state money, issued by a central bank without fiscal backing, needs some risk sharing mechanisms between member states. Otherwise, financial markets will shift the risks of financial instability onto the weakest members that are least able to bear them. It is exactly what happened: Vulnerable member states were drawn into a negative feedback loop between deteriorating government balances, weakened by rescue measures for their oversized banking systems, and deteriorating bank balance sheets, weakened by falling asset prices including government bonds that they held as "safe assets".

Since May 2010, the member states that were financially less exposed had to ride repeatedly to the rescue of these crisis countries. This was in their own interest as sovereign defaults would have dealt a fatal blow to many of their domestic banks as well and possibly led to the end of the euro area. But the uncertainty of when support will be forthcoming and how much of it has made crisis management very costly and politically divisive.

What was the problem with the old paradigm? The original architecture was meant to contain the moral hazard inherent in monetary integration: member state governments were expected to become more reckless in running deficits, given that financial markets might not punish a government that issues more euro-denominated debt as each debt issue constitutes only a small share in a vastly expanded market for euro-denominated bonds. The threat to be left to one's own devices in a crisis was made explicit by the notorious bail-out clause. The ECB was not allowed

to buy bonds directly from the issuer, not even under the extreme circumstances of a systemic financial crisis: panic had to force the central bank's hand before it could intervene in secondary markets.

The separation principle means effectively that banks can count on being bailed out swiftly and directly while sovereigns get a bailout only under the most onerous conditions. Those obsessed with moral hazard should also worry about the incentives for future risk-taking that this creates in the financial system. The separation principle also ensures that instability is allowed to spread, as a kind of punishment for the alleged perpetrator of fiscal sins. Neither Ireland nor Spain should have fallen from grace on that account, however.

The lesson, perhaps too obvious and therefore ignored, is this: integration – monetary, financial, and economic – makes members more interdependent and the crises of some can easily become a crisis of many. It is in the self-interest of every member to prevent this, irrespective of whether they are cause, victim or collateral damage of market panic. The GEMU reports have now acknowledged this and propose welcome ideas for doing something about it. But the union of unions may be too much of a good thing.

The Five Presidents' report proposes three big steps towards the ultimate union of unions (Juncker, 2015: 4): In the short term, a banking and capital markets union should provide the mechanisms for private risk sharing when a shock hits any of its members.<sup>1</sup> This would give time to economies and governments, in the medium term, for their “economic structures [to] converge towards the best standards in Europe”; convergence would finally prepare the ground for public risk-sharing “through a mechanism of fiscal stabilization for the euro area as a whole.” Eventually, political-fiscal union would embrace economic and monetary, banking and capital union.

## **2 The economic limitations of the paradigm shift**

This phasing-in model of risk-sharing in the Four and Five Presidents' reports is firmly based on a literature from the second half of the 1990s (Asdrubali et al. 1996, Sørensen and Yosha, 1998). It modified the standard approach to monetary integration in that it argued that members of a monetary union do not have to converge economically before they can form an “optimal currency area”; to the extent that shocks were idiosyncratic and not common, they could insure and compensate each other to mutual benefit. If households have, directly or indirectly through their banks and pension funds, access to financial markets in other member states, a

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<sup>1</sup> An element of fiscal union is thrown in as well, with the foundation of an independent Fiscal Board, but I regard this as a complete side show. There is no need to have even more oversight powers than DG Ecfm already has.

downturn of domestic income can be compensated through capital income or credit from other member states.

The methodology measured how much of an output shock is compensated by various channels of inter-state risk sharing, absorbing its transmission into consumption volatility. Especially between U.S. states, the bulk of output shocks was apparently absorbed by capital and credit markets, while the federal budget and labor migration combined contributed less than 20%. Later studies in this tradition found increasing risk sharing of output shocks between OECD countries and in particular the euro area members that could be attributed to closer financial integration (e.g. Gerlach and Hoffmann, 2008; Christev and Méltiz, 2011: 27–29). This literature could show that a monetary union of diverse member states is not a problem but provides the opportunity for mutually beneficial risk diversification.

But this literature also has limitations. They are quite serious if used in a blueprint for the future of the euro area. The methodology can deal with exogenous output instability only and excludes, by assumption, the destabilizing influence of demand volatility on output. This may explain why the estimates for the contribution of public risk-sharing are so low (Dullien, 2012: 59). The methodology does not grasp endogenous risks arising from financial integration itself. An example is the leveraging of private balance sheets and an ensuing asset bubble, both fueled by cross-border capital flows. The prime channels of private risk sharing, capital and credit markets, can thus never become the source of risks to macroeconomic instability, for instance a credit crunch for investing firms and wealth effects on consumption (Christev and Méltiz, 2011: 29). The economic literature on which the Five Presidents' report bases its recommendation was firmly based on the belief that financial markets are efficient and imperfect largely because of regulatory-political segmentation.

This is hardly a tenable view of the world in 2015. The North-Atlantic financial crisis since 2007 and the euro area crisis since 2010 have not been caused by too little financial integration. What made markets seize up was the interdependence of banks in advanced economies that had taken too much and poorly understood risks on their books, not an output shock like a sudden rise in commodity prices. The systemic private debt crises were largely managed by public mechanisms of risk spreading, notably public debt which ropes future taxpayers into national risk pools. Above all, it was and still is monetary risk sharing that has saved the European economies from a more severe downturn – the monetary “channel” does not even figure in this literature because the methodology is based on national accounts data. Finally, the exit from years of lingering financial crisis is so difficult because it is impossible to tell how the financial system will be affected when the monetary life support of zero interest rates ends; fiscal authorities are too frightened and battered to take on the problems in their banking systems resolutely. Finance is still the problem, not the solution.

But there is also an inconsistency in the approach that cannot be blamed on this risk sharing literature which had undoubtedly scholarly merits. The stipulation that countries have first to converge in their economic structures before fiscal risk-sharing should be contemplated makes no sense. Since common shocks cannot be insured, convergence would actually reduce the potential for risk sharing (Imbs and Mauro, 2007). The convergence postulate is a legacy of the old paradigm that if only every member state exercises fiscal discipline, all macroeconomic stabilization could be left to the independent central bank.

Diversity of economic structures is here to stay. This is not a handicap but can be a source of economic robustness. It requires finding ways of spreading the risks to income and employment from (asynchronous) business cycles and different vulnerabilities. Notably the risks of member states with high growth potential but stability problems can be pooled to mutual benefit with risks of mature member states that are stable but stagnating. Public risk sharing must be strengthened before private risk sharing can be relied on. However, convergence on some imaginary best standard is not even desirable from an economic perspective.

### **3 Taking political constraints seriously**

The “union of unions”-paradigm is a splendid vision of the euro area if one is a great believer in ever closer union. But European electorates seem to be wary of this mantra of European integration and those in the PR department of the EU may want to take notice. European electorates resent ever further steps and roadmaps towards closer integration not because they are ignorant and have not seen the light. It is because they sense that it is a road full of uncertainty, with the potential for serious accidents along the way. An agenda that tells the public that the monetary union is really a union of many unions is like telling somebody who wanted to buy a simple doll that they got a Russian doll with more dolls inside, none of which is particularly fun to play with.

But instead of admitting to uncertainty, we are getting a firm roadmap with timetables. The promotion of a capital markets union is the next big project. This is again following the script of the literature that sees in cross-border capital ownership the most powerful risk sharing channel (Sørensen and Yosha, 1998: 213). If every household in the euro area would get its income from holding a representative portfolio of shares in the output of the euro area, national output fluctuations would not matter to consumption as the income streams would be equalized. This could even deal with permanent shocks to a regional economy. Any default would be spread among the many shareholders, not banks and sovereigns that tend to get into a fatal embrace, dragging each other into the abyss.

Unfortunately, households do not hold and get their income from representative portfolios. And governments could not ignore the default of a major player in stock

markets. Lehman Brothers was an investment bank, AIG a wholesale insurer of the financial industry. If a big pension fund would collapse in a stock market crash, whose responsibility would it be if this were to wipe out the old age security of many pensioners in several member states? If it were the responsibility of the fiscal authority in the country where the pension fund had its headquarters, one might see the same negative feedback loop that we witnessed in the case of Irish and Spanish banks.

Governments are still not ready to underwrite the risks of an integrated financial system in the euro area. The banking union has not eliminated negative feedback loops because the resolution mechanism has no underpinning from a euro bond. The German Treasury seems to have got cold feet on this once the threat of a euro area break-up was over. But it is irresponsible to press ahead with a capital markets union as if governments were willing to incur joint liability for cross-border default of systemically important financial businesses. They are not.

This has to be taken as a hard political constraint. Ignoring it amounts to a political strategy that tries to panic governments into ever closer union, with the mother of all crises as the ultimate threat. At the moment, the end of the union seems to be the more likely outcome of such a strategy.

Taking seriously the political constraints imposed by integration fatigue requires thinking of public risk management short of joint fiscal liability. If governments are not ready to underwrite the risks of financial integration, then it seems logical to limit and possibly even reverse financial integration. Macroprudential instruments are a good start, since they are sensible capital controls that dare not speak their name. They are sensible because they do not create costly and hard to maintain borders with regressive distributive effects but organize collective action of supervisory authorities against the herding behavior of lenders and investors. One should probably contemplate also other forms of segmenting (dis-integrating) financial markets, as the Dodd-Frank Act in the United States and the Vickers rule in the UK have done.

Reversing the order of private and public risk-sharing expressed in the report should be considered as well. Public risk sharing can be improved without a central budget and a common debt instrument, even though the latter would be a desirable stabilizing instrument. Re-insurance mechanisms that draw on the deep pockets of central banks are an alternative. For instance, the re-insurance capacity of the resolution mechanism could be enhanced if it were given a banking license and could thus get access to the ECB as a lender of last resort. It would no longer confine it to a finite amount of firing power, in line with what the financial industry is able to pay or beleaguered governments are able to stump up. In a systemic crisis, pre-committed amounts tend to trigger adverse speculation that funds run out rather than assure everybody that “it will be enough”, to paraphrase Mario Draghi. In contrast

to direct lending of last resort by the ECB, the resolution mechanism could attach strings to its rescue operations for banks, such as a strict cap on bonuses.

Another risk sharing mechanism, operating at the interface of public and private finance, would be an insolvency law for sovereign debtors (Gianviti et al., 2010). It is a long over-due international public good. Financial investors must get back the sense that they have to share the pain and that returns are earned for taking not only the upside but also the downside risk. Obviously, banks and funds would try to pass on the losses to their shareholders and clients. But this would be preferable to the present situation in which the public institutions that rescued them have to do this unpopular business for the bank and fund managers, passing losses onto taxpayers. Before a union of unions can be proposed to these taxpayers, the monetary union will have to show that it can do better than that.

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# Monetary union and fiscal integration<sup>1</sup>

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In the subsequent debates on the rationale and perspectives of the euro area, both supporters and opponents of the *euro project* agreed it must be accompanied by a fiscal and political union in order to survive. However, while the former (e.g. Wolff, 2012) believed this was both possible and desirable, the latter (e.g. Feldstein, 1997; 2012) doubted it would ever happen due to a long historical tradition of sovereign nation states in Europe.

Unfortunately, these debates have suffered from numerous shortcomings. First, the notions of fiscal union and political union have been rarely defined in a precise way (if at all) what has led to frequent misinterpretation of the existing status of EU integration (section 1.2). The same concerns arguments in favor of political and fiscal integration as the condition for the monetary union's sustainability. Frequently, especially in the recent crisis-dominated hot debate, they have been taken as given. As a result, the claim for closer political and fiscal union sounded more like a creed rather than something based on well-founded academic arguments. De Grauwe (2006), who offers an in-depth discussion on interrelations between monetary and political/fiscal union, and Aizenman (2013), who underlines the importance of a banking union (with its fiscal implications) for the stability of a common currency, are prominent exceptions here. However, a closer examination of interlinks between monetary and fiscal union on both a theoretical and empirical ground provides us with a more nuanced picture.

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<sup>1</sup> This is the updated fragment of the report prepared within the European Commission DG ECFIN's 2014–2015 Fellowship Initiative (Dabrowski, 2015). The author acknowledges the support of the European Commission, which made this work possible. However, the paper reflects solely personal views and opinions of the author and not necessarily those of the European Commission or any institution, which he is affiliated with.

# 1 Definitions

Before we move to theoretical and empirical analyses of interrelation between monetary and fiscal union we will try to define both concepts.

## 1.1 Monetary union

Monetary union can be defined in both narrow and broad terms. In its narrow definition, monetary (or currency) union refers to situation when more than one territory (jurisdiction) share a common currency, and a single monetary and foreign exchange policy (Rosa, 2004). It can result from a bilateral or multilateral agreement when all interested parties decide to create/ share a common currency, common central bank and responsibility for joint monetary policymaking. This is the case of Economic and Monetary Union (EMU) within the European Union (EU), West African Economic and Monetary Union (WAEMU), Central African Economic and Monetary Community (CEMAC), Eastern Caribbean Currency Union (ECCU) and few other similar arrangements. Alternatively, a country may decide to use other country's currency based on its own unilateral decision, just giving up its monetary sovereignty. These are the contemporary cases of Panama, Ecuador, El Salvador and Zimbabwe (using the US dollar), Kosovo, Montenegro (using the euro), Lichtenstein (using the Swiss franc), Nauru (using the Australian dollar), and few other countries.

Under a broader definition, the concept of monetary union also includes multiplicity of currencies that are linked each other through fixed exchange rates. Cohen (2008) calls this variant as an *exchange-rate union*, in opposition to *currency union* (see above). A fixed exchange rate can be set against either other currency or a common metallic standard (silver or gold). As in the case of narrow definition, the broad definition includes cases of multilateral or bilateral agreements such as the Bretton Woods system or the European Monetary System and countries' unilateral decisions. Among the latter, a *currency board* regime is the strongest arrangement.

Such a broader definition was assumed by Mundell (1961) in his seminal analysis of an optimal currency area (OCA) – see section 2.1.

Obviously, there are important differences between *currency union* and *exchange-rate union*, even in its strongest *currency board* variant. In particular, they relate to costs of leaving monetary union, much higher when there is a common currency (Dabrowski, 2012a; Aslund, 2012).

## 1.2 Fiscal union

Unfortunately, there is no single and clear-cut definition of a fiscal union in economic literature. In the debate on the causes of the European debt crisis and possible remedies, various practical meanings of fiscal union have been assumed by individual authors depending on their personal/ institutional views and opinions and



which particular issues their analyses focus on. Thus, in various proposals related to changes in EU/EMU governance architecture, the notion of fiscal union may involve:

- a higher degree of centralization of fiscal resources at the Union level
- the development of European revenue sources for the EU budget (instead of the contributions of member states)
- a harmonization of taxation/ entitlements within the EU/EMU
- a mechanism of fiscal discipline at both the Union and national levels, including the mechanism of orderly sovereign default
- building up of Union-wide insurance mechanisms against financial turbulences (bailout facilities), including a debt mutualization mechanism
- the creation of institutions with fiscal authority on a supranational level (for example, creating an EU/EMU Ministry of Finance)

In our opinion, all of these proposals constitute elements of fiscal union, which can be defined, in very broad terms, as transfer of part of a fiscal resources and competences in the area of fiscal policy and fiscal management from the national to supranational level.

Analysis of the current integration mechanisms and institutions within the EU leads to conclusion that they involve several ingredients of the fiscal union as discussed earlier: federal budget, including cross-country fiscal transfers, some elements of federal taxation, partial tax harmonization, fiscal discipline rules, fiscal crisis resolution mechanism and federal bailout facilities (see Dabrowski, 2014 for detail analysis). There are few additional fiscal integration mechanisms and facilities within EMU, related to fiscal discipline rules, bailout facilities and (forthcoming) euro area-wide deposit insurance and banking-crisis resolution facilities. This contradicts frequent and somewhat surprising opinions that the EMU is a case of monetary union without a fiscal union (e.g. Bordo et al., 2011; European Commission, 2012). On the other hand, this is a rather shallow fiscal union as measured by the degree of fiscal centralization (1% of EU Member State's Gross National Income or less plus bailing out funds within the EMU) and if compared with contemporary federal states (Wyplosz, 2014).

Taking into consideration that the fiscal union already exists (although with various limitations), a call for supplementing monetary union with fiscal union can be interpreted as the postulate to increase the degree of fiscal centralization within EMU.

Consequently, the existence of fiscal union, even the shallow one, means that the EU, in particular the euro area, also shares characteristics of a political union, which can be understood as ceding part of national sovereignty to supranational bodies (in this concrete case – to the EU governing bodies). Apart from fiscal policy and fiscal management, EU Member States have delegated to the EU level important prerogatives in the areas of trade policy, competition, internal market regula-

tion, immigration, justice and home affairs, agriculture and fishery and many others. Most importantly, the decision of creating the common currency and central bank represented another important step towards political unification (Draghi, 2015).

## 2 Theoretical foundations

Looking for conceptual foundations of the analysis of interrelation between monetary and fiscal union, we will briefly review two pieces of economic theory: (i) OCA theory, which analyzes economic conditions, under which a common currency can function effectively, and (ii) theory of fiscal federalism, which offers criteria of fiscal centralization and decentralization.

### 2.1 OCA theory

The OCA theory as developed by Mundell (1961) and McKinnon (1963) analyzes, among others, adjustment to asymmetric shocks in the absence of exchange rate flexibility. The best adjustment mechanism can be provided by free mobility of production factors (labor and capital). In case when factor mobility is insufficient (or shock is particularly large), fiscal policy can help cushion the consequences of idiosyncratic shocks.

However, this part of OCA theory may be interpreted in two ways: either as the retention of fiscal capacity and sufficient fiscal buffers in territories participating in a common currency area to enable them to respond to idiosyncratic shocks in a decentralized way (in the absence of monetary accommodation) or the necessity to arrange cross-territorial fiscal transfers. This second solution may have advantage of reducing the risk of uncoordinated, idiosyncratic fiscal responses conducted in a decentralized way, which can produce additional unnecessary shocks (Cottarelli, 2012a).

The first interpretation stayed behind the original design of the Maastricht Treaty and the Stability and Growth Pact (SGP) (Mortensen, 2004; De Grauwe, 2006). The second one seems to dominate in the post-2010 debate (e.g., Wolff, 2012). The reason of such shift may relate to failure of building sufficient room for countercyclical fiscal policy on national level prior to the global and European financial crisis, resulting from insufficient fiscal discipline (Dabrowski, 2014).

There is also the question of how big is the risk of idiosyncratic shocks within the euro area. According to the original OCA theory, the concept of idiosyncratic shocks relates to real external shocks affecting respective territories in different way, i.e., factors beyond policy control – see the example of shift of external demand from goods produced by territory B to goods produced by territory A, in

Mundell (1961). Looking back for more than 15 years of history of the European common currency it is hard to detect such major asymmetric shocks<sup>2</sup>.

Two biggest shocks (of 2008–2009 and 2010–2013) were caused by the financial crisis, so they had nominal rather than real character. The first stage of the global financial crisis (2008–2009) had largely external origins (crisis in the US financial sector) and affected negatively all EU and EMU members, in one way or another. Thus, it is hard to argue about its asymmetric character.

On the contrary, the second stage of financial crisis (2010–2013) affected directly only part of the euro area, its so-called periphery. Indeed, it had an asymmetric character, however, not originating from the real sphere<sup>3</sup> but from imprudent fiscal policies and banking supervision in individual member states then reinforced by the market fear that crisis-affected countries may leave the common currency area. Thus, they were policy-induced and one can say about idiosyncratic policies rather than idiosyncratic shocks in the OCA theory sense (see Cottarelli, 2012a). In such circumstances, effectiveness of using fiscal transfers as remedy remains questionable.

In the light of the above discussion, increasing the euro area's capacity to respond to idiosyncratic shocks would require increasing flexibility and transparency of labor, capital, product and service markets and rebuilding fiscal buffers on a national level rather than insisting on higher degree of cross-border fiscal redistribution (Fuest and Peichl, 2012; Issing, 2013; Balcerowicz, 2014; Draghi, 2015).

## 2.2 Theory of fiscal federalism

When discussing economic rationale of closer fiscal integration within the EU and EMU, the *theory of fiscal federalism* should serve as primary guidance, similarly to the role of OCA theory in the debate on monetary integration. This theory helps us understand “*which functions and instruments are best centralized and which are best placed in the sphere of decentralized levels of government*” (Oates, 1999, p. 1120).

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<sup>2</sup> In this respect our opinion differs from those of Rey (2013) and Wyplosz (2015). The latter considers “...highly differentiated debt buildups on highly diverse initial debt level positions as well as different inflation and current account evolutions” as evidence of asymmetric shocks (in the OCA theory sense) affecting the euro area and confirmation “...that the Eurozone is not an OCA.”

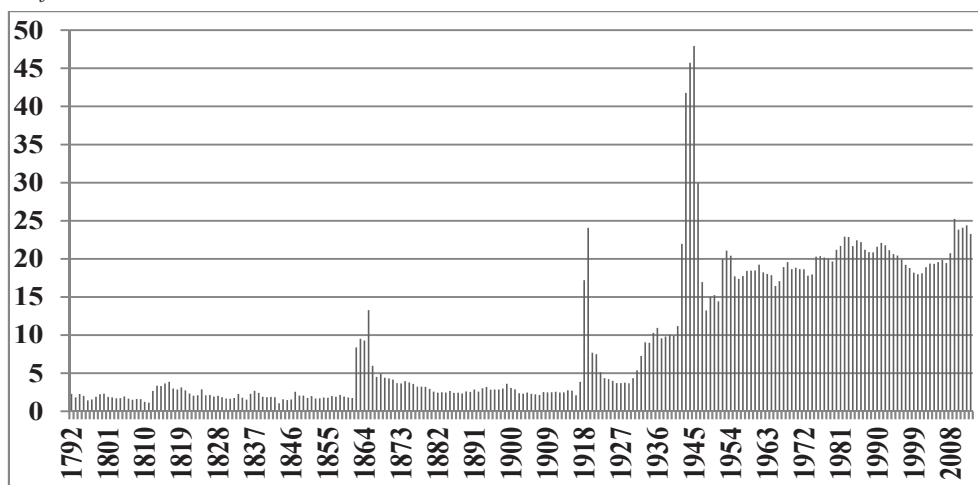
<sup>3</sup> Cottarelli (2012a) mentions the “globalization” shock suffered by Italy and Portugal, which produced low-value added goods and faced increasing competition of emerging-market producers. Indeed, it represented asymmetric shock in terms of OCA theory. However, in our opinion, its contribution to financial shock experienced by both countries in 2010–2013 (which originated from sovereign over-indebtedness) was limited and indirect.

Thus, discussion about the perspective of closer fiscal integration in Europe should start from a functional analysis aimed at identifying those policy areas and public goods where the centralization of competences and resources could either offer increasing returns to scale or help address cross-border externalities (see e.g. Berglof et al., 2003 and Wyplosz, 2007 and 2014). As result, any further fiscal integration should be justified by potential benefits of pooling resources to carry out common policies and provide supranational public goods rather than by the very idea of a closer fiscal union itself. In the context of our analysis, this means that potential benefits of greater fiscal centralization (for monetary union stability and sustainability) should outweigh its potential costs in the form of lower efficiency of centralized expenditure (as compared to decentralized), wrong policy incentives on national level (risk of moral hazard and free riding) or redistribution conflict between member states.

### 3 Examples of other monetary unions

Empirical analysis requires comparison of the current institutional architecture of the EMU with other past or contemporary monetary unions. Most frequently, the EMU is compared with the US (see e.g., Bordo et al., 2011; Henning and Kessler, 2012; Gros, 2013), which may be justified by the similar size of economies, their global importance and the role of the US as the major EU's partner and competitor. However, such comparison suffers from several shortcomings.

*Chart 1: US total federal spending 1792–2013*  
% of GDP



Source: [www.usgovernmentspending.com/spending\\_chart\\_1792\\_2013USp\\_13slli011mcn\\_F0f\\_Spending\\_In\\_20th\\_Century](http://www.usgovernmentspending.com/spending_chart_1792_2013USp_13slli011mcn_F0f_Spending_In_20th_Century).

First, it disregards different political and institutional characteristics of both: while the US is a federal state, the EU represent an institutional hybrid that merges characteristics of federation, confederation and international organization of independent states (Dabrowski, 2010).

Second, it often overlooks the process of historical evolution of the US federation, which is much more centralized today than it was in the past, including its fiscal dimension (chart 1). Until the beginning of the 20<sup>th</sup> century, the US federal budget amounted to 2–3% of GDP in peacetime. However, unlike the EU budget, it was concentrated on the provision of typical federal public goods such as general government services and national defense, with almost no redistribution and transfers. It started to grow substantially, including large-scale redistribution schemes, only after the Great Depression in the 1930s.

Third, it disregards other historical and contemporary experiences of monetary unions, heterogeneous in their economic and political architecture and operational details (e.g., Cohen, 2008; Deo, Donovan and Hatheway, 2011).

Indeed, going beyond a simple comparison of the EU/EMU with the USA, and looking for other historical and contemporary cases of monetary unions provides us with a mixed picture.

The first observation relates to the fact that most historically known common currency areas (CCAs) have matched with the territory of sovereign states, either unitary or federal. Furthermore, most historical episodes of monetary unification followed political unification, which was in most cases involuntary, being the result of war, conquest, colonization, etc. (this also relates partly to the US and process of its territorial formation in the 19<sup>th</sup> century). Thus, it should not be surprising that in such cases monetary union goes hand-by-hand with fiscal union: both are results of the same exogenous factor, i.e., political unification.

EMU is different from most of those CCAs not only as a voluntary union but also because the degree of its political integration is limited (see above). For this reason, it makes sense to compare EMU not only with the monetary unions of federal states but also with voluntary monetary unions of sovereign states. We mean cases when a common currency and common central bank are not accompanied by a meaningful delegation of political sovereignty in other areas (like fiscal policy) to a supranational entity and building a political superstructure.

The 19<sup>th</sup> century examples of such monetary unions involved the Latin Monetary Union, Scandinavian Monetary Union and German Monetary Union (prior to German political unification in 1871). Due to technical specifics of monetary systems based on metallic standards, they concentrated on unification of gold and silver content of national coins and their free circulation across unions' member states (Cohen, 2008). The first two unions involved no political and other forms of integration, while the German Monetary Union was associated by a custom union.

Two largest contemporary monetary unions outside Europe, the WAEMU and CEMAC, have virtually no political and fiscal integration but they have used a common currency (the CFA franc) since 1945, i.e., for 70 years. Only at the end of the 1990s did member countries of both monetary unions start to develop other segments of economic integration, i.e., custom unions, common markets and some soft forms of supranational macroeconomic policy coordination and fiscal surveillance, following the EU/EMU experience. However, the pace of those integration processes is rather slow, especially in the case of CEMAC.

Nevertheless, both monetary unions have proved sustainable so far in spite of numerous asymmetric shocks (IMF, 2013 for a contemporary analysis of the WAEMU challenges), divergent macroeconomic trends, violent political conflicts (both internal and regional), limited trade and financial integration, etc.

Other contemporary examples of monetary unions with no or weak political integration components include the ECCU and the Common Monetary Area in Southern Africa.

If we use a broader definition of monetary union by including permanently fixed exchange rate regimes (against other currency or common metallic standard – see section 1.1), we obtain more cases in which monetary “federalism” has not been accompanied by the political and fiscal one. This concerns, in first instance, the period of the international gold standard in the second half of the 19<sup>th</sup> century and the beginning of the 20<sup>th</sup> century, when most independent (and sometimes politically antagonistic) countries shared the same monetary rules and, in fact, remained in a quasi-monetary union (Eichengreen, 1998; Cesarano, 2009).

## **4 Benefits, costs and limits of deeper fiscal integration**

Now we will turn to discussion on potential net benefits of deeper fiscal integration. Following analysis in section 2.2, we will look for these proposals from the perspective of the theory of fiscal federalism and divide them into measures, which can increase sustainability of a common currency and those that help increasing returns to scale or address cross-border externalities in other policy areas.

In the first group, there are three potential arguments in favor of closer fiscal integration in Europe, namely (i) building the banking and capital market union, (ii) conducting countercyclical fiscal policy and (iii) cushioning asymmetric shocks.

In the light of the recent global and European financial crisis experience, unifying financial market regulations and supervision, building the pan-European deposit insurance and crisis resolution mechanisms (to deal with potential bank failures) can provide obvious benefits for the entire EMU, EU and global economy (due to size and importance of the European financial industry). Most importantly, it will facilitate completing the single market for financial services. Otherwise, as long as regulatory and supervisory power and fiscal responsibility for crisis resolution

remain in national hands (even if banks operate in more than one EU Member State), the incomplete single market will face a continuous danger of fragmentation and renationalization, especially in a time of financial distress (Kumm, 2013). Other positive externalities involve eliminating cross-border regulatory arbitrage and containing danger of cross-border financial contagion. On the other hand, such integration will lead to greater centralization of public resources at the European level as result of launching the European Deposit Insurance Scheme and the Single Resolution Fund.

By the way, the presence of large and sophisticated financial sector with cross-border operations seems to be the main feature, which distinguishes EMU from other contemporary monetary unions of sovereign states (see Aizenman, 2013 and Wyplosz, 2015 on the role of financial integration in ensuring the euro's sustainability).

Some authors (e.g. De Grauwe, 2006; Wolff, 2012, Cottarelli, 2012b) also suggest conducting supranational countercyclical fiscal policy based on the findings in fiscal federalism's literature, which tend to assign this function to the federal level (Oates, 1999; Begg, 2009; Bordo et al., 2011). Leaving aside the discussion on the effectiveness of countercyclical fiscal measures (especially discretionary ones) in smoothing the business cycle in an open economy and against various political traps (Dabrowski, 2012b), one may agree that they have more of a chance to work at the supranational level than the national level due to collective action problem, the risk of free riding and cross border "leakages" of demand (Dabrowski, 2010). On the other hand, it would require building a much bigger fiscal capacity at the European level (probably in the range of at least of 10% of the Union's GDP), including far-going tax schemes, social transfers and other expenditure responsibilities.

Not only is such a far-going fiscal centralization politically unrealistic in a foreseeable future, even within the EMU only, but it may also be economically dysfunctional. First, it can contradict the basic principle of fiscal federalism, i.e. assigning responsibilities to the level of government, which can most effectively carry out a given task. Taking into consideration the internal political, economic, social and cultural diversity of the EU, the optimal degree of its fiscal centralization may be lower than in other "mature" and more homogenous federal states. Second, taking into consideration the remaining huge productivity differences across the EU, centralization of social and income policies (which usually stays behind the substantial size of federal budgets and their countercyclical capacity) may lead to the excessive convergence of labor and social costs<sup>4</sup> and, as a result, make the EU labor market even more rigid than it is now.

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<sup>4</sup> Experience of German reunification in 1990s when labor costs in East Germany rapidly converged to the West German level (without a sufficient increase in productivity level in the East) and led to a high unemployment rate may serve as a warning example (von Hagen and Strauch, 2001).

For example, Wolff (2012), who supports the idea of moving part of the countercyclical fiscal policy from the national to the euro area level, including the creation of a euro area budget in the range of 2% of GDP, recognizes the risks associated with building a single unemployment insurance system within the euro area. Dullien and Fichtner (2013) also see some risks but they strongly advocate such a common unemployment insurance scheme. Beblavy et al. (2015) propose the EU-wide reinsurance scheme for national unemployment insurance systems.

In most historical cases, the countercyclical role of the federal budget has come as a result of the prior centralization of various responsibilities: public pension systems, unemployment benefits, deposit insurance, federal infrastructure projects, and general public services (which include defense, public order, foreign policy, public health, education, justice administration, federal taxation, etc.), rather than building explicitly countercyclical fiscal facilities.

Wolff (2012) and the European Commission (2012) suggest a controversial idea of building a centralized euro area's fund which would provide member states with automatic but temporary fiscal transfers in the case of adverse idiosyncratic shocks (repaid in "good" times), a kind of a countercyclical insurance mechanism. The first question is how often do EMU economies experience asymmetric business cycles and suffer from idiosyncratic supply shocks? (section 2.1) Second, if transfers are to be neutral over the medium term as expected in those proposals it means an implicit assumption of a perfect regularity and symmetry of business cycles, which is far from the contemporary reality. Third, it underestimates difficulties with the *ex ante* identification of a given phase of the business cycle and the character of the shock (supply vs. demand, asymmetric vs. symmetric). Finally, it ignores the political economy and politics of any such redistribution mechanism, which most likely will make transfers permanent rather than temporary and repayable.

Gros (2012) argues that redistribution mechanisms in federal states such as the US may help decrease income disparities between regions rather than cushion asymmetric shocks. In his opinion, the US banking union seems to be the most effective instrument for addressing asymmetric shocks. His opinion can be interpreted as assigning the primary role in cushioning asymmetric shocks to mobility of private capital and labor rather than cross-territorial fiscal transfers (section 2.1).

If we go beyond an economic policy sphere, we can find more cases of potential benefits of centralization. This may relate to the EU common defense and security policy (Briani, 2013), the protection of external borders, common asylum policies (both extremely important in the context of 2015 refugee crisis), common consular services, environmental policy and many others.

However, the economic rationale for the centralization of new functions will always have to be confronted with political considerations such as national sovereignty concerns (Begg, 2009; Wyplosz, 2014, 2015), the interests of the incumbents



at the national level and a limited appetite for cross-border fiscal redistribution<sup>5</sup>. As a result, the EU has been built around the principle of subsidiarity enshrined in Article 5 of the Treaty on European Union (TEU). According to this principle, the functions of higher levels of government should be as limited as possible and should be subsidiary to those of lower levels (Mortensen, 2004).

## 5 Conclusions

Summing up our discussion, monetary unions between sovereign states or within relatively loose political federations or confederations are not a new phenomenon and may be relatively sustainable if not affected by major political shocks such as World War I in case of the gold standard. This means that EMU is not as unique a historical case as suggested by some authors (e.g. Bordo et al., 2011) or official documents (e.g. European Commission, 2012) and it makes sense to learn from the above-mentioned experiences (instead of limiting comparison to the USA). These experiences tell us that monetary integration does not necessarily must be accompanied by fiscal and deeper political integration, or even – by trade and market integration (however, the absence of the latter limits major potential benefit from a monetary union, i.e. lower transaction costs).

If we compare EMU with other past and contemporary monetary unions of sovereign states, it does not look so bad from the point of view of its institutional architecture, complexity and economic characteristics. It is accompanied by the advanced (although still incomplete) Single Market of goods, services, capital and labor which has led to increasing level of trade and investment integration, increasing cross-country labor mobility (Wyplosz, 2015) and high degree of synchronization of business cycles. This means it meets basic economic precondition of its effective functioning as determined by the OCA theory. Furthermore, it is the first historical case when the OCA theory was taken into account during the process of setting the CCA (apart from political goals and considerations). EMU is also accompanied by a partial fiscal and political union.

In response to the recent financial crisis, some important elements of fiscal union have been redesigned, further developed or added. This concerns building up the banking union, sovereign debt resolution mechanism and bailing out facilities within the euro area, and overhaul of fiscal discipline mechanism.

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<sup>5</sup> Buiters (2013) argues that a similar reluctance to cross-regional redistribution is observed within national states in Europe, resulting in secessionist tendencies in some of them.

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# Macroeconomic imbalances and institutional reforms in EMU<sup>1</sup>

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## Abstract

The paper summarises the channels and mechanisms which led to the emergence of macroeconomic imbalances in EMU before, in and after the crisis of 2008/09. It focuses on the role of the specific institutional setting of EMU in these developments and outlines the key reforms which are necessary to eliminate the imbalances and prevent them from re-emerging.

*Keywords: EMU, macroeconomic imbalances, European economic policy*

*JEL Codes: E02, E52, E62, F32, F33, F42*

## 1 Introduction

Macroeconomic imbalances<sup>3</sup> are at the heart of the crisis in the European Monetary Union (EMU). Before 2008/09, EMU member states embarked on different growth paths: Germany and other countries in the “North”<sup>4</sup> featured strong exports and weak domestic demand, and consequently accumulated large current account surpluses. By contrast, the economies in the “South” were characterized by weaker

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<sup>3</sup> This paper mostly deals with “external” or “current account imbalances”. Changes in the latter however cannot be separated from domestic developments, which are sometimes subsumed under the term “internal imbalances”. Because of that, I generally use the broader term “macroeconomic imbalances”.

<sup>4</sup> Throughout the paper, I use the labels “North” and “South” as well as “Northern” and “Southern” Europe as synonyms for current-account surplus and deficit countries, regardless of their geographical position. See Ederer and Reschenhofer (2013) for further discussion.

exports and a boom in domestic demand, and built up high external deficits.<sup>5</sup> These developments were not sustainable and made EMU highly vulnerable during the financial and economic crisis. They are also a major cause for the subsequent sluggish and uneven recovery, as well as for the crisis of public finances and the financial sector in many Southern European economies.

Major factors behind these developments were the institutional flaws of EMU. First, it is not an optimal currency union (OCA). With monetary policy centralized and fiscal policy restricted by a series of regulations, labour markets are the only remaining mechanism for adjustments after asymmetric shocks. Upward and downward wage and price flexibility are however not high enough, and labour migration within EMU is rather limited. Second, the institutional framework of EMU supported the boom and bust cycles which lead to the emergence of macroeconomic imbalances and the current crisis. The divergence in wages and prices entailed substantial differences in the real interest rate. High-growth and high-inflation countries had low real interest rates which stimulated domestic demand and amplified the boom. Strong domestic demand led to expanding imports and consequently to the emergence of current account deficits. By contrast, real interest rates in low-growth and low-inflation countries restricted domestic demand. This supported the emergence of current account surpluses. In theory, the so-called “real interest channel” should have been less effective than the counteracting “competitiveness channel”. Before the crisis however, the situation was quite the opposite. The common monetary policy which was supposed to stabilise the business cycles had no remedy against these developments. Furthermore, due to fundamental changes in the risk perception of financial investors ahead of the establishment of EMU, nominal interest rates had converged and did not counteract the effect of the real interest channel.

The common currency and the integration of EMU’s financial markets supported these (symmetric) developments. Domestic demand booms and current account deficits were financed by large capital flows stemming from current account surplus countries. Banks intermediated the credit expansion of domestic households and firms by running up large stocks of debt abroad. This made current account deficit countries highly vulnerable to “sudden stops” of capital flows when the financial crisis began and caused a sharp decline in domestic demand. The legacy of high stocks of financial debt impeded a recovery when the global crisis ended. Households and firms tried to reduce their debt burdens by restraining their

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<sup>5</sup> Trade deficits of catching-up countries are not necessarily harmful if they come along with high growth rates that permit those countries to equilibrate their external position in the future. Such trade deficits would not be named “imbalances”. The developments in the South however were mostly not the result of a catching-up process, but stemmed from unsustainable consumption and construction booms. See Ederer and Reschenhofer (2013).

expenditures and consequently deflated demand, which aggravated the economic crisis even more. The countries suffered from a “balance sheet recession”. Furthermore, the lasting boom in domestic demand before the crisis induced structural changes on the production side of the economy. The closed, domestic-oriented sectors, such as construction and services grew relatively to the open, trade-oriented sectors. Because booming demand in these sectors was unsustainable and is unlikely to return in the near future, these structural shifts need now be reversed, at least partially. Such adjustment processes however take time and are never easy for firms and employees alike.

The paper provides a summary of these developments and derives some conclusions with regard to economic policy in order to prevent macroeconomic imbalances from (newly) arising and to reduce the existing ones. It builds on the findings of Ederer and Reschenhofer (2013, 2014a, 2014b) and Ederer and Weingärtner (2013). The first section summarises the mechanisms which led to the emergence of macroeconomic imbalances. The next section highlights the role of the economic governance structure of EMU in these developments. The fourth section is about policy reforms to overcome those imbalances and make EMU more stable in the future. The last section summarises and concludes.

## **2 Macroeconomic imbalances**

### **2.1 The built-up of imbalances before 2008/09**

Before the crisis of 2008/09, the EMU member states developed substantial macroeconomic imbalances. Germany and other Northern European countries built up large current account surpluses whereas the Southern European countries accumulated substantial external deficits. These imbalances were the result of different growth paths: The surplus countries featured strong export growth but weak domestic demand. The deficit countries in general were hallmarked by weaker exports and a boom in domestic demand (Ederer and Reschenhofer, 2013).

At the root of these developments were huge differences in wage and price inflation within EMU. This divergence had various effects (“channels”): First, changes in relative prices determine the price competitiveness of a certain country vis-à-vis its trading partners. A higher inflation rate than in other countries reduces competitiveness and consequently leads to a deteriorating trade balance (“competitiveness channel”). If this was the only mechanism at work, it would automatically counterbalance divergent developments. Faster growing countries with higher inflation rates would lose competitiveness, which in turn weakens economic growth. On the opposite, slower growing economies with lower inflation rates would gain competitiveness and would consequently be stimulated.

There are however two more channels present, which potentially limit the effectiveness of the competitiveness channel. One is the so-called “real interest channel”

(European Commission, 2006, 2009): Higher inflation rates reduce real interest rates and therefore stimulate credit-driven domestic consumption and investment. This leads to an even higher economic activity, which in turn induces higher wage and price inflation. The economic boom is reinforced. Furthermore, different productivity, wage and price developments in EMU may result in divergent patterns in the wage share. A higher economic activity typically strengthens the power of labour unions and raises the wage share. A rising wage share usually stimulates consumption more than it reduces investment, thus stronger economic activity will be the result. Consequently, a rising wage share would deteriorate trade balances (“income distribution channel”).

In the North, and particularly in Germany, unit labour costs almost stagnated before the crisis. Productivity growth was on average only marginally higher than in the South. Wages however increased markedly slower than in the rest of EMU. This led to a substantial gain in relative competitiveness in the North vis-à-vis the other EMU countries, and vice versa in the South. Germany and others however benefited not only from competitiveness shifts within EMU, they furthermore increased their competitiveness with respect to countries outside EMU. Because of the higher inflation rates in the South, the exchange rate of the Euro vis-à-vis other currencies was lower in the North than it would have been in the case of country-specific currencies. Contrarily, the euro was potentially overvalued in the Southern European countries, due to low inflation in the North.

The price divergence led to high differences in real interest rates within EMU. In the high-inflation countries in the South, real interest rates were much lower than in the North. Furthermore, differences in unit labour costs were even larger than in prices, which caused the wage share in the North to fall substantially more than in the South. All three channels consequently contributed to the emergence of macroeconomic imbalances in EMU (Ederer and Reschenhofer, 2013).

The surpluses of the North corresponded to some extent (but not entirely) with the deficits in the South. In the North, both exports into EMU and the rest of the world increased strongly (Ederer and Reschenhofer, 2014a). Exports of the South evolved less favourably, particularly into EMU. Imports of the North however more or less stagnated, both from EMU and the rest of the world. In the South, and particularly in Spain, imports increased, both from EMU and from outside. Thus, the North benefited from strong demand in the South and an ever better competitiveness position both within EMU and vis-à-vis the rest of the world. In the South, demand from the North contributed almost nothing to their export performance. A deteriorating competitiveness dampened exports, particularly within EMU.

Interestingly, the North thrived not so much because its firms positioned themselves better within global value chains, but because global final demand for their products (or products to which they contributed a certain value added) increased.



This effect was particularly strong vis-à-vis EMU. The North seemed to be in a good position inside the global value chains already before the establishment of EMU. Nevertheless, they also improved their position in the global value chain to meet extra-EMU demand. The Southern European countries did not benefit from rising foreign demand, both from EMU and the rest of the world. Some of the countries (Greece, Portugal, and Spain) seemed to have repositioned themselves better within global value chains. France and Italy on the contrary lost some of their share in the production of demanded goods.

Furthermore, in Greece and Portugal current account deficits have persisted for a long time and can therefore (at least partly) be considered as “structural” in the sense that they would not be eliminated entirely if domestic demand in EMU was more balanced across the member countries. Nevertheless, the lack of an industrial sector is possibly the consequence of the aforementioned price divergences in EMU. The continuous loss in competitiveness in Southern Europe discouraged investment in innovative technologies and the establishment of new firms. Furthermore, existing firms could not keep up with their competitors in other EMU countries and outside the monetary union, and closed down.

This is strongly supported by a look into the developments on the supply side (Ederer and Reschenhofer, 2014b). In the North the share of the manufacturing sector, and of the export-oriented industries in particular increased (relative to the EU average), whereas in Western and Southern Europe it decreased. These developments were again related to unit labour cost developments. When we look into the developments of unit labour costs and their underlying variables at the industry level, we find that productivity growth in manufacturing and its export-oriented industries was higher in the North than everywhere else. Wages on the other hand grew slowest in the North and fastest in the South. Unit labour costs therefore decreased in the former and increased in the latter. Changes in aggregate productivity and in unit labour costs of the total economy were almost entirely determined by their respective changes within sectors and industries. The structural change which we observed – the shifts of the value added share between sectors and industries – contributed only marginally to these developments.

We also find that the increase in the relative value added share of the manufacturing sector corresponds to a decrease in relative unit labour costs in the North, and vice versa in the South (Ederer and Reschenhofer, 2014b). A similar pattern can be found at the industry level. An increase in the relative value added share of export-oriented industries correlates with a decrease in relative unit labour costs in the North. In the rest of EMU, the opposite patterns can be observed. The results of the econometric analysis confirm these findings. We find a statistically significant negative impact of changes in relative unit labour costs on the changes in the value added share of a certain industry in a country relative to the EU average. Furthermore, there is a clear difference between the effects for domestic-oriented and

export-oriented industries. The latter are much more exposed to international competition, so that price competitiveness is more important than in the former. Our results thus strongly support the hypothesis that structural change was to some extent determined by the divergence of labour costs in EMU.

## 2.2 Developments in and after the crisis

The financial and economic crisis in 2007/08 brought an abrupt end to these developments. Particularly those countries where current account imbalances were accompanied by credit-driven construction and/or consumption booms were hit hardest. Between 2007 and 2009, when the global crisis was at its worst, GDP declined in almost all EMU countries. Due to the global dimension of the crisis, exports declined everywhere and had a major impact on aggregate demand. In the South however domestic demand and imports declined much more than in the rest of EMU (Ederer and Reschenhofer, 2013).

This pattern was mostly a consequence of the macroeconomic imbalances which had built up before the crisis. In most of the South, domestic demand had been the driver of the economic boom, primarily fuelled by increases in the amount of private domestic credit which in turn was financed by the current account surplus countries. The financial and economic crisis led to a “sudden stop” in international credit flows as investors lost confidence and induced a reduction of the amount of credit to private households and firms by domestic banks (Lane, 2013). Without the possibility to refinance their expenditures, domestic demand collapsed.

The financial and economic crisis seemed over in 2009. In the majority of EMU countries the economy restarted to grow. The legacy of the developments before the crisis in general and the macroeconomic imbalances in particular (and the misguided crisis policies in the South) however led once more to divergent development patterns. The North recovered quickly from 2009 onwards, and reached its pre-crisis level in 2012. Recovery in general was mainly due to resuming export growth, in particular to the countries outside EMU. In the South however, GDP continued to shrink or stagnated, and remained well below its pre-crisis level.

The legacy of high stocks of financial debt impeded a recovery (or worsened the crisis) in the South when the global economy started to pick up speed again. Falling asset prices, a deteriorating economic climate and drying-up financial flows from abroad made refinancing for banks more difficult and led to a cancellation of credit contracts. This in turn provoked bankruptcies and asset prices to fall further, as all sectors tried to pay back their debt (“deleveraging”) by selling assets. Households and firms tried to reduce their debt burdens by restraining their expenditures and consequently deflated demand, which aggravated the economic crisis even more. In almost all EMU countries, the balance of financial flows of the non-financial corpo-

rate sector turned from a deficit into a surplus.<sup>6</sup> The exceptions were France, Italy, and Portugal, where it remained in deficit. In those countries where the household sector had exhibited a deficit in the financial flows' balance before the crisis, it turned into a surplus or showed at least a significant improvement afterward. Private sector credit flows decreased in all EU Member States after the crisis, and turned even negative in Greece and Spain. These patterns provide evidence that many EMU countries suffered (and still suffer) from a balance sheet recession (Koo, 2009).

The long-lasting boom in domestic demand before the crisis had induced structural changes on the production side of the economy. The closed, domestic-oriented sectors, such as construction and services had expanded relatively to open, trade-oriented sectors. Because these developments were unsustainable and domestic demand is unlikely to return in the near future, these structural shifts need now be reversed, at least partly. Such adjustment processes however take time and are never easy for firms and employees alike. Current account surplus countries however face a similar albeit much less drastic need for readjustment. They had sold a large amount of their products to the booming deficit countries. Production and employment consequently had shifted to the open, trade-oriented sectors such as manufacturing. As exports in surplus countries were at least partly the mirror image of domestic demand in deficit countries, the former also face a need to adjust and shift production and employment to more domestic-oriented sectors.

### 3 The role of EMU's economic policy architecture

The (flawed) institutional setting of EMU contributed substantially to the emergence of macroeconomic imbalances and the subsequent crisis. First, EMU is not an optimal currency union (OCA). According to OCA theory, a monetary union is considered to be optimal if the participating countries are rather homogeneous in their economic structure and hence react similarly to shocks (this property is called "symmetry"), and if wages and prices are flexible and labour mobility is high ("flexibility", Mundell, 1961). In that case, asymmetric shocks are infrequent and, in the event, the economies smoothly adapt to such shocks.<sup>7</sup> When EMU was founded, monetary integration was expected to lead to a steady convergence among member states.<sup>8</sup> This however was overly optimistic: Although the poorer member states enjoyed above-average economic growth before the crisis and their income levels partly caught up towards the richer countries, a good deal of these develop-

<sup>6</sup> In those countries which had a surplus in the balance of financial flows of the non-financial corporate sector already before the crisis, this surplus increased afterwards.

<sup>7</sup> The literature lists several other criteria for optimal currency areas, such as product diversification, financial market integration, degree of openness etc. See e.g. Breuss (2011), Handler (2013) for an overview.

<sup>8</sup> This is usually referred to as "endogenous OCA theory".

ments was driven by debt-financed demand rather than by increases in productivity (Aiginger et al., 2012; Bertola, 2013; Ederer and Reschenhofer, 2013). National differences persist with regard to economic and fiscal policies as well as product, financial and labour markets, which are a potential source of asymmetries. Furthermore, (upward and downward) wage and price flexibility are low, and labour migration within EMU is limited.

The OCA theory focuses on the adjustment mechanisms after (asymmetric) exogenous shocks. However, this is only one part of the story. The present set-up of EMU gives rise to a number of endogenous forces by which the asymmetry of business cycles is reinforced and instability enhanced (de Grauwe, 2013). The divergence of wages and prices entailed significant differences in the real interest rate. High-growth and high-inflation countries had low real interest rates which stimulated domestic demand and amplified the boom. Strong domestic demand led to expanding imports and consequently to the emergence of current account deficits. By contrast, real interest rates in low-growth and low-inflation countries restricted domestic demand. This supported the emergence of current account surpluses. In some countries, the “real interest channel” was more effective than the “competitiveness channel” (section 2).

Likewise, the consequences of financial market integration have been underestimated (Kuenzel and Ruscher, 2013). The strong increase in cross-border capital flows and of financial assets worked towards destabilising EMU. Before the crisis, the risk perception of financial investors changed fundamentally and nominal interest rates on longer-term assets converged. Domestic demand booms and current account deficits were financed by large capital flows coming from current account surplus countries. Banks inter-mediated the credit expansion of domestic households and firms by running up large stocks of debt abroad. This made current account deficit countries highly vulnerable to “sudden stops” of capital flows when the financial crisis began and caused a sharp decline in domestic demand.

The legacy of high stocks of financial debt impeded a recovery when the global crisis ended. Households and firms tried to reduce their debt burdens by restraining their expenditures and consequently deflated demand, which aggravated the economic crisis even more. The countries suffered from a balance sheet recession. In such a situation public expenditures are the only remaining source of demand. The fiscal rules which had been established in the Maastricht Treaty however limited public expenditures, in particular in those countries which had been affected most severely. Instead of relaxing the rules in times of the crisis, they were reinforced by introducing new, even stricter rules. Fiscal policy consequently acted pro-cyclically. Consolidation measures which were put into effect in a parallel undertaking in all EU Member States depressed demand and drove the economies (further) into recession.

Furthermore, sovereign debt is issued in a currency over which national governments have no control (de Grauwe, 2012). Unlike single states, EMU member states

do not have a lender of last resort. Given its mandate and the conception of its own role, the ECB was not in the position to guarantee the redemption of maturing government debt. If confidence in a country's public finances is undermined, a rising number of financial investors will be induced to sell that government's bonds, thereby driving up the interest rate. As a result, the likelihood of the country being able to pay back maturing debt diminishes. This in turn will undermine investor confidence in the country's ability to meet its financial obligations, triggering a self-reinforcing liquidity crisis. At the same time, capital will flow from the crisis-ridden periphery countries to stable Northern Europe where interest rates will decline and demand be strengthened, thereby amplifying asymmetric shocks. Moreover, the rise in refinancing cost may lead to the burden of public debt becoming unsustainable, with the liquidity crisis turning into a solvency crisis.

The framework for economic and fiscal policy of EMU put particular pressure on the deficit countries. At the time of the crisis, no rules or institutions to safeguard systemic banking crises or illiquid sovereign debt markets in the monetary union were established. Countries were pressed to bailout their banking sector (Greece, Ireland), and received financial support in the case of refinancing difficulties only after committing to drastic spending cuts in the public sector (Greece, Ireland, Portugal, Spain, Cyprus). This aggravated the economic crisis even more and forced several countries into a recession. Automatic stabilisers in the deficit countries were in fact "turned off".

A further aggravating factor was the close connection between the national authorities and the domestic banks. The slump in government bond prices diminished banks' fixed assets and thus their equity capital. As a consequence, the governments were again called to support the banks. The financial situation of public authorities and banks is therefore closely tied to each other. Further adding to the feedback loop described above were the repercussions of fiscal policy on aggregate demand. If the government reacts to the loss of confidence on the part of investors by cutting spending drastically, economic activity will be dampened (or an ongoing recession be deepened), adversely affecting public finances and requiring further fiscal restraint.

These mechanisms complicate adjustments to asymmetric shocks since they exacerbate the underlying asymmetries. In the case of temporary shocks, no lasting adjustment would be necessary as their impact may theoretically be accommodated by automatic stabilisers. This is however only possible in the case that financial market confidence is maintained during the critical phase and stabilisers are allowed to operate. In the case of permanent shocks, automatic stabilisers are no substitute for the necessary adjustments. Nevertheless, they may grant the economies more time for their implementation.

## 4 Institutional reforms

The institutional deficiencies of EMU, which we summarised in the previous section, need to be eliminated in order to stabilise the monetary union. Without a lender of last resort, a joint regulation and supervision of banks, a common fiscal policy and a co-ordinated economic policy, EMU is incomplete. Its member countries face a situation similar to developing countries which incur debt in a foreign currency, and are consequently prone to liquidity crises. Furthermore, without aligning unit labour costs, EMU is not stable in the long run and is in danger of breaking up. In principle, this can be achieved by the following, mutually reinforcing measures (Aiginger et al., 2012; de Grauwe, 2012; Ederer, 2010):

- The establishment of a comprehensive banking union, including a common bank supervision and an authority for the resolution of banks in the case of insolvency as well as a common European deposit insurance in order to sever the close ties between government budgets and domestic banks.
- The European Central Bank (ECB), by guaranteeing all government bonds issued in EMU countries to an unlimited extent, should become a lender of last resort. In this way, liquidity crises could be avoided before turning into solvency crises pushing an economy into a downward spiral of a loss of confidence, financing problems and a recession.
- Government budgets and public debt should (at least partly) be mutualised at EMU level. This reduces the risk of a looming loss of financial investor confidence and thus prevents a self-fulfilling crisis in individual countries. The danger of a break-up of EMU will thereby decrease. Such a move should be combined with the set-up of an intra-EMU transfer mechanism in order to smooth differentials between national business cycles.
- A coordinated wage setting process should be established to adjust unit labour cost differences in EMU.

During the crisis, a series of institutional reforms have been put into place. The main focus of these reforms was the establishment of a banking union as well as a strengthened and reinforced fiscal framework.<sup>9</sup> The new rules and procedures, particularly the Stability and Growth Pact (SGP) and the Macroeconomic Imbalances Procedure (MIP), are embedded in the original architecture of EMU and breathe the same spirit. The SGP was reinforced by the “Six-Pack” and “Two-Pack”, and was complemented by the Treaty on Stability, Coordination and Governance (TSCG). They all aim at implementing more stringent rules on public deficits and debt, and on stricter sanctions in the case of non-compliance. The MIP was constructed in a

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<sup>9</sup> For a more elaborated assessment of the existing governance framework and its re-forms, see Aiginger et al. (2012), Ederer and Weingärtner (2013), Sachs (2013), and Thillaye (2013a, 2013b).

similar manner and consists of a preventive and a corrective arm, which both foresee recommendations and sanctions for member states with “excessive imbalances”. The decision whether a member state exhibits an excessive imbalance is based on a scoreboard of indicators and in-depth reviews of the countries’ economic situation.<sup>10</sup>

These reforms however fail to support the elimination of the present macroeconomic imbalances and are even more unlikely to effectively prevent them from emerging again. The SGP has led to fiscal policy acting in an uncoordinated, procyclical manner, giving too much emphasis on austerity and neglecting economic and political stability. The MIP on the other hand implies that imbalances arise solely within a single country, and not between countries. As we have discussed, the emergence of macroeconomic imbalances were supported by EMU’s framework and are a symmetric phenomenon. They cannot be remedied by one country alone.

This current rule-based approach, which neglects the interlinkages between member states, is threatening to destabilise EMU. The economic and social situation has deteriorated in many European countries, and the public support for the EU as an institution is waning. As opposed to the path taken hitherto, the EU needs a common, coordinated approach to economic policy, as outlined above. Adjustment in surplus and deficit countries needs to be symmetric and coordinated to prevent further centrifugal and destabilising developments in EMU.

The symmetric approach to solving macroeconomic imbalances is supported by the results of Ederer and Reschenhofer (2014a). Neither an increase in domestic demand in the North nor the decrease of it in the South alone can reduce the imbalances entirely. Domestic production still contributes the lion’s share to a country’s final demand. Consequently, the direct impact of a demand increase in the North on the South is limited. Likewise, demand would need to shrink dramatically to reduce trade deficits in the South and would have only a small impact on the surpluses of the South. A combination of these two strategies, in the style of a balanced growth scenario, would adjust trade surpluses and deficits to a certain extent. Nevertheless, the current account deficits in the South (in particular in Greece and Portugal) seem to have long-time roots and need to be corrected by policies which aim at improving the countries’ positions within global value chains.

These changes could be brought about by the establishment of new firms and industries, as well as technological change. These processes usually take some time; the necessary changes will therefore happen over several years. Furthermore, new investments need support by good public infrastructure and other incentives (Aiginger, 2014). During the period of adjustment, deficit countries would need financial means to support their industrial sector so as to reposition themselves in

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<sup>10</sup> For detailed information about the MIP see European Commission (2012) and the Commission website ([http://ec.europa.eu/economy\\_finance/economic\\_governance/macro-economic\\_imbalance\\_procedure/index\\_en.htm](http://ec.europa.eu/economy_finance/economic_governance/macro-economic_imbalance_procedure/index_en.htm)).

the value chains. Until then, monetary transfers from surplus to deficit countries would support these changes. These transfers would replace the capital exports from the North to the South which mainly financed consumption and construction booms before the crisis. An adequate organisational structure would need to channel monetary transfers and private capital exports into productive investments instead. Building on the existing EU framework (the European Investment Bank and the Structural and Cohesion Funds of the EU) would be the logical solution.

Nevertheless, the divergence of unit labour costs, which was at the root of the emergence of macroeconomic imbalances, needs to be corrected. The reduction of the large gaps in price competitiveness is a precondition for deficit countries to improve their positions within global value chains. Reducing the competitiveness gap between EMU countries would also lead to a better position vis-à-vis non-EMU countries, because the euro exchange rate would better reflect each country's relative price level. These adjustments would support the development of new industries and the establishment of new enterprises and thus the necessary structural change in these countries.

Ederer and Reschenhofer (2014b) find that the lack of a competitive export-oriented industrial sector in the South seems to be (at least partly) the result of the diverging unit labour costs.<sup>11</sup> The continuous deterioration of relative (cost) competitiveness in Southern Europe most likely discouraged investment in innovative technologies and the establishment of new firms. If diverging competitiveness in EMU is at the root of the weak performance of export-oriented manufacturing industries in Western and Southern Europe, structural policies alone to foster these would most likely not solve the problem. Unit labour cost adjustments would be necessary to support the establishment of such new industries.

Labour and social policies nevertheless are still under the responsibility of the member states. Wage setting in the EU can therefore only be coordinated through a mix of (non-binding) country guidelines as part of the country-specific recommendations of the European Semester on the one hand and transnational collective bargaining processes on the other.<sup>12</sup> The guidelines should thereby set the country specific productivity growth plus the inflation target of the ECB as a measure for wage increases. During a transitional phase in which the competitiveness gaps are reduced, the yearly targets for wage policy should be set (symmetrically) during the European Semester.

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<sup>11</sup> Another important determinant is for instance whether the countries conduct an industrial policy aiming at the development of an export-oriented industrial sector. See Aiginger (2014).

<sup>12</sup> See e.g. Thillaye et al. (2014).



## 5 Conclusion

Eliminating the macroeconomic imbalances which arose before the financial and economic crisis of 2008/09 and preventing them from emerging again is an essential element of an improved economic governance structure for EMU. Macroeconomic imbalances were at the root of the crisis and have been preventing the economies from full recovery since then. This paper has summarised the channels and mechanisms which led to the emergence of macroeconomic imbalances. It has also highlighted the role of the flawed economic architecture of EMU in these developments.

The macroeconomic imbalances procedure (MIP) which was established in 2011 to target these developments is not adequate to eliminate these imbalances. It is not based on the understanding of these imbalances as a *symmetric* phenomenon, which can only be dealt with by a coordinated cross-national approach. The rule-based Stability and Growth pact (SGP) and its reinforcements likewise function pro-cyclically and therefore undermine the stability of EMU more than they enhance it. Other elements of EMU governance framework, e.g. the banking union, improve the stability of EMU's financial system, but are not sufficient to prevent the emergence of macroeconomic imbalances.

A comprehensive, symmetric governance framework which would eliminate the institutional flaws of EMU consists of the following elements: a (more) comprehensive banking union, an actively coordinated fiscal policy, a lender of last resort for government debt (the ECB), debt mutualisation among EMU member states (at least to a certain extent) and a coordinated wage policy. Politically, these reforms are difficult to establish. Nevertheless, the current framework is inadequate to solve the problems of macroeconomic imbalances which suppress economic growth in the euro area. Without implementing them, the future of EMU seems rather gloomy.

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# Opting into the banking union before euro adoption

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## 1 Background

The global financial crisis exposed weaknesses in the EU financial architecture, arising from misalignments between national mandates for financial sector oversight and the EU-wide operations of many market participants:

- *Negative externalities:* The pursuit of domestic financial stability and competitiveness objectives, as well as resident taxpayer interests can create negative externalities for other EU members, resulting in a sub-optimal Union-wide outcome. One example is the failure of home supervisors of banks with subsidiaries in Central and Eastern Europe to rein in credit expansion in the region, which fueled unsustainable domestic demand booms prior to 2008. Host supervisors' efforts to limit rapid credit growth were circumvented by redirecting borrowers from local subsidiaries to parent banks' headquarters (Hilbers et al., 2005). Another example is the bailout of companies from the financial conglomerate Fortis Group according to their country of incorporation, instead of restructuring on a consolidated basis (BIS, 2010).
- *Financial fragmentation:* The national nature of deposit insurance schemes and public backstops for financial institutions led to a post-crisis fragmentation of the European market for financial services, as the funding costs of financial intermediaries and ultimately the cost of borrowing for non-financial sector became linked to sovereign creditworthiness (ECB, 2012). As a result, a number of countries became caught in a negative feedback loop between bank solvency and sovereign default risks, posing a major challenge for euro area countries which do not have monetary autonomy (IMF, 2013a).

In the aftermath of the crisis, the EU and the euro area embarked on ambitious financial sector reforms aimed at harmonizing the regulatory and supervisory regimes of all participants in the EU single market for financial services. The Euro-

pean System of Financial Supervision<sup>1</sup> was set up in 2011, followed by the development of the Single Rulebook. The core of the Single Rulebook is now in place, with the entry into force of the Capital Requirements Directive (CRD IV) and the Capital Requirements Regulation (CRR) – which harmonize capital definitions and implement Basel III – although some elements are to be phased in gradually over time. Euro area countries took a step further by forming a banking union that centralizes bank resolution and creates common backstops and macroprudential mandate spanning the realm of the banking union. The banking union is open to non-euro area EU Member States.

## 2 Banking union modalities

The banking union architecture includes the Single Supervisory Mechanism (SSM) and the Single Resolution Mechanism (SRM). They centralize bank supervision and resolution powers, respectively. The other key elements of the banking union – a truly common fiscal backstop and a common deposit guarantee scheme – are not yet in place.

The SSM is comprised of the ECB and national bank supervisors (box 1). The ECB is the overarching supervisory authority, directly supervising 120 significant banks<sup>2</sup> – jointly comprising almost 85% of total euro area bank assets – and overseeing national competent authorities' (NCAs') supervision of the other 3.500 less significant banks in the euro area. The ECB can take over direct supervision of any less significant bank at any time in order to maintain cross-country consistent and high supervisory standards, or if it deems the bank to have become significant.

The SRM is comprised of national resolution authorities and the central Single Resolution Board (SRB), which is a stand-alone institution (box 2). The SRB oversees the resolution of banks by national resolution authorities (which will follow the structures of the Bank Recovery and Resolution Directive (BRRD)), and directly handles the resolution of large and cross-border banks. From January 2016, it can

<sup>1</sup> Comprising the European Banking Authority (EBA), European Securities and Markets Authority (ESMA), European Insurance and Occupational Pensions Authority (EIOPA), the Joint Committee of the European Supervisory Authorities (ESAs), the European Systemic Risk Board (ESRB) and national supervisory agencies.

<sup>2</sup> The significance of banks is based on the criteria set out in the SSM Regulation and the SSM Framework Regulation, namely: a) size (total assets exceeding EUR 30 billion); b) importance for the economy of the EU or any participating Member State (in particular, total assets exceeding EUR 5 billion and 20% of GDP of a Member State); c) significance of cross-border activities (in particular, if the ratio of its cross-border assets or liabilities to its total assets or liabilities, respectively, is above 20%); d) a request for, or the receipt of, direct public financial assistance from the European Stability Mechanism (ESM); e) one of the three most significant credit institutions in a participating Member State.

also draw upon a common, industry-funded backstop called the Single Resolution Fund (SRF), in order to resolve banks under the BRRD. The eventual size of the industry backstop is planned at EUR 55 billion (about 1% of covered deposits in the euro area).

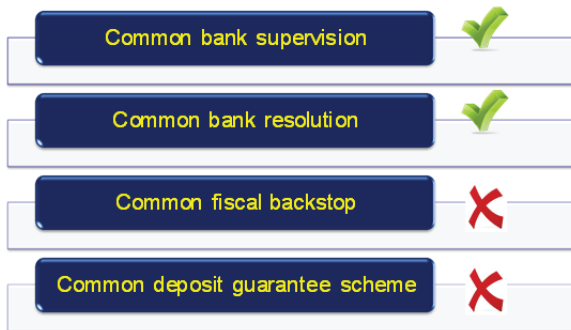
The European Stability Mechanism (ESM) can directly recapitalize banks up to EUR 60 billion. This mitigates some of the potential fiscal problems associated with ESM indirect bank recapitalization, when a sovereign borrows from the ESM and then funnels those funds into its banking system. ESM bank recapitalization will not be available for any future non-euro area banking union participants, since the ESM Treaty is only open to currency union members. However, even if it were available, there are doubts about its effectiveness as a common fiscal backstop as currently formulated. The hurdles for its use are very high and in the event of systemic crisis, the ceiling on the funding available for recapitalization could be rapidly reached.

The granting of a banking union-wide macroprudential mandate to the SSM implies some constraints on national policies. The CRR/CRD IV legislative package defines a range of tools over which national macroprudential authorities may set stricter requirements (above the industry-wide, microprudential minima) based on systemic risk considerations, macroprudential concerns, or to address risks at individual firm level. In the case of banking union members, national competent authorities can still deploy macroprudential measures as they deem appropriate, subject to a notification requirement to the European Systemic Risk Board (ESRB). However, in the case of CRR/CRD IV measures (box 3), banking union-participating states must also notify the ECB of their intention 10 working days prior to issuance of their decision. If the ECB objects, then it supplies a written explanation within 5 working days, which the national authority must take into consideration. Furthermore, if the ECB wishes, it may apply stricter macroprudential requirements on banks, irrespective of whether they are under direct SSM supervision or not, than the national authorities (subject to similar notification and consideration timelines). At the same time, neither the ECB nor national competent authorities can compel loosening of macroprudential measures imposed by the other (i.e. national prudential norms can only be stricter than those prescribed by the ECB).

By design, the banking union is intended to raise the credibility and quality of banking supervision and to eliminate conflicts between home and host supervisors, as well as sever the links between banks and sovereigns by unifying the bank resolution and restructuring framework and providing a common, industry-funded backstop. This would in turn lead to lower bank compliance costs, the removal of any barriers to cross-border banking activity (which may be in place to protect

national interests), lower resolution and restructuring costs, and ultimately lower bank funding costs.<sup>3</sup>

*Chart 1: Banking union building blocks*



However, the full benefits of the banking union will be realized once all its elements are in place, which is not yet the case (chart 1). While the SSM and SRM are now operational, an effective common fiscal backstop is still needed to break the sovereign-bank links (the ESM is currently acting as *de facto* common fiscal backstop for euro area banks). Other key elements include allowing the Single Resolution Fund (SRF) (which will be fully funded and mutualized only by 2024)<sup>4</sup> to borrow against future industry levies, and working towards a pan-European deposit guarantee scheme (DGS). Reaping the benefits of banking union membership also depends crucially on the effectiveness and efficiency of banking union day-to-day operation, including the coordination between the SSM and local supervisors, as well as to coordination between prudential policies at the national and banking union-levels and national monetary policies.

### 3 What does “opting into the banking union” entail?

Banking union membership refers to participation in both the SSM and in the SRM. For non-euro area economies, “opting into the banking union” would mean entering into a close cooperation with the ECB and amending national legislation to enable national authorities to work with the ECB and the Single Resolution Board (SRB) under their supranational frameworks for supervision and resolution, respectively. Whereas the outcome of the application is not conditional on the results from the

<sup>3</sup> See IMF’s Staff Discussion Note on “A Banking Union for the Euro Area” (IMF, 2013) for a comprehensive discussion of the banking union design and benefits.

<sup>4</sup> The SRF will start out with national compartments which build up over time and are gradually mutualized building to 100% after 8 years, in 2024.

comprehensive assessment, the ECB can use its powers to request further information and carry out its own comprehensive assessment to steer the process. For countries that have already set a target date for euro adoption, joining the banking union prior to euro adoption effectively amounts to phasing in the necessary institutional and operational adjustments.

Chart 2: Modalities of banking union participation for opt-ins



Upon opting into the banking union, non-euro area members would not be treated in the same way as the euro-area members (chart 2): (i) *role in the SSM*: non-euro countries are not members of the ECB's Governing Council that is charged with adopting decisions drafted by the Supervisory Board (box 1);<sup>5</sup> (ii) *fiscal backstop*: non-euro area opt-ins are not eligible for direct bank recapitalization from the ESM; and (iii) *liquidity support*: non-euro area opt-ins would not automatically have access to the ECB liquidity facilities.<sup>6</sup> That said, there are some safeguards for non-euro area opt-ins, such as the reasoned disagreement procedure and the exit clause. The latter means that unlike euro-area members, non-euro area countries can terminate their participation in the banking union (though the ECB can take such decision as well).

<sup>5</sup> The ECB Governing Council cannot change draft supervisory decisions, but can object and refer them back to SSB for redrafting, or to a mediation panel to resolve differences among national competent authorities.

<sup>6</sup> At present, any liquidity provision by the ECB to non-euro area members via repo or swap lines is evaluated on a country-by-country basis and subjugated to monetary policy considerations.

*Box 1: The SSM modalities*

Oversight will be managed by a *Supervisory Board* (SB), based within the ECB, which consists of a chair and vice-chair (the latter also serving on the ECB Executive Board), a single representative from each participating Member State plus four ECB representatives and who are expected to act in their personal capacities for the good of the Union, rather than for national or group interests. In the event that a participating member state's national supervisor is not the national central bank, they may request that a representative of the national central bank also attends. For the purposes of voting however, the representatives of any one member state are considered as one member.

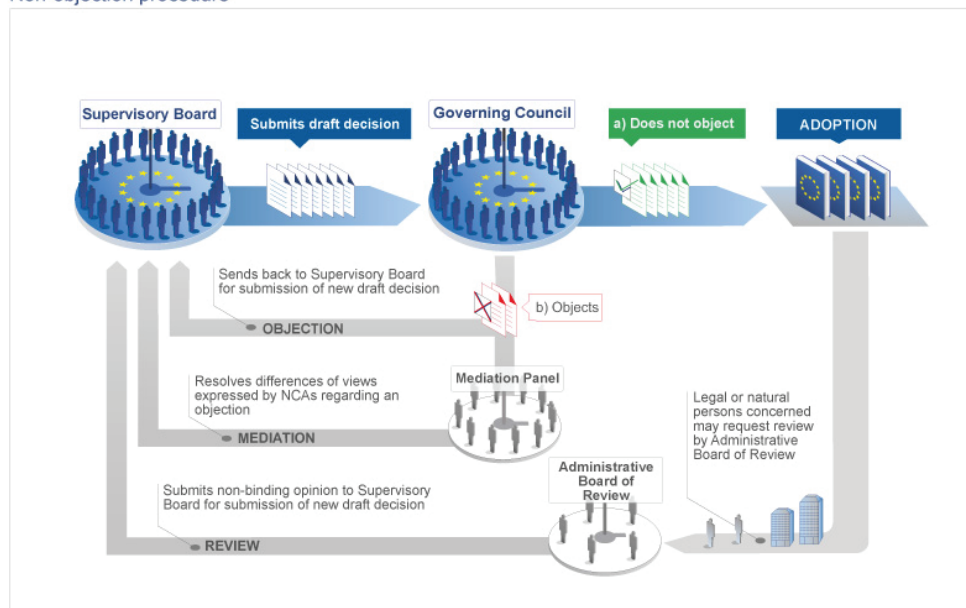
The SB will also make draft decisions, which are then referred to the ECB's *Governing Council* (consisting of ECB Board members and euro area national central bank heads). Regular draft decisions are passed by simple majority, while regulatory decisions with SSM-wide import are passed by qualified majority.<sup>1</sup> The ECB Governing Council then either adopts the decision on a lapse-of-time basis or objects to it. In case a decision is objected to, it is referred back to the SB for redrafting, or, as an intermediary step, goes to a mediation panel which works to resolve the differences in views across national competent authorities.

The non-euro area member states of the banking union – who do not have representation on the ECB Governing Council – would be invited to send representatives to the ECB Governing Council, if the ECB contemplates an objection to an SB draft decision or if the non-euro area members disagree with a draft decision of the SB. If no satisfactory compromise can be found in the subsequent reconciliation process, the non-euro area member state can notify the ECB that it will not be bound by such decision. If the “reasoned disagreement” with the decision is not accepted, this can result in the eventual suspension or termination of the member state's cooperation with the ECB in the SSM (per Article 7, SSM Regulation).

<sup>1</sup> A qualified majority is defined in Article 16(4) of the Treaty on European Union (TEU) and Article 3 of Protocol Number 36 on transitional provisions associated with TEU (reweighted according to the membership of the SSM).



Decision-making process of the Single Supervisory Mechanism:  
Non-objection procedure



Source: [www.bankingsupervision.europa.eu/organisation/governance/html/index.en.html](http://www.bankingsupervision.europa.eu/organisation/governance/html/index.en.html).

Box 2: The SRM modalities

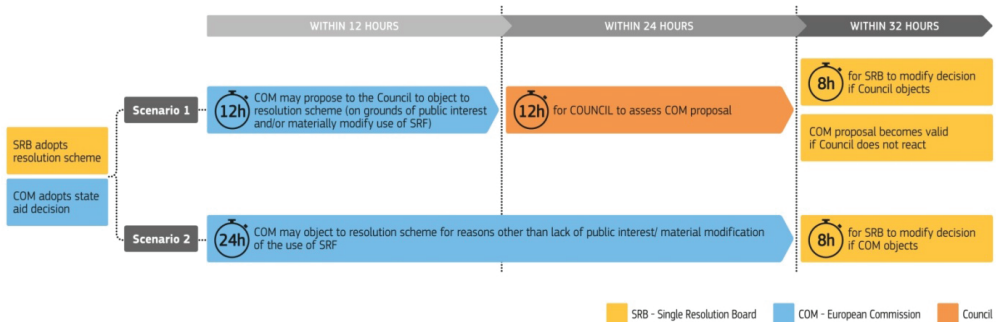
**Decision-making in the SRM**

The governing body of the SRM is the *Single Resolution Board* (SRB), which consists of a chair, vice-chair, three other full-time members, and one representative from the national resolution authorities of each participating member state. The chair, vice-chair and other full-time members, constituting the *executive of the SRB*, are all appointed by the European Parliament from a short-list of candidates drawn up by the Commission.

Resolution decisions are drafted by the executive of the SRB and are assumed adopted by the SRB unless there is an objection by one of the representatives of the participating member states (similar to the non-objection procedure used by the SSM). In the case of an objection, the SRB meets in plenary (all members) and takes the resolution decision, based on a *simple majority* rule. In general, the plenary SRB meets at least twice a year, to review the budget and assess resolution activity, but it may also meet at the behest of the chair or if more than EUR 5 billion in funds from the SRF have been used in any 12 month period.

The resolution procedure also involves close coordination with the European Commission and the EU Council (see below)

## Resolution procedure in the banking union



Source: [europa.eu/rapid/press-release\\_MEMO-14-294\\_en.htm](http://europa.eu/rapid/press-release_MEMO-14-294_en.htm).

### Contributing to the SRF

Under the SRM Regulation and SRF intergovernmental agreement, all participating member states contribute (whether euro area or not) and are able to access the SRF under the SRM. A bank's *ex ante* contributions to the SRF are calculated *pro rata* with its share of total liabilities minus covered deposits of all banks in participating member states (plus a risk-adjusted contribution drawing upon BRRD criteria; see the SRM Regulation, Article 70).

### Box 3: Macroprudential policy space for the banking union members

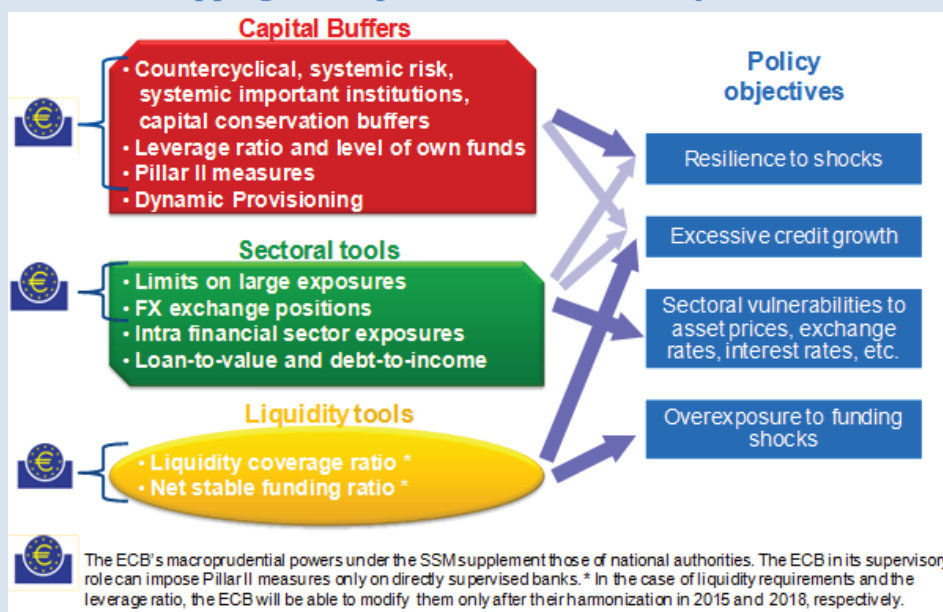
For banking union members, the SSM entails some additional constraints on macroprudential policies. Under the SSM Regulation (Article 5), national competent authorities (NCAs) can still deploy macroprudential measures as they deem appropriate, following the usual practice of submitting them to the ESRB for a non-binding opinion. However, in the case of CRR/CRD IV measures (see below), banking union-participating states must also notify the ECB of their intention 10 working days prior to issuance of their decision. If the ECB objects, then it supplies a written explanation within 5 working days, which the national authority must take into consideration. Furthermore, if the ECB wishes, it may apply stricter macroprudential requirements on banks, irrespective of whether they are under direct SSM supervision or not, than the national authorities (subject to similar notification and consideration timelines)

The CRR/CRD IV legislative package defines a range of tools over which national macroprudential authorities may set stricter requirements (above the industry-wide, microprudential minima) based on systemic risk considerations, macroprudential concerns, or to address risks at individual firm level. These are subject to a notification requirement to the European Systemic Risk Board (ESRB) and include:

- Pillar I measures – countercyclical capital buffer and additional capital buffers for systemic risk, systemic important institutions, and capital conservation, as well as the leverage ratio and the level of own funds. In addition, national authorities can set higher risk weights on real estate exposures and large exposures;
- Pillar II measures – a wide range of measures at the level of individual institutions or group of institutions with similar risk profile, imposed following a supervisory review and evaluation process aimed at identifying risks they face or pose to the financial system;
- Liquidity provisions – liquidity coverage ratio and net stable funding ratio;
- Limits on large exposures and intra financial sector exposures.

National macroprudential authorities retain control over macroprudential measures, not specified in Union law, such as the loan-to-value and debt-to-income ratios, among others (chart below). This is subject to a notification requirement to the ESRB and possible intervention by the EU Council. In addition, until the harmonization of the liquidity requirements in 2015 and the leverage ratio in 2018, member states can set unilaterally these measures.

### Mapping Macroprudential Tools to Objectives



Source: Authors' compilation, mapping to objectives is based on IMF 2013b.

## 4 Opting into the banking union: analytical framework

### 4.1 Theoretical considerations

Domestic financial stability is an overarching objective of national supervisors, but supporting growth – by ensuring access to credit for nonfinancial firms and adequate profitability for financial intermediaries – is often an implicit goal as well. This dual objective entails tradeoffs. While tighter prudential and macroprudential supervision reduce the risk and cost of financial instability, they also dampen credit growth and lower bank profitability. At the end, the weights that national supervisors put on stability and growth objectives would determine the stringency of national prudential supervision. These weights may vary across countries, depending on the institutional setup of financial sector oversight (its independence and accountability), the type of financial system (bank versus market-based credit provision), ownership of the banking sector (domestic versus foreign), and the degree of market concentration.

Other policy instruments may also be used to promote financial stability objectives, such as monetary policy (including lender of last resort (LoLR) facilities) and safety nets (including deposit guarantee schemes (DGS), resolution funds, and other backstops). For example, different combinations of DGS and bank prudential and macroprudential regulation could be used to reduce the risk and cost of financial instability. Here, there are tradeoffs as well. More generous deposit insurance lowers the cost of a banking crisis, once it occurs, but would induce moral hazard at the bank level leading to higher probability of a crisis. On the other hand, more stringent bank prudential and macroprudential regulation would impose more discipline on banks and reduce the risk of financial instability, but hurt bank profitability and credit access, as discussed above.

Furthermore, the design of national supervision and safety nets in a multi-country integrated market has to take into account potential cross-border spillovers. Tighter supervision which makes the domestic banking system safer may also be good for other countries with which this country has close links, by reducing financial stability risks. On the other hand, tighter supervision may make domestic banks less competitive vis-à-vis foreign banks. This suggests that while there may be incentives for national supervisors in a financially integrated region to cooperate, independent regulators may also have an incentive to promote the competitiveness of domestic banks by lowering their own supervisory standards, which could trigger a “race to the bottom.”

When will a centralized solution (“banking union”) be preferred by national supervisors as a way to achieve their national stability-growth objectives? For each individual country, the balance between banking union advantages and disadvantages is determined by policy preferences and country characteristics:

- *Policy preferences* – the theoretical literature suggests that countries that are similar in their regulatory preferences along the economic growth – financial stability axis will tend to see higher net benefits to coordination. But in order for such national supervisors to prefer a banking union, the common standards must be stricter than the ones existing in individual countries (Dell’Ariccia and Marquez, 2006). If however, the initial cross-country differences in supervisor preferences are significant, the centralized solution may not be an optimal choice for all. In more extreme cases, regulatory preferences may be distorted by vested interests of bank shareholders, debtors, and creditors (Scherf, 2014), in which case joining a regulatory union may be a way to reduce “regulatory capture.”
- *Country characteristics* – parallels between the decisions to join a banking union and a currency union bring out additional factors pertinent to the decision. Greater “similarity” between economic characteristics of current and prospective banking union members reduces the probability of an idiosyncratic shock driving a wedge between national interests and that of the banking union. When idiosyncratic shocks do occur, the more flexible the product and labor markets, the smaller the need for policy reaction that might be in conflict with union-wide policies. Lower supervisory quality and lower backstops at the national level likely increase the benefits of having common (tighter) regulatory/supervisory standards and common (larger) backstops.<sup>7</sup> Limited domestic policy space could also reduce the potential costs of joining the banking union.

## 4.2 Application of analytical framework to “opt-in” choice

Based on the theoretical considerations outlined above, the “opt-in” choice can be seen as a solution to a “pay-off” matrix (table 1). Table 1 juxtaposes country characteristics (top row) and policy objectives (first column) to determine whether joining the banking union could help or hinder (second column) the achievement of these objectives. In table 1, blank cells indicate that a particular benefit or cost of joining will accrue independent of the balance of policy preferences or whether a country ranks low or high on a particular country characteristic. Green cells indicate an added benefit and red cells reflect extra loss in one of the states (low or high) of country characteristics. The country characteristics in table 1 are the ones that appear most relevant for the decision to join the common currency area or the common regulatory area based on the literature:

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<sup>7</sup> Recent research on the optimum currency area highlights the benefits of financial markets integration and of importing prudent economic management by pegging the domestic currency to that of a dominant economic power (see, for example, McKinnon, 2004). In addition, a common fiscal backstop in a banking union serves the role of an insurance policy, upon which individual members can draw in the event of an asymmetric shock.

- The degree of real or financial integration with the euro area (columns 1 and 3) determines the relative likelihood of common versus asymmetric shocks and hence, risk-sharing preferences;
- The degree of economic flexibility (column 2) reflects the ability of the economy to absorb shocks; less flexibility makes it more likely that negative shocks could trigger financial instability.
- The share of local bank assets owned by euro area banks (column 4) indicates the importance of intra-group cross-border flows of euro area banks for domestic financial stability.
- The supervisory standards (column 5) refer to the stringency of rules and quality of supervisory processes at the local level.
- Local backstops for the financial system include local deposit guarantee schemes (DGS) (column 6) and fiscal policy space (column 8) refers to national capacity to absorb shocks. Their adequacy is inversely related to countries' potential exposure to contingent liabilities, as measured by the ratio of insured deposits to GDP, and the size of public debt relative to GDP.
- Policy space indicates the availability and effectiveness of monetary and fiscal policies (columns 7 and 8), as tools for demand management. Fiscal policy space can be proxied by the ratio of public debt to GDP, whereas the availability of monetary policies depends on the nominal anchor (exchange rate versus inflation) chosen by the central bank.

#### 4.2.1 Would joining the banking union reduce financial stability (FS) risks for the new members?

##### **YES, if joining the banking union:**

- Improves the overall quality/stringency of supervision. To the extent that supervision under the SSM will be stricter than current national supervision, banks would be safer and financial stability risks would be lower. This would be the case, if the SSM: (i) sets microprudential standards for local banks that are at least as strict as the current standards in force in the new members; and (ii) succeeds in distancing supervision from the influence of local vested interests, especially the “too big to fail” domestically-owned banks. In order for these benefits to accrue, it is critical for the SSM to establish early a strong track record. That said, differences in legal and accounting standards across members would complicate harmonized supervision in the banking union. *New members with less stringent supervisory standards and those with weaker local backstops would benefit more* (table 1, columns 5, 6, and 8, ranks: low).
- Limits negative externalities stemming from the actions of current banking union member banks. The participation of the non-euro area countries in the banking union could further reduce the scope for regulatory arbitrage and leakages of

macroprudential measures aimed at safeguarding financial stability in member countries.<sup>8</sup> The possibilities for regulatory arbitrage have already been reduced through the Single Rulebook, but the SSM would ensure compliance through centralized supervision and greater harmonization of supervisory practices. *New members with strong financial links with the euro area, and a significant presence of banking union member banks* (table 1, columns 3 and 4, ranks: high), as well as those with *less stringent supervisory standards and weaker local backstops* (table 1, columns 5, 6 and 8, ranks: low) *would benefit more*.

- Better access to information and better home-host coordination through direct participation in the SSM.<sup>9</sup> Joining the banking union would provide non-euro area members: (i) greater access to supervisory information on cross-border banks operating in their jurisdictions (and also in other jurisdictions);<sup>10</sup> and (ii) ability to directly participate in the SSM/SB decision making process, though acting in their personal capacities for the good of the Union, rather than for national or group interests. There is a range of views on whether this would ultimately give “opt-ins” greater leverage over decisions regarding parent banks. On the one hand, as a member of the SB, the “opt-ins” representatives would be able to vote on *all issues*, including the ones that are currently beyond the purview of local supervisors.<sup>11</sup> On the other hand, because of different treatment of the euro area and non-euro area members of the SSM (discussed above), the ability of “opt-ins” to influence decisions may be weaker than that of the euro area members. Another important issue is that after opting into the banking union, the new

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<sup>8</sup> The macroprudential measures adopted by the local authorities to slow rapid credit growth in CESEE countries during the pre-crisis boom were often not very effective because they were not matched by similar measures by the home country supervisors of euro area banks operating in CESEE countries.

<sup>9</sup> Prior to the banking union, cross-border coordination of banking supervision of a banking group would occur via a college of supervisors, involving supervisors from those jurisdictions spanned by the group. The college would provide a venue for interactions between supervisors across countries to facilitate information sharing and coordination (particularly in emergencies or cases of restructuring or resolution). A key innovation of the banking union is the removal of this institutional layer for coordination between its members.

<sup>10</sup> Being part of the supervisory college, non-euro area member can request any information about parent banks that it deems relevant. Because there is a need to request information, access to information may not always be as timely as desired. In comparison, being part of the SSM would automatically grant access to all info about the parent bank as well as other euro area banks.

<sup>11</sup> Currently, the extent to which local supervisor is able to influence any given decision depends on the specific issue under consideration and who has competency over this issue. E.g., in the case of capital/liquidity requirements at the group level, if a home supervisor decides to increase the requirements for the whole group, the host supervisor cannot block this decision; in the case of capital/liquidity requirements at the subsidiary level, the host supervisor has the final say.

member would no longer have the final say on certain matters that are of particular importance to them (e.g. local liquidity requirements, box 3). Hence, the net gain/loss of influence on the decisions regarding parent banks would depend not only on the “opt-ins” role in the SSM, but also on how much control they will *de facto cede* by joining the banking union. This would imply that *new members with strong financial links with the euro area and a significant presence of the banking union member banks would benefit* (table 1, columns: 3 and 4, rank: high), subject to the caveats discussed above.

**NOT necessarily, if joining the banking union:**

- *Limits the ability to use prudential tools to address country specific shocks*, to the extent that the loss of powers is not compensated by a commensurate decline in the frequency or size of such shocks. Under the Single Rulebook, local supervisors have significant flexibility to impose additional macro- and microprudential requirements, early intervention powers and ability to set conditions under which the local CB could provide liquidity assistance to troubled banks. After joining the SSM, some of this flexibility (including “good” discretion) could be lost. For example, in the event “opt-ins” are hit by asymmetric shocks, SSM’s prudential requirements may end up being stricter than might be warranted given country-specific circumstances, which could lead to higher (than optimal) incidence of bank closures or to lower recovery values on distressed assets (less of “good forbearance”). *This consideration is most relevant for countries that are relatively less integrated with the euro area and hence more exposed to asymmetric shocks* (table 1, columns 1 to 4, ranks: Low), *as well as for supervisors with greater capacity to intervene* (table 1, column 5, rank: high).
- *Leads to loss of full control over cross-border capital and liquidity flows*, to the extent that the loss of powers is not compensated by a commensurate reduction in the likelihood of negative spillovers or in the absence of alternative mechanisms for dealing with such spillovers. Ring-fencing of capital and liquidity of the euro area banks’ subsidiaries was used by national supervisors during the crisis to prevent problems in foreign parent banks from spilling over to the domestic banking systems. After joining the banking union, local supervisors will lose control over the liquidity requirements at the subsidiary level, though they will retain the ability to set large exposure limits.<sup>12</sup> To the extent that banking union would completely eliminate any negative externalities, the “opt-in” supervisor should not be

<sup>12</sup> While in a banking union it will be much harder for host supervisors to block intra-group cross-border transfers, there are still some powers that are given to member states that could be viewed as safeguards. E.g., there is large exposure regime in the CRR and there are two discretions: one given to supervisor and the one that allows member states to impose large exposure limits (Article 493). The supervisory decision can never overrule the decision of a member state.



concerned about losing the ability to ring-fence after joining the banking union. However, to the extent that some spillovers remain a possibility, national supervisors may perceive a loss of control over cross-border intra-group flows as potentially increasing the risk of financial instability. *These considerations are most relevant for countries where the euro area banks' subsidiaries dominate in the local banking market* (table 1, columns 3 and 4, ranks: high), *as well as for supervisors with greater capacity to intervene* (table 1, column 5, rank: high).

#### 4.2.2 Would joining the banking union reduce the cost of financial distress, once it occurs?

##### **YES, if joining the banking union:**

- *Increases efficiency and reduces the cost of bank resolution.* The BRRD already goes some way towards achieving this objective, but the SRM further ensures that the process of winding down of large cross-border banks is orderly and “least cost” on a consolidated basis. *This is a positive factor for all, but especially for those countries that host subsidiaries of euro area banks* (table 1, column 4, rank: high).
- *Provides access to common backstop* (SRF). Joining the SRM allows local banks to have access to a larger backstop without adding to the fiscal burden of the sovereign. Having access to a common backstop (SRF) would be relatively more attractive for countries that are more likely to be hit by asymmetric shocks and those with *weaker local backstops*. However, these benefits are limited until the SRF is fully mutualized. The national contributions to the SRF will be only gradually mutualized over the course of the next eight years, reducing the appeal of this aspect of banking union membership in the interim. *Hence, less integrated countries* (table 1, columns 1 to 3, ranks: low) *and those with weaker local backstops* (table 1, columns 6 and 8, ranks: low) *would derive the biggest benefit once the fully mutualized backstop is in place.*

##### **NOT necessarily, if joining the banking union:**

- Leads to some loss of local control over the resolution process, without commensurate risk-sharing on supra-national level. Once a non-euro area member joins the SRF, the decision on whether or not to resolve a bank under SSM supervision will be taken at the banking union level. Until the SRF is fully mutualized, this raises the risk that the resolution decision may not fully take into account available financing (for resolution purposes), as the latter would still largely consist of local DGS and local fiscal backstop. In addition, there is a risk that the SSM will apply stricter criteria (than might be warranted by local conditions) in determining whether a bank is solvent or not, which would lead to higher incidence of resolution under the banking union. *This consideration is most relevant for*

*countries with strong supervision (table 1, column 5, rank: high), those in which subsidiaries of cross-border banks that would be resolved directly by the SRM have significant market share (table 1, column 4, rank: high), as well as countries with less adequate local backstops (table 1, columns 6 and 8, ranks: low).*<sup>13</sup>

#### 4.2.3 Would joining the banking union facilitate or hinder achieving macroeconomic objectives?

- Joining the banking union could reduce the national policy makers' ability to support access to credit through prudential measures, particularly when country specific circumstances require more supportive financial regulation than in other banking union members.<sup>14</sup> This is partly an artifact of the asymmetry between the powers of the ECB and national supervisors to tighten and loosen prudential norms: (i) national prudential norms can only be stricter than the floor set by the ECB; and (ii) the ECB may always strengthen macroprudential policies, but it cannot compel loosening. While in principle, the ECB does not have to set the same macroprudential standards across all banking union members, it is not clear how much heterogeneity it may be prepared to accept given its objective of ensuring level playing field and preventing regulatory arbitrage. *This consideration is most relevant for less integrated economies that are more likely to find themselves facing different cyclical conditions than the rest of the banking union (table 1, columns 1 to 4, ranks: low), as well as for supervisors with greater capacity to intervene (table 1, column 5, rank: high).*

#### 4.2.4 Does monetary policy autonomy make a difference?

All banking union members, including those in the euro area, retain some policy instruments (for example, taxes and subsidies, housing policies, and so on) that could potentially be used to offset the impact of measures adopted at the banking union level. However, non-euro area members will have an additional tool – they

<sup>13</sup> In addition, initial conditions may matter as well. If asset quality, liquidity and profitability of local subsidiaries of euro area banks are stronger than in the rest of the banking group, local stakeholders would be worse off if a banking group is resolved at banking union-level (on a consolidated basis) rather through the local resolution process. While this consideration is not relevant in a steady state, it may provide a disincentive to joining the banking union from a position of relative strength.

<sup>14</sup> For example, during the crisis, some European countries used prudential measures to enhance credit supply, including a reduction in risk weights for SME loans when calculating banks' capital adequacy ratios, forbearance of nonperforming loans, and countercyclical macroprudential regulations (see e.g., GFSR (2013) for details).

will retain sovereignty over monetary and exchange rate policies.<sup>15</sup> In the banking union, these national policies would need to be coordinated not only with prudential measures taken at the national but also at the banking union level. Independent monetary policy provides an additional policy tool to manage the impact of shocks on the economy that could, in principle, allow a non-euro area banking union member to take advantage of the upsides offered by the banking union, while mitigating potential downsides. In that regard, *perspective banking union members without independent monetary policy will, hence, be at a disadvantage relative to their inflation-targeting peers* (table 1, column 7, rank: low).

### 4.3 Considerations for “new” Member States

Certain characteristics of Central and Eastern European EU Member States make them particularly sensitive to the lack of equal (or fully equivalent)<sup>16</sup> treatment of non-euro area countries in the banking union:

- *Central and Eastern European (CEE) EU Member States are more prone to idiosyncratic shocks, making them more likely to test the inadequacies of the existing setup.* Despite significant progress in EU integration and income convergence since the mid-1990s, the real income gap (relative to the euro area) is still substantial for most CEE EU Member States (chart 3). This is a symptom that their economic structures are yet to converge sufficiently towards the prevailing structures in the euro area.<sup>17</sup> And, whereas labor markets in the CEE EU Member States are, on average, more flexible than in the euro area – with lower statutory minimum wages, union density rates and more decentralized wage bargaining structure than in the euro area – the region falls short in the area of liberalization of business regulation (chart 4).

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<sup>15</sup> Monetary policy remains a national responsibility prior to euro adoption, but is subordinated to EU Treaty obligations. In particular, its main objective should be price stability, with exchange rate policy being treated as a matter of common interest.

<sup>16</sup> Discussions on the common fiscal backstop are ongoing with the view to achieving a better symmetry between euro area and non-euro area banking union members. See [data.consilium.europa.eu/doc/document/ST-16250-2014-INIT/en/pdf](http://data.consilium.europa.eu/doc/document/ST-16250-2014-INIT/en/pdf).

<sup>17</sup> Synchronization with the euro area is notably higher for Hungary and the Czech Republic relative to other CEE EU Member States.

*Table 1: Simplified taxonomy of benefits and costs of joining banking union for non-euro area countries*

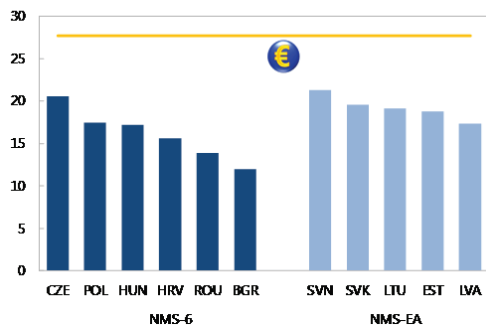
Policy objective	Real Sector				Financial Sector				Supervision/Backstops				Policy Space			
	(1) Degree of real convergence/integration with the euro area		(2) Degree of labor & product markets flexibility		(3) Degree of financial integration with the euro area		(4) Banking system structure (share of banks owned by euro area banks)		(5) Supervisory standards		(6) Industry-funded backstops (DGS)		(7) Monetary		(8) Fiscal	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
Benefit or Cost of joining the Banking Union	1. Improve the overall quality of supervision															
	2. Limit negative externalities from euro area banks			+								+				
	3. Increased access to info and improved home-host coordination through CSM			+								+				
Likelihood of distress	4. Reduce ability to mitigate country specific shocks	-			-											
	5. Constrain ability to control cross-border intra-group flows				-											
	6. Increase efficiency and lower cost of cross-border bank resolution							+								
Cost of distress	7. Provide access to common industry-funded backstop (SRF)		+				+									
	8. Loss of some local control over resolution process in the absence of fiscal backstops															
Growth	9. Reduce ability to smooth credit cycles through prudential measures															

*Note: The table presents a simplified taxonomy of country characteristics (top row) and policy objectives (first column) and whether joining the banking union could help or hinder the achievement of these objectives (rows showing potential benefits and costs). The cells in the matrix indicate whether country's ranking on a given country characteristic has a material impact on the benefits or costs of joining (e.g. the degree of real or financial integration with the euro area (columns 1 and 3) affects the relative likelihood of common versus asymmetric shocks, with lower integration = higher likelihood of asymmetric shocks and hence costs of giving up local policy space to respond to them). Types: for each characteristic listed in the top row, a country can be of two types: "High" – at or above the average across banking union members; and "Low" – below the average across banking union members. Payoffs: "-" (extra loss); "+" (added benefit with diagonal stripes indicating only partial benefit during transition to full SRF mutualization); and "blank" (particular benefit or cost of joining does not depend directly on country ranks on a particular economic characteristic).*

*Chart 3: CEE EU – real convergence with the euro area*

**Gross domestic product per capita, 2013**

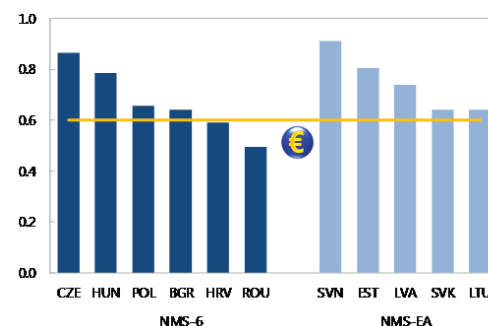
*EUR thousand, purchasing power standard*



Source: Eurostat; and Haver Analytics.  
 Note: NMS – EU new Member State in Central and Eastern Europe  
 EA – euro area  
 € – Symbol signifies euro area average of plotted data

**Business cycle synchronization with euro area, 1998–2013**

*Contemporaneous correlation of output gaps*

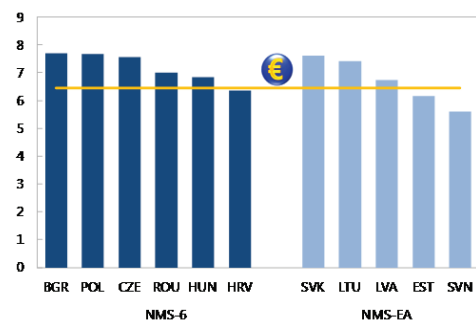


Source: IMF staff calculations.  
 Note: Output gaps are extracted with the Baxter-King bandpass filter. Euro area average is an unweighted average correlation for the 12 initial members.

*Chart 4: CEE EU Member States– labor and product market flexibility*

**Labor market regulations, 2011**

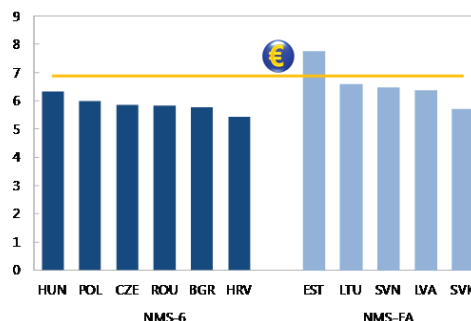
*Index, 10 = least restrictive*



Source: Economic Freedom of the World.

**Business regulations, 2011**

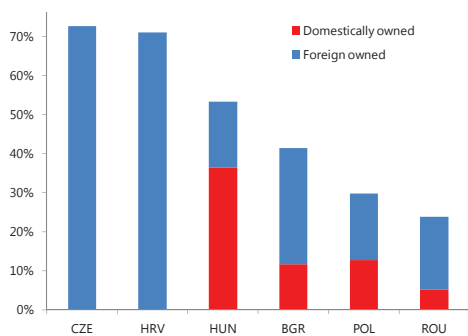
*Index, 10 = least restrictive*



- *Ability to influence decisions related to parent banks is critical for the CEE EU Member States* because most of their banking systems are dominated by the euro area bank subsidiaries, which tend to be more important for local economies than for the parent banking groups (chart 5). If under the banking union most *barriers to cross-border transfers* of capital and liquidity are removed, this could reduce the required capital and liquidity buffers at the subsidiary level, but it would also take away some of the local authorities' ability to ring-fence (Cerutti et al., 2014). Having less control over intra-group cross-border flows could be partly offset, however, by the benefits that come with direct participation in the SSM, which would allow opt-ins to vote in the SB on issues that are currently beyond the purview of local supervisors. It also remains to be seen how the SSM will balance prudential considerations of host and home countries, and address potential concerns that considerations related to larger financial systems/institutions, which have a greater bearing on the financial stability of the banking union as a whole, would be viewed as more important.
- *Access to common liquidity and fiscal backstops is important for the CEE EU Member States*, because (i) they still have large external liabilities, though many subsidiaries are now less reliant on foreign parent bank funding than before the crisis; (ii) banks in CEE EU Member States typically hold less bail-inable funds (other than uninsured deposits) than euro area banking groups operating in the region. The CEE EU Member States are, therefore, more likely to benefit from the risk-sharing aspect of the SRF or other common backstop (chart 6).

**Chart 5: CEE EU Member States – Banking sectors dependence on foreign banks**

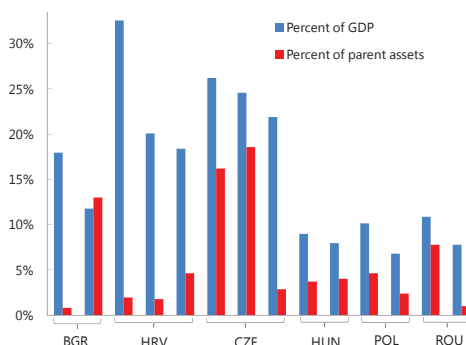
**Three largest banks by assets, 2013**  
% of GDP



Source: Bankscope; and IMF staff estimates.  
Note: Top 3 banks would be expected to come under SSM.

**Assets of largest foreign-owned banks in CEE EU**

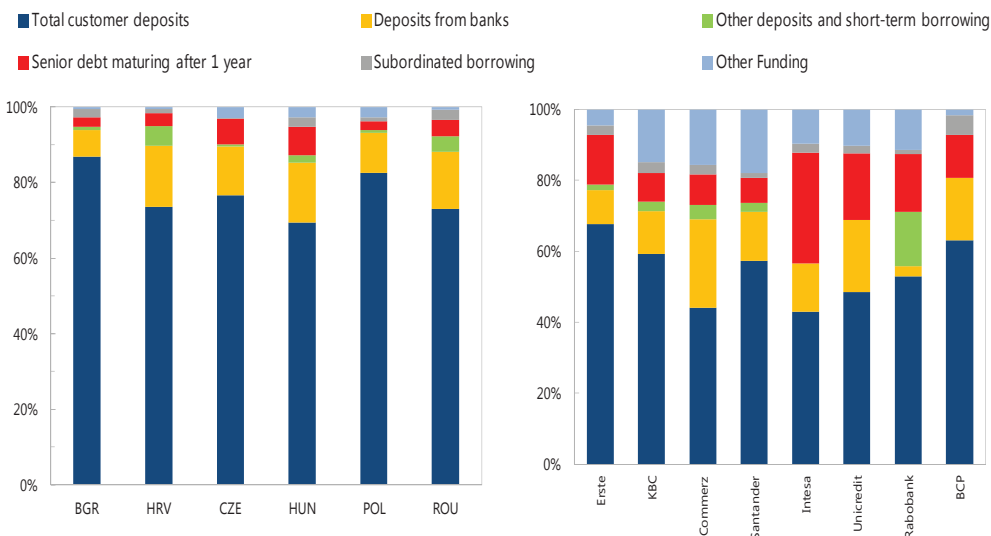
*Individual bank assets*



Source: Bankscope; and IMF staff estimates.  
Note: In some cases, the source data are consolidated for the financial group, in which the bank is part of.

**Chart 6: CEE EU Member States – bank funding structures, 2013**

*USD billion; % of total*



Source: Bankscope; and IMF staff estimates.  
Note: Based on largest 10 banks in each country and selected parent banks.

## 5 Summary

The lack of equal (or fully equivalent) treatment of the banking union members and non-euro area opt-ins – regarding their role in the Single Supervisory Mechanism (SSM), as well as access to common liquidity and fiscal backstops – makes opting into the banking union before euro adoption less attractive.

The choice of an early “opt-in” entails a number of country specific trade-offs:

- Economies that are less integrated with the euro area and hence more likely to find themselves facing different cyclical conditions than the rest of the banking union (e.g., Bulgaria, Croatia) face a trade-off between gaining access to a larger industry-funded common backstop (SRF) and giving up some flexibility to deal with country specific shocks. While the upside will fully materialize only once the SRF is fully mutualized, the downside can be properly assessed only when there is more clarity on and experience with the relevant banking union operational modalities.
- Economies where the euro area banks dominate local banking systems (e.g., Czech Republic, Croatia) face a trade-off between direct participation in the SSM deliberations (which entails better access to information and ability to participate in the decision-making on parent banks) and ceding full control over intra-group cross-border capital and liquidity flows (ability to ring-fence). The big unknown here is the extent to which negative externalities stemming from the activities of the euro area cross-border banks would indeed be effectively eliminated under the banking union, as this would determine the value of having control over the intra-group cross-border flows for local authorities.
- Countries with monetary and exchange rate flexibility would need to better understand how the centralization of micro- or macroprudential powers under the banking union would affect their ability to conduct monetary policy/lender-of-last-resort functions effectively. While the non-euro area banking union opt-ins could, in principle, use their monetary policy/exchange rate flexibility to offset tighter macroprudential requirements set at the banking union level, in practice, this could lead to tensions that would need to be resolved.

Despite the current shortcomings of the banking union, some countries can still find it advantageous to opt-in, as a way to enhance the quality and credibility of bank supervision or to gain access to larger industry-funded common backstops.



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# **(When) should a non-euro country join the banking union?<sup>1</sup>**

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## **1 Introduction**

The global financial crisis exposed numerous weaknesses in the European safety net arrangements. The fragmented European supervision was not adjusted to changes caused by growing internationalization and integration in the EU financial system and thus strengthened and unified financial supervision.

We analyze and assess both advantages and disadvantages of opting-in to the banking union<sup>2</sup> for non-euro EU Member States, focusing on the example of CEE countries. What would be the optimal choice: opting-in now or joining the banking union when entering the euro area? Answering this requires assessing the robustness of national safety net, structure and stability of the national banking system, as well as the construction of the banking union in its current shape.

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<sup>1</sup> Summary of the paper. The opinions expressed herein are those of the authors and do not reflect those of the associated institutions.

<sup>2</sup> For the description of both supervisory and resolution pillars of the banking union and their general assessment see Smaga (2015).

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The literature on evaluation of opting in to the banking union is still scarce. To our knowledge for the time being only Berglöf et al. (2012), Darvas and Wolff (2013), Kisgergely and Szombati (2014), NBP (2014) and IMF (2015) analyze opting-in from the perspective of CEE countries. We provide a comprehensive assessment of attractiveness of all aspects of banking union pillars from the perspective of a non-euro country and outline practical policy proposals to encourage opting-in. Moreover, we evaluate current willingness of each non-euro country to opt-in.

## **2 Potential benefits of opting-in**

Potential benefits for the non-euro countries from opting-in include:

- Increased stability, confidence in the banking system and risk-sharing mechanisms (Belke and Gros 2015);
- Increase in quality of supervision and harmonization of supervisory practices that would counter any national bias/forbearance and provide a “quality stamp” (owing to the ECB’s reputation and credibility);
- Improved home-host relations by streamlining communication and reducing/internalizing coordination problems;
- Access to parent bank supervisory data and a chance to participate in JSTs;
- Improved political position on the EU fora;
- For banks in opt-in countries – harmonized reporting and lower compliance costs;
- Addressing coordination and burden-sharing problems related to cross-border resolution.

However, for the time being, discussed benefits are mostly of theoretical and potential in nature because the Single Supervisory Mechanism (SSM)/Single Resolution Mechanism (SRM) have not yet fully proven their effectiveness and still no non-euro country has opted-in.

## **3 Potential risks of opting-in and possible remedies**

At the same time, there are many immediate risks for a non-euro country that joins the banking union in its current shape. Those are mainly due to deficient structure of banking union pillars established within the unchanged treaty framework. Potential risks include:

- Limited influence of opt-ins over decision-making process within the SSM, as the Supervisory Board only drafts decisions ultimately taken by Governing Council in which opt-ins do not participate;
- Lack of access to liquidity facility at the ECB and to a fiscal backstop (European Stability Mechanism);

- Risk of insufficient “added value” of the SSM over national supervisory framework, as SSM creates another, centralized supervisory layer with increased administrative burden;
- Risk that banks in opt-ins will be “too small to matter” and home country interests will prevail over national financial stability concerns in opt-ins (e.g. related to centralized capital and liquidity management);
- Complicated and time-consuming decision-making process of the SRM that involves too many parties to ensure a timely “over-the-weekend” resolution;
- Single Resolution Fund (SRF) not having a sufficient size and not being mutualized from the start;
- Lack of single deposit guarantee scheme;
- Risks connected with opting-out (e.g. negative market reaction).

The cost/benefit analysis of opting-in is, for the time being, unfavorable for non-euro countries. Opt-ins transfer majority of their competences in banking supervision and resolution to a pan-European level, but the responsibility for financial stability still remains to a large extent on the national level (e.g. covering the costs of instability from national Deposit Guarantee Schemes’ funds).

Remedies to the identified drawbacks entail changes at least in the TFEU and the ESM treaty, ensuring equal rights and responsibilities of all SSM members (irrespective of their euro zone membership). This includes providing (for all SSM members) equal access to fiscal and liquidity backstops, full participation in SSM decision making processes, increased involvement of national supervisors and taking into account also risks systemic only in national dimension. A better capitalized Single Resolution Fund and completion of the banking union by establishing a pan European deposit insurance system (for a proposal see Schoenmaker and Gros, 2012) are additional prerequisites not only for encouraging opting-in, but also for a stable and efficient functioning of the banking union itself (building the so-called “steel-framed” banking union, see Véron 2013).

## 4 Conclusions

Opting-in to the banking union might therefore be a beneficial solution for a non-euro country that has: a high share of foreign ownership in the banking system, significant size of the banking system, highly concentrated banking sector with presence of SIFIs, low financial potential of national Deposit Guarantee Schemes and resolution funds and has an imminent perspective for euro adoption. Those features have different relative importances of among potential opt-ins in CEE countries. For the time being, only Romania, Bulgaria and Denmark have made a

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positive assessment of the opt-in option, while others (Poland, Czech Republic and Hungary) adopted a “wait-and-see” approach<sup>3</sup>.

Fortunately, euro area accession mitigates the majority of identified drawbacks. However, due to political constraints, implementing above mentioned remedies for opt-ins does not seem to be feasible in the short term. No “quick fix” remedies are present and changes in the treaties are required. Hence, it seems optimal for a non-euro country not to opt-in now but to join the banking union upon euro adoption (or just a few years prior to fixed euro adoption date). National political factors also play a significant role in deciding to opt-in and could sometimes overshadow the economic rationale. Moreover, the experiences of a “first mover” – a non-euro country that first decides to opt-in – can serve as a decisive factor to opt-in for others and increase the peer pressure.

Yet, it is too early to make a comprehensive and grounded assessment of the banking union. Therefore, the attractiveness of opting-in requires periodic reassessments.

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<sup>3</sup> Sweden and the UK are likely to remain outside the banking union.

# Market-preserving fiscal federalism in the European Monetary Union<sup>1</sup>

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## **Abstract**

Responding to the euro crisis, European leaders have put in place an enhanced economic and financial governance framework for the euro area, including the main pillars of a banking union, while they have initiated work on a capital markets union. This should more effectively secure sound national macroeconomic and fiscal policies, a healthy financial sector and the stability of the euro. This paper poses the question whether the status quo of half-way political integration is sufficient to safeguard the cohesion and integrity of the euro area. National governments still have considerable leeway to circumvent the “hard” budget constraint and the strong market competition implied by the euro area’s “holy trinity” (one market, one currency and one monetary policy). For example, they might target captive sovereign debt markets or take protectionist measures. This economic nationalism would entrench the crisis-related fragmentation of the single market and frustrate the efficient functioning of the monetary union. A higher level of market-preserving fiscal federalism could prevent member countries from encroaching on markets and foster sustainable economic convergence towards an optimal currency area.

*JEL codes: E6, F33, F4, H7*

*Keywords: European Monetary Union, monetary policy trilemma, protectionism, market fragmentation, fiscal federalism*

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*“The recent crisis has shown that there remains a strong temptation, particularly when times are hard, to roll back the Single Market and seek refuge in forms of economic nationalism.”*

(Barroso in his mission letter to Monti, 2010)

## 1 Introduction

From mid-2007 to mid-2012, the European Economic and Monetary Union (EMU) successively saw a financial crisis, economic crisis and sovereign debt crisis, which threatened the very existence of the euro (Mongelli and van Riet, 2013). Responding to this triple crisis, European leaders have undertaken many important reforms to strengthen the institutional architecture of EMU, also giving up national authority over banking supervision and resolution. As a result, the euro area has entered a new era with a substantially upgraded economic and financial governance framework for preventing and resolving new crises (Mongelli, 2013). They nevertheless decided to hold on to national sovereignty in macroeconomic and fiscal policies.

The question this paper poses is whether this half-way euro area political integration, staying within the boundaries of the 2009 Lisbon Treaty, is sufficient to secure the cohesion and integrity of a monetary union in which economic freedom and market pressure are foreseen to drive the process of convergence towards an optimal currency zone. The risk it identifies is that member countries may use their remaining leeway to suppress the free functioning of the single market and free-ride on the euro in order to relax their “hard” budget constraint and protect domestic banks and industries. Such economic nationalism would entrench the market fragmentation observed since the euro crisis and frustrate the efficient functioning of EMU. This risk highlights the need for appropriate supranational institutions to ensure that euro area countries observe sound fiscal policies and that “mercantile competition” between them in a common market without barriers is welfare-enhancing rather than destructive. The corresponding analysis in this paper builds on the requirements for “market-preserving fiscal federalism” which McKinnon (1995, 1997) discussed for the American Monetary Union in comparison with Europe.

The Member States of the European Union (EU) introduced the euro as a political response to the “monetary policy trilemma” which in international economics is also known as the “impossible trinity” facing an open economy. This trilemma states that for countries wishing to embark on financial globalisation the triplet of perfect capital mobility, fixed exchange rates and an autonomous monetary policy is not feasible: they need to drop one of the three elements of this “holy trinity” (as Rose, 1996, called it). Accepting the liberalisation of international capital flows after the breakdown of the Bretton Woods exchange rate system, advanced economies have generally preferred two-corner solutions to this trilemma, adopting either

fixed or floating exchange rate regimes and the associated opposite implications for their monetary policy autonomy (White, 2013). Europe followed a different road. Creating a monetary union allowed the participating nations to uniquely occupy all three corners of the monetary triangle and to enjoy the benefits of a “holy trinity” inside the euro area: a single market, a single currency and a single monetary policy. A combination of market forces and common rules of behaviour was expected to impose policy discipline, as a precondition for both economic convergence and euro area stability, which in turn would bring greater prosperity.

From the outset it was clear that the euro area was not an optimum currency area (Jager and Hafner, 2013; Mongelli, 2013). Moreover, as became evident during the euro crisis, the theory of optimum currency areas as formulated in the mid-20<sup>th</sup> century was silent about the implications of financial liberalisation, the need for a banking union and the specific political requirements of creating a monetary union in Europe (Eichengreen, 2014). Many member countries were ill-prepared for the opening up of markets inside the EU, the economic consequences of adopting the euro, and the coincident globalisation of trade and finance, which increased competition both inside and outside EMU. At the same time, they had given up their old (imperfect) instruments of currency devaluation and inflation to rebalance the domestic economy and correct current account deficits. In addition, the active use of industrial policies to protect domestic sectors was constrained by EU rules governing the single market and state aid (Bastasin, 2012).

According to McKinnon (1995, pp. 463, 477), the Maastricht Treaty of 1992 and its push for a single currency was a “leap in the dark”. This was true especially for the EU Member States with a high public debt. Given open capital markets, in his view, these countries required continued national sovereign control over their currency and their central bank in order to be able to limit capital outflows, devalue the currency and/or use monetary financing of budget deficits so as to prevent financial crises in times of fiscal stress (or to use these policy options during episodes when bank rescue operations strained fiscal resources). With the irrevocable adoption of the euro they once and for all relinquished the option of using inflation and/or devaluation as a last resort to deal with a public debt overhang – also knowing that a supranational replacement in the form of an effective crisis management system was not available, since this “was regarded as superfluous” (Thygesen, 2013, p. 28). Hence, euro area countries in principle faced a “hard budget constraint” (McKinnon, 1995, 1997) and a government default became the only way to resolve a fiscal crisis (Sims, 2012), even though a formal sovereign bankruptcy procedure did not exist.

This EMU architecture implied that the participating countries were bound to observe sound macroeconomic, fiscal and financial policies, both in their own interest and in that of the euro area as a whole. They would need to work hard to increase their economic flexibility, fiscal strength and financial resilience in order to absorb asymmetric shocks and deal with spill-over effects in an integrating currency area



that moreover operated in an increasingly competitive global economic environment. As it turned out, the governance model of the euro area was subject to a “systemic failure” (De Streef, 2013, p. 337). Governments in practice faced only weak market incentives, soft peer pressure and no enforcement to maintain competitive economies, sound public finances and healthy financial sectors. On the contrary, their incentives were misaligned towards preserving economic policy autonomy and pursuing “mercantile” strategies favouring national rather than common euro area interests (see also Bastasin, 2012). Harmful “mercantile competition” (cf. Hayek, 1939; McKinnon, 1995) was widespread in Europe in the decades before the single market and the single currency were established, *inter alia* with the purpose to overcome this source of fragmentation. There are indications that economic nationalism has ever since remained a (hidden) force of divergence between the euro area countries and that it intensified during the triple crisis. From 1999-2014 there was in any case no convergence of real GDP per capita between the first 12 euro area members (European Central Bank, 2015)

Recent studies have examined the scope for trade-offs between the two-corner solutions given by the monetary policy trilemma and how countries could adopt intermediate policy strategies in order to “round the corners” for some time (see Klein and Shambaugh, 2013). For example, advanced economies concerned about competitive devaluations in a global context of ultra-easy monetary policies could be tempted to apply administrative instruments, such as capital restrictions and financial repression, in order to insulate themselves and regain a degree of policy autonomy (White, 2013). All over the world central banks, regulators and governments appear to be resorting more frequently to national financial sector policies with the characteristics of financial protectionism in order to manage volatile capital flows and financial fragilities (Beck et al., 2015). Many nations have further taken recourse to outright trade restrictions or “murky” forms of beggar-thy-neighbour policies that are difficult to detect, despite the commitment of G20 leaders to resist all forms of protectionism and keep markets open (Evenett, 2014).

The euro area is no exception to this global trend of policy makers trying to reclaim room for manoeuvre in fields where it had been lost. Many member countries looked for national safeguards against macroeconomic, fiscal and financial instability and national policy levers that could “round the corners” of the monetary triangle inside EMU. As the financial crisis struck, governments had to convince markets that they were strong enough to carry the heavy budgetary burden of the bank rescue operations and the Great Recession and hence that their bonds were still safe, also in the face of contagion by weakened member states. Foreign creditors were quick to withdraw their capital from those countries where adverse shocks led to a crisis of confidence in the stability of the banking system, the prospects for a durable economic recovery and the sustainability of public finances. Seeking a way to respond to the crisis, countries in distress considered their participation in the

euro a “strait-jacket” (Bastasin, 2012, p.158), as it left them with an “uncomfortably narrow” policy space (Crafts, 2013, p.713). As there was no supranational stabilisation and rescue mechanism to assist them and the Maastricht Treaty explicitly excluded a bail-out by partner countries, the financial sector, or the European Central Bank (ECB), the countries concerned were in principle left to their own devices to break the self-fulfilling default expectations. Hence, they had strong incentives to encroach on free markets by putting up barriers to competition, subsidising strategic firms, supporting banking champions, promoting captive sovereign debt markets and applying soft capital outflow restrictions (see also Bastasin, 2012; Véron, 2013; Crafts, 2014). While these policy interventions may reflect legitimate domestic stability concerns rather than protectionist intentions, they also had serious negative side effects on economic and financial integration.

An incomplete EMU characterised by fragmented authorities, policies and markets, if sustained, raises serious questions about the long-term viability of the euro (see also Pisani-Ferry et al., 2012). Trade protectionism inside the euro area constrains cross-border competition for goods and services priced in the same currency, which reduces opportunities for increasing firm efficiency and labour productivity. Facilitating the growth of national banking champions supports the build-up of leverage and systemic risk. Shielding public and private sector access to capital from market discipline promotes a bias towards debt-financed spending. Financial market fragmentation frustrates cross-border credit intermediation, hampers monetary transmission across the euro area and undermines the effective conduct of the single monetary policy.

On balance, EMU is bound to move towards a more optimal currency area only when national leaders are willing to further expand their supranational arrangements and adopt a higher level of market-preserving fiscal federalism, subject to adequate democratic control. This means that they should transfer sufficient intervention powers to European institutions charged with the task to guarantee a free, open and stable market economy for the euro area and to ensure a “hard” government budget constraint for member countries. EMU could well move further away from an optimal currency zone when they are unwilling to embark on this path. Creating a fiscal union in a next step would require care to preserve fiscal discipline, as a powerful central government tends to enjoy a “soft” budget constraint and any budget transfers would extend this to the national level.

The paper is organised as follows. Section 2 looks into the implications for member countries of their participation in EMU and the role of the euro area’s “holy trinity” in imposing market-based discipline. Section 3 outlines the main reasons why – contrary to most expectations – market incentives for sovereigns were relatively weak in the first 10 years of the euro. Section 4 reviews how some member countries attempted to restore national policy space after sovereign debt markets had turned vigilant again. One typical reaction was to introduce (hidden) barriers

inside the single market. Section 5 argues that a higher level of market-preserving fiscal federalism could remove the ability of member countries to encroach on free markets and align national policies with EMU requirements. Section 6 concludes that embarking on this path requires a social consensus about the limits of a sovereign nation state in a monetary union and national ownership of the reforms necessary to underpin the viability of the euro.

## **2 The euro area’s “holy trinity” imposes market discipline**

### **2.1 Economic policy constraints in an ever-closer union**

One may argue that the market-driven liberal economic regime underlying European monetary unification and EMU was derived from Hayek’s (1939) analysis of the by necessity limited scope for member state economic policies in an interstate federation. He stressed the importance for a political federation to have adequate restraining powers to prevent individual member states from interfering with the freedom of economic activity and causing a gradual disintegration of the common economic area. Hence, market liberalisation unavoidably meant a transfer of sovereignty over economic policies to the federation and the establishment of an economic union.

Moreover, the federal government would itself have to limit its powers of economic planning and regulation to those activities which enhance the internal coherence of the union and that are grounded in common convictions, ideals, values and traditions. While common economic interests and a sense of solidarity can usually be clearly defined for the citizens of a sovereign nation state, a political union tends to be characterised by diverse economic conditions and much weaker solidarity among its members. The more heterogeneous a federation is, the more complicated it will be to reach agreement on centralised interventions in economic life (such as protection from competition, subsidies for less developed regions, unemployment insurance and labour market regulations), because the benefits would only accrue to specific states, sectors or groups while the costs would be carried by the more dynamic or prosperous other parts of the union. Consequently, “there would have to be less government all round if federation is to be practicable” (Hayek, 1939, reprint of 1948, p. 266).

As pointed out by Hayek, this does not imply extreme *laissez faire*. But instead of continuously interfering with market forces, the federation’s economic policies should provide the framework within which individual initiatives can prosper and supply the common public goods and services that the market mechanism is unable to deliver.

The growing economic policy constraints in “an ever closer union among the peoples of Europe” (as foreseen since the Treaty of Rome of 1957) based on increasing market liberalisation has triggered two opposite reactions. For some observers

the inability to use federal distributive policies to correct the social disparities and regional imbalances accompanying a free market economy is the reason to denounce the whole process of European unification and to reject the single currency. Given the diversity among the participating EU Member States, these euro sceptics favour instead the freedom of sovereign states to intervene in markets and for example to use currency devaluation and other protectionist measures to tackle economic and social divergences.

For other observers the solution is instead a deeper European integration. The euro area countries should share more of their sovereignty by attributing stronger economic intervention powers to the European institutions that could be employed to promote both economic and social progress as well as to address regional imbalances. The historical heterogeneity of European economic cultures and traditions would in their view not stand in the way of erecting a supranational democratic system – or even a European federation – that would legitimate such centralised market interventions.<sup>3</sup>

## 2.2 Solving the monetary policy trilemma

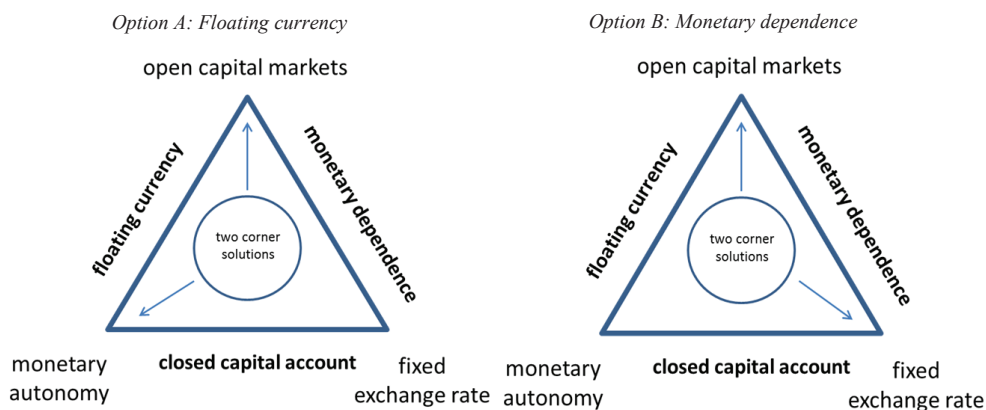
The introduction of the euro in 1999 was a political response to the monetary policy trilemma associated with the Mundell-Fleming model for an open economy. According to this trilemma, a country wishing to maintain free capital movements as well as exchange rate stability cannot simultaneously pursue an autonomous monetary policy; as only two-corner solutions are possible, one of the three elements of this “holy trinity” (Rose, 1996) has to be given up.

For example, Germany combined an open capital market with monetary autonomy and hence accepted a floating currency (see chart 1, option A). By contrast, many of its European trade partners pegged their currencies (more or less tightly) to the Deutsche Mark, seeking to import the high credibility of the Bundesbank’s monetary policy aimed at price stability (see chart 1, option B).

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<sup>3</sup> For an overview of this debate in Germany, notably between W. Streeck and J. Habermas, see Pistone (2013).

*Chart 1: The monetary policy trilemma*

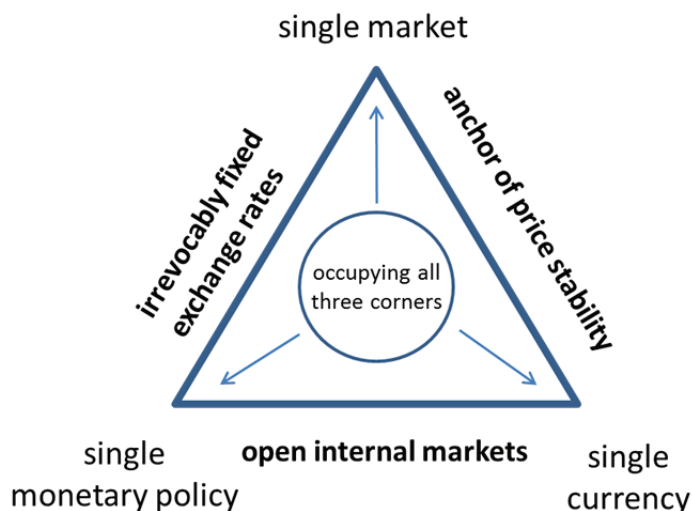


*Note: A country can occupy only two of the three corners and the line in between that connects them.*

The founding members of the euro were keen to preserve exchange rate stability, reflecting a predominant post-war concern with avoiding trade distortions and promoting trade integration (Wyplosz, 2000). The difficulty to maintain control over both monetary policy and the exchange rate in open financial markets motivated them (after having experimented with exchange rate stabilisation systems since the mid-1970s) to join forces in order to occupy each of the three corners of the monetary triangle and realise a “holy trinity” inside the euro area: by complementing the single market with a single currency and a single monetary policy they could henceforth all enjoy the benefits of a large and open internal market, irrevocably fixed bilateral exchange rates and a credible common anchor of price stability (chart 2).

While all euro area countries gave up their freedom of choice with regard to any of the three corners of the monetary policy trilemma, the pooling of national monetary sovereignty offered them the opportunity to mandate a common central bank to independently preserve monetary stability for the euro area and to manage the euro as a floating currency in globalised markets (the setting depicted in chart 1, option A). By contrast, they decided to retain their national sovereignty in other policy areas (apart from trade and competition in the context of the single market).

Chart 2: The “holy trinity” of the euro area



*Note: Euro area countries together occupied all three corners of the monetary triangle and thus each one of them enjoys open internal markets, irrevocably fixed bilateral exchange rates and a credible common anchor of price stability.*

This is a unique configuration, as in monetary history a currency was always aligned with a state. On the one hand, the “deep pockets” of the state made it easier to protect the value of the currency in the interests of the economy; on the other hand, the sovereign could then also abuse the currency by debasing its value in order to lower the burden of public debt (see Goodhart, 1998; van Riet, 2015). EMU was to be different. All countries that adopted the euro could expect substantial benefits from economic actors being able to access one wide market with one stable currency and to diversify portfolio risks. However, as a denationalised currency managed by a depoliticised common central bank, the euro was not meant to offer a protective “shield” against market discipline. On the contrary, based on “the principle of individual responsibility” (Weidmann, 2014), all euro area countries were themselves presumed to create the conditions for a dynamic economy, sustainable public finances and a stable financial system. The pursuit of prudent national policies was moreover vital for the entire euro area, as deeper integration also meant a growing exposure to shocks in other member countries and to systemic financial risk. This constellation leads to the conclusion that all euro area authorities shared a common responsibility for the cohesion and stability of the single currency.

## 2.3 Market-based discipline and rules-based discipline

This EMU architecture in principle left the challenge of countering asymmetric shocks and of dealing with a potential crisis to the national authorities. McKinnon (1995) warned that in particular EU countries with a large public debt overhang would be better off keeping their own currency and central bank, because life in EMU would be too costly for them. McCauley and White (1997) cautioned that the over-investment of European banks and pension funds in domestic government bonds exposed them to rising sovereign credit risk and could trigger financial instability. Countries with weak public finances also lacked the fiscal capacity to deal with a systemic banking crisis. High-debt countries might therefore need to devalue their currency to secure (temporary) economic gains or exploit their central bank to secure market liquidity, low real interest rates and inflation tax revenues in order to address a fiscal breakdown and limit a financial crisis; they might also have to retain exchange controls on capital flows so as to be able to sustain financial repression revenues.

During the transition towards the euro two divergent views were expressed on the nature of this challenge (Issing, 2008). The so-called “economists” argued that deeper economic integration was necessary – as implied by the theory of optimum currency areas – before the euro could be introduced in a final step. This view resulted in economic convergence criteria, laid down in the Maastricht Treaty, which prospective members had to meet on a sustainable basis before being able to adopt the single currency. Low inflation and a sound fiscal position as reflected in low government bond yields and a stable exchange rate featured high among the nominal convergence requirements. An independent national central bank was also part of the entry criteria.

By contrast, the so-called “monetarists” thought that the creation of a single currency would itself be sufficient to enforce the economic adjustments that would make the euro an optimal currency zone. This view placed great trust in market discipline as an endogenous driving force for the sound fiscal policies and structural reforms necessary for successful participation in EMU, supported by the many institutional changes – not least the establishment of an independent European Central Bank – that would accompany the introduction of the euro.

The Maastricht Treaty required the Member States and the EU to act in accordance with the principles of an open market economy with free competition. As in the end Member States were unwilling to sacrifice their political autonomy in the field of economic policy, the final EMU agreement lacked a strong supranational mechanism for promoting structural economic adjustment once countries had renounced their monetary and exchange rate policies. This also reflected confidence in the virtuous influence of a competitive market economy operating under a single currency as the “Trojan horse” for supply-side flexibility (Dyson and Featherstone, 1999, p. 784). In practice, Member States only had to engage in a non-binding coor-

dination of their economic policies, as these were acknowledged to be a matter of common concern. Only in 2009, the Lisbon Treaty arranged that the euro area countries could decide to go much further in this respect, in order to ensure the proper functioning of EMU.

The Maastricht Treaty entailed more binding arrangements for national fiscal policies, on top of the fiscal discipline expected from market forces. A privileged access of the public sector to the funds of financial institutions (other than for prudential purposes) was prohibited. The legal independence assigned to the ECB in the conduct of monetary policy and its statutory focus on price stability secured the ban on monetary financing of governments (making an exception for supplying central-bank reserves to public credit institutions in order to treat them the same as private banks). Moreover, the “no bail-out” rule forbid EU Member States to take over each other’s commitments and the same prohibition applied to the EU institutions. This was to avoid entering into a transfer union, whereby wealthier member countries could be called upon to support their weaker partners by equalisation payments (Issing, 2008).

These legal provisions ensured that governments must fund their debt in the open capital market, compete for savings in a way that supports an efficient allocation of funds and spend their resources for productive investments that enhance economic performance and competitiveness (cf. McKinnon, 1997). One could argue that subjecting national policy makers to the powers of the market mechanism was one of the normative objectives of EMU, namely to prevent that unsound national actions could destabilise the single currency (Goodhart, 1998). Governments were thus well-advised to generate positive market expectations about their creditworthiness by building confidence in their stability-oriented fiscal policies, the quality of prudential regulation and supervision and the economic performance of their country. This should enable both the public and private sectors to borrow at affordable, market-determined (real) interest rates and firms to attract equity capital at attractive conditions from international investors.

Governors of European central banks were aware, well before the Maastricht Treaty was concluded, that market discipline may at times be ineffective. The Delors Report had highlighted that free access to a large capital market facilitates the financing of budget imbalances and “the constraints imposed by market forces might either be too slow and weak or too sudden and disruptive” (Committee for the study of economic and monetary union, 1989, p.24). As documented by James (2012, p. 297), when drafting the Statute of the ECB in 1990/91, governors also realised that public entities could still enjoy a privileged access to financial markets as a result of national fiscal, banking and prudential regulation. They were furthermore aware that market participants could expect that euro area governments will ultimately be bailed out by their partner countries when encountering funding difficulties – and that these governments could expect the same, leading to moral



hazard. As a result, markets would not set the correct interest rate on public debt. Hence, governors were sceptical that market discipline would be sufficient to avoid excessive budget deficits and feared that the ECB could then become subject to political pressure to pursue a more accommodating monetary policy and to bail out high-debt member countries.

Such doubts about the effectiveness of market constraints motivated the introduction of EU fiscal rules and surveillance in the Maastricht Treaty as additional safeguards against excessive budget deficits and too high public debt. The importance of coordinating national fiscal policies and of concerted budgetary discipline – needed to prevent adverse interest rate spill-overs of fiscal laxity on other member countries, protect the credibility of the ECB’s monetary policy and guarantee a balanced policy mix – motivated further detailed fiscal policy provisions, which were laid down in the Stability and Growth Pact of 1997 (Artis and Winkler, 1998).

At the same time, the European Commission initiated a comprehensive action plan to complete the single market for financial services, enhance EU prudential legislation and strengthen coordination among the national supervisory authorities. This set of legal measures aimed at enhancing market efficiency and a healthy financial sector while offering a precaution against potential market instability that could be triggered by troubled financial institutions.

### **3 Constrained market discipline over national fiscal policies**

#### **3.1 The “hard” budget constraint on euro area sovereigns**

Already in the run-up to EMU many prospective euro area countries gave their national central banks an independent mandate to maintain price stability and sought to stabilise their exchange rate vis-à-vis other currencies (above all the Deutsche Mark) that participated in the exchange rate mechanism while opening up their capital markets (see for example Eijffinger and de Haan, 2000). The choice to give up political control over monetary and exchange rate policy became irrevocable with the adoption of the euro. This made their new position comparable to that of subsidiary governments like the American States, and that of developing countries faced with low market confidence in their national currency; i.e. they were all unable to issue bonds in a currency under their own monetary control (McKinnon, 1997; Goodhart, 1998). Euro area countries however remained fully responsible for their own public finances as there was no central fiscal authority that could levy taxes, make transfer payments, absorb asymmetric shocks, rescue banks or pool their sovereign debt.

As a consequence, euro area countries replaced a “soft” for a “hard” budget constraint that once and for all ruled out the options of devaluation and inflation and excluded a bail-out by other member countries or EU institutions to deal with episodes of severe fiscal stress. The regime change was much smaller for “safe

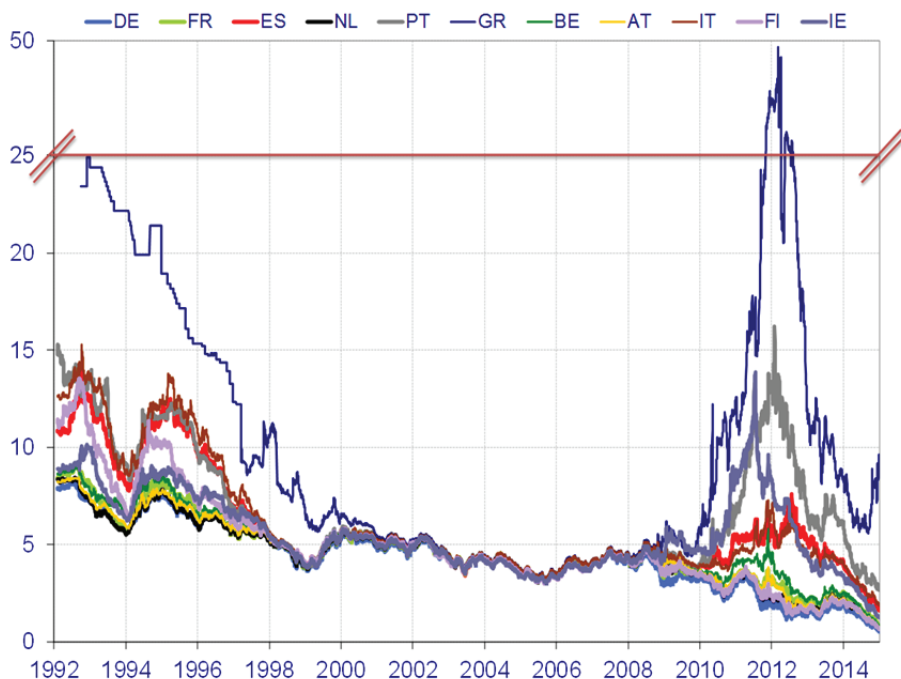
haven” countries accustomed to open capital and product markets and with a history of central bank independence and successful stability-oriented policies; it was more significant for those EU-Member States with a tradition of protected markets and the reputation of monetary financing of high public deficits and regular currency devaluations. Especially for the latter group of countries the changeover to the euro raised the default risk on national public debt.<sup>4</sup>

The market funding of euro area governments became thus dependent on the willingness of international investors to roll over the already accumulated sovereign debt that, henceforth, to a smaller or larger extent was characterised by a higher risk profile (McCauley and While, 1997; Arnold and Lemmen, 2001; Gros, 2012). One might have expected that market interest rates would shift upwards for many euro area countries to reflect the apparent higher sovereign default risk, with the most indebted governments seeing the largest increase. Several factors worked against this plausible expectation, contributing to a downward convergence of government bond yields – a process that started well before the euro was introduced in 1999 (chart 3) – instead of leading to persistent interest rate spreads reflecting disparate country fundamentals.

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<sup>4</sup> The pre-EMU distinction between sovereign credit ratings for domestic currency debt and those for foreign currency debt disappeared. While Standard & Poor’s unified the ratings of euro area countries on the (in several cases lower) foreign currency ratings to reflect the fact that they could no longer turn on the “printing press”, Moody’s by contrast used the domestic currency ratings as the new basis arguing that governments had already given up this option by granting their central banks independence.

*Chart 3: Government bond yields in the euro area countries  
daily data, in percentages*



Sources: Datastream and ECB.

Note: Chart excludes Cyprus, Luxembourg, Malta, Slovenia, Slovakia and the Baltic countries.

### 3.2 A new environment for public debt management

One factor was a more professional sovereign debt management in response to the liberalisation of capital markets and the institution of independent central banks. Many European countries had established public debt management offices with operational autonomy in the 1990s, working under specific guidelines from the finance ministry. Their task was in fact to provide the government with a form of insurance against market power (Dyson, 2014, p. 381).

The activities of public debt managers generally focused on promoting a liquid government bond market, minimising borrowing costs at a prudent level of risk and supporting a more efficient asset and liability management of the public sector. They cooperated closely with primary dealers, a selective group of both domestic and foreign banks, which in return for certain privileges had the task to facilitate the placement of government securities in the open capital market.

Another factor contributing to the convergence of sovereign bond yields was the positive effect of a country adopting the euro and anchoring itself to a stability union. The ECB's credible guarantee of price stability made it possible for public debt managers to issue more longer-maturity bonds than previously, thereby reducing roll-over risk. These debt securities also attracted demand from long-term investors residing elsewhere in the euro area, using the new opportunity to diversify their country risk without in parallel having to accept exchange rate risk (see McKinnon, 2002).

Moreover, EU banking legislation allowed national supervisors to assign a very low or even zero risk weight to bank claims on the central government, also when these originated from other OECD countries. While before 1999 exchange rate risk still acted as a barrier, after the inception of the euro banks could make full use of the opportunity to buy government bonds of other participating countries without having to worry about extra capital charges for lower-rated sovereigns. Government bonds were furthermore exempted from the large exposure limit that applied to private assets on bank balance sheets (McCauley and White, 1997; Arnold and Lemmen, 2001). EU prudential legislation entailed similar sovereign exposure privileges for institutional investors. With the introduction of the euro, regulatory requirements to match the currency of their assets and liabilities allowed them to expand their domestic government bond portfolios to sovereign issuers from the whole euro area.

The preferential regulatory treatment of public relative to private sector claims may have led market participants to believe that, no matter the amount purchased, government debt was virtually risk-free. They may have felt reassured by the convergence of fiscal positions in the transition to EMU, the agreement on the Stability and Growth Pact and the possibility laid down in the Maastricht Treaty to impose sanctions on Member States with persistent excessive deficits. Even if imperfect, it arranged for EU surveillance of national fiscal policies and it targeted sound public finances.

For turbulent times, market actors may have counted on a bail-out of troubled member countries, given the dangers of contagion in an integrated capital market and the presumption that EU institutions, the ECB and euro area partners would have little choice but to step in with supporting measures so as to ensure financial stability and preserve the euro (McKinnon, 1995; den Butter and Segers, 2014). This bail-out expectation may also explain the significant "bonus" that appeared in the sovereign credit ratings of EU Member States upon joining the euro, given the evidence that until 2010 their euro-denominated debt was treated more favourably than the national-currency debt of other OECD countries (Körner and Trautwein, 2015).

Once the euro was in place, banks and other financial institutions thus had every incentive to accumulate government securities on their balance sheets and to select

in particular the higher-yielding bonds of those euro area countries that were priced in the market as being subject to higher credit and liquidity risk. As these bonds could now be purchased without currency risk, market participants started a “search for yield” – also driven by a global “savings glut” – that resulted in a general compression of sovereign bond yields, bringing them close to the low levels of the safest member countries (chart 3).<sup>5</sup> As reported by Weidmann (2014), over the period 1999–2007, the average yield spread on the sovereign bonds of EMU countries relative to the German Bund was just 14 basis points.

With the benefit of hindsight, the government debt of several euro area countries was significantly over-rated and the associated credit risk was systematically under-priced before the financial crisis. The view that markets would tolerate a lower public debt than before EMU and discipline national fiscal policies was refuted by reality. For the previous high-interest rate countries the adoption of the euro in fact relaxed budget constraints rather than tightening them, as it made them an attractive target for yield-hungry investors, thereby creating moral hazard. However, market pressure returned with a vengeance following the collapse of Lehman Brothers in September 2008.

## **4 Rounding the corners of the euro area’s monetary triangle**

### **4.1 Countering self-fulfilling default expectations**

When a new Greek government took office in October 2009 it surprised markets by disclosing much higher deficit and debt figures than were known before. Growing market concerns about the sustainability of public finances in Greece also affected other exposed euro area countries with a high public and/or private debt, a fragile banking sector and a poor economic outlook. The sudden shift in market sentiment towards these vulnerable members, especially among foreign creditors, caused a rapid increase in their sovereign bond yields as default risk premia were adjusted upwards, in conjunction with falling credit ratings and cross-border contagion effects (chart 3). By contrast, Germany and other euro area countries with a “safe haven” status benefitted from “flight to safety and liquidity” flows and enjoyed falling government bond yields. This experience showed that only after the onset of the sovereign debt crisis, when credit rating agencies repeatedly downgraded vulnerable countries, markets fully recognised again the fundamental default risk attached to subsidiary governments that should have been evident from the start of

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<sup>5</sup> Buiter and Sibert (2005) argue that this market failure was also partly due to the fact that the Eurosystem allocated all euro-denominated central government securities in the highest liquidity category without regard to differences in the market’s valuation of default risk. Although of relatively minor significance, this artificial liquidity enhancement could have suppressed government bond yields of weak euro area sovereigns.

EMU. Several hedge funds even started to take speculative positions against the euro. Not surprisingly, this was also reflected by a “malus” appearing in the sovereign credit ratings of vulnerable euro area countries as compared to other OECD members (Körner and Trautwein, 2015).

The spreading of the sovereign debt crisis in the euro area closely corresponded to what Kaminsky et al. (2003) describe as the “unholy trinity of financial contagion” in the context of sudden stops in foreign funding: a surprise negative announcement sets off a broad-based reversal of capital inflows as leveraged common creditors reduce their exposure to the sovereign as well as to private borrowers perceived to be vulnerable. The mirror image of the euro area’s “holy trinity” in tranquil times was the “unholy trinity” facing troubled members: excluding inflation, devaluation and a bail-out was incompatible with avoiding a sovereign default; at least one “safety valve” for sovereigns under market stress had to be found, as a self-fulfilling default was not only costly but also contagious and endangered the cohesion and integrity of the euro area.

As a solution, the EU institutions and euro area leaders committed to do whatever was required to secure financial stability in the euro area as a whole (see van Riet, 2015). Responding to the sovereign debt crisis they created new fiscal backstop mechanisms subject to strict policy conditions to support member countries that temporarily had lost access to the capital market. Separately, the ECB initiated temporary and limited purchases of their government bonds – the monetary impact of which was sterilised – to repair the fragmenting securities markets and restore an even monetary transmission across the euro area. At the peak of the crisis in mid-2012, as sovereign bond yields appeared to include a currency redenomination risk premium, the ECB made a credible commitment to undertake conditional but unlimited outright purchases of government debt securities within the scope of its monetary policy mandate, which was successful in removing market uncertainty about a possible break-up of the euro.

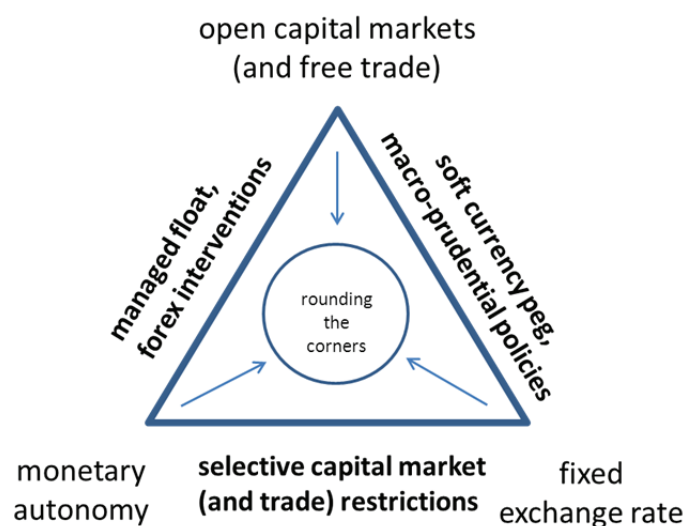
The national authorities on their part looked for (additional) solutions that would buy them time for undertaking the necessary policy reforms and potentially as a more permanent arrangement for easing the severe market pressure. Their own pre-EMU experiences with actively trying to use domestic financial and industrial policies in the presence of currency pegs may have offered them inspiration (cf. Wyplosz, 2000).

## **4.2 Reducing national policy constraints inside the euro area**

As already mentioned, theory suggests that countries can only occupy two of the three corners of the monetary policy trilemma and have to give up their autonomy over the third (chart 1). This impossible trinity can be extended to an “impossible quartet” when free trade is added. Historical analysis largely confirms that the

monetary policy trilemma holds in the longer run and is a useful guidepost for policy makers (Obstfeld et al., 2005). However, recent studies suggest that there may be scope for intermediate policy choices that – using the words of Klein and Shambaugh (2013) – “round the corners” of the monetary policy trilemma and allow some time-bound room for manoeuvre to tackle specific national policy dilemma’s. The policy options that address the various trade-offs in responding to significant shocks include for example trade protectionism to create artificial competitive advantages in interconnected product markets, selective capital market restrictions to address financial fragility concerns, macroprudential measures to better control domestic credit growth, soft currency pegs to gain some autonomy over domestic monetary conditions, and management of floating exchange rates to limit harmful currency volatility (chart 4). The appropriateness, feasibility and effectiveness of such “middle-of-the-road” policies are widely debated.

*Chart 4: Rounding the corners of the monetary policy trilemma*

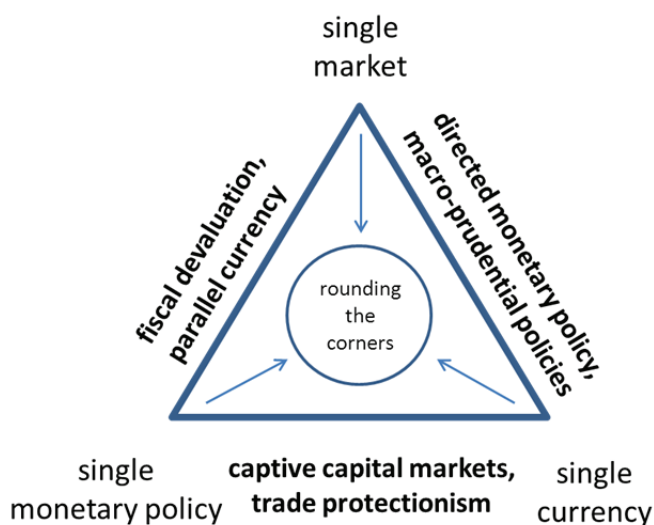


*Note: A country that occupies two of the three corners and the line in between that connects them can still achieve some extra room for manoeuvre on the implied policy constraint if it is able to “round” the third corner.*

Countries in the euro area have similar incentives to exploit the scope for trade-offs in an integrated single market with a single currency and a single monetary policy in order to restore some margin for national policy manoeuvre (Blundell-Wignall et al., 2013; Crafts, 2014). The possible tools that would “round the corners” of the euro area’s monetary triangle include quasi-fiscal, regulatory, prudential, exchange rate, trade and industrial policies. They could be adopted both to prevent and manage

domestic imbalances inside the euro area as well as to respond to asymmetric shocks. During a crisis, participating countries may in particular look for national stabilisation tools that make it easier for them to tackle market turbulence, fiscal distress, and economic adjustment (chart 5).

*Chart 5: Rounding the corners of the euro area's monetary triangle*



*Note: Euro area countries may “round” all three corners of the monetary triangle by trying to relax the constraints implied by open internal markets, irrevocably fixed bilateral exchange rates, and a single monetary policy stance.*

For example, (coordinated) national macroprudential policies (such as changes in the required counter-cyclical capital buffer or the maximum loan-to-value ratio), could be used to counter heterogeneous business and financial cycles within EMU, where the single monetary policy is unable to prevent or address these in the member countries (Houben and Kakes, 2013; Herzberg and Watson, 2014). To assist a rebalancing of current account positions, some authors propose a fiscal devaluation as a national substitute to the inability of euro area countries to devalue (Keen and de Mooij, 2012). This policy reduces the relative cost of tradables through a shift in the tax base away from capital taxation and social contributions on labour to taxes on consumption or property. A radical suggestion to regain room for exchange rate manoeuvre is to introduce for some time a parallel currency in distressed countries which could fluctuate against the euro (Richter et al., 2013).

Constraining the free functioning of the single market could also gain momentum. To ease competitive pressures, governments may continue to shield the provi-



sion of services from foreign competition, provide state aid to favoured sectors, or impose administrative requirements that amount to trade protectionism in disguise. They may also be tempted to place restrictions on foreign take-overs of strategic firms and put up barriers to labour mobility within the EU. Bastasin (2012) reports in this respect that in the wake of the financial crisis several euro area countries protected their banks in order to prevent that they could become an easy prey to foreign acquisitions. Some also gave state subsidies or loans at concessional interest rates to their car industries.

Various suggestions have also been made for a more “effective management of capital flows” (see the policy agenda proposed by Lane, 2013, pp. 16 ff.). National policy makers may apply a range of financial sector policies as a tool to restrict cross-border capital movements and create more space to address domestic policy challenges stemming from volatile capital flows and tight financial conditions (Beck et al., 2015). During the sovereign debt crisis, the public debt managers of vulnerable euro area countries generally sought an insurance against rising market expectations of sovereign default (Dyson, 2014, p. 383; van Riet, 2014). This apparently took the form of inducing resident investors, in particular banks, pension funds and insurance corporations, to buy and hold more bonds issued by their own sovereign (see also Bastasin, 2012; Reinhart, 2012). Some euro area countries also used their fiscal capacity to enable weakened domestic banks to expand their role as major investors in government bonds and thereby to counter the risk of capital flight causing a sharp increase in their own borrowing costs (Valiante, 2014).

With the same effect, Koo (2012) proposes to agree at the euro area level to limit the sale of government bonds to citizens and exclude foreigners, while leaving investments in private sector financial assets free for non-residents. He sees this “nationals-only rule” as an alternative to a fiscal union, which could enable the government to run more flexible fiscal policies to fight a recession, as domestic creditors could be more likely to accept the necessary higher budget deficits. The key advantage of such a more captive domestic investor base is that it reduces the fiscal vulnerabilities from having a large and less stable foreign community of government bond holders, albeit at the price of crowding out local private investment and preventing domestic creditors from spreading their risks across a wider range of assets (van Riet, 2013).

Another example of financial protectionism is that national supervisors reportedly placed restrictions on the outflow of bank capital and liquidity, while demanding repatriation of assets held abroad, so as to ring-fence their domestic banking systems and secure credit supply for residents, including for the government (Véron,

2013).<sup>6</sup> As an ultimate solution against a run on bank deposits and citizens moving their savings abroad, Cyprus had to impose administrative restrictions on bank transactions and capital outflow controls in March 2013 that were in force for just over two years. Greece faced the risk of a financial breakdown related to a possible exit from the euro in June 2015 and was forced to temporarily close its banks and the stock exchange while until further notice closing the border for capital exports. Substantial capital flight would also have complicated these governments' future return to the capital market.

### 4.3 The fragmentation of the euro area

Such “middle-of-the-road” policies reflect attempts by national authorities to relax the constraints associated with the “holy trinity” of the euro area and to reclaim some control over how the triplet of the single market, the single currency and the single monetary policy affects their own economies. Some of the aforementioned interventions are sensible, such as a (budget-neutral) fiscal devaluation to improve competitiveness or national macroprudential actions to deal with localised housing booms. A correction of capital market failures and improper incentives in the financial industry that fuelled the external financing of a credit-driven boom in the crisis-hit countries is also warranted. The financial trilemma<sup>7</sup> associated with the high degree of financial integration in EMU nevertheless demands that member countries coordinate national macroprudential actions and regulatory measures which affect cross-border capital flows and financial conditions across the euro area (see Herzberg and Watson, 2014).

Some other crisis-related national policies, however, may be interpreted as a form of “mercantile competition” that is turning into market repression and protectionism to ease economic adjustment, reduce fiscal stress and solve distributional issues (cf. Hayek, 1939; McKinnon, 1995; Rodrik, 2000 and 2011). Government efforts to nurture the domestic banking and corporate sector or to introduce “hidden” restrictions on cross-border capital flows contribute to a renationalisation of markets, which could lead to growing economic and financial disintegration. The consequent fragmentation of the single market along national lines frustrates the

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<sup>6</sup> This supervisory reaction appears to be a global phenomenon, leading to financial protectionism and a “balkanisation” of banking (The Economist, 23 November 2013, pp. 18 and 74). Rose and Wieladek (2014) report evidence that nationalised banks and those benefiting from public sector support after the 2008 financial crisis reduced foreign lending to counterparts in the United Kingdom or charged them higher interest rates.

<sup>7</sup> Following Schoenmaker (2011), the financial trilemma states that an effective management of domestic financial developments when there is full capital mobility is only feasible with international coordination.

efficient allocation of resources, distorts wage and price formation, constrains monetary transmission and complicates the conduct of the single monetary policy.

This in turn could oblige the ECB to take (further) non-standard measures for repairing the monetary transmission mechanism, also using special tools directed at dysfunctional national markets and economies starved of credit (see chart 5). In the same vein, several EU initiatives seek to promote the ability of capital markets to mobilise non-bank long-term financing and to channel it across Europe to regions, sectors and SMEs that are short of bank funding (European Commission, 2014). The steps being taken towards a capital markets union offering equal access to funding and uniform creditor protection also go in the direction of countering financial disintegration and fragmentation (European Commission, 2015).

#### **4.4 The revival of economic nationalism**

Altogether there is a risk of euro area countries curtailing the single market and returning to old-style industrial and directed credit policies for national benefit. Crafts (2014) sees the consequent retreat from economic and financial integration as a new political compromise to save the euro, comparable to the Bretton Woods episode when most European countries applied capital controls while pegging the exchange rate to the US dollar and opening up for trade. These capital market restrictions served in his view to preserve monetary policy autonomy and enabled countries to use financial repression as a national strategy to support public debt deleveraging and the build-up of a welfare state.<sup>8</sup>

Similarly, Monnet et al. (2014) interpret the return of financial market restrictions as a reactivation of historical patterns of suasion, interaction and control that in many EU Member States characterised the relations between governments, their central bank and the domestic financial sector for decades after World War II until the changeover to EMU. The objective of such close relationships was to ease the government budget constraint, allocate credit to favoured sectors, conduct industrial policy and stabilise the economy. According to these observers, euro area countries facing distress could again be allowed to use protectionist and repressive measures that facilitate their economic and financial adjustment and reduce the pain of fiscal consolidation.

EU law permits, within limits, taking measures at the European or national level to support the proper functioning of markets, the soundness of financial institutions and the stability of the euro. However, these actions may also have undesirable “side effects” that distort incentives and undermine the ability of markets to impose disci-

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<sup>8</sup> Wyplosz (2000) explains the adherence to financial repression in post-war Europe with EU Member States’ commitment to stabilise their exchange rates, reflecting a predominant concern with intra-area trade.

pline on national policy makers (van Riet, 2013). Where they are aimed at repairing dysfunctional markets and institutions and at protecting countries against distorted economic and financial conditions, they may be characterised as stabilising. Where the interventions go beyond correcting market and regulatory failures and introduce new distortions, such as government funding privileges or state aid facilities for national economic champions, they undermine the cohesion and integrity of EMU.

Before the crisis, market discipline was weak and the ample availability of cheap financing created political incentives to free-ride on the euro and to delay reforms; following the crisis, the return of market vigilance made financing more expensive, which this time could fuel political incentives in favour of protectionist and repressive measures that undermine the smooth functioning of the euro area. As the European Commission (2012, p. 10) warned: “More than 50 years after the foundation of the European Union the crisis of confidence appears to be reinstating the constraining power of national borders, questioning the Single Market and threatening the achievements and as yet unfulfilled aspirations of Economic and Monetary Union”.

#### **4.5 Limits to national policy autonomy and common risk-sharing**

Two relevant questions for EMU are therefore whether and to what extent continued national autonomy over key economic policy areas is compatible with building a more resilient and integrated euro area; and to what extent a common risk-sharing mechanism is at all feasible in a heterogeneous monetary union.

The first issue can be illustrated by the fiscal/financial trilemma put forward by Obstfeld (2013): maintaining financial integration, financial stability and fiscal autonomy are mutually incompatible in a context where the health of the banking sector and the creditworthiness of sovereigns are closely intertwined. One of the three desiderata has to give way and moving to some kind of fiscal union appears to him (and others) as the most logical choice.<sup>9</sup>

Piketty (2014, p. 561) sees a fiscal union in this respect above all as an instrument to ensure the effectiveness of financial restrictions in an open international capital market, as the risk of capital flight requires them to be introduced at the level

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<sup>9</sup> Pisani-Ferry (2012) draws the same conclusion in favour of a fiscal union on the basis of the new impossible trinity of a national banking system connected to the sovereign, a strict ban on monetary financing and the rejection of co-responsibility for public debt. Beck and Prinz (2012) see a single monetary policy by an independent ECB and the no bailout clause as mutually inconsistent with national fiscal sovereignty. The Tommaso Padoa-Schioppa-Group (2012) calls for a single currency area that combines the single market with a banking union and key elements of a fiscal union. Bindseil and Winkler (2014) argue that a monetary union like the euro area must have a strong underpinning by a banking and fiscal union in order for the common central bank to be able to deal with solvency issues that might arise when it fights a liquidity crisis.

of the euro area: “When countries relinquish monetary sovereignty, it is essential to restore their fiscal sovereignty over matters no longer within the purview of the nation-state, such as the interest rate on public debt, the progressive tax on capital, or the tax of multinational corporations.”

Yet, the costs and benefits of moving to a fiscal union also depend on the role assigned to markets and institutions in ensuring budgetary discipline. McKinnon (1997) argues that a supranational fiscal authority in combination with a “hard” budget constraint on euro area countries would put the latter in the position of subsidiary sovereigns like American States. The concern he raises (both for the case of Europe and that of the United States) is that a supranational government in principle faces a “soft” budget constraint, because the federal bonds that it issues will be perceived as “risk free” in the home capital market as long as it has (political) influence over the common central bank. Under these circumstances federal bonds will be the preferred “safe” investment category and hence the supranational government faces little market discipline. To prevent the “federal leviathan” from building up too much debt, it would need to observe a balanced budget rule, possibly together with a constitutional agreement that federal taxes are to be used only for financing truly federal public goods and services.

Moreover, when the common fiscal capacity is used to make transfer payments to equalise economic conditions across the monetary union, the subsidiary sovereigns get indirect access to the common central bank and their own budget constraint will soften accordingly. This benefit is of particular interest to the less fiscally prudent members, who may even adopt strategies to exploit this channel. Bolton and Jeanne (2011, p.190) note in this respect that the wealthier EMU countries will have a strong interest in a form of fiscal integration which imposes as much budgetary discipline as possible, because in a fiscal union they could otherwise be forced to make continuous transfer payments to the weaker countries.

Tirole (2015) believes that, in such an asymmetric situation, the healthy countries have no incentive to conclude joint-and-several liability arrangements. After a negative shock, they will only show solidarity to distressed members out of self-interest, in order to prevent being hit by contagion effects arising in an integrated monetary union, i.e. an environment in which imposing official sanctions is not very credible. Multilateral insurance is in his view only feasible in a symmetrical context where all members have a sound fiscal position, are equally exposed to shocks, face large spill-over effects and market-induced sanctions to over-borrowing are credible. This in turn requires much more progress with real economic convergence.

The conclusion is that the cohesion and integrity of EMU may only be guaranteed if (new or existing) supranational public institutions receive sufficient intervention powers to preserve market-based discipline as a complement to rule-based pressure on member countries. This should promote more similar economic condi-

tions and a more optimal currency zone. In addition, the possible creation of an area-wide fiscal authority should be embedded in an appropriate governance structure to avoid opening the door to a new public debt bias. As a further constraint, recalling Hayek (1939), a common fiscal policy in combination with common risk sharing and solidarity mechanisms must be grounded in common values and preferences among euro area citizens, or at least enjoy democratic legitimacy.

## 5 Benefits of market-preserving fiscal federalism for EMU

### 5.1 Political restrictions on discretionary economic policies

The ability of euro area countries to engage in harmful “mercantile competition” jeopardises EMU by moving it away from an optimum currency area. The question is therefore how in practice to counter such protectionist tendencies and how to revive economic and financial integration in a political set-up where so far nation states have largely retained their sovereignty (as they have only transferred common tasks in the fields of trade and competition, monetary policy and banking supervision and resolution to European institutions with limited accountability to the European Parliament).

A possible answer lies in the observation by McKinnon (1995, 1997), Weingast (1995) and Qian and Weingast (1997) that a stable and welfare-enhancing monetary union needs “market-preserving (fiscal) federalism”. This amounts to a multi-level governance structure which secures free and open markets, promotes efficient horizontal competition between the member countries and subjects all governments to a “hard” budget constraint (without privileged access to credit, the printing press or a bail-out) while providing financial stability safeguards against disruptive market forces. To prevent that political forces encroach on markets, it places credible restrictions on discretionary economic policy making – both at the national and supranational level – and it simultaneously protects property rights and enforces contracts.<sup>10</sup>

Against this background, taking inspiration from the criteria put forward by McKinnon (1995, 1997), Weingast (1995) and Montinola et al. (1995), one may derive five main characteristics of market-preserving fiscal federalism that could govern the European Monetary Union:

1. There exists a clear *hierarchy between area-wide (federal) authorities and subsidiary authorities* in which each level of government is autonomous in its

<sup>10</sup> Market-preserving fiscal federalism closely corresponds to what Enderlein (2009) calls “competitive fiscal federalism”. Among his three worlds of fiscal federalism, this type stands for a federation in which the federal government shares its power with sub-national entities that are responsible for financing their own policies and in which there is no requirement to equalise living conditions through transfer payments.

own jurisdiction and subject to democratic control; *the allocation of their tasks and responsibilities is durably institutionalised* by a common political agreement anchored in primary legislation.

2. Area-wide (federal) institutions provide the *common public goods and services that are essential for the efficacy and stability of the monetary union*, notably a central judiciary to police the common market and enforce competition law and contracts, an integrated capital market with a single set of rules that ensure equal access to finance and offers equal creditor protection, a single monetary policy independent from political interference, a fully-fledged banking union, single supervision and resolution of non-bank financial institutions, a strong capacity for macroprudential interventions, a common sovereign bond that functions as anchor of the financial system, a common fiscal backstop as a fall-back for subsidiary governments and ailing systemic banks that are deemed solvent, and a sovereign bankruptcy procedure involving private creditors in removing a public debt overhang when a member country is clearly insolvent.
3. The area-wide (federal) fiscal authority has a *structural balanced budget* in normal times allowing for modest spending to fulfil its tasks fully backed by its own tax revenues; it ensures that *fiscal and structural policies are aligned* across the union; and it manages a *common stabilisation mechanism* that issues the common sovereign bond (a synthetic instrument secured by a portfolio of subsidiary government debt), provides the common fiscal backstop and implements the sovereign bankruptcy procedure.
4. All subsidiary governments maintain a *structural balanced budget for current spending*; they can borrow for cost-effective capital expenditure<sup>11</sup> and to capitalise the common stabilisation mechanism; their sovereign debt is rationed by the capital market and receives no preferential treatment in financial regulations.
5. Each subsidiary government has *primary responsibility for its own economy*; it can only draw on the common fiscal backstop to absorb exceptionally large asymmetric shocks and excessive financial market reactions and this temporary liquidity support is subject to strict policy conditions that effectively constrain their sovereignty; it can only request to activate the sovereign bankruptcy procedure in exceptional cases subject to common agreement; a sovereign bail-out operation financed by area-wide (federal) institutions or other subsidiary governments to restore solvency is strictly forbidden.

These five characteristics emphasise that political institutions have an economic role to play in EMU by providing a balanced multi-level political system of rights and obligations that forms the basis for a well-functioning open and competitive

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<sup>11</sup> This “golden rule” is taken from McKinnon (1995, 1997), but is not feasible in EMU because the Stability and Growth Pact and the Fiscal Compact demand a close to balanced overall budget or surplus in structural terms.

internal market and for sound economic policies that foster sustainable convergence of the participating nation states.

## 5.2 The need for political checks and balances

To make such a governance structure “self-enforcing”, so Qian and Weingast (1997), politicians must have credible incentives to honour the common rules of behaviour. As noted by McKinnon (1997) and Weingast (1995), under an unbalanced political system the central government may have too much discretionary authority to promote its own interests by restricting economic freedom and reallocating income and wealth to the centre. This tendency to overwhelm the subsidiary governments could destroy the federal system and the stability of the common currency – unless a strong central bank takes countervailing measures. Or subsidiary governments may have too much scope to overspend by borrowing against the future, to overtax citizens in an arbitrary way, or to provide distortionary state aid to favoured local industries. This free-riding behaviour at the expense of other members would also undermine the federal system and may oblige the central bank to step in to safeguard the common currency.

To solve these dilemmas of federalism, a proper balance of powers is required: the central government should have a sufficiently strong mandate to police free-riding subsidiary authorities and align their economic policies. The subsidiary governments in turn should be able to resist an encroaching central authority by taking concerted action against abuses (Qian and Weingast, 1997, p. 90). A common central bank and other union-wide bodies removed from direct political control (such as the judiciary) could in both cases tip the balance of this power struggle in favour of economic policy discipline as a precondition for a viable federal system and a stable currency.

Montinola et al. (1995, p. 54) argue in this context that a market-preserving federal system with the right political checks and balances between the central government and subsidiary governments is superior to either complete centralisation with a unitary government or a complete decentralisation with each region being an independent nation state. The reason for this superiority is that in both alternative corner solutions the unitary government or the independent nation may retain the discretionary power to encroach on markets and abuse their central bank to devalue the currency or create inflation when it is looking for ways to circumvent its budget constraint.

This analysis is also relevant for the ongoing discussions on the appropriate degree of political integration in the euro area and the future of the euro as a currency beyond the state: it suggests that a fully-fledged fiscal and political union may be neither desirable, nor necessary. For a sustainable EMU it could be sufficient to have effective common rules and autonomous supranational authorities (separate



from the ECB) for safeguarding and enforcing economic freedom and market discipline, as well as a credible commitment of all national authorities concerned to coordinate their policies at the union level and to do whatever may be necessary for stabilising the euro (van Riet, 2015).<sup>12</sup> This will still require a revision of the Lisbon Treaty to ensure that these supranational bodies have effective restraining powers and are made subject to democratic accountability and control.

The additional condition of democratic legitimacy relates to the “political trilemma” put forward by Rodrik (2000, p.180; 2011, p.200). He highlights that any country wishing to participate in an integrated world economy has to make a choice: either give up national self-determination (replacing it by supranational decision-making under democratic control), or forget about participatory democracy (replacing it by a political system in which sovereign nation states delegate tasks related to the global economy to autonomous international institutions without democratic legitimacy).

Rodrik (2011, p. 218) sees Europe in this respect as “a half-way house”, as it combines deep regional economic integration among the sovereign Member States with an elaborate EU governance structure of many specialised agencies and few democratic institutions. Taking his analysis and focusing it more specifically on the euro area, the intermediate solution adopted for the political trilemma may be seen as another example of how its members are trying to “round the corners” of this triangle, notably with regard to the role of the nation state and of democratic legitimacy, while aiming to meet the economic requirements for a successful participation in EMU (chart 6).

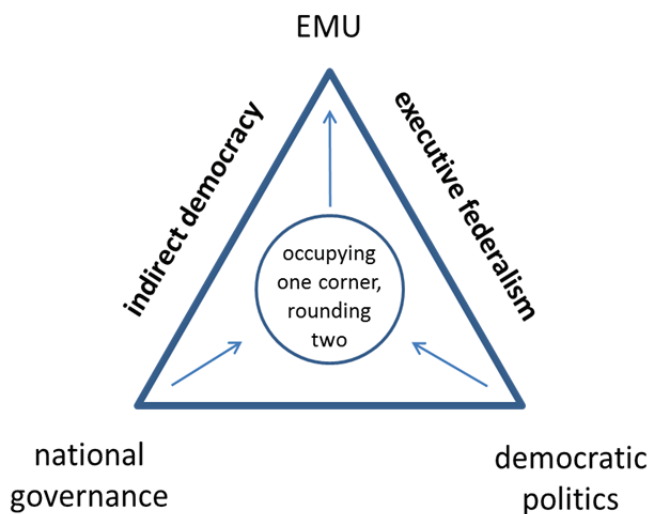
On the one hand, as discussed further in section 5.3, the European leaders have established EU institutions with executive mandates to provide common public goods and services, promote sound public finances, and stabilise the financial system. This EU governance framework of “executive federalism” (the expression used among others by Habermas, 2011) ensures that national policies are geared towards facilitating mutual trade and capital mobility, concerted fiscal discipline and area-wide financial stability rather than towards serving narrow domestic interests. For this purpose, so Rodrik (2011), national regulations are either harmonised according to common standards or structured in such a way that they reduce transaction costs and pose “the least amount of hindrance” to economic integration. In addition, the discipline imposed both by EU surveillance and market forces makes national policies compatible with euro area policies and the requirements for a stable and coherent monetary union.

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<sup>12</sup> This is in line with the conclusion of the Tommaso Padoa-Schioppa Group (2012, p. 5) that “the single currency requires as much fiscal federalism as necessary for its appropriate functioning, but as little as possible”. See also Allard et al. (2013) for a discussion of the elements of a fiscal union that would be required as a minimum to make future euro area crises less severe.

On the other hand, the growing reach of “executive federalism” has narrowed the domain of national electoral influence. The Lisbon Treaty has therefore strengthened the political infrastructure at the European level, notably by giving greater powers to the European Parliament. Still, democratic legitimacy remains largely vested at the national level. The question remains how to make supranational decision-makers more directly politically accountable for their actions, in particular as this also presupposes the existence of a social consensus among European citizens (cf. Rodrik, 2000, pp. 182, 185; Rodrik, 2011, pp. 214–220; Habermas, 2011).

*Chart 6: The political trilemma of the euro area*



*Note: To manage EMU, euro area countries have transferred specific common tasks to EU executive institutions that are subject to indirect democratic control at the national level rather than directly to the European Parliament.*

### 5.3 The market-preserving rules and institutions of Europe

Europe has many supranational rules and institutions that provide the common public goods and services that a viable monetary union requires and the recent substantial upgrade of its governance framework should be instrumental in better aligning national incentives with market-preserving behaviour. The authority of the European Commission to police the EU internal market and that of the European Court of Justice to enforce competition law are well-established; they secure the cross-border mobility of goods, services, capital and labour. The Single Market Acts of 2011 and 2012 contain initiatives to further deepen the EU internal market. This EU

legislation followed the call in the Monti (2010) report for a new EU strategy to safeguard the single market against a revival of economic nationalism and to extend it to new areas. The envisaged creation of a capital markets union that further harmonises financial legislation and promotes the availability of non-bank sources of investment funding across Europe should also contribute to further integration.

Since 2011, the newly established European System of Financial Supervision (comprising the European Systemic Risk Board (ESRB) and the three new European Supervisory Authorities for banks, occupational pension funds and financial markets) has been given the task to ensure efficient and harmonised macroprudential and microprudential regulation and supervision in Europe. Their aim is to support financial stability and a sound financial system in the EU as a whole.

The ECB is since 1999 in charge of the single monetary policy with an independent mandate to maintain price stability in the euro area. Originally it was foreseen that it would only contribute to financial stability, because prudential supervision remained a national responsibility. Since November 2014, however, the ECB has been mandated with new powers as the single supervisor of significant banks in the euro area and with final responsibility for the supervision of the smaller banks that will remain under national oversight. The ECB now also shares responsibility for macroprudential supervision with the national authorities as coordinated by the ESRB and it may decide to tighten (but not loosen) the macroprudential capital buffers applied nationally to the banking sector when still seeing a risk of financial imbalances. This should remove a “home bias” in banking supervision and the risk that major banks could be pushed into investing in the sovereign bonds of their country of residence. Moreover, the separate Single Resolution Mechanism ensures that as from 2016 bank resolution will follow harmonised procedures.

The Treaty enshrining the Fiscal Compact introduced as from 2014 a structural balanced budget rule in each contracting party’s national legislation, complementing the reinforced Stability and Growth Pact. A new EU surveillance procedure, which took effect in end-2011, aims to prevent and correct harmful macroeconomic imbalances. As from mid-2013, euro area countries also face more intrusive supra-national surveillance and stronger enforcement in the event that their macroeconomic or fiscal policies would go astray. The newly established European Stability Mechanism (ESM), capitalised by the euro area countries, provides a common fiscal backstop for countries in liquidity stress, subject to strict policy conditions. Given an ESM assistance programme, the ECB might decide to undertake outright monetary transactions in a dysfunctional government bond market, if this was warranted for monetary policy reasons. As a “last resort”, the ESM may also directly inject capital in troubled banks, assuming that all other options including a private sector bail-in have been exhausted. Finally, as private investors will be aware, collective action clauses introduced in new sovereign bond contracts should in future facilitate in exceptional cases an orderly public debt restructuring for insolvent countries.

## 5.4 The limits of half-way euro area political integration

Yet, this enhanced supranational economic and financial governance framework may be neither sufficient nor effective in countering (hidden) market repression and protectionism by euro area governments. Political economy arguments suggest that, as before, they might seek to escape market-based policy discipline and the “hard” budget constraint. As noted before, governments may respond to fiscal stress by inducing a captive domestic investor base or react to an economic downturn by imposing protectionist measures. The enforcement of the single market, the new banking union and the future capital markets union should mitigate these concerns, but it remains to be seen how effective they will be in countering financial protectionism and imposing uniform laws governing securities markets.

Sapir and Wolff (2014) observe in this respect that “the single market is still far from reality in vital areas”, pointing to the Commission’s limited leverage over the largest EU Member States. Focusing on cross-border finance, the ESRB Advisory Scientific Committee (2014) argues that the application of EU competition policy to banks is only weak, which complicates the task of countering government tendencies to nurture national banking champions and to protect them from foreign competitors and take-overs.

Dickson (2015) highlights that the ECB in its role as single bank supervisor works on creating a common supervisory culture across Europe characterised by a centrality of vision and absence of national bias. However, there is as yet no unified EU legal framework for banking supervision. This means that the ECB is confronted with very diverse supervisory provisions and implementation practices at the national level that create a significant margin of discretion and may interfere with the ECB’s supervisory competences. For example, national authorities can still issue binding prudential legislation that may hamper even conditions of bank competition and fragment the banking union.

Posen and Véron (2014) conclude that Europe has established only “half a banking union”. There are lingering doubts over the remaining autonomy of national resolution authorities and the adequacy of ESM funds reserved for direct bank recapitalisation. To complete the banking union, further steps will need to be taken to put in place a common fiscal backstop for the Single Resolution Fund as well as a European deposit insurance scheme.

Furthermore, a supranational supervisor for institutional investors is still out of sight, despite their large cross-border financial activities. Also the national rules and supervisory bodies governing financial market structures may still prevent uniform capital market conditions. Altogether this suggests that banks, pension funds, insurance companies and other financial intermediaries may still be vulnerable to moral suasion from national authorities to invest more “at home”, such as in housing, energy, infrastructure, and in sovereign bonds.

Moreover, the new national macroprudential authorities in the euro area may not yet fully internalise the spill-over effects of their policies on other member countries. As noted by Angeloni (2014), with central coordination still in its infancy, they could introduce a domestic dimension in their oversight of credit developments. This would distort the allocation of capital and undermine financial integration. Or they might take an overly lenient attitude towards signs of overheating and a large sovereign exposure, especially when the necessary measures are politically sensitive. This could have negative consequences for economic and financial stability, both in their own country and in the euro area.

Arellano et al. (2015) point to weaknesses in the EU legal framework for creditor protection and enforcement of property rights, allowing considerable differences across countries. Member States have also retained the right to impose controls on capital movements on public policy grounds. This situation keeps foreign investors alert to rising sovereign stress and the risk that governments might interfere with private contracts, freeze bank deposits and impose capital outflow restrictions that hinder private borrowers from servicing their external debt. As a result, any sovereign debt crisis is likely to spill over to the private sector and turn into an external debt crisis.

Finally, Crafts (2013) warns that growing anti-European sentiments, rising euro scepticism and falling popular support for a free market economy could fuel protectionist tendencies that damage the euro area's growth prospects.

## **5.5 The transformation to a more perfect monetary union**

Following the negative scenario outlined by Pisani-Ferry et al. (2012), the unwillingness of euro area countries to cede further sovereignty could – not only in a crisis but also in normal times – cause a sustained fragmentation of financial and product markets and lead to a degeneration of EMU. Taking a more positive stance, Posen and Véron (2014) expect that the banking union, even when it is only half completed, will counter nationalist tendencies and have a positive transformational impact on the economic and financial structure of Europe.

As part of this transformation, Trichet (2011) calls for setting up an EMU treasury, with a balanced budget of moderate size. This central ministry of finance could be given the responsibility to align national fiscal policies in the euro areas' interest, carry out surveillance of national economic policies and, when necessary in exceptional cases, enforce the prevailing rules of behaviour upon member countries.

The EMU treasury could also be put in charge of managing the financial support tools of the ESM designed for member countries that face temporary liquidity constraints but are fundamentally solvent. For countries that have an unsustainable public debt it could activate a sovereign bankruptcy procedure involving private

creditors. Phasing in a statutory framework that opens the possibility of an orderly sovereign default inside EMU reinforces the credibility of the temporary and conditional character of the fiscal backstop provided by the ESM. Moreover, it should be expected to increase market discipline on governments which is vital to preserve their “hard” budget constraint (Fuest et al., 2014; Deutsche Bundesbank, 2015).

Brunnermeier et al. (2011) suggest introducing a “safe” common sovereign bond to anchor the financial system and mitigate destabilising cross-border capital flows within the euro area. The EMU treasury could be given a mandate for the ESM to issue a tranche of senior synthetic bonds backed by a maximised portfolio of national sovereign bonds as well as a tranche of junior synthetic bonds that would carry the potential losses. To maintain a “hard” budget constraint for the participating countries, the preferential treatment of government bonds in EU prudential legislation that leads to an under-pricing of sovereign risk in the capital market could be gradually limited and carefully phased out (see also van Riet, 2013; Deutsche Bundesbank, 2015).

Overall, a higher level of market-preserving fiscal federalism is warranted, i.e. a transfer of national sovereignty to the union level as necessary to secure the cohesion and integrity of the euro area. To succeed, however, the principles of economic freedom and market discipline in EMU must be anchored in what Weingast (1995, p. 26) calls “a social consensus about the appropriate limits of the state” – or in the context of the euro area: about the responsibilities of sovereign nations participating in a monetary union. Such a consensus should lead citizens to withdraw their political support for a national government that violated these economic principles and refuses to internalise the positive requirements of a welfare-enhancing EMU and the negative externalities of market-distorting policies for other members. The biggest challenge for the euro area may well be that of “finding a consensus on, and support for, new social contracts among national constituencies” that guide the economic, financial and political transitions that are required to foster convergence towards an optimal currency area and ensure the long-term viability of the euro (Mongelli, 2013, p.7).

## **6 Conclusion: an imperfect monetary union may entrench fragmentation**

This paper examined the role of markets and institutions in disciplining national policy makers and driving EMU towards an optimum currency area. European leaders introduced the euro as a political solution to the monetary policy trilemma known from the economic literature. They expected that this would offer them the triple benefits of a single market with a single currency and a single monetary policy, i.e. a “holy trinity”. The price to pay was that national policy makers in principle became subject to stronger market discipline. EU surveillance of compli-

ance with the fiscal rules of the Maastricht Treaty and the Stability and Growth Pact complemented the market forces with peer pressure in support of sound public finances.

The euro crisis revealed the design flaws of EMU, showing that the area-wide control mechanisms to counter complacent national policies and protectionist tendencies were too weak and that supranational authorities to control the financial sector were needed as well as a “last resort” common rescue mechanism for liquidity-stressed sovereigns and failing systemic banks. Moreover, capital markets had exercised insufficient fiscal policy discipline before the crisis erupted. This appears at least partly due to the regulatory presumption that government bonds of all euro area countries were “safe”, which seemed to suggest a readiness of euro area partners to support each other in times of fiscal stress and in effect undermined the credibility of the “no bail-out” clause.

European leaders have responded to the euro crisis by putting in place an enhanced economic and financial governance framework for the euro area. This should be more successful in aligning national incentives with EMU requirements and in preventing and correcting unsound national policies, while providing for a common fiscal backstop if member countries nevertheless run into trouble. They also established the main pillars of a banking union and have taken first steps towards a capital markets union. The question is whether these important but still half-way measures of political integration, within the boundaries of the Lisbon Treaty, are sufficient to safeguard the cohesion and integrity of the euro area.

Governments have kept their national sovereignty in the field of macroeconomic and fiscal policies and may try to use this leeway to “round the corners” of the euro area’s monetary triangle, i.e. to circumvent the “hard” budget constraint and the strong market competition that they face in EMU. For example, high-debt governments may target more captive sovereign debt markets so as to reduce their exposure to fickle foreign investors and volatile interest rates. Countries may ring-fence their national banking champions or put pressure on institutional investors in order to secure access to credit for residents, including for the government itself. Or they may continue to shield strategic firms from foreign competition and take-overs or use state aid to subsidise favoured sectors.

Those countries that applied such protectionist strategies during the euro crisis in effect turned inwards by promoting a renationalisation of policies and markets to facilitate their adjustment and deleveraging process. This economic nationalism may serve them well as a transitory stabilisation tool, but the longer it is sustained, the more it entrenches the fragmentation of the single market, which in turn frustrates the single monetary policy and the efficient functioning of the European Monetary Union.

To guarantee the cohesion and integrity of the euro area a higher level of market-preserving fiscal federalism is warranted whereby European institutions

with a democratic mandate are empowered to ensure the alignment of national policies with the requirements of EMU. This should prevent individual member countries from encroaching on markets and foster sustainable economic convergence towards a more optimal currency area. Creating a fiscal union in a next step requires care to preserve fiscal discipline, because a powerful central government tends to enjoy a “soft” budget constraint and any budget transfers to subsidiary governments would extend this public debt bias to the national level.

Finally, more fiscal federalism along these lines also requires that the principles of economic freedom and market discipline are supported by a social consensus about the responsibilities of sovereign nations participating in a monetary union. The most important challenge of realising a welfare-enhancing EMU is to create national ownership for the economic, financial and political reforms necessary to secure the long-term viability of the euro.

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# Sustainable tax policy beyond the tax ratio for the EU as core element of a “Fiscal Union”<sup>1</sup>

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## 1 Introduction

Within the last two decades, the tax burden in the European Union has been rather constantly moving around substantial levels: Tax ratios range between over 35% of GDP on average for the EU-28 and almost 40% of GDP on average for the “old” Member States (EU-15); in the “new” Member States (EU-13), tax ratios reach about 33% of GDP on average (European Commission, 2014c).

Tax ratios at such levels bear a considerable potential of taxes to contribute to the achievement of the objectives of the Europe 2020 strategy, which is aiming at smart, sustainable and inclusive growth, and thus to support sustainable development in the EU. More than that, they virtually imply the need to use tax systems not only to generate revenues, but also to pursue non-fiscal, strategic objectives. If tax policy, for example, abstains from effective taxation of activities harmful for individual health or the environment, but rather rests heavily on taxes with undesired side effects instead (e.g. high taxes on labour incomes), additional public expenditures are needed to repair increasing unemployment or damages with respect to individual health or the environment, which again require tax increases. Therefore, it seems advisable to place tax systems at the service of a tax policy aiming at increasing sustainability in its various dimensions in the first place. This includes national tax policy as well as the European/international level.

Coincidentally, together with the outbreak of the financial and economic crisis in 2007/08 the revival of a decade-old fundamental debate among economists could be observed. This debate focuses on two inter-related issues: First, to develop alternative concepts to secure and improve economic, social and environmental sustain-

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ability. Second, to replace the conventional narrow approach to define and measure the welfare of an economy and its members via the steady growth of GDP by a broader approach taking into account a larger set of economic, social and ecological aspects and indicators. This recent debate is led under the catchphrase "beyond GDP" and roots in an initiative started by European Commission, European Parliament, Club of Rome, OECD and WWF in 2007 by hosting a high-level conference titled "Beyond GDP". The "Report by the Commission on the Measurement of Economic Performance and Social Progress" (the so-called Stiglitz-Sen-Fitoussi-Report) issued in 2009 serves as the starting point for a growing number of academic and policy-oriented contributions, the latter both on the national and the supranational level, concentrating on alternative concepts for welfare and well-being for economies and societies as well as on alternative indicators to assess overall social, economic and environmental progress.

Up to now, the „Beyond GDP“-activities following the Stiglitz-Sen-Fitoussi-Report of 2009 have been focusing on the outcome of the total of (economic) policies on individual and societal well-being and welfare as well as on economic, social and ecological sustainability. Single policy areas have received far less attention. Especially the potential contribution of public finances to improve economic, social and environmental sustainability has not played a very prominent role in this recent debate. There is hardly any literature systematically addressing from an encompassing perspective options and possibilities to support sustainable development via government expenditures and revenues. This is surprising, and appears as a considerable research deficit, considering the existing substantial levels of government activity reflected in the various indicators capturing government size, as for example expenditure ratios, tax ratios, deficit or debt ratios in the EU. This paper tries to make a first step to fill this gap by providing some deliberations about the fundamentals of a sustainable tax policy beyond the tax ratio.

In fact, analogously to GDP, which often serves as the central indicator to measure a country's economic and societal success and progress, the overall tax ratio (i.e. total tax revenues in relation to GDP) is often used as the most important indicator to assess a country's tax system. Like GDP, the overall tax ratio has the advantage that it is easily available, also in an international comparison and over long periods of time, and easily communicable. Analogously to GDP, however, the overall tax ratio is of rather limited value to assess a tax system in general and its contribution to sustainability in particular. The overall tax ratio does not give any indication on the social and environmental impact of a tax system. It also does not deliver any specific information on potential economic effects of a tax system, as these depend on the overall tax structure and on the concrete design of individual taxes contributing to overall tax revenues (besides, of course, the use of tax revenues). As ample empirical evidence shows, there is no clear-cut relationship between the level of the overall tax ratio and economic growth. The existing empirical results

allow to conclude safely only that further tax increases will harm economic growth when the total tax burden has reached a very high level already.<sup>2</sup> With respect to fiscal sustainability, the overall tax ratio can be seen as a snapshot indicator to gauge – in comparison to public expenditures – whether the state receives sufficient funds to fulfil its tasks or whether there is a shortcoming of tax revenues which needs to be compensated by new government deficit. It does not, however, allow evaluating a tax system's contribution to fiscal sustainability in the longer run.

For the last few years, the OECD, the International Monetary Fund as well as the European Commission have been pushing the case for enhancing the growth-friendliness of taxation. The starting point of this work, which has gained new momentum under the impression of weak growth rates in the EU and the developed world in general in the aftermath of the financial and economic crisis, is the recognition of the limited usefulness of the overall tax ratio as principal yardstick and guideline for tax policy. Recent empirical analyses (e.g., Arnold et al., 2011; Acosta-Ormaechea and Yoo, 2012) establish a tax-and-growth-hierarchy according to which individual tax categories differ in their harmful impact on economic growth: with property-based taxes as the least harmful and taxes on labour income and profits as the most harmful tax categories, thus resulting in a "tax and growth hierarchy". In this perspective, the design of tax systems should primarily attempt at minimizing potentially detrimental effects on economic growth. Environmental and social/equity considerations are not completely neglected, but appear to have lower priority in the hierarchical order of aims and objectives guiding the design of tax systems. Moreover, the (social and environmental) „quality“ of economic growth does not play any role.

The concept of green tax reforms has a wider focus, explicitly combining environmental and employment goals via the „double dividend hypothesis“ (Bovenberg, 1999): Revenue-neutral green tax reforms aim at reducing environmental damage by increasing ecotaxes, the proceeds of which are used to cut labor taxes and thus to increase employment.<sup>3</sup> While some of these green fiscal reform approaches pay attention to the potential regressive effects of environmental taxes<sup>4</sup> by foreseeing measures to mitigate undesired distributional consequences, they ignore further social aspects, as for example gender aspects of green fiscal reforms or the role of the tax system vis-à-vis increasing income and wealth inequality.

Altogether, currently tax theory and tax policy are addressing partial aspects of sustainability, but do not adopt an integrated perspective. The paper outlines the

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<sup>2</sup> See for recent overviews about the current state of the empirical literature Arnold (2008), Myles (2009), European Commission (2010) and Mathé, Nicodème and Ruà (2015).

<sup>3</sup> See, e.g., the contributions in Ekins and Speck (eds.) (2011).

<sup>4</sup> See Kosonen (2012) for a differentiated analysis of the distributional effects of environmental taxes.

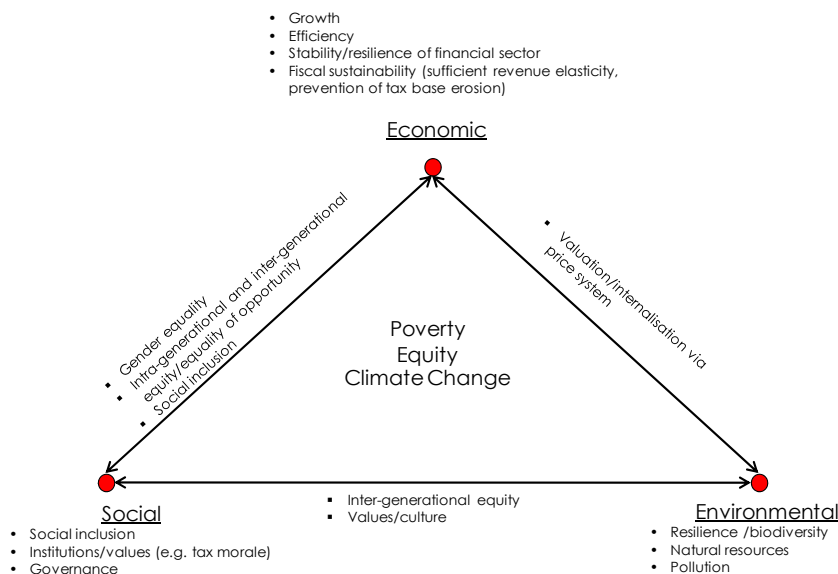


objectives of a sustainable tax policy which may contribute to the Europe 2020 strategy aiming at smart, inclusive and environmentally sustainable growth. It then identifies those areas of tax policy where the attempts to create a European Single Market and the mobility of goods, services, capital and people require some co-ordination of tax policy in the EU to close sustainability gaps in tax policy. Of particular relevance are the containment of company tax competition and profit shifting; the creation of a framework to effectively enforce environmental and sin taxes in EU Member States; and options to introduce EU taxes. Thus the paper tries to bring together aspects of a EU tax policy supporting the Europe 2020 strategy and the debate about a “Fiscal Union” as suggested in the presidents’ reports “Towards a Genuine Economic and Monetary Union” of 2012 and “Completing Europe’s Economic and Monetary Union” of 2015. Both reports only very vaguely mention taxation. This paper is based on the conviction that the increasing economic integration of EU member states requires increasing tax co-ordination going beyond the current initiatives on the EU level.

## 2 Objectives of a sustainability-oriented tax policy

Sustainable tax policy should rest on economic, social and ecological objectives (chart 1).

Chart 1: Sustainability measures



Source: Author’s compilation.

As one aspect of economic sustainability, sustainable tax policy should first of all contribute to restore and preserve long-term fiscal sustainability of public finances. Here increasing international capital mobility and, as its consequence, legal and illegal tax avoidance and evasion pose particular challenges. Also demographic change is a challenge in this respect, if it increases the share of “inactive” retired tax-payers vis-à-vis gainfully employed ones, who do not earn labour incomes, but capital incomes from increasing wealth and who hold an increasing share in overall consumption. Thus, from the perspective of fiscal sustainability, the composition of the overall tax base should allow for a long-term revenue elasticity securing sufficient tax revenues to enable governments to finance their tasks and the corresponding expenditures, and governments need to pay increasing attention to tax enforcement. As another aspect of economic sustainability, sustainable tax systems should also contribute to stable and resilient financial sectors. Furthering employment and reducing current high unemployment are further import objectives of tax policy. They belong to the economic, but also to the social dimension of sustainability. So does gender equality, another feature of an economically and socially sustainable tax system.

Social sustainability of tax policy requires that income and wealth inequality are mitigated and social mobility is supported. Environmental objectives of tax systems result from climate change, the depletion of natural resources and the efforts to initiate an energy transition.

These are the central objectives of a sustainability-oriented tax system which equally aims at the social dimension (social inclusion and governance), the environmental dimension (securing of resilience/biodiversity, preservation of natural resources, prevention of climate change and reduction of pollution), and the economic dimension (growth, efficiency, stability) of sustainability<sup>5</sup>, and which creates a stable basis also in the long run to finance public expenditures, thus contributing to fiscal sustainability.

### **3 Necessity of strengthening EU-wide cooperation in tax policy as core element of a “Fiscal Union”**

A look at tax structures and effective macroeconomic tax rates in the EU and their longer-term development conveys the impression that currently tax systems’ contribution to the realisation of sustainability objectives is limited only and has not increased within the past decade. A considerable and – at least for the EU-15 – increasing share of overall tax revenues stems from taxes on labour which generally negatively impact on labour supply and demand; with a share of about 50% in overall tax revenues on average in the EU-15 and about 47% in the EU-28 (Euro-

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<sup>5</sup> For the concept of sustainability and its three dimensions see Munasinghe (2010).

pean Commission, 2014c). Also the weight of revenues from the value added tax, with its overall regressive effect, increased. The shares of taxes on capital (with the exception of property taxes whose share in overall tax revenues slightly increased), environmental taxes and other taxes on consumption (in particular sin taxes on alcohol and tobacco consumption) show a declining trend.

Also effective macroeconomic tax rates, relating total tax revenues stemming from a specific tax base to this tax base (e.g. labour taxes to the wage sum), suggest that overall tax structures have remained rather stable during the past decade (European Commission, 2014c). The most remarkable change can be observed for the effective tax rate on energy which increased considerably in the EU-15 as well as in the EU-28; which, however, captures only a part of environmentally relevant tax bases and taxes.

It may be assumed that – besides a number of other economic and non-economic factors having to do with policy-making on the national level – this lack in sustainability-orientation of national tax systems may also have to do with certain restrictions national tax policies encounter in the EU, as an economic area characterised by increasing mobility of capital, goods and labour. In this case, an increasing number of unilateral measures may not be enforceable effectively, so that EU-wide cooperation needs to be strengthened: Firstly, to secure the financial basis for governments to fulfil their tasks on the national level, but also to provide European public goods. Secondly, to create the preconditions to exploit the steering potential of taxes and to effectively use them as tools for redistribution also in the future. EU-wide cooperation in tax matters may take different forms: the coordination or harmonisation, respectively, of certain taxes, whose revenues go to national budgets; or the introduction of European taxes, whose revenues accrue to the EU to finance European tasks.

Many of the initiatives necessary to strengthen EU-wide cooperation have been repeatedly put on the agenda by the European Commission for many years and intensively discussed by EU Member States. In some areas certain progress could be achieved in the last few years. The measures to fight tax evasion by individuals are particularly remarkable in this respect. If, however, EU Member States' tax systems as a whole, however, should be made more growth- and employment-friendly and fiscally sustainable, and if they are to contribute more effectively towards social and ecological objectives, there is far-reaching need for action in various areas of tax policy at the national and the EU level. The EU-wide co-ordination and harmonisation, respectively, of tax policy appears to be a core element of a "Fiscal Union" striving to contribute to a sustainable growth and development path for Europe. In particular, three areas should be of particular importance: curbing harmful tax competition and tax avoidance within company taxation by co-ordinating and harmonising company taxation; strengthening taxes with potential steering effects to internalise negative externalities by introducing EU wide minimum

standards; and introducing EU taxes. In the following we will address the most important problems and options for action in each of these three fields.

## **4 Harmful company tax competition and company tax avoidance**

Since the beginning of the 1980s, company taxation in the EU has been characterised by intense tax competition. This tax competition manifests itself in a considerable decrease of nominal corporate tax rates, but also in decreasing effective corporate tax rates (European Commission, 2013 and 2014c). The survey by Leibrecht and Hochgatterer (2012) shows that declining corporate tax rates are a consequence of tax competition.

Whether company tax competition is beneficial, as it holds ever-growing and wasteful Leviathan governments in check, or whether it has reached a dimension with is associated with harmful effects, e.g. the under-provision of public goods or the shift of the tax burden from mobile to immobile tax bases, is still debated in the literature (Bénassy-Quéré, Trannoy and Wolff, 2014).

Most recently, profit shifting by multinational firms inside and outside the EU to minimise corporate tax payments by exploiting nominal tax rate differentials or by making use of special tax regimes including “treaty shopping”<sup>6</sup> has been acknowledged as one of the most serious accompaniments of international/European company tax competition within tax policy, but increasingly also within academic research. Recent empirical results suggest – and are corroborated by ample anecdotal evidence (e.g., “LuxLeaks”) – that profit shifting is indeed taking place on a large scale. For the United States Zucman (2014) estimates that US-owned multinationals reduce their corporate tax payments by 20% via profit shifting activities. According to his estimations, tax avoidance via tax havens like Bermuda contributes to at least two third to the reduction of the effective tax rate from 30% to 20% between 1998 and 2013, which reduces tax payments not only in the USA but only in those European countries where US companies’ activities are located.<sup>7</sup> According to an estimate by Credit Suisse, 386 OECD-based multinationals reduce their yearly tax payments by more than EUR 100 billion through “aggressive tax planning” (Gratwohl, 2013). Altogether, existing estimations corroborate the assumption that tax avoidance activities by multinational firms lead to sizeable company tax losses for EU Member States, while the various estimations deliver a broad range for the magnitude of these tax losses (Fuest et al., 2013).

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<sup>6</sup> For a brief overview over the techniques used to avoid taxes via profit shifting see Fuest et al. (2013) or Hebous (2014).

<sup>7</sup> See also Gravelle (2015) for an overview over estimation results for corporate tax losses for the USA due to profit shifting.

It can be shown empirically that international tax rate differentials strongly influence profits reported by multinational firms.<sup>8</sup> Empirical evidence points towards various harmful effects of company tax competition in general and profit shifting in particular. Profit shifting may result in a distortion of competition in favour of multinational firms, which – as empirical results by Egger, Eggert and Winner (2010) suggest – face considerably lower effective tax rates than comparable, purely domestically-oriented firms. Thus, the benefit principle as one rationale for company taxation is violated, as multinational firms use public goods and services without contributing their fair share via taxes. According to Huizinga and Laeven (2006), profit shifting in the EU results in considerable reallocation of corporate tax receipts within in the EU.

Besides inducing profit shifting, international tax rate differentials may distort investment decisions by multinationals. Feld and Heckemeyer (2011) based on a meta-study reach the conclusion that foreign direct investment is significantly influenced by (international differences in) company tax rates, which may only partially be moderated by public goods and services. According to the meta-analyses by Heckemeyer and Overesch (2012), international tax rate differentials are also a significant determinant of discrete locational choices.

Finally, there is increasing econometric evidence that international tax competition induces a shift of the tax burden from mobile capital towards immobile labour incomes.<sup>9</sup> There is a general tendency in the EU of increasing nominal tax rates for VAT with its overall regressive effects. At the same time, almost all EU Member States with directly progressive income tax schedules implemented some degree of dualisation in their income tax systems during the last two decades, taxing capital incomes with flat rates at moderate levels and labour and other incomes with progressive rates (Schratzstaller, 2004). Particularly taxes for top income earners have been losing in importance during the last thirty years, as Förster, Llana-Nozal and Nafilyan (2014) point out for the OECD countries. These long-term developments do not only erode the distributional impact of taxation, but can also be expected to have undesired consequences for employment.

Altogether company tax competition and profit shifting by multinational firms and their consequences touch various sustainability dimensions. Profit shifting endangers fiscal sustainability of tax systems. It violates fairness considerations and may undermine the general tax morale, as a group of tax-payers does not contribute adequately to financing public expenditures. A shift of the tax burden away from

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<sup>8</sup> See the meta-analysis by Heckemeyer and Overesch (2013), see also the recent review of analyses studying the relationship between reported profits and tax rates presented by Gravelle (2015) and the review in OECD (2013).

<sup>9</sup> See, e.g., Schwarz (2007) and Winner (2005); for a review of recent literature, see Genschel and Schwarz (2012).

capital and company profits towards labour incomes may harm employment and may be perceived as undesired also for distributional reasons.

A sustainability-oriented EU tax policy first of all needs to address the problem of profit shifting by multinational firms. This includes the roll-back of tax breaks and specific tax constructions allowing multinational firms to minimise their overall tax liabilities. In the last few years, several internationally co-ordinated initiatives at the OECD/G20 level ("BEPS"<sup>10</sup>) as well as at the EU level were set up to take action against "aggressive tax planning". In December 2012 the European Commission published a broad action plan against tax fraud and tax evasion (European Commission, 2012). The European Commission also issued a recommendation to Member States how to deal with tax oases as well as measures against aggressive tax planning by multinational firms. In March 2015 the European Commission presented a tax transparency package, including inter alia the proposal to introduce a system of automatic exchange of information about advance cross-border tax rulings and to review the code of conduct on business taxation.

These initiatives are important first steps, but need to be followed by more far-reaching measures. These would include a system of country-by-country-reporting, which would oblige multinational firms to report profits and tax payments separately, i.e. on an unconsolidated basis, for all those countries in which they are active. A system of country-by-country-reporting would allow the identification of tax loopholes and would increase the pressure on the countries granting them to abolish these specific tax breaks. Moreover a certain harmonisation of company taxation seems inevitable. The outgoing European Commission had scaled back considerably their initiatives in the field of company tax co-ordination and had in the last few years restricted their focus on the introduction of a common consolidated corporate tax base (CCCTB), for which the new European Commission currently is planning a re-launch within their second Action Plan on Corporate Taxation presented in summer 2015. The system of unitary taxation, which had been at the heart of the proposals to strengthen company tax co-ordination pursued since the beginning of the 2000s (European Commission, 2001), had not been pursued in the last few years. Within such a system of unitary taxation, taxable profits of multinational firms would be allocated to the locations in which multinational firms are active based on an apportionment formula reflecting the allocation of real activities.

Benassy-Quéré, Trannoy and Wolff (2014), following the European Commission's original proposal, regard the harmonisation of tax bases and their allocation to EU Member States via an apportionment formula as sufficient to eliminate profit shifting, which they see as the most important problem. However, harmonising tax

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<sup>10</sup> BEPS stands for „base erosion and profit shifting“, for the most relevant information and documents see [www.oecd.org/ctp/beps.htm](http://www.oecd.org/ctp/beps.htm).

bases would leave tax rates as only competition parameter, and can thus be expected – by making effective tax burdens transparent immediately – to intensify company tax competition via further tax rate cuts. Therefore, tax base harmonisation should be combined with minimum corporate tax rates, as suggested also by Bettendorf et al. (2010). Hereby, considering existing economic divergences between “old” and “new” member states, one uniform minimum corporate tax rate would not be an effective solution:<sup>11</sup> To be an effective downward barrier for “old” Member States with their on average still considerably higher corporate tax rates, the minimum tax rate would have to be rather high, which would harm “new” Member States which still use low corporate tax rates as a “tax rebate” to compensate for other locational disadvantages. Therefore, it should be considered to introduce a rather high minimum corporate income tax rate in the “old” Member States and a rather low one in the “new” Member States, which reflects existing economic divergences and could be adjusted according to their development over time.

## **5 Creating a framework for effective enforcement of steering taxes**

Creating a framework for a more effective enforcement of steering taxes, i.e. environmental taxes and sin taxes on activities which are considered socially undesirable (particularly tobacco and alcohol consumption), is another rather pressing field of action for the European Commission. Such taxes are effective instruments within health or environmental policy and at the same time are considerably more growth- and employment-friendly than the taxation of labour incomes (see section 1 above). However, their effective enforcement is increasingly difficult in an integrated economic area as the EU. Possibilities of avoidance (e.g. in the form of tank tourism or by switching to airports in neighbour countries which do not levy taxes on air traffic) put tax rates under pressure and initiate national governments to abolish such steering taxes or to not introduce them in the first place (Withana et al., 2014). For the average of the EU-15, the share of tobacco and alcohol taxes as well as of environmental taxes in total tax revenues as well as in GDP decreased between 2002 and 2012. Also in the EU-28 average, environmental taxation and taxes on alcohol lost in importance, only tobacco taxes gained somewhat in weight during this period of time (European Commission, 2014c).

First of all, minimum standards for an environmentally more effective taxation of energy should be introduced. An overhauled energy taxation directive should provide for effective minimum tax rates for fossil energy. These should be adjusted regularly to inflation to avoid real devaluation, which not only devaluates tax revenues, but also erodes steering effects in the long run. Tax rates should, as

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<sup>11</sup> See Schratzenstaller (2008) for the following.

foreseen in the proposal for a new energy directive presented by the European Commission in 2011, be divided in two components: They should be based on energy content as well as on CO<sub>2</sub> emissions of the energy sources underlying taxation. However, the new European Commission has withdrawn its proposal of 2011, because after lengthy negotiations with the European Council only a compromise could be reached: which is considered unacceptably watered down by the European Commission, but would still not get the required consensus in the European Council.

A specific area, in which due to its particularly negative consequences for climate change urgent need for co-ordination exists, is air traffic. Possible options for taxation are minimum taxes for air tickets, a kerosene tax or the obligation to apply the regular VAT rate on kerosene to thus decrease or abolish the most important tax advantages of air traffic compared to railway traffic. Currently kerosene used in cross-border air traffic according to the EU VAT directive must be VAT exempted; many EU Member States also abstain from applying VAT to kerosene used in domestic air traffic. The directive on energy taxation in its current version allows EU Member States to levy a kerosene tax in domestic air transport; however, many Member States do not use this option either. Intra-Community air traffic may be taxed with a kerosene tax if Member States conclude corresponding bilateral treaties. At the EU level EU steps should be taken to ensure that such bilateral treaties are concluded as comprehensively as possible.

Moreover, there is need for action concerning the taxation of alcohol consumption. Current minimum taxes date back to 1992 and have not been adjusted since (the minimum tax rate for wine even is zero). Here a step-wise adjustment in the form of a step-wise increase of minimum tax rates plus regular inflation adjustment is needed. Tax rates should be aligned across countries to reduce wasteful cross-border shopping, and they should more closely than currently reflect the alcohol content of different spirits (Cnossen, 2007). Also tobacco tax minimum rates should be increased further, including regular inflation adjustment, and country-specific tax rates should be aligned to minimise bootlegging and smuggling (Cnossen, 2006). Moreover, the European Commission should enforce their considerations and initiatives to simplify the existing, complex system of tax bases and tax rates and to combat tobacco tax evasion (European Commission, 2014b).

## 6 Options for EU taxes

Within the “Fiscal Union” debate, specific EU taxes until now have played a minor role only. Some authors suggest to finance a euro area budget, and particularly a euro area unemployment benefits scheme, by own taxes.<sup>12</sup> Apart from this, the debate about introducing EU taxes to finance the EU budget has been led for quite

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<sup>12</sup> For a brief overview over the most important proposals see Iara (2015).



some time.<sup>13</sup> As an alternative to harmonizing taxes based on minimum standards introduced at the national level, certain taxes could be assigned to the EU level, as so-called EU taxes. These could within a broader reform strategy for the EU system of own resources, replace a part of the national contributions currently making up the lion's share of EU resources to finance the EU budget. Making more use of such EU taxes which besides having potential steering effects are also relatively growth- and employment-friendly, could enhance leeway for national governments to cut taxes at the national level with relatively less favourable characteristics. In addition, EU taxes would have two remarkable benefits: Firstly, they would create a direct connection between EU tasks and expenditures for the provision of European public goods with European value added (e.g. infrastructure, research and development, tertiary education, climate policy, etc.) and their financing. Secondly, at the EU level such tax bases and tax subjects, respectively, could be taxed, whose taxation on the national level cannot be enforced effectively (any more) due to avoidance reactions.

The financing system of the EU in its current design which has evolved over more than 60 years since the foundation of the European Coal and Steel Community (ECSC) in 1952 is characterised by a number of shortcomings rooted in the low and decreasing revenue autonomy of the EU. As the own resources of the EU consist primarily of Member States' contributions paid directly from national budgets the EU budget has increasingly become the subject of political conflict, as most clearly demonstrated by the "juste retour debate". Reaching an agreement on the MFF is becoming more and more difficult, particularly with economic divergences widening by the last enlargement rounds. This carries the risk of the EU budget becoming chronically under-financed against the challenges facing the EU in the future. Such risk is witnessed by the current MFF 2007 to 2013 as well as by the current MFF 2014 to 2020, each setting expenditures to decline as a ratio of EU GNI, rather than being at least held constant as warranted by the current and future tasks of the EU.

The predominance of national contributions narrows down the focus of Member States on monetary net returns from the EU budget, i.e. the relation between national contributions to the budget and monetary returns from the individual policy areas (common agricultural policy, structural and cohesion policy, research and innovation, etc.). Benefits of EU membership beyond pure financial flows related to the EU budget, however, do not play much of a role as evaluation and decision criteria of Member States. This is an essential reason that particularly net contributor countries, whose gross contributions exceed transfers received from the EU budget, urge a limitation of the EU budget's volume. Moreover, it furthers the tendency of Member States to support the preservation of those expenditure categories promising to maximise individual country-specific transfers received from the EU budget,

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<sup>13</sup> For a more detailed discussion and presentation of the case for EU taxes see Schratzenstaller (2013).

instead of pushing an expenditure structure from which a maximal benefit for the EU as a whole (European value added) may be expected. In this context it should be recalled that the financial resources at the disposal of the EU also serve to finance various "European public goods", i.e. goods or activities with positive cross-border external effects and with European value added, respectively. In particular this concerns expenditures in the areas of research and innovation, education, transport infrastructure, and climate/energy policy, decided upon at the EU level. Securing fiscal equivalence would require assigning to the EU also the taxes necessary to finance these expenditures.

Moreover, the lack of tax autonomy at the EU level runs counter to the long-term trend of deeper integration. Despite an increase in negative cross-border externalities (e.g. environmental damage) caused by ever closer economic integration of Member States policy refrains from using taxes at the European level to influence economic agents' behaviour, thus foregoing potential benefits of a rather powerful market-based policy instrument. In general, the current revenue system hardly contributes to or supports EU policies.

In various recent documents the European Commission evaluates several candidates which may be levied as EU taxes: charges on air transport, a financial transactions tax (FTT), energy taxes/CO<sub>2</sub> tax, a partially centralised corporate income tax (CIT), and a surcharge to the value added tax (VAT).<sup>14</sup> Altogether the potential revenues of the various candidates could contribute to a considerable extent to financing the EU budget.

A first evaluation of these taxes according to various criteria mostly provided by the theory of fiscal federalism gives rough indications for the selection of candidates for EU taxes (Schratzstaller, 2013). Altogether the most straightforward option for an own EU tax is the FTT which as a new tax has the additional advantage that national revenues would not be affected, which would be the case for charges on air transport and energy taxes which exist at least in some Member States already. Thus it can be expected that choosing the FTT as EU tax will meet with less political resistance than options which imply redirecting national revenues to the EU budget. From an administrative point of view, the FTT has the further advantage that there are no nationally differing tax bases that would need to be harmonized beforehand. It could cover a substantial share of total EU expenditures. If the aim is to extend the contribution of EU taxes even further, charges related to air transport would be another readily available solution, considering also that only few Member States levy such charges at all and that they are exposed to permanent criticism as they are regarded as severe competitive disadvantage when implemented unilaterally at the national level. The same holds for a CO<sub>2</sub> tax which some Member States have introduced rather recently.

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<sup>14</sup> Schratzenstaller (2013) for an overview.

## 7 Conclusions and outlook

There are basically two fundamental reasons that achieving progress in taxation matters at EU level is a lengthy and cumbersome process. First of all, the EU's competencies in taxation matters anchored in the EU treaties are rather limited. An immediate competence exists for indirect taxes only, to avoid distortions of competition in the EU single market. Initiatives concerning direct taxes have to be justified specifically based on potential distortions of competition, thus the EU's mandate in the area of direct taxation is an indirect one only.

Secondly, however, not even these limited competencies are fully exploited at EU level, because taxation is one of the few remaining areas in which unanimous decisions are required. It is obvious that unanimity within a growing number of EU Member States characterised by persisting substantial socio-economic and -cultural heterogeneity in an area which is so sensitive and touches upon genuine and deeply-rooted national interests is ever harder to achieve. On the one hand it is understandable that many Member States insist on the application of the unanimity principle, because tax policy belongs to the fundamental sovereign rights of nation states. On the other hand, however, this sovereign right, which is defended so intensely, de facto does not exist anymore regarding numerous areas of taxation. Therefore, strengthening EU-wide cooperation in taxation matters may allow, if international integration makes the exertion of national sovereign rights impossible or at least increasingly difficult, regaining room for manoeuvre. The new European Commission therefore should put their initiative to introduce qualified majority voting at least in certain tax areas, which they pursued in the negotiations about the Lisbon Treaty (European Commission, 2003), as a priority on their agenda again.

Moreover, the yearly indicator-based screening of EU Member States' tax systems by the European Commission as one element of the European Semester (European Commission, 2014a) should be designed in a more sustainability-oriented way. Environmental and distributional aspects should be assigned the same weight as the growth- and employment-oriented objectives currently dominating. Currently, the predominant line of argumentation by the European Commission when recommending shifts of the tax burden away from labour taxes towards environmental taxes, recurrent immovable property taxes and VAT is that such shifts would increase tax systems' growth-friendliness (Garnier et al., 2014). While this line of reasoning is supported by empirical evidence (see also section 1), the focus on growth aspects as over-riding objective is too narrow from a broad sustainability perspective. It firstly neglects potential undesirable impacts of certain taxes on other sustainability dimensions (e.g. the regressive effect of the VAT). Secondly, while according to empirical studies environmental taxes as well as property taxes indeed are relatively growth-friendly compared to direct taxes on profits and labour incomes, their value in themselves (as important instruments within environmental or distribution policy) and thus their potential contributions to other sustainability

dimensions than just the dimension of economic growth should be emphasised more strongly.

Overall, European Commission as well as EU Member States themselves should see themselves more as the pioneers of a tax policy actively contributing to a growth and development path based on economic dynamics, but also social inclusiveness and environmental sustainability – also in a global context. Multilateral problems like international tax flight or climate change can only be solved by multilateral approaches, in which the EU plays an active and pioneering role as the world-wide largest integrated economic area. If the EU Member States managed to speak with one voice in tax matters, instead of letting country-specific national interests dominate over a common position particularly vis-à-vis third countries outside the EU, these could be more easily convinced (if need be also by means of economic pressure) to cooperate.

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## Wrap-up first workshop day

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This was a very rich and interesting discussion day: 11 lectures and one panel with 6 participants, plus the chairs: it is impossible to do justice to each and every paper with the short time I have available.

What struck me most is that we mainly talked about institutions and governance issues, but hardly at all about the direction of economic policy-making at the euro area level: the best institutional set-up leads nowhere, if the policy direction is wrong. Let us remember: This year the euro area will barely reach the GDP of 2007, the last year before the crisis (the U.S.A. have grown by more than 10% in the meantime), unemployment is 50% higher, youth unemployment goes through the roof, and even the self-chosen objective of crisis management by the euro area, to get the debt level down, has not been achieved: on the contrary, today the euro area debt ratio is nearly 30 percentage points higher than 2007. One might think that this warrants a discussion about possible policy failures.

Let me, instead of summarizing the papers, approach my task in two ways: first, what I consider to be novel, or at least non-conventional, and second, what I find missing from the discussion.

Novel and unconventional points:

- The tradeoff line between budget union and „flexibility“, which then was adapted by another speaker into a tradeoff line between fiscal response and flexibility: interesting approaches.
- The importance of the financial cycle with its longer swings, as opposed to the business cycle.
- The controversial discussion of the Five Presidents' Report, which has not been discussed yet in the euro area and EU gremia, being pushed off the agenda by other items.
- The call for industrial policy in the Southern countries, as well as for coordinated wage setting mechanisms.
- The careful discussion of the possibility of non-euro-area member states to opt into the Banking Union.
- The call for a Sovereign Bankruptcy Mechanism.

- The call for the importance of tax alignments and other tax priorities for the euro area.
- And, finally, the semantic novelties of the “flak jacket” and the “holy trinity”: here we see that euro area gaps are permeating into all kinds of areas, usually seen unrelated to economic matters.

Missing points or questions remaining:

- Does not the call for strengthening voting and sanction mechanisms stand in contrast to the frequently heard call for more democratic legitimacy and sovereignty considerations?
- Is not the lack of a “euro area economic strategy” part of the macroproblem of the euro area? The focus on country-by-country assessments and evaluations (e.g. Country-specific policy guidelines) ignores that the primary object of fiscal and economic policies needs to be the euro area, in order to coordinate properly with the single monetary policy.
- Is euro area policy appropriate only as a “crisis insurance mechanism”, or should it not be a regular feature, in order to arrive at a growth-directed fiscal-monetary policy mix?
- Is the Political Union really a separate animal, or are major components not already embedded in Fiscal, Banking, Economic and Capital Market Union?
- Are government budgets really exogenous, as some speakers seem to suggest, or are they not rather strongly influenced by economic conditions?
- To sum up: in my mind, both euro area policy and the present discussion lacks a macroeconomic focus. I see this as an essential part of the euro area policy failure.



# Countering divergence through automatic stabilizers in EMU

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## 1 Imbalanced and fragile euro area

Following the political agreement on the third bailout program for Greece, what else could Europeans wish for? Is there anything else left on the agenda after defeating the evil of Grexit?

Well, the next step should be to explore the forest behind the tree. The euro area has not been in a state of recession for some time, but it has not experienced a proper recovery either after the double dip.

Angel Gurría, head of the OECD, speaks about a vicious circle driven by falling investment and increasing imbalances, resulting in the erosion of human capital, economic competitiveness and fiscal health.

Arguably, this vicious circle cannot be broken without further reforming the Economic and Monetary Union (EMU). As long as core countries are allowed to accumulate ever greater surpluses, while periphery countries can only rely on internal devaluation in bad times, the euro area will remain wedded to low growth, deepening asymmetries and vulnerability.

The euro area has been diagnosed with serious divergence in the Five Presidents' Report (FPR) in June. This document was noticed by too few at the time of the Greek storm, but Jean-Claude Juncker, Donald Tusk, Mario Draghi, Jeroen Dijsselbloem and Martin Schulz actually outlined the key arguments for revamping the EU's economic and monetary structures.

Excessive focus on Greece – which sometimes was inevitable – never helped putting a proper analysis of the EMU on the agenda. But it is high time to ask why since 2011 the EU economy decoupled from the USA, why countries keeping their national currencies are more dynamic and stable than those in the euro area, and

why EMU remains so imbalanced and fragile despite investing so much political capital in stabilization and reforms.

No doubt, Greece has been and remains the weakest link in the euro area, and there are many internal reasons for that. However, the shortcomings of the whole EMU architecture also require attention, before continuing weak economic performance and future disturbances destabilize the system again, with an increasing likelihood of disintegration.

## 2 From diversity to divergence

Post-war European monetary cooperation disintegrated twice: once in the early 1970s, and then again in the early 1990s. We learned in the recent years that the abolition of national currencies in itself is not a sufficient guarantee against another disintegration.

At times of crisis and heightened speculation, a possible break-down, or dissolution of the euro has been mainly discussed in terms of a crash of one or several member states and the resulting need to introduce a new national currency. However, this is not the only way the single currency could die.

Just like the life of humans can end in various ways, a currency union can also be a victim of different diseases. Cancer does not kill the same way as a heart attack. Through reforms (notably the banking union) and one-off, discretionary measures (by the ECB mainly), the risk of a heart attack has been diminished. However, the risk of cancer is still there, and has probably increased in the meantime.

The EU is supposed to create unity out of diversity, but the minimalist monetary union turned diversity into divergence in the last two decades. Divergences between the core and the periphery of the euro area (or North-South imbalances) are more dangerous for the sustainability of the EMU and the stability of the EU than East-West imbalances. The latter are linked to the wide income gap between old and new Member States, which despite the crisis, continued to diminish in the last five years.

EMU membership for peripheral countries means that in periods of growth they enjoy greater confidence and consequently favorable pricing of finance, for private as well as public actors. At a time of recession, on the other hand, financial fragmentation increases the costs of borrowing and also the risk of insolvency. Capital flight usually aggravates this situation, also in connection with the lack of full confidence in the future of the euro area, or in its composition.

What I would like to highlight is that the sovereign debt crisis since 2010 and the fiscal consolidation strategies implemented in response to it have substantially weakened the power of the welfare state in countries of the euro area periphery.

In particular, they have weakened the effectiveness of so-called automatic fiscal stabilizers at the national level, which basically means the ability of a state to immediately act in a countercyclical way as tax revenues drop and social expenditure

increases. A dramatic cut in automatic stabilizers (e.g. unemployment benefits) due to tightened economic governance led to the euro area recession of 2012–13, which was actually more brutal in terms of household incomes than the first recession of 2008–09. Unemployment and inequalities soared in particular in more peripheral regions.

Divergence is indeed the main threat to the existence of the single currency and to the stability of the EU as a whole. Hence, there is a need for further strengthening of the EMU architecture, and in particular to strengthen its real economic performance and its social dimension.

This ambition should go beyond securing the short-term survival of the single currency. Without an improvement in real economic and social outcomes, rising nationalist sentiment will continue to turn against either the single currency, or the EU, or both.

### **3 The quest for risk sharing**

Rebalancing the euro area is a key question. Various models of rule-based, though limited mechanism of solidarity have already been explored by think tanks, in order to strengthen people's and markets' confidence in the euro, and thus create a better institutional foundation for the recovery of investment.

Hostility around bailout programs and their conditionality have not created a good atmosphere in which more solidarity could be easily promoted, especially if it involves various forms of fiscal transfers. However, there is virtually no serious assessment of the functioning of the euro which would see a chance of long life without a fiscal capacity and risk sharing, ideally in some form of automatic stabilizers that can limit the damage from cyclical downturns.

In recent years, various forms of cross-border automatic stabilizers have been examined as one of the possible ways to improve the functioning of the EMU: output gap-based schemes, partial pooling of unemployment insurance systems and reinsurance for big shocks. Each of these options would have beneficial effects on economic growth and the most vulnerable euro area members, with each member state deriving benefits over the cycle. Among the options, a partial pooling of unemployment benefit schemes stands out as the model with continuous impact and direct connection with the citizens. However, each of the three models could contribute significantly to the effort to restore confidence in EMU.

Hence, before we get too close to national parliamentary elections in major countries again, and while the third Greek bailout agreement delivers a certain degree of tranquility, we should use the window of opportunity to discuss a substantial reconstruction of the EMU and make some crucial steps in practice. The work ahead should not only focus on avoiding another heart attack, but on changes needed for truly improving resilience, performance and cohesion.

Beyond occasional bailouts, there are several broader issues awaiting debate and answers. Should we see the IMF as a permanent participant of EMU stabilization? Or we will reach a point soon when the Fund is not needed any longer as a lender or an analyst of debt sustainability.

Can the ECB be defended from constant legal challenges when it acts in defense of the integrity of the single currency? Can we find the right balance between external support and national responsibility (and bankruptcy if needed) without the risk of contagion and disintegration?

There should also be a way to better articulate economic policy for the euro area as a whole, in order to optimize policy coordination for growth together. Member states should not be allowed to pursue arbitrary targets (e.g. “black zero”), or accumulate excessive current account surpluses, if those are detrimental to the growth prospects of the community as a whole.

Establishing a chief economist in the euro area has been considered for some time, but concrete steps have proven just too difficult, similarly to the external representation of the euro.

Better governance is necessary (e.g. joint action against excessive imbalances), but it is not obvious that Member States would hand over competences to a stronger EMU level governance structure without more risk sharing. This latter on the other hand would also help strengthening public acceptance of the EMU. Strengthening discipline, solidarity and legitimacy simultaneously would probably pay-off economically as well as politically.

## **4 Political capital for change**

Perhaps a dramatic momentum is not here now for a sudden paradigm shift. But the time is right for a serious and deep reflection. In fact this might be the last time when the road forward towards a more perfect EMU is still open. If this chance is missed and divergence and asymmetries are not dealt with, continuing stagnation will turn even greater shares of the electorate against the euro, and in a few years the only choice will be between orderly or disorderly deconstruction.

The 2012 experience should serve with inspiration. Three years ago, the intervention of the ECB turned out to be a game changer. Without it, the euro area would probably have quickly disintegrated. However, the ECB only managed to change the game at the level of survival. Today this is not sufficient. What we need is significantly higher rates of growth and a return to real convergence.

The key question, however, is whether there is still sufficient political capital left among mainstream political forces to promote solutions that can counter the internal imbalances and divergence between the core and periphery within the euro area. Some would say a full solution to the euro area problem can only be delivered

by changing the Treaty of the EU, which is very hard. Still it is easier to change the Treaties than the laws of economics.

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# A feasible shock absorber for the euro area

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## 1 A feasible scheme in the current EU framework

The sovereign debt crisis of 2011-13 has exposed the limits of a monetary union with fully decentralised fiscal policies. In the impossibility of managing country specific negative shocks through monetary policy and exchange rate fluctuations, national governments can only resort to counter-cyclical fiscal policy to stabilise the economy. In practice, we have seen that they may have little room to manoeuvre due to the interplay of the union fiscal rules and the limited access to capital markets whenever the fiscal position has deteriorated. A centralised fiscal tool could help to absorb idiosyncratic negative shocks.

This idea has long been present in the debate on the European unification, at least since the reports prepared by the expert commissions chaired by Marjolin and MacDougall in the 1970s, and by Delors a decade later. It has gained new momentum in the midst of the sovereign debt crisis with the suggestion from the so-called report of the Four Presidents to create “An EMU fiscal capacity with a limited asymmetric shock absorption function” a priority later confirmed by the Five Presidents’ report in 2015. Critics fear that such a capacity could foster opportunistic behaviour and weaken the incentives to promote painful growth-enhancing reforms, but the thorniest issue is probably the cross-countries income redistribution that it could imply.

These fears might be excessive, at a closer scrutiny. Indeed, it is possible to design a centralised shock absorber that can offer non-negligible stabilisation of the business cycle, and yet be incentive compatible and limited in the extent of cross-country redistribution. In a recent paper<sup>1</sup> we envisage a device for risk-sharing across countries based on a hypothetical unemployment benefit (UB) for the euro

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<sup>1</sup> Brandolini, A., Carta, F. and F. D'Amuri. 2014. A feasible unemployment-based shock absorber for the Euro Area, Bank of Italy Occasional paper 254.

area. This device, that we call Notional Euro-wide Unemployment Insurance (NEUI), consists of a supranational fund which finances the expenditure that each country experiencing an adverse shock would incur to pay the common unemployment benefit (UB) to its citizens. The NEUI is “notional” because it mimics an individual-level insurance scheme but operates via transfers at the macrolevel. With respect to a rainy-day fund, it is less subject to political discretion and is targeted to a specific shock clearly linked to the business cycle: entry into unemployment. To limit opportunistic behaviours, the hypothetical UB could be parameterised to benefits of limited duration and replacement rate and be activated only in case of large negative shocks. In accordance with the subsidiarity principle, national schemes would remain in place, based on rules set by national governments; but the NEUI subsidy would be explicitly acknowledged in order to make citizens cognisant of European solidarity.

Payments to the NEUI fund could be determined by a contribution rate that balances disbursements and receipts in the medium run, either for each country (full experience rating) or only for the euro area as a whole (partial or no experience rating). Varying the generosity of the system and the degree of experience rating would imply different levels of macroeconomic stabilisation and cross-country redistribution. In presence of experience rating we are not allowing any permanent redistribution of resources across countries, obviously limiting the extent of risk-sharing. In case of partial experience rating redistribution across countries is milder than in the absence of experience rating; however contribution rates are set to keep the supranational fund balanced on a given time period.

## 2 Analysis and results

Within the outlined boundaries, it is possible to design several schemes that differ for the eligibility criteria, the maximum duration and amount of the benefit, the trigger activating the program and the financing regime. In order to identify the preferable design, we need to estimate the stabilisation offered by each scheme. We assume that the NEUI fund is financed via a consumption tax increase, and that the freed resources are used by beneficiary countries to raise public investments. The impact on GDP can be calculated by applying the multipliers adopted by the European Commission in its forecasting exercises.

We use the European labour force survey for ten euro area (EA) countries in the 2002-12 period to simulate all the schemes obtained by combining the possible features of the NEUI (chart 1). We find that in the majority of cases, the scheme implying the lowest cross-country redistribution for a given level of stabilisation features a notional benefit equal to 50% of the average wage for all employees experiencing a job termination, eight months maximum duration and a trigger based on employment dynamics (chart 2). Even systems that do not redistribute resources

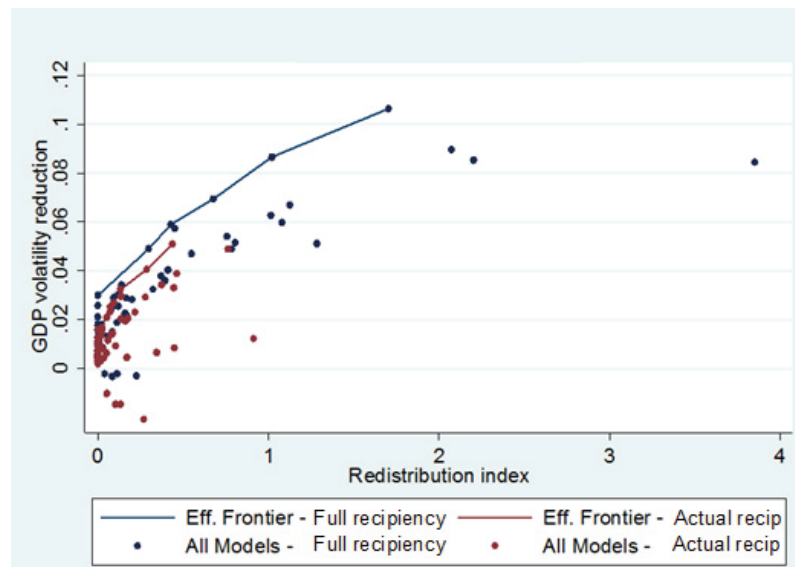
between countries can have a non-negligible stabilisation impact in the medium run. Finally, our results on the preferable scheme are robust to the choice of the multipliers and to changes in the estimation period.

We then compute the financial flows across countries implied by the working of the preferable scheme (chart 3). While with full experience rating each country's position would be balanced over time, with partial or no experience rating Spain and to a lesser extent Portugal would be the main beneficiaries of such a scheme in absolute terms over the 2002-12 period; France and Germany would be the greatest contributors. Italy would also be a contributor even if affected by a large increase of unemployment during the debt crisis. This is due to the higher incidence of self-employment and long term unemployment, which are not covered by the envisaged scheme. The direction of financial flows strongly depends on the reference period. In fact, considering the pre-crisis period 2002-08, Spain and Germany would be the biggest beneficiaries, while France and Italy would remain the biggest contributors. This evidence is a warning that the conclusions on cross-country redistribution are highly sensitive to the simulation period, and the related fears might be excessive. In the period between 2002-12, the stabilisation offered by the NEUI might be up to one fourth the level of the one made possible by the cyclical adjustment of the budget balance provided for by European fiscal rules. Thus, the stabilisation achievable by the shock absorber is not negligible, especially if compared to the very limited cross-country financial flows involved: Luxembourg, the country contributing the most to the scheme relative to domestic product, would have transferred resources worth 0.09 of its GDP.

The incentives for national authorities to improve benefit take-up rates – to take full advantage of supranational transfers – and to standardise national UB systems – which would facilitate the reallocation of workers and hence macroeconomic stabilisation within the EA – are two positive side effects of the NEUI. Yet, its main goal would be providing a tool for smoothing business cycles which is at the same time a visible example of European solidarity.



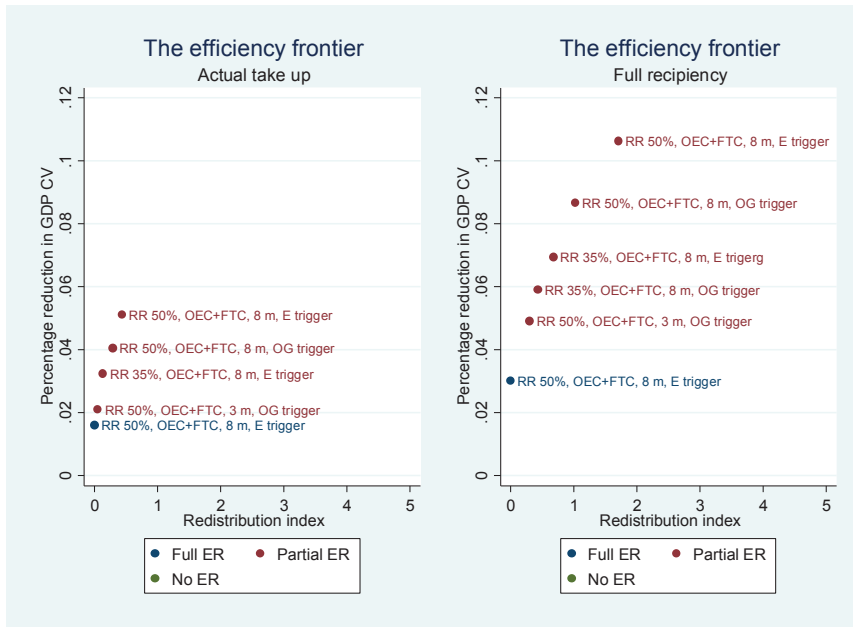
Chart 1: The efficiency frontier



Source: Authors' elaboration on EU-LFS data.

Note: Each point represents the Redistribution-Stabilisation pair of one of the 72 different notional UB schemes simulated in the paper. The GDP volatility reduction is equal to the reduction in the GDP coefficient of variation. The redistribution index is equal to the sum of the squared deviations of the unique contribution rate that balances the system for the area as a whole from the contribution rates that balances the system for each country, multiplied by a million. Under full reciprocity we assume that all the eligible for the common UB actually get the transfer. Under actual reciprocity we use the actual take-up rate of national unemployment systems measured in the EU-LFS.

Chart 2: Schemes on the efficiency frontier

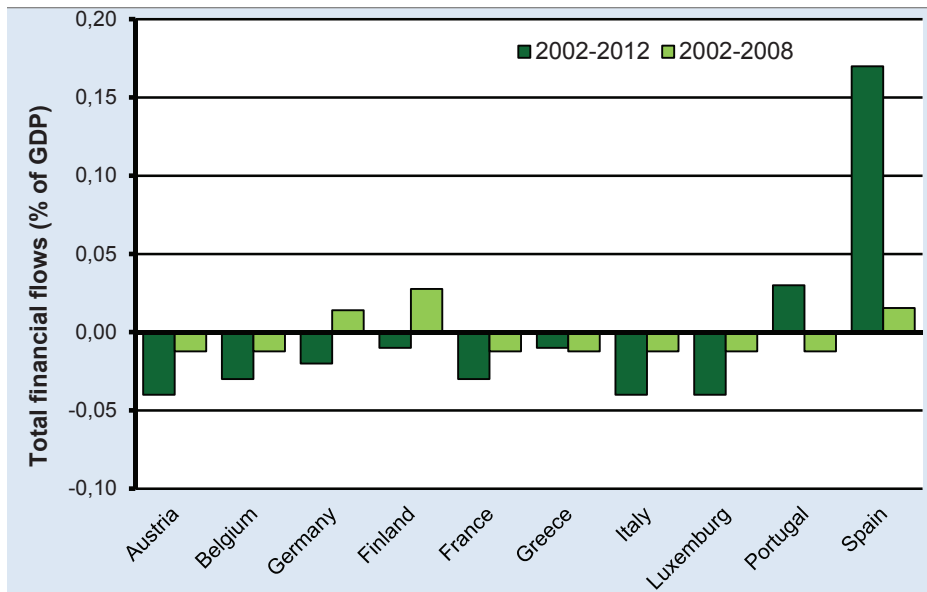


Source: Authors' elaboration on EU-LFS data.

Note: Values estimated over the 2002–2012 time interval, multiplier equal to 0.4 for outflows and to 0.9 for inflows. Legend: benefit replacement rate (RR), labour force coverage (OEC: termination of open-ended contract; FTC: termination of fixed-term contract); months of maximum duration (m); activation trigger variable (E: employment; OG: output gap); experience rating (ER). Under full reciprocity we assume that all the eligible for the common UB actually get the transfer. Under actual reciprocity we use the actual take-up rate (the proportion of eligible which actually get the transfer) of national unemployment systems measured in the EU-LFS.

Chart 3: *Financial flows implied by the preferable scheme for the 2002–2012 and 2002–2008 periods*

% of GDP



Source: Authors' elaboration on EU-LFS data.

Note: Financial flows are those implied by simulating the preferable scheme which has a replacement rate of 50%, covers terminations of open-ended and fixed-term contracts, has a maximum duration of 8 months and is activated by an employment-based trigger in at least one of the considered countries. We consider a regime of partial experience rating as financing scheme of the supranational fund: the contribution rate is such that each country has a balanced position over the considered time period (contributions=transfers, regime of full experience rating) up to a yearly threshold of 0.2% of GDP. To make up for the loss in contributions and keep the fund balanced over the whole interval, countries below the cap contribute to the fund an additional fixed proportion of their GDP relative to what they would pay under a full experience rating.

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# **An unemployment insurance scheme for the euro area? A comparison of different alternatives using micro data**

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## **Executive Summary**

The Great Recession and the resulting European debt crisis have revived the debate about deeper fiscal integration in the European Economic and Monetary Union (EMU).<sup>1</sup> The EMU is an atypical monetary union because monetary policy is decided at the central (European) level while fiscal policy is carried out at the sub-central (member state) level (Bordo et al., 2013).<sup>2</sup> Some observers argue that national automatic stabilizers provided insufficient income insurance during the crisis as some EMU member states lost access to private capital markets and conclude that common fiscal stabilization mechanisms are necessary to make EMU

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<sup>1</sup> The executive summary is based on Dolls et al. (2015).

<sup>2</sup> In the following we equivalently use “EA”, “EMU” and “euro area” to refer to the 18 member states of the European Monetary Union that had introduced the euro in 2014.

more sustainable and more resilient against asymmetric macroeconomic shocks (Bertola, 2013; IMF, 2013). The main concerns in this debate relate to the issues of permanent transfer flows within the currency union and moral hazard. In particular, national governments might neglect structural reforms or fiscal consolidation.

How could a fiscal risk sharing mechanism in the euro area be designed? In the so-called Four Presidents' Report published in 2012, the former President of the European Council, Herman van Rompuy, has suggested the following: "An EMU fiscal capacity with a limited asymmetric shock absorption function could take the form of an insurance-type system between euro area countries. [...] The specific design of such a function could follow two broad approaches. The first would be a macroeconomic approach, where contributions and disbursements would be based on fluctuations in cyclical revenue and expenditure items [...]. The second could be based on a microeconomic approach, and be more directly linked to a specific public function sensitive to the economic cycle, such as unemployment insurance." (Van Rompuy, 2012). The European Commission and more recently Jean-Claude Juncker in the Five Presidents' Report built upon this initiative with own blueprints for EMU (European Commission 2012, Juncker 2015).

Since then, the perspectives of a European fiscal union and different reform proposals along the lines of the Four Presidents' Report have been analyzed in various studies. For the *macroeconomic approach*, suggestions include a cyclical shock absorber based on output gaps (Enderlein et al., 2013) and a stabilization fund for the euro area (Furceri and Zdzienicka, 2015). For the *microeconomic approach*, the discussion has focused on the idea of a common EMU-wide unemployment insurance system (henceforth EMU-UI) as proposed among others by Deinzer (2004), Dullien (2014) and Andor (2014).

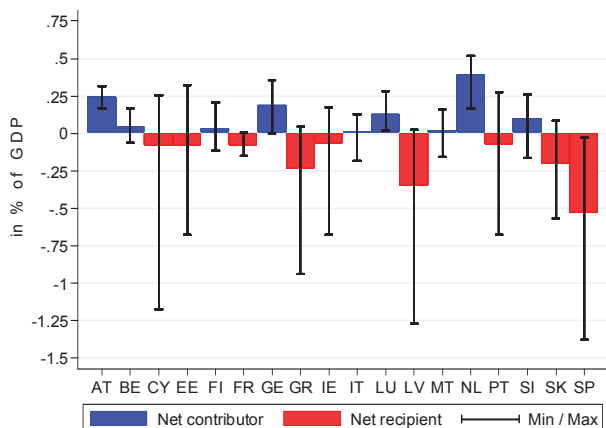
Our paper (Dolls et al., 2015) is the first to provide a comprehensive and systematic analysis of a wide range of design options for an EMU-UI system based on household micro data. Our counterfactual experiment covers the period since the start of the euro in 1999 until 2013. The analysis includes the current 18 euro area member states (EA 18) and simulates a sample of repeated cross-sections for each member state combining micro data from the EU Statistics on Income and Living Conditions (EU-SILC) and the EU Labor Force Survey (EU-LFS). We focus on redistributive and stabilizing effects of a basic EMU-UI scheme that partly replaces national UI systems. We quantify the coverage and stabilization gaps. These are defined as the differences in coverage and stabilization between i) the benchmark scenario of national UI alone and ii) a reform scenario where EMU-UI and national UI coexist as explained further below. Coverage and stabilization gaps are calculated at the aggregate household level as well as for different socio-demographic groups within each country. Automatic fiscal stabilization effects are decomposed into household income and government budget stabilization. In addition, we explore the effects of experience rating and compare the basic EMU-UI scheme to a variant

with *contingent*, i.e., trigger-based benefit payments that provide income insurance only if the labor market situation deteriorates significantly in a given member state. Moreover, we run several sensitivity checks regarding coverage and generosity levels of the scheme. We also discuss various concerns and potential adverse effects of an EMU-UI system, in particular the view that such a system would lead to a transfer union in Europe and moral hazard issues. Importantly, the aim of our paper is not to serve as a policy proposal but rather as a conceptual experiment, providing general insights into the effects of various design options for a basic EMU-UI.

Our main results are as follows. We find that a basic EMU-UI scheme with a replacement rate of 50% , a maximum duration of benefit receipt of 12 months and a broad coverage of all new unemployed with previous employment income could be implemented with a relatively small annual budget. Over the period 2000-13, average benefits would have amounted to roughly EUR 47 billion per year, financed by a uniform contribution rate across member states of 1.56% on employment income. The scheme is not designed to give rise to permanent redistribution across countries because only short-term (rather than structural) unemployment is insured. Nevertheless, our simulations reveal that a small number of member states would have been net contributors or net recipients in each year of our simulation period.

Chart 1 shows that Austria, Germany and the Netherlands would have been the largest net contributors with average yearly net contributions of 0.19%–0.39% of GDP. Latvia and Spain are the largest net recipients (average yearly net benefits of 0.36% and 0.54% of GDP).

*Chart 1: Average yearly net contributions from 2000 to 2013*



Source: AMECO, EU-LFS and authors' calculations based on EUROMOD.

Note: Net contribution = SIC – BEN. Contribution rate uniform across member states. Scheme is revenue-neutral over the simulation period.

We show that a basic EMU-UI scheme can provide insurance by stabilizing household incomes and government budgets. We compare automatic stabilization effects under dual insurance (the combination of national UI and EMU-UI) and the status quo. For 2009, the year with the most significant surge in unemployment across EA member states, we find that the average (unweighted) stabilization gap, that is the potential gain in stabilization through an EMU-UI for household incomes, would have amounted to 12% of the gross income shock at the EA-level. Largest gaps are found for Southern European countries (e.g. 18% in Italy, 17% in Greece) and the Baltics (22% in Latvia). Government budgets would have been stabilized by on average 6% of the gross income shock in 2009. This is because governments would have spent less on national UI. The combined stabilization impact on household incomes and government budgets would have equaled 0.3% of GDP on average, with values up to 1.1 (0.9)% in Latvia (Estonia). Schemes with lower coverage ratios and generosity levels generate smaller cross-country transfers but also reduce desired insurance effects.

Turning next to within-country heterogeneity, we find the largest coverage and stabilization gains for the young and, perhaps surprisingly, also for high-skilled unemployed. The reason for the former is that the young often do not meet eligibility conditions of national UI while they are covered by the simulated EMU-UI. The result for the high-skilled is due to a higher proportion of short-term relative to long-term unemployed (who are not eligible to EMU-UI) among them. Finally, we consider a contingent benefit scheme which is activated if the unemployment rate in a given member state is 1 percentage point higher than in one of the previous three years. Under this system no member state would have been in a permanent net contributing/receiving position. With EUR 22 billion per year, the overall budget and thus the amount of cross-country redistribution would have been less than half as large as under the non-contingent scheme in the baseline.

One should note that the simulations assume revenue-neutrality over the entire time span considered (2000–2013), but not in each period. This raises the issue of whether the EMU-UI would be allowed to issue debt. In our calculations the EMU-UI would have produced a surplus in its early phase, so that reserves would have been available to finance higher benefits in the crisis. But there is, of course, a concern that political pressures would build up to let the EMU-UI accumulate more and more debt until it needs to be “bailed out” by the member states. Clearly, while a balanced budget in each period would limit the ability of the system to act as a fiscal stabilizer, an effective debt limitation would be needed. One possible approach would be to start by deliberately accumulating reserves which would provide a buffer in the next recession.

We should emphasize that our analysis has a number of limitations which should be taken into account in the interpretation of the results. Most importantly, it is not the objective of our paper to establish whether or not the introduction of an EMU-UI



scheme is desirable in terms of overall welfare. Our analysis focuses on the financial flows implied by different unemployment insurance schemes and the ability of these flows to act as an automatic stabilizer. In so far our analysis is purely positive, rather than normative. In addition, we take economic behavior as given. If EMU-UI had the desired stabilizing effects, the financial flows in the system would differ from those calculated here; the redistributive effects would probably be smaller. However, if the moral hazard effects dominated, the financial flows from contributors to recipients could also be larger. Adding behavioral effects to the analysis is a promising subject for future research.

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# The trinity of wage setting in EMU: a policy proposal

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Diverging labor cost developments are often considered to be one of the most important factors that led to large current account imbalances in the euro area (EA) in the run-up to the global financial crisis. It has also been shown that wage growth differentials have significantly lowered the co-movement of EA countries' business cycles – the most widely used meta-criterion for optimum currency areas. Against this background, this paper develops a wage-setting benchmark that aims to keep the economy in internal equilibrium and to maintain price stability, while it also exhibits the capacity to correct for external imbalances. The proposed wage benchmark is very simple and may serve as an anchor for the macroeconomic dialogue in the Economic and Monetary Union (EMU). In order to demonstrate the potentially beneficial effects of such a wage benchmark we present some simulations showing how current account balances and labor costs would have developed across EA countries if the rule had served as a benchmark already in the run up to the crisis.

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## Introduction

The sovereign debt crisis in the euro area has brought back the issue of optimum currency areas (OCA) to the center of discussion both in policy circles and in academia. In particular, the question of possible rebalancing mechanisms in case of internal misalignments in a currency area became increasingly relevant. The first contributions to the OCA literature suggested various prerequisites to ensure a high degree of business cycle synchronization among member states (e.g. economic openness, similarities in inflation rates), or alternatively, appropriate adjustment mechanisms in the case of asymmetric shocks (e.g. price and wage flexibility, labor mobility, fiscal integration etc.). The underlying argument is simple: If business cycles across countries in a currency union diverge, the common monetary policy by the ECB cannot be optimal for all currency union members. This can yield situations in which asset price and demand booms in some economies are accompanied by excessively suppressed demand in others, very much as observed during the early years of the euro area.

Against this background, it seems crucial to examine possible policy options to increase the co-movement of business cycles among EMU members, and to avoid the associated build-up of potentially disastrous external imbalances between currency union members. Especially prior to the introduction of the euro, a large strand of literature examined potential determinants of business cycle synchronization. In particular, the degree of openness or, more precisely, bilateral trade relations between two countries has been found to be the most important determinant of business cycle co-movement (Frankel and Rose, 1998; Inklaar, Jong-A-Pin and de Haan, 2008; Baxter and Kouparitsas, 2005; Gächter and Riedl, 2014).

Furthermore, several other factors have been suggested in the literature to be potentially important for business cycle synchronization, such as fiscal policy, financial integration and industrial specialization (amongst others). Those latter determinants, however, are typically found to be either non-robust or of less importance than bilateral trade relations among member countries. While both wage and price flexibility as well as labor mobility has been highlighted by the early OCA literature as being important to adjust in the case of exogenous demand shocks within a currency area, wage developments as a potential source of such demand shocks, i.e. as a source rather than a consequence of the business cycle, has been disregarded in empirical studies until recently. Gächter, Gruber and Riedl (2015) show, however, that wage growth differentials across countries significantly and causally reduce business cycle co-movement within a common currency area, while such divergences do not play any important role for countries with sovereign money. Remarkably, according to their results, the economic significance of the effect might even exceed the impact of bilateral trade relations in the case of the euro area. Their results suggest that a certain degree of wage coordination among EMU member

states could significantly reduce the cost of a common currency by increasing business cycle synchronization across countries.

Those recent research findings as well as the imbalances that built up within the euro area prior to the crisis naturally raise the question about possible wage coordination mechanisms across EMU countries. While this paper does not put into question the free collective bargaining arrangements on the national level, i.e. tariff autonomy in negotiations between employers' and employees' organizations, we nevertheless develop a country-specific wage growth benchmark as a rough guidance for wage bargaining. The literature on optimal wage rules in general and currency unions in particular is relatively scarce. Most of previous papers are based on the so-called Golden Rule that proposes wage growth equal to (medium-term) productivity growth plus the inflation target of the ECB. While such an approach is useful to stabilize the functional income distribution, it does not contain any mechanism to adjust to external shocks or imbalances. Our benchmark, on the contrary, extends the Golden Rule by an external correction term and thereby combines three crucial economic policy targets. This "trinity" of wage setting aims at (i) internal stability by stabilizing the functional income distribution, (ii) price stability as defined by the ECB price stability target, and (iii) external stability as measured by the current account balance.

The paper is structured as follows. Section two gives a short literature review on why wage setting plays a crucial role in EMU and discusses previously proposed wage setting benchmarks. Section three derives an optimal policy rule by extending the Golden Rule by an external correction term. In section four, we show some simulations how wages and current account balances would have developed under the assumption of a (i) Golden Rule scenario, and the proposed (ii) trinity benchmark scenario. Finally, section five draws some conclusions.

## 2 Literature review

### 2.1 Wage setting and macroeconomic imbalances in EMU

By adopting a common currency, member countries irrevocably fix their exchange rates and give up their control over monetary policy decisions, which is an important economic policy instrument outside a currency union to adjust both to internal (inflation) and external (current account) imbalances. Wage and price flexibility has indeed been proposed as a main prerequisite for successful monetary integration already in the early OCA literature (De Grauwe, 2009). On the one hand, in the case of an exogenous demand shock in one country, relative wage and price adjustment is the only instrument to change the real exchange rate in order to move back to equilibrium. On the other hand, however, Gächter, Gruber and Riedl (2015) highlight the role of wage divergence as a source rather than a consequence of business cycle developments. More precisely, they argue that wage growth differentials across

countries in the run-up to the crisis have led to considerable business cycle divergence. Thus, wage dispersion across countries has not contributed to a re-adjustment of business cycles, but rather acted as a disequilibrating mechanism by triggering domestic demand shocks, eventually leading to lower business cycle co-movement and large current account imbalances.

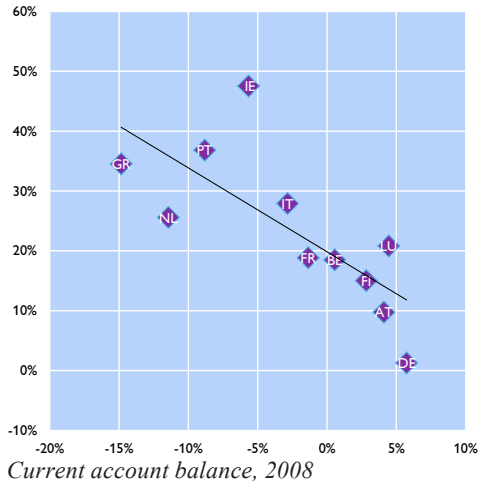
While considerable wage divergence has been observed in the early years of EMU, the underlying factors driving this development are still controversial. In essence, previous literature proposes two different, but not mutually exclusive views on why wage divergence occurred and, in a further step, external imbalances built-up in the first decade of EMU (Johnston and Regan, 2014). The first perspective highlights the role of the current account, as institutional differences between export-led and domestic demand-led countries gave rise to a loss of competitiveness of the latter, and subsequently, caused high and increasing current account deficits in the periphery. According to this view, export-led core countries typically exhibit corporatist wage-bargaining institutions that favored significant wage moderation, while such coordinated wage bargaining systems are non-existent in peripheral (domestic demand-led) countries. This institutional perspective therefore highlights the role of the current account, while financial inflows to peripheral countries are seen as a consequence of these developments. The second perspective, on the contrary, views the loss of competitiveness and the deterioration of current account balances as a consequence of considerable financial inflows to peripheral countries. It is argued that imbalances started in the financial account, as the convergence in nominal exchange rates and interest rates led to significant reductions in borrowing costs in peripheral countries, giving rise to credit-driven consumption and real estate booms, which further increased wages and inflation. For the case of the euro area, it seems likely that both perspectives played a considerable role in the build-up of imbalances prior to the crisis. Irrespective of the dominant driving factor, however, wage developments are the crucial factor in both theories, and further reinforced external imbalances by two self-amplifying transmission channels (Gächter, Gruber and Riedl, 2015). Higher wages do not only boost domestic demand directly by increasing households' disposable income, but also lower domestic real interest rates due to increasing inflation rates, and thus, stimulate investment and domestic demand also indirectly, thereby further amplifying the original inflation differentials.

Higher wage growth ultimately leads to a real appreciation and lowers the country's competitiveness, which should theoretically have an equilibrating effect due to lower external demand (and some substitution effect from domestic to foreign goods). Empirical data however suggest that this external effect was rather weak in the short-term, while the internal effect – higher wages leading to lower real interest rates and a domestic demand boom – worked instantaneously. Put another way, the equilibrating external effect was much weaker than the still disequilibrating inter-

nal effect prior to the crisis, leading to further divergence of euro area business cycles and external balances.<sup>2</sup>

*Chart 1: External and domestic effects of wage divergence in a currency union*

**External view: wages and external demand**  
Change in nominal unit labor costs (NULC), 1999–2008



**Internal view: wages and domestic demand**  
Change in nominal unit labor costs (NULC), 1999–2008



Source: European Commission, AMECO.

Chart 1 presents a first descriptive view of the consequences of diverging wage developments in the early years of the currency area (excluding Luxembourg as a notorious outlier but including Greece). In the right-hand chart, it is clearly observable that stronger increases in nominal unit labor costs (NULC) were associated with considerably higher GDP growth. This stylized fact does not imply any causal effect, as higher inflation rates (and a real appreciation against other euro area countries) could also be due to the well-known Balassa-Samuelson effect in catching-up economies. The fact that inflation differentials were driven by wage growth in the non-tradeable sector (which typically exhibits relatively low productivity gains) in those economies, however, does not support the view that real appreciations in the periphery were caused by the Balassa-Samuelson effect. On the contrary, Johnston et al. 2014 renders some evidence that domestic demand booms driven by higher wage increases indeed played an important role for the build-up of imbalances. This line of argument is further strengthened in the left-hand chart. Rising nominal unit

<sup>2</sup> For a more extensive discussion on this issue and related stylized facts, see Gächter, Gruber and Riedl (2015).

labor costs are associated with higher current account deficits (i.e. higher external imbalances) at the peak of the crisis, which further supports the argument of considerable domestic demand booms in the periphery. The lack of wage coordination among EMU countries is therefore likely to have played a considerable role in the build-up of internal and external imbalances.

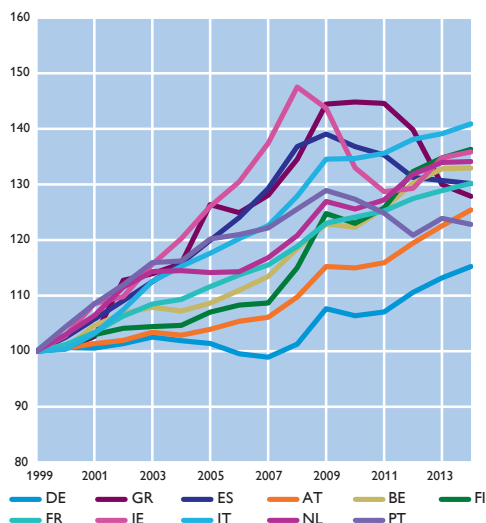
## 2.2 Wage setting benchmarks

Against the backdrop of the important role of wages for the functioning of EMU, the discussion about possible benchmarks for optimal wage policies is relatively scarce. A reason for this might be the fact that there has been a rather broad consensus favoring the Golden Rule for wage setting, which suggests that nominal wages should increase in line with medium run productivity growth plus the inflation target of the ECB (Koll, 2005 and 2013, Watt, 2006). This benchmark is widely considered to be a stabilizing anchor for wage setting, while simultaneously having the capacity to generate price stability. Consequently, this rule has also been adopted in the macroeconomic dialogue (Koll, 2013; Collignon, 2009) and countries where advised to pursue wage policies that ensure that this norm is followed.

Chart 2: *The actual picture*

**Nominal unit labour costs – Actual values**

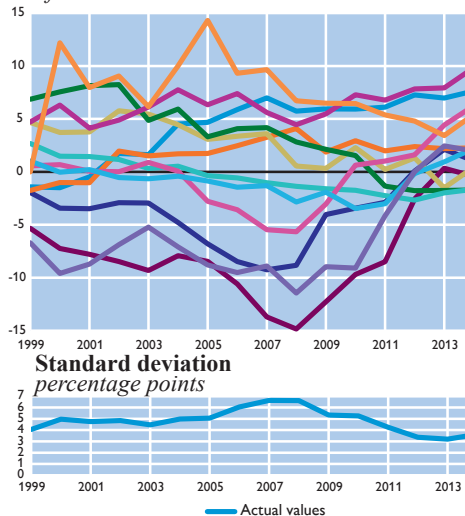
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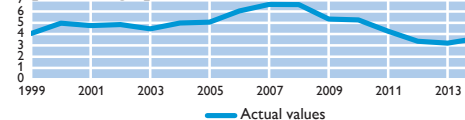
Source: AMECO Database, authors' calculations.

**Current account – Actual values**

% of GDP



**Standard deviation**  
percentage points



Wage developments in EMU member states, however, significantly deviated from the Golden Rule. Chart 2 is somewhat a close-up of the left-hand chart in

chart 1, but also reports developments over time. It shows nominal unit labor costs in the left-hand chart, the current account in the right-hand top chart and the dispersion of the current account measured by the standard deviation at the bottom of the right-hand chart. Nominal unit labor costs strongly diverged across countries and only wage developments in France (see turquoise line) tracked the wage growth rates recommended by the Golden Rule quite closely. Apparently these divergences also went along with a strong divergence in the respective current account positions of the corresponding countries.

These large and persistent imbalances in EMU have even raised concerns whether the full application of the Golden Rule would have been sufficient since it lacks an adjustment mechanism to external imbalances. Indeed, we will show below that even the adherence to the Golden Rule, while mitigating the build-up of external imbalances, would still not have prevented the accumulation of considerable imbalances in EMU.

The most prominent proposal for an extension of the Golden Rule has been formulated by Collignon (2012 and 2013). He recommends extending the Golden Rule by an adjustment term that corrects for excessive deviations of the national return to capital compared to the currency union's average. Given that the rate of return indicates the attractiveness of production for regional investment this should help balancing capital and thus current accounts. Collignon's proposal is a very timely and welcome extension of the Golden Rule since it has the capacity – at least in principle – to account for external imbalances. However, there are some objections with regard to the type of correction. First, the calculation of the rate of return requires knowledge of the stock of capital which is extremely difficult to measure. Second, the correction mechanism is completely unanchored and thus implicitly assumes that the average return to capital in the currency union is “correct”. If this is not the case, the correction might even shift the entire union into a wrong direction.

Stockhammer and Onaran (2012) proposed a different mechanism. They also extend the Golden Rule by a correction-term. In their case, however, the correction is based on the deviation of national nominal unit labor costs from the average of unit labor costs in the currency union. While this approach in principle has the capacity to overcome the first major problem of Collignon's approach, the correction term is still completely unanchored. Once again, if average unit labor costs of the union are out-of-equilibrium, the entire system would be pushed to an unsustainable level of unit labor costs. Assume for instance an asymmetric labor market shock in a large economy that transitorily fuels (slows) nominal unit labor costs. The increase (decrease) is justified in the country in which the shock has occurred but it affects overall average unit labor costs. If the rule was to be applied strictly this subsequently would trigger a hike (slowdown) in the nominal unit labor costs in all other countries and eventually would result in a process of permanent wage inflation (deflation). Thus, an optimal benchmark for wage growth would require some form of anchoring. We will discuss such a rule in the next chapter.



### 3 Is there an optimal rule of wage growth?

The existing proposals for wage benchmarks discussed above primarily aim at fixing the functional distribution of income, i.e. the distribution of income between capital and labor. The reason for this is fairly simple: From a theoretical viewpoint, when the economy has reached its steady state and grows at its potential, the capital intensity remains constant, which means that the functional distribution of income should also remain constant. Any other scenario, on the contrary, will ultimately lead to a stagnationist outcome.<sup>3</sup> For these reasons, a stable functional distribution of income will also serve as a reference value for our considerations. Put differently, an optimal wage rate should keep the economy at its equilibrium (steady state) level and thus should fix the functional distribution of income, although external disequilibria must also be taken into account.

#### 3.1 Deriving the Golden Rule of wage bargaining

In order to derive the Golden Rule of the macroeconomic dialogue as recommended by Koll (2005) or Watt (2007), we define real wages with  $W$ , real output with  $Y$  and prices with  $P$ . In this case, the wage share is defined by  $W/Y$  (it should be noted that this is also equivalent to real unit labor costs). We thus can write:

$$\Delta \ln \left( \frac{W_t}{Y_t} \right) = \ln \left( \frac{W_t}{W_{t-1}} \right) - \ln \left( \frac{Y_t}{Y_{t-1}} \right) \quad (1)$$

From our considerations above we know that we want to fix the wage share (and by implication the profit share). Thus, in the optimum,  $\Delta \ln \left( \frac{W}{Y} \right) = 0$  which leads us directly to the optimal growth rate of real wages:

<sup>3</sup> Classical economics has been full of models with a changing distribution of functional income that ultimately run into stagnation as e.g. the models of David Ricardo or Karl Marx (Hein, 2004; Piketty, 2014). More recently, Piketty (2014) observed that many industrialized economies do not have a constant capital coefficient (or capital-income-ratio) which accordingly leads to destabilizing inequality and eventually even into a stagnationist scenario. However, this has no implication with regard to the optimality of the Golden Rule of wage setting. Given that the profit share is identical to the product of the capital-income-ratio and the profit rate (i.e.  $\frac{\Pi}{Y} = \frac{K}{Y} \frac{\Pi}{K}$ ), by fixing the profit share ( $\frac{\Pi}{Y} = \frac{K}{Y} \frac{\Pi}{K}$ ) any increase in the capital-income-ratio ( $\frac{K}{Y}$ ) will inevitably lead to a fall of the profit rate. Under normal circumstances this would again – sooner or later – put a halt to the expansion of the capital-income-ratio. Given that equation (2) above by implication also means that not only wages but also profits grow along productivity. Thus, the whole process will stop when all variables ( $\Pi$ ,  $K$  and  $Y$ ) grow at the same rate as can be directly deduced from the definition of the wage share above.

$$\ln\left(\frac{W_t}{W_{t-1}}\right) = \ln\left(\frac{Y_t}{Y_{t-1}}\right) \quad (2)$$

Subsequently, it is a small step to arrive at an optimal rate for nominal wage growth. Adding the change of prices – inflation – at both sides of the equation renders the following optimal rate of nominal wage growth:

$$\ln\left(\frac{W_t}{W_{t-1}}\right) + \ln\left(\frac{P_t}{P_{t-1}}\right) = \ln\left(\frac{Y_t}{Y_{t-1}}\right) + \ln\left(\frac{P_t}{P_{t-1}}\right) \quad (3)$$

This allows us to contemplate another fundamental relationship that will prevail in an equilibrium situation. Assuming mark-up pricing<sup>4</sup> and further assuming that real wages grow along productivity growth (as stated in equation (2)) it is easy to see that prices will grow with whatever they are assumed to grow throughout the wage setting process. Put differently, if we substitute price growth on the right side of equation (3) with the price target of the currency union's central bank, we arrive in a situation in which price stability is given.

$$\ln\left(\frac{W_t}{W_{t-1}}\right) + \ln\left(\frac{P_t}{P_{t-1}}\right) = \ln\left(\frac{Y_t}{Y_{t-1}}\right) + \ln\left(\frac{P_t^{Target}}{P_{t-1}^{Target}}\right) \quad (4)$$

### 3.2 A trinity of targets

While the Golden Rule of wage bargaining assures that the economy stays in internal equilibrium (if it has reached one), it is not clear whether the economy has simultaneously reached an external equilibrium position. This is no problem if the economy exhibits a free floating exchange rate, because excessive deviations of the external position can be adjusted by fluctuations of the exchange rate. However, as soon as a country enters a currency union and fixes its exchange rate, this adjustment mechanism is no longer available. In a fixed exchange rate regime, the Golden Rule of wage setting is thus turned into a knife-edged wage rule that only applies if (1) all countries entered the currency union at an equilibrium level of the real effective exchange rate and (2) no asymmetric shock occurs thereafter (see chapter 4 for a simulation of the counterfactual).

<sup>4</sup> In principle, there are two circumstances in which a deviation from mark-up pricing can occur. Either there is an adjustment regarding a change in the capital intensity (e.g. a catching up process). In this case, an adjustment of the mark-up could be warranted. Another possibility would be a change in the level of competition on product markets. In any case, whether the adjustment is warranted or due to market failure, this is ultimately determined by product markets and not through the wage setting process. It thus appears to be fairly reasonable to assume a constant mark-up as a default assumption of wage bargainers.

This – of course – is an unrealistic scenario. On the contrary, the euro area has witnessed significant imbalances during the first years of its existence. Thus, an adjustment of the Golden Rule of wage setting appears to be warranted. Given the fact that in a currency union external imbalances can be regarded a key indicator of misalignments of relative unit labor costs and thus wages, a wage benchmark is a natural starting point for an adjustment mechanism.

Fortunately, it is simple to establish a direct link between the current account and wage setting. More precisely, open economies display some relation between nominal unit labor costs and the current account, i.e. the current account can be depicted as a function of real effective exchange rates, and thus, (relative) nominal labor costs within a currency union (where the nominal exchange rate is no longer available as an adjustment mechanism). Note that this result is based on both a competitiveness and an income effect. Even if price competitiveness were to play a subordinated role the income effect will affect the current account (see below for a discussion of the caveats). In other words, the elasticity of the current account to nominal unit labor costs  $\frac{PW}{Y}$  can be used to derive a corresponding level of nominal unit labor costs for each level of the current account. Consequently, for a certain targeted level of the current account – CA\* – it is possible to derive an optimal level of nominal unit labor costs NULC\* at which the economy will be in external equilibrium. More precisely, by correcting nominal wage growth by the percentage point deviation between the optimal level of unit labor costs and the actual level of unit labor costs will push nominal unit labor costs to a sustainable level. This renders the following wage benchmark:

$$\ln\left(\frac{W_t}{W_{t-1}}\right) + \ln\left(\frac{P_t}{P_{t-1}}\right) = \ln\left(\frac{Y_t}{Y_{t-1}}\right) + \ln\left(\frac{P_t^{Target}}{P_{t-1}^{Target}}\right) + \ln\left(\frac{NULC_t^*}{NULC_{t-1}}\right) \quad (5)$$

Using the custom to note growth rates with a dot over the variable we can note  $\dot{w}$  as the growth rate of wages,  $\dot{p}$  as the growth rates of prices,  $\dot{y}$  as productivity growth and  $\dot{p}^{Target}$  as the ECB's target rate of inflation. Let us further denote the term, which assures external stability, as  $\dot{c} = \frac{NULC_t^* - NULC_{t-1}}{NULC_{t-1}}$ . Now we can simply rewrite (5) and arrive at

$$\dot{w}_t + \dot{p}_t = \dot{y}_t + \dot{p}_t^{Target} + \dot{c}_t. \quad (5')$$

If we further denote nominal wages as  $PW_t$  with  $PW_{1999} = W_{1999}(1 + \frac{p_t}{100})$  we can formalize the path of nominal wages as<sup>5</sup>

$$PW_t^{trinity} = PW_{t-1}^{trinity} \left(1 + \frac{\dot{y}_t + \dot{p}_t^{Target} + \dot{c}_t}{100}\right) \quad (6)$$

This benchmark has the capacity to achieve a trinity of targets. (i) The first item on the right side of the equation (5) –  $\dot{y}$  – creates internal stability and keeps the functional distribution of income constant. Thereby, it ensures that the economy will remain on its steady state once it has achieved it. (ii) The second term –  $\dot{p}^{Target}$  keeps the economy on its targeted nominal growth path and ensures that the price level will grow at the envisaged level over the medium term<sup>6</sup>. In EMU, this term reduces to 2% – to the price stability level of the ECB. (iii) Finally, the third term –  $\dot{c}$  – ensures external stability. By being linked to the current account, it keeps the economy in a stable external position, i.e. it has the capacity to correct for internal out-of-equilibrium situations as far as these materialize in the current account.<sup>7</sup> Finally, it can work as a memory item that memorizes any uncorrected misalignments, so any necessary external adjustment can in principle be stretched over a longer period of time.

### 3.3 Where is the correct level of the current account?

In theory, we thus have derived a simple mutually stabilizing benchmark for wage growth. However, a decisive question that has remained unanswered up to this point concerns the level of the sustainable current account, i.e. CA\*.

In principle, it is possible to estimate the sustainable level of the current account (for instance, IMF, 2006). However, different methodologies prevail and their respective outcomes vary widely. Fortunately, however – with regard to EMU – we can resort to a politically derived optimal level of the current account. The so called scoreboard indicators (European Commission, 2011) set the (maximum) acceptable

<sup>5</sup> Note that, in the same vein, the path of nominal wages under der Golden Rule scenario can be represented as  $PW_t^{GR} = PW_{t-1}^{GR} \left(1 + \frac{\dot{y}_t + \dot{p}_t^{Target}}{100}\right)$ .

<sup>6</sup> In the short run deviations will inevitably occur as adjustments introduced via the third term are ongoing.

<sup>7</sup> Recall the dual function of wages. If the classical savings hypothesis applies – that is if the propensity to save out of profits is higher than the propensity to save out of wages – an excessively high wage share will lead to excessive consumption and thus to a trade deficit and vice versa.

level of the current account deficit to  $-4\%$ . Using a symmetric corridor this renders a range of desirable levels of the current account between  $-4\%$  and  $+4\%$ .<sup>8</sup>

## 4 Empirical results: A trinity benchmark scenario analysis

In this section we want to provide the reader with a rough estimate concerning the empirical implications of our proposed wage setting benchmark. In particular, we are interested in a counterfactual scenario that draws the potential evolution of nominal unit labor costs and current account balances of EMU countries under the assumption that national wage bargainers had stuck to the trinity benchmark since the start of the currency union in 1999. We will outline the empirical approach and the respective results in detail in subsection 4.2. However, in order to isolate the influence stemming from the proposed correction term ( $c$ ) which complements our trinity of wage setting, we first look how current accounts would have reacted under a Golden Rule policy.

### 4.1 Observed external balances and the Golden Rule scenario

In order to see how EMU member countries' current accounts would have developed if the Golden Rule of wage setting had been applied, we make use of the existing empirical relation between nominal unit labor costs and the current account. However, before moving in this direction, we go one step back and briefly elaborate on the link between nominal wage growth and unit labor costs.

If nominal wages increase with the growth rate of prices (i.e. inflation) and productivity (as required by the Golden Rule), then nominal unit labor costs will grow at the rate of inflation ( $p$ ). Since nominal unit labor costs are defined as the ratio of nominal wages to labor productivity, i.e. the numerator is measured in nominal terms and the de-numerator in real terms, the productivity growth rate driving both terms cancels out and the ratio increases by the inflation rate only.<sup>9</sup> More formally, the relationship between nominal wages and nominal unit labor cost can best be represented if we first recall the path for nominal wages under the Golden Rule scenario, which we derived in section 3.2, namely:

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<sup>8</sup> Note that the actual range specified in the scoreboard lasts from  $-4\%$  to  $+6\%$ . However, from an economic point of view, in the very long run a country's cumulated current account position will inevitably be balanced rendering an asymmetric corridor dysfunctional. Further, it should be noted that massive capital losses during the crises underline that capital exports from the euro area in the recent past have not necessarily been very wisely invested anyhow (Gourinchas, Rey and Truempler, 2012). This leaves the question whether high current account surpluses – going along with high net capital exports – are generally desirable.

<sup>9</sup> Alternatively, one can think of this ratio in terms of an “inflated” wage share.

$$PW_t^{GR} = PW_{t-1}^{GR} \left( 1 + \frac{\dot{y} + \dot{p}^{Target}}{100} \right). \quad (7)$$

Given that  $ulc_i = \frac{PW_t}{Y_t}$ , it is easy to show that  $ulc_i^{GR} = ulc_{i-1}^{GR} \left( 1 + \frac{\dot{p}^{Target}}{100} \cdot \left( \frac{Y_{t-1}}{Y_t} \right) \right)$ . As the latter term (converges to 1 for large numbers of  $Y_t$ ,<sup>10</sup> the path of nominal unit labor costs of a country  $i$  in period  $t$  under the Golden Rule can thus be approximated by

$$ulc_{it}^{GR} = ulc_{it-1}^{GR} \left( 1 + \frac{\dot{p}^{Target}}{100} \right). \quad (8)$$

Hence, if we create an index variable by setting nominal unit labor costs of all EMU countries to 100 in 1999, i.e.  $ulc_{i,1999}^{GR} = 100$ , we would observe an increase of this variable at the pace of 2% annually, i.e. at the ECB's targeted inflation rate. This is depicted in the left-hand chart of chart 3 which shows one single line – reflecting the fact that nominal unit labor costs are growing by the same rate in all countries.

Yet, if labor costs would have developed differently over the past 15 years, this of course would have altered the course of current accounts as well. In order to roughly assess these potential deviations, we employ trade elasticities published in an IMF working paper by Tokarick (2010). There are many studies that have calculated estimates of trade elasticities. As the magnitudes of these elasticities vary widely, we have decided to employ the estimates by Tokarick (2010) who uses a well-accepted model of international trade to calculate elasticities without using econometrics.

The elasticities provided by Tokarick (2010) give the response of the trade balance (measured in % of GDP) to shocks in the real exchange rate.<sup>11</sup> Fortunately, in EMU the real exchange rate of a member country is just a relationship of relative prices<sup>12</sup>, which are commonly measured by nominal unit labor costs. If we assume – for simplicity – that the current account moves in line with the trade balance<sup>13</sup>, we can easily compute EMU member countries' responses of current accounts to changes in unit labor costs by referring to the trade balance elasticities of Tokarick (2010).

Hence, under the Golden Rule policy scenario (GR) the current account  $CA_{it}^{GR}$  of a country  $i$  in period  $t$  is the sum of the actually realized value of the current account  $CA_{it}^{actual}$  and the change in the current account  $\Delta CA_{it}$  that is triggered by a change in

<sup>10</sup> Note that, as  $Y$  represents the gross domestic product of euro area countries, the expression  $\frac{Y_{t-1}}{Y_t}$  is almost 1. Note also, that this expression algebraically originates out of the fact that we have approximated a relationship that in reality is multiplicative (see equation (1) in section 3.1).

<sup>11</sup> Note that, Tokarick (2010) computes trade balance elasticities under three different scenarios. We use the median of the respective elasticities (Tokarick, 2010, p. 34).

<sup>12</sup> Note that the nominal exchange rate is one in a currency union.

<sup>13</sup> This assumption is not very strong given the high empirical correlation between the respective variables in the EMU-11 countries over the last 15 years.

the real exchange rate  $\Delta r_{it}^{GR}$ . Given the trade balance elasticity,  $\varepsilon = \frac{dCA}{dr}$  the current account under the Golden Rule scenario is then represented by the following expression:

$$CA_{it}^{GR} = CA_{it}^{actual} + \Delta r_{it}^{GR} \varepsilon_i \quad (9)$$

This leaves us with the task of measuring the change in the real exchange rate due to changes in wages. By doing so, we have to consider the fact, that in our scenario all EA-11 countries follow the Golden Rule at the same time, i.e. wages and therefore unit labor costs change simultaneously across those countries compared to their actual labor cost values. Hence, we first compute the actual real effective exchange rate  $reer_{it}^{actual}$  for each country  $i$  given the realized unit labor costs across the region while in a second step we calculate the real exchange rate by  $reer_{it}^{GR}$  assuming that unit labor costs would have evolved according to the Golden Rule. That is, the unit labor cost of each country at time  $t$  corresponds to the value that is given by the line in the left-hand chart of chart 3. Finally, the percentage change between the computed exchange rates gives the change in the real exchange rate

$$\Delta r_{it}^{GR} = \left( \frac{reer_{it}^{GR}}{reer_{it}^{actual}} - 1 \right) 100. \quad (10)$$

To calculate the respective real effective exchange rates we use the geometric weighted average of a basket of bilateral nominal exchange rates, which are deflated using relative unit labor costs. Hence, we define the actual real effective exchange rate as

$$reer_{it}^{actual} = \left( e_{ikt} \frac{ulc_{it}}{ulc_{kt}} \right)^{(1 - \sum_j w_{ij})} \prod_{j=1}^N \left( e_{ijt} \frac{ulc_{it}}{ulc_{jt}} \right)^{w_{ij}} \quad (11)$$

where  $j$  denotes one of the trading partners of country  $i$  that are among the group of EA-11, while  $k$  denotes the region that includes all other trading partners of country  $i$  (not in the group of EA-11). The weight  $w_{ij}$  that is assigned to a partner country  $j$  is based on bilateral trade volumes and is measured as the sum of exports and imports between country  $i$  and  $j$ , expressed as a proportion of total exports and imports of country  $i$ .<sup>14</sup> Finally,  $e$  is the nominal exchange rate which equals 1 for country-pairs that are in the group of EA-11 (i.e.  $e_{ijt} = 1$ ). This is not necessarily the case for the bilateral exchange rate of country  $i$  and region  $k$ . However, as we will see in a moment, we do not have to assign a value to this variable in order to compute the change in the real effective exchange rate  $\Delta r_{it}$ .

<sup>14</sup> Note that we use time averages of trade volumes (1999–2011) to calculate weights, i.e. the latter are assumed to be fixed over time. Trade data are extracted from Eurostat (EU-27 Trade). Missing data are provided by UNComtrade and the Vienna Institute for International Economic Studies.

Consistent with the previous formula, we define the real exchange rate under the Golden Rule as follows

$$reer_{it}^{GR} = (e_{ikt} \frac{ulc_{it}^{GR}}{ulc_{kt}})^{(1-\sum_j w_{ij})} \prod_{j=1}^N (e_{ijt} \frac{ulc_{it}^{GR}}{ulc_{jt}^{GR}})^{w_{ij}}, \quad (12)$$

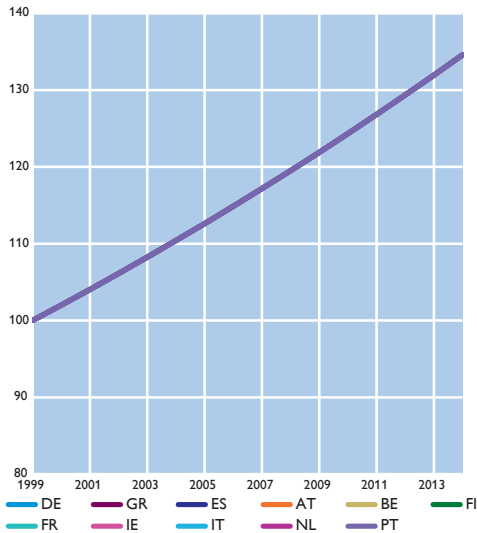
where we assume that unit labor costs outside the EA-11 region do not change and that the nominal exchange rate between country  $i$  and region  $k$  does not change either. Given that, especially for the period of the run-up to the crisis, the aggregated current account balance of the entire region remains relatively unaltered after applying this rule (and also after applying the trinity rule) as compared to the actual development, this does not appear to be an excessively strong assumption. Moreover, note that under the Golden Rule, where all EA-11 countries have the same ULC development,  $ulc_{it}^{GR}$  equals  $ulc_{jt}^{GR}$  such that the second expression of (12) reduces to 1. Under these assumptions it is easy to show that

$$\Delta r_{it}^{GR} = \left( \left( \frac{ulc_{it}^{GR}}{ulc_{it}} \right)^{(1-\sum_j w_{ij})} \prod_{j=1}^N \left( \frac{ulc_{jt}}{ulc_{it}} \right)^{w_{ij}} - 1 \right) 100. \quad (13)$$

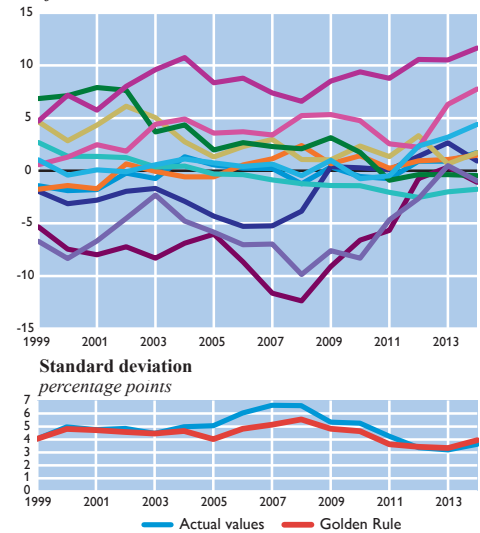
Hence, the change in the real effective exchange rate is only a function of relative unit labor costs in the EA-11 region and of country  $i$ 's trade relations with EA-11 partners and the rest of the world (represented by the term  $1-\sum_j w_{ij}$ ).

Chart 3: The Golden Rule scenario

Nominal unit labour costs – Golden Rule  
Index 1999=100



Current account – Golden Rule  
% of GDP



Source: AMECO Database, authors' calculations.



After having formalized the last necessary component in equation (9) we are now in the position to calculate the evolution of current account balances in EA-11 under the assumption that countries had stuck to the Golden Rule from the beginning of 1999. The results are shown in the right upper chart of chart 3. What becomes immediately apparent is that the spread in current accounts is not much lower compared to the actual evolution of current accounts, as was shown in section 2.2 in chart 2. In effect, the standard deviation of current accounts under the Golden Rule changes only slightly (particularly in the period 2005–2008), as shown by the red line in the bottom right chart of chart 3. Only in the period 2005–2008 the red line is lower compared to the blue line by around 1 percentage point. Although such a situation would certainly constitute a step in the right direction, it is though far from optimal, as we can still observe countries with current accounts much beyond sustainable values. Hence, we can conclude that it would not have been enough to apply the Golden Rule to correct or avoid current account imbalances in the euro area.

## 4.2 The Trinity Benchmark scenario

We have seen in the previous subsection that sticking to the Golden Rule would not have been sufficient to bring current accounts back to desired levels. Therefore, we extend this rule by a correction term, which is a direct function of countries' current account levels. As outlined in section 2.3., we will alter the growth rate of nominal wages if the current account of a country exhibits a value that is outside a certain range  $[-a, +a]$  which is symmetric around zero. This leads to a unit labor cost path that is different from the Golden Rule scenario for all those countries whose current accounts were outside this range, at least at one point in time. Hence, our task is to find a rule that – when applied by each country individually – leads to convergence (to a specified range) in current accounts across the EA-11. Moreover, as the rule should serve as a benchmark for the macroeconomic dialog in the euro area, it should be designed in a way as to allow easy application. For the latter reason, the rule will depend only on factors that can be influenced by the country itself, i.e. policy makers do not have to take into account potential changes of unit labor costs of other countries.

More concretely this means that countries, whose current accounts are outside the range in the previous period, will alter their nominal unit labor cost growth rate (of  $\dot{p} = 2\%$ ) by the amount that is necessary to close the gap between their actual and the specified minimum (or maximum) current account value. That is, we need to know by how much unit labor costs have to adjust in country  $i$  so as to shift the current account towards the respective threshold level ( $\pm a$ ). Hence, to calculate this we need to know the gap between the actual level of the current account and the closer threshold level ( $\Delta CA_{i,t-1}^{gap}$ ). Recalling the relationship introduced in the previ-

ous subsection  $\varepsilon = \frac{dCA}{dr}$ , we can postulate that the gap will be closed if the real exchange rate of country  $i$  is altered by  $\Delta r_{it}^{gap} = \frac{\Delta CA_{i,t-1}^{gap}}{\varepsilon_i}$ . If we further assume that trade partners' nominal unit labor costs are not altered – which corresponds to the case where policy makers do not take into account potential changes of unit labor costs of other countries – the necessary change in the real exchange rate ( $\Delta r_{it}^{gap}$ ) is equal to the growth rate of unit labor costs that is required to achieve the desired current account movement, i.e.,  $\Delta r_{it}^{gap} = \Delta ulc_{it}^{gap} = \left( \frac{ulc_{it}}{ulc_{it-1}} - 1 \right) 100$ . To see this, note that – consistent with the calculation method of exchange rates in the previous sub-section – the change in the real exchange rate from one period to another can be represented in the following way:

$$\Delta r_{it}^{gap} = \left( \frac{reer_{it}}{reer_{it-1}} - 1 \right) 100 = \left( \left( \frac{ulc_{it}}{ulc_{it-1}} \right)^{(1 - \sum_j w_{ij})} \prod_{j=1}^N \left( \frac{ulc_{jt-1}}{ulc_{it-1}} \frac{ulc_{it}}{ulc_{jt}} \right)^{w_{ij}} - 1 \right) 100 \quad (14)$$

If we assume that trade partners' nominal unit labor costs are not altered, i.e.  $ulc_{jt} = ulc_{jt-1}$ , the expression in (14) reduces to  $\left( \frac{ulc_{it}}{ulc_{it-1}} - 1 \right) 100$ , which is simply a growth rate of unit labor costs of country  $i$ .

Given the fact that nominal unit labor costs of some trade partners will move up and of some down if the trinity rule was applied, it is fair to assume that trade partners' nominal unit labor costs do not change on average. The relatively symmetric situation with regard to current account imbalances before the crisis allows us to impose this assumption without a huge loss in realism. Against this background, our approach will only trigger a mild overshooting. If each country imposed the trinity rule, a country with an excessive deficit could expect the aggregate foreign unit labor cost environment to move slightly up, and vice versa. However, the nice property accruing out of our approach is that we can see how the situation would evolve if each country introduced the rule unilaterally (thus without the necessity of a transnational agreement on its application). We will see that nonetheless this will lead to an “invisible hand” of wage settlements.

For each country, the required adjustment to close its current account gap is thus represented by a yearly growth rate at which its unit labor costs must deviate from the Golden Rule benchmark growth rate (of  $\dot{p}^{Target} = 2\%$ ). Fortunately, this rate can be easily computed, as the current account gap  $\Delta CA_{i,t-1}^{gap}$  as well as the elasticity  $\varepsilon_i$  are known parameters.

In the following, we will re-label the growth rate at which unit labor costs shall deviate from the Golden Rule benchmark scenario  $\Delta r_{it}^{gap}$  by the term i.e.  $\dot{c}_i = \frac{\Delta CA_{i,t-1}^{gap}}{\varepsilon_i}$ , in order to align notation with the theoretical part of the paper. Finally, we are in the position to formalize the trinity wage rule, which will specify the path of nominal unit labor costs  $ulc_{it}^{trinity}$  in the Trinity Benchmark scenario:

$$ulc_{it}^{trinity} = ulc_{it-1}^{trinity} \left( 1 + \frac{\dot{p}_{it}^{Target} + \dot{c}_i}{100} \right) \quad (15)$$

$$\dot{c}_{it} = \begin{cases} -\left| \frac{CA_{i,t-1}^{trinity} + a}{b\varepsilon_i} \right|, & CA_{i,t-1}^{trinity} < -a \\ 0, & -a \leq CA_{i,t-1}^{trinity} \leq +a \\ +\left| \frac{CA_{i,t-1}^{trinity} - a}{b\varepsilon_i} \right|, & CA_{i,t-1}^{trinity} > +a \end{cases} \quad (16)$$

where  $ulc_{i,1999}^{trinity} = 100$  and  $CA_{i,1999}^{trinity} = CA_{i,1999}^{actual}$ . Recalling the relationship between nominal unit labor costs and nominal wages from previous sub-section, the trinity rule for nominal wages can be represented as follows:

$$PW_{it}^{trinity} = PW_{it-1}^{trinity} \left( 1 + \frac{\dot{y}_{it} + \dot{p}_{it}^{Target} + \dot{c}_{it}}{100} \right) \quad (17)$$

From (15) we see that the path of nominal unit labor costs will be equal to the Golden Rule scenario if the adjustment parameter  $\dot{c}_{it}$  is equal to zero in each point in time. This will only be the case for countries whose current accounts were within the range of  $[-a, +a]$  in the period 1999 to 2013. Otherwise, their labor costs will deviate from the growth rate path of  $\dot{p}$  by the amount that is defined in (16). The specified amount is added to  $\dot{p}$  if the country's current account is in surplus and above the specified threshold, as unit labor costs will have to grow faster compared to the Golden Rule path in order to bring current accounts back to the desired range. On the contrary, for countries with large current account deficits, the adjustment has to be subtracted in order to boost competitiveness as to reduce the deficit accordingly. In addition to the already introduced input parameters, the adjustment term  $\dot{c}_{it}$  is a function of the parameter  $b$ , which shall serve as a smoothing device. If this parameter, which has the range  $b=[1, \infty]$ , equals 1, then all of the required labor cost adjustment will be performed promptly (within one year). As this might involve a quite drastic labor cost adjustment, the parameter  $b$  can be set at higher values in order to moderate the required adjustment. If, in the other extreme case,  $b$  is set to infinitum, the trinity rule converges to the Golden Rule of wage setting. In the following empirical application we set  $b=2$ . Hence, countries will adjust their labor costs only by the half of the entire adjustment that would be necessary to close the current account gap instantaneously. Moreover, as already discussed in section 2.3., the threshold parameter of the current account range is set to  $a=4$ .

Once unit labor costs are determined in period  $t$ , the current account can be computed as follows

$$CA_{it}^{trinity} = CA_{it}^{actual} + \Delta r_{it}^{trinity} \varepsilon_i \quad (18)$$

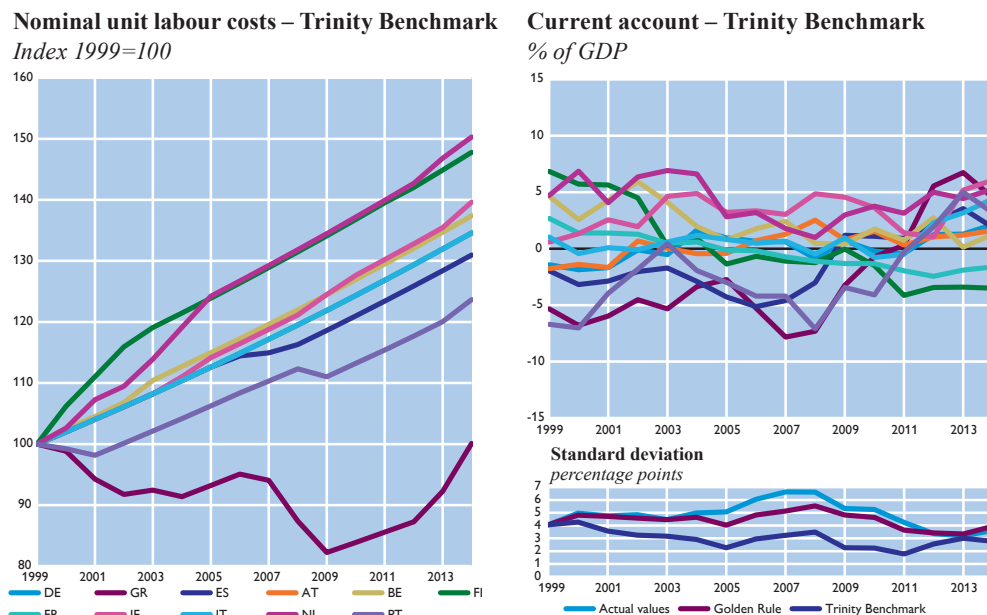
where  $\Delta r_{it}^{trinity} = \left( \frac{reer_{it}^{trinity}}{reer_{it}^{actual}} - 1 \right) 100$  is determined along the same lines as in the Golden Rule scenario. The resulting expression though deviates slightly from the one in the previous sub-section, as unit labor cost paths differ across countries under the trinity scenario (i.e.  $ulc_{it}^{trinity} \neq ulc_{jt}^{trinity}$ ). Hence, the change in the real exchange rate of country  $i$  is now also a function of country  $j$ 's unit labor costs under the trinity rule:

$$\Delta r_{it}^{trinity} = \left( \left( \frac{ulc_{it}^{trinity}}{ulc_{it}} \right)^{(1 - \sum_j w_{ij})} \prod_{j=1}^N \left( \frac{ulc_{jt} ulc_{it}^{trinity}}{ulc_{it} ulc_{jt}^{trinity}} \right)^{w_{ij}} - 1 \right) 100. \quad (19)$$

Having derived the last necessary component allows computing the current account under the trinity rule. Before we discuss the respective results, we want to briefly summarize the individual calculation steps. First, unit labor costs are determined in year  $t$  (15). A change in unit labor costs triggers a change in the exchange rate, which is calculated according to expression (19). This change triggers a reaction in current accounts in the same period, which is computed in (18). The current account in year  $t$  will in turn serve as an input parameter to determine the next period's unit labor costs ( $t+1$ ), thus repeating the whole process for period ( $t+1$ ). Following this procedure, we end up with a path of unit labor costs and current accounts for all EA-11 countries under the trinity scenario. The results are represented in chart 4.

As can be seen from the left-hand chart in chart 4, there are seven countries that deviate from the Golden Rule path of labor cost growth. While, Spain, Portugal and Greece are among those countries that would have needed lower labor cost growth rates compared to the Golden Rule scenario, there is also a group of countries, whose labor cost growth rates should have been higher than 2% in order to avoid current account surpluses of more than 4% percent. This group includes Belgium, Ireland, Finland and the Netherlands. All other countries would have evolved along the lines of the Golden Rule scenario.

Chart 4: The Trinity Benchmark scenario



Source: AMECO Database, authors' calculations, COMP 1999–2014.

The right upper chart of chart 4 represents the corresponding development of current accounts under the assumption that countries had realized unit labor cost growth rates assigned by the trinity rule. What becomes immediately clear is that current accounts are much closer to the desired range compared to the Golden Rule scenario (see upper right chart in chart 4) and more so compared to the actual development of current accounts. This is especially visible in the lower right chart of chart 4, which gives standard deviations of the current accounts under all three scenarios. In contrast to the Golden Rule, current accounts in the trinity scenario start converging already in the beginning of the 2000s and keep staying close to each other throughout the whole period.

Note that, there are two reasons why not every country in each period is within the defined range  $[-4,+4]$ . First, the adjustment parameter  $b > 1$  prevents countries from making the total necessary adjustment to close the current account gap within one year. Second, even if the parameter would have been set to 1 (total adjustment), there might be cases, where individual countries' current accounts end up being above the range. This is because the change in current accounts, which is triggered by a change in the real exchange rate ( $\Delta r_{it}^{trinity}$ ), is added to the actual realized value of the current account in our scenario (recall equation 14). Since the latter value is not known at the time unit labor costs are determined, the realized current account under the trinity scenario might hence lie beyond the desired range. Notwithstand-

ing these facts, the proposed policy rule is still suitable to satisfy the desired goal, namely to keep the economies' external positions stable and hence to avoid dangerous imbalances. Therefore, we can conclude, that the proposed Trinity Benchmark might serve as an anchor for national policy makers to achieve not only internal and price stability, but also external stability as measured by the current account balance.

### 4.3 Caveats and limitations

A certain number of caveats concerning the rule and limitations concerning our modelling approach arise out of the above discussion. As concerns the caveats it has to be stressed that there – of course – are non-wage factors affecting the current account. This relates to non-price factors of competitiveness (e.g. quality, reputation, etc.) as well as to drivers of demand other than wages (e.g. investment, credit, etc.). However, as argued in the introduction it appears as if wages play as far the most important role with regard to dangerous imbalances.

Moreover, the proposed benchmark relies on a constant mark-up. A constant mark-up however is a standard assumption in macroeconomics (and also the basic assumption of the Golden Rule). There are only two potential scenarios in which a change in the mark-up might occur. These are the occurrence of a supply shock (oil price, competitiveness, etc.), and a catching up process in which the capital intensity of production increases. In the first case the effect will be temporary, while in the second case, the change is warranted and it will ultimately be up to social partners to decide whether they are confronted with such a situation and a deviation of the rule is justified.

Finally, due to nominal wage rigidity there are non-linear costs to adjust nominal wages. In particular, costs typically increase disproportionately at the zero lower bound. In principle this is a problem that also applies to the Golden Rule. Though, while countries exist that have experienced relatively calm periods of nominal wage cuts (e.g. Estonia), these have been very special cases. In general we do not believe that the potential benefit reaped by nominal wage cuts can potentially compensate for the huge costs in terms of industrial conflict. Fortunately, using the benchmark introduced above nominal wage cuts hardly ever will be necessary. One of the main advantages of the benchmark is the fact that the current account serves as a kind of memory item. If the adjustment in a given year has been insufficient due to nominal wage rigidity this will inevitably crop up in the next year's realized current account. Under normal circumstance thus it would be possible to conduct necessary adjustments via real wage restraint.

With regard to the limitations, we also have to emphasize the simplifying approach of modeling a counterfactual scenario. In particular, we implicitly assumed zero elasticity of demand with regard to wages (this includes the assumption of an unchanged policy rate) and an unchanged exchange rate. Concerning demand

effects, however, the bias introduced hereby would actually overestimate the necessary adjustment. With regard to the exchange rate it should be noted that current account adjustment run in both directions, effectively minimizing the overall effect on the aggregated current account of EMU.

## 5 Discussion and conclusion

During the first years of the euro area, wage dispersion across member states has been one of the key drivers of widening macroeconomic imbalances both within and between EMU countries. Consequently, the recently published Five Presidents' report<sup>15</sup> takes up the crucial issue of wage divergence in a currency union and specifically proposes the creation of national "Competitiveness Authorities" in each member state. Those national authorities would be supposed to assess the performance and national policies in the field of competitiveness, and should also "*assess whether wages are evolving in line with productivity and compare with developments in other euro area countries and in the main comparable trading partners*" (p. 8). From this, the question naturally arises how policy makers can calculate or propose such a "sustainable" rate of wage growth. Earlier literature on wage setting benchmarks have commonly proposed that wage growth should comply with the so-called Golden Rule, which states that wages should grow along with productivity and inflation (or the inflation target, respectively). In a first step, we have therefore simulated a scenario assuming that member states had complied with the Golden Rule of wage setting from the start of the euro area in 1999. This scenario analysis, however, shows that compliance with the Golden Rule would not have prevented external imbalances within EMU from arising. While the report does not propose a more detailed benchmark for wage growth, this paper subsequently derived a theoretical framework for wage setting ensuring not only (1) internal stability in terms of a stable functional income distribution and (2) price stability in accordance with the ECB's notion of the inflation target, but also (3) external stability defined as a specific range of "sustainable" current account balances in individual member states. If a country moves outside this range of "sustainable" current account balances, our benchmark equation includes a simple correction mechanism that brings the country back to equilibrium. In our simple scenario analysis, we are able to show that the compliance of member states to such a Trinity Benchmark of wage setting would have led to substantially lower external imbalances within the euro area. Thus, a stronger coordination of wage setting across EMU countries does

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<sup>15</sup> Juncker, J.-C., Tusk, D., Dijsselbloem, J., Draghi, M. and Schulz, M. (2015). Completing Europe's Economic and Monetary Union. Available at [http://ec.europa.eu/priorities/economic-monetary-union/docs/5-presidents-report\\_en.pdf](http://ec.europa.eu/priorities/economic-monetary-union/docs/5-presidents-report_en.pdf).

have the potential to prevent the build-up of dangerous macroeconomic imbalances across member states of the euro area.

In line with the Five Presidents' report, however, we want to stress that the above derived optimal corridor for member countries' wage developments is considered to serve as a benchmark only and should not be a fixed rule which countries are obliged to follow. Instead, it might be useful as a reference value for wage bargainers, while wage autonomy and the role of social partners should not be put into question. In particular, our simple wage benchmark could be used by the proposed national competitiveness authorities to calculate an annual benchmark as a rough guidance for national actors and institutions in the wage formation process.

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# **The effects of institutional instability in collective bargaining: a long-term analysis of changing collective bargaining actors and structures**

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## **1 Introduction**

This article takes up a classical theme in political economy and institutional economics – the consequences of institutional change – by analyzing the impact of changes to the institutional structures of collective bargaining on macroeconomic performance. Changes to collective bargaining structures, i.e. in the level, domain and form of coordination of bargaining among different actors, have been pervasive across industrialized countries in recent decades. Not least since the advent of the current economic crisis where in many European countries collective bargaining has been changed on the basis of recommendations by the European Commission, the European Central Bank and the International Monetary Fund, the so called Troika (Marginson, 2014). However, the theoretical and empirical foundation for the effects of these and other changes in collective bargaining structures are unclear. In part, this is due to the fact that the effect of any change itself has largely been neglected in existing studies.

One strand of literature on the relationship between collective bargaining institutions and socio-economic aggregates has attempted to assess the impact of particular bargaining structures on various direct outcome variables of collective bargaining such as wage increases and labor costs, as well as on related macro-economic indicators or concepts such as competitiveness, (un)employment, inflation, and (wage) inequality (e.g., Brandl, 2012; Calmfors and Driffill, 1988; Iversen, 1998; Johnston, 2012; Soskice, 1990; Traxler and Kittel, 2000). Another strand has focused on the change or resilience of institutions for collective bargaining facing changing socio-economic and technological conditions (e.g. Crouch, 1993; Hall and Soskice, 2001). The axis of contention in the former has thus been which institutional struc-

tures performed relatively better in terms of particular macroeconomic goals, while the axis of the latter has been the existence, direction and causes of institutional change. Somewhere in between the two, the issue of macroeconomic impacts of institutional change itself has thus been largely ignored or assumed. For the first strand, this has probably been because after decades of theoretical and empirical debates there is still no widely agreed consensus on which institutional structure is associated with the comparatively “best” performance (e.g. Brandl, 2012), so that the focus on analyzing effects of the structure itself is still challenging and required. For the latter, the cost of change has been theoretically assumed by many scholars seeing path-dependence in bargaining structures (Hall and Soskice, 2001) or, alternatively, it is the direction and causes of change – rather than the effects – that receive attention (e.g. Baccaro and Howell, 2011; Thelen, 2014).

In this article we explain and argue that in most countries collective bargaining structures have changed considerably over time and these changes have come with non-negligible macroeconomic costs, at least in the short-to-medium term. Theoretically, we argue that these costs arise due to the disruption of mutual trust between the actors involved in collective bargaining. We argue further that mutual trust between actors is of vital importance for the efficacy of collective bargaining so any disruption of trust impairs their efficacy. Consequently the costs of the change are defined here as the impaired efficacy due to the change. We propose that institutional stability fosters trust between all actors involved in collective bargaining by creating mutual expectations about behavior which forms the basis for stable wage determination and the provision of an important public good, i.e. for wage moderation. Institutional change might therefore lead to short-to-medium term collective action problems (Farrell, 2009) and increased transaction costs in labor markets (North, 1990).

Empirically, we analyze the relationship between institutional change and macroeconomic performance using a Time-Series-Cross-Sectional analysis on the basis of yearly data from 1965 to 2010 of 33 countries on two key macroeconomic indicators; inflation and the unemployment rate. The article is organized as follows. Following this introduction, we review the relevant literature on collective bargaining structures and macroeconomic performance and develop our theoretical arguments on how institutional change affects the efficacy of collective bargaining. Next, we present the methodological and empirical strategy for testing the hypotheses. Finally, we conclude the analysis and discuss the implications of our study in the context of current theoretical and empirical debates together with the implications for policy-makers attempting to reform labor market institutions.

## 2 Impact of collective bargaining structures, institutional change and trust

One major economic goal for policy makers in industrialized economies is to maintain or even increase the '*competitiveness*' of their economies. In this economic policy context, one key function of collective bargaining institutions is ensuring that wages are aligned or even slightly below productivity increases, i.e. that they produce wage moderation. The idea behind wage moderation is that companies in the economies are able to maintain or even increase their competitiveness and in the end, from a macroeconomic perspective, low inflation and high employment are ensured. Scholars disagree over the relationship between different collective bargaining structures and the desired macroeconomic outcomes.

The standard theoretical argument – based on Mancur Olson (1965) – is that encompassing bargaining structures cannot externalize the negative consequences of pay increases, so they are forced to moderate them. There is, however, disagreement about what encompassment means procedurally and institutionally. One position relates to the level at which pay agreements are concluded, and thus equates encompassment with bargaining centralization. The original thesis associated with corporatist theory was that beneficial effects of collective bargaining institutions monotonically increase with the degree of encompassment (e.g., Bruno and Sachs, 1985). The other position argues that economy-wide coordination of lower-level bargaining also ensures encompassment in a way analogous to centralized bargaining (Soskice, 1990). Both positions, however, concur in assigning superior capacity for internalizing pay externalities to the level of the peak associations of business and labor since their membership domains are most encompassing. The counter position presents a hump-shape argument which contends that extremes (i.e. centralized/coordinated and decentralized/uncoordinated structures) both outperform industry-level bargaining structures as the latter work as performance-inhibiting cartels (Calmfors and Driffill, 1988).

However, as stressed in subsequent debates, the effects of collective bargaining depend upon additional contextual factors such as the monetary policy regime, the organizational structure of actors and compliance between actors (e.g., Calmfors, 1993; Iversen, 1998; Johnston, 2012; Traxler and Brandl, 2012). Compliance problems horizontally between different actors and vertically between differing bargaining levels potentially increase the greater the distance of an agreement from the bargaining levels which the agreement claims to cover. Empirical analysis has found that peak-level agreements are highly effective in pay moderation only when they are vested with governability (i.e. institutional means of controlling lower-level pay-setting). Otherwise, they perform no better than any other bargaining structures (Traxler and Kittel, 2000).

The proposition that peak-level arrangements compel the bargaining actors to internalize negative externalities fully applies to closed economies only (Calmfors and Driffill, 1988; Calmfors, 1993). In conditions of economic openness, especially in tandem with a fixed exchange rate, the incentive for pay moderation decreases under peak-level bargaining, as this economic situation creates the opportunity for sheltered sectors to externalize pay hikes. According to the advocates of the hump-shape thesis, the hump-shape becomes flatter under these circumstances, but will nevertheless hold. This is questioned by Traxler and Brandl (2012). They argue that economic openness transforms the calculus of peak-level bargaining from an economic into a political question: faced with the interest cleavage between the exposed sector (e.g. manufacturing) and the sheltered sector (e.g. construction or public sector), the peak-level trade union organization will unify these conflicting interests so that political support for its policy is maximized. This implies choosing a policy line which favors the “median affiliate”, i.e. the trade union which provides the peak-level trade union with majority support. Since the position of the median affiliate in the divide between the sheltered and exposed sector is contingent on the membership composition of the peak-level trade union, the performance of peak-level arrangements is argued to be indeterminate. The theoretical and empirical finding is that intermediate and decentralized structures if coordinated by the exposed sector – for example via pattern bargaining (Ibsen, 2013) – significantly outperform other arrangements (Traxler and Brandl, 2012).

### **3 The role of trust in collective bargaining**

With the exception of a few studies emphasizing the (informal) politics of bargaining (e.g., Ibsen, 2013; Traxler and Brandl, 2012), the link between macroeconomic performance and the structures of collective bargaining revolves around formal coordination and compliance procedures among actors. By contrast, Farrell and Knight (2003) argue that mutual trust among actors can be a sufficient mechanism for coordination and compliance in order to ensure the production of collective goods, such as wage moderation. If compliance is neither existent nor effective however actors can never be entirely sure if other actors will not defect from wage moderation. Such a situation is typical in collective bargaining structures in which many actors are involved. Horizontal collective bargaining, for example, is rarely supported with formalized sanctions of non-compliance except in countries with strong centralized bargaining. As noted on the cleavage between exposed and sheltered sectors, this introduces an element of risk in the production of wage-moderation and actors in one industry will have to make a ‘*leap of faith*’ when moderating their own wages since they cannot be sure that other industries will comply. This ‘*leap of faith*’ rests completely on mutual trust. Thus mutual trust is focal for

the efficacy of collective bargaining and consequently for the ability to achieve beneficial goals.

It is striking that countries with institutional structures of collective bargaining in which compliance rests heavily on such '*leaps of faith*', such as for example Austria, Denmark, Finland, Germany, Norway, and Sweden, usually perform above average economically (e.g., Brandl, 2012; Soskice, 1990; Traxler and Kittel, 2000). So the existence of trust in collective bargaining can be considered as focal and a loss (or disruption) of trust can be expected to hinder the efficacy of collective bargaining. While trust is often mentioned in studies of collective bargaining (e.g., Fox, 1974; Walton and McKersie, 1965) its role in establishing and sustaining mutually beneficial outcomes, e.g. wage moderation, is usually not empirically addressed.

However, there exist various advanced theoretical discussions about the role of trust in public goods provision. Farrell (2009) and Farrell and Knight (2003) convincingly show that institutions actually promote trust and trustworthiness leading to production of collective goods. In the first step, this entails recognizing that institutions are not merely formally sanctioned rules that serve a well-specified function. Rules cannot be assumed to be entirely clear or do not fit the specific situation leaving room for interpretation by actors. Instead institutions convey information about the expected behavior of certain actors in certain situations. Formally, we can state that A trusts B when actor B is expected to do X in situation Z. If B fails to do X, this will be visible to actor A and there can be material or normative sanctions. However, as long as B knows about the visibility of her actions, it is in her interest to do X. Thus, A (for example a union in manufacturing) can trust B (a union in construction) to do X (moderate wages) in situation Z (economic boom) because it is in B's interest to do so due to institutionalized procedures for wage bargaining. This is exactly what Hardin (2002) describes as "encapsulated interests". That is, A trusts B regarding Z, because in the matter Z, the interests of B encapsulates the interests of A. Institutions furthermore convey information about what B's intentions are and what B is doing. This transparency makes it possible for A to follow B, enhancing the trustworthiness of B. In turn, B knows that A trusts B, making A trustworthy in relation to production of collective goods. Thus, mutual expectations about behavior are formed (Farrell, 2009).

All institutional structures of collective bargaining pertain to distinct procedural rules and norms which are shared among actors and define the process of bargaining as well as the connection between bargaining areas and bargaining levels. In each structure, three main trust relationships between actors in different areas and levels exist. The ability to build up trust along these three channels which are needed to produce collective goods differs however in different institutional structures. Firstly, there is a trust relationship between the two sides in the employment relationship, i.e. between employers and unions within each bargaining unit.

The second trust relationship refers to bargaining units at different levels – ranging from single-employer, multi-employer to cross-sectoral bargaining structures (Clegg, 1976). On different levels, the rules and norms regarding coordination define further characteristics of the institutional structure. Thirdly, there is a trust relationship horizontally, i.e. across bargaining units on the same level. However, the rules and norms in the interaction between actors along the three relationships can be very different in different institutional structures – all associated with differences in their ability to enable actors to build up and maintain mutual trust. We expect that changes in any dimension, i.e. in the institutional structure, will disrupt trust between actors and thus erode the production of collective goods with possible negative macroeconomic consequences (Farrell, 2009). Note that these issues are independent from the question of which institutional structure enables which degree of trust among actors and thus which structure results in which economic performance.

#### **4 The costs of institutional change and the loss of mutual trust**

We argued that mutual trust is of vital importance for the efficacy of collective bargaining and any disruption of trust impairs the efficacy of bargaining. On the basis of this, we defined the costs of the institutional change by the impaired efficacy due to the change. Theoretically, the costs of institutional change have been addressed in the literature in different ways and from different perspectives. For example Brandl and Ibsen (2015) argue on basis of shifting power relations that institutional change of collective bargaining structures implies costs and hinders the efficacy of collective bargaining. From a more general perspective, path-dependence theory based on increasing returns posits that actors will refrain from changing institutions due to large fixed costs, learning effects, coordination effects and adaptive expectations (Pierson, 2004). Whilst devised to explain institutional stability, the same mechanism of collective learning and adaptation applies in our account. As Pierson states (2004, p. 38): *“The point is not that learning never occurs... Rather, learning is very difficult and cannot be assumed to occur.”* In other words, institutional change will have costs as actors scramble to re-adjust mutual expectations about behavior needed for collective action to occur. The difference compared to Pierson’s account is that we are not trying to explain stability or change itself but rather want to know the effects of institutional change ex post.

Another perspective on the costs of institutional change comes from theories on institutional complementarity. Most notably, Hall and Soskice’s (2001) Varieties of Capitalism framework is built around institutional complementarity according to which configurations of institutional spheres produce synergies, i.e. enhance the performance effect of each other. A change in one sphere would therefore jeopard-

dize complementarity and have negative macroeconomic effects. The complementarity-thesis has been criticized for lacking empirical support (e.g., Deeg, 2007). Without discussing this further, it suffices to note, that a trust-based explanation of costs from institutional change is not incompatible with the complementarity-thesis. Indeed, the trustworthiness of actors in one institutional sphere might be disrupted by institutional change, leading actors in other institutional spheres to defect from collective action. This might lead to cumulative negative effects. As with increasing returns, however, the complementarity-thesis is devised primarily to explain stability rather than the effects of changes, although negative effects of change are inherent in the hypothesis.

As regards collective bargaining here in this work, the cost of change originates in the disruption of trust among actors due to the change. Because actors are not fully cognizant of the effects of new institutions due to the erosion of mutual expectations there will always be some costs of institutional change. Typically, changes to collective bargaining structures imply vertical and horizontal re-ordering of bargaining units and levels. Hereby, bargaining actors are substituted for others and there is little information about how new actors have acted in the past and therefore how they will act in the future. The consequence of these changes is that it might lead negotiators to focus on distributive concerns rather than integrative concerns that can undermine wage-restraint (Walton and McKersie, 1965). Horizontally across industries, institutional change might disrupt trust that sheltered sectors will moderate wages. If bargaining parties are concerned about relative earnings – which they typically are (Elster, 1989) – this might spur unions in other industries to take out higher wages. Vertically, a change in bargaining institutions might also spur ambiguity about what to expect of bargaining at other levels, which in turn spurs a breakdown of the “division of labor” between bargaining levels. This is particularly likely in processes of decentralization where more bargaining autonomy is delegated to the company level or vice-versa under centralization, when lower level actors continue to bargain wage increases on top of central increases.

The sources for disruption of trust are thus multiple and pertain to both moves to centralize and decentralize. Firstly, as noted, unions concerned about relative earnings will take out a risk-premium of higher wages to prevent falling behind. In turn, this might spur a wage-inflation spiral with other unions making compensatory claims. Secondly, employers unsure about the consequences of institutional change might be cautious about hiring until the effects of changes are known. A key function of collective bargaining for employers is precisely that the price of labor is known for a foreseeable future which makes personnel planning possible (Swenson, 2002). So, even institutional change that favors employers might have negative employment effects, because companies will delay employing until the price of labor is clearly known in order to reduce opportunity costs. This means that complete decentralization might also lead to performance losses – contrary to neo-classical



assumptions. Moreover, complete decentralization could spur a higher level of industrial conflict because of shifting power relations also leading to performance loss (Brandl and Ibsen, 2015). As a corollary, even supposedly performance-enhancing institutional change, for example from low compliance horizontal bargaining coordination to high compliance bargaining coordination, might – *ceteris paribus* – lead to performance losses.

There are, therefore, multiple reasons why change in collective bargaining structures, all other things being equal, is costly. Trust, moreover, has an important and strong temporal dimension. The question is how costly and how long it takes to fully restore the efficacy of the new institutional structure. Independent of the magnitude and duration of the cost effect, it can be assumed that the more changes the more costs accumulate. Consequently, institutional instability – that is, multiple changes – are associated with negative effects. Arguably, these negative effects of institutional change and instability will most often be temporary as actors readjust agency to new institutions, build up new mutual expectations of behavior and foster trust again. However, as the literature on trust has established, trust takes considerably longer to build up than to break down (Braithwaite and Levi, 1998; Farrell, 2009). In contrast to previous studies focusing on the effects of different institutional configurations on macroeconomic performance, we therefore expect considerable initial costs from institutional changes when trust based on mutual expectations about behavior breaks down.

## **5 Data, modelling strategy and empirical analysis**

In order to test our hypothesis of the effects of institutional change and instability we use a data set which covers 33 countries and spans a period from 1965 to 2010. Our sample differs from those used in other studies of the effects of different institutional collective bargaining coordination structures (e.g. Brandl, 2012; Calmfors and Driffill, 1988; Soskice, 1990; Traxler and Kittel, 2000) as it considers a significantly higher number of countries and a longer time period. The large number of countries covers a wide range of very different institutional structures and contextual factors in which collective bargaining takes place. In the following analysis we test the effect of the institutional instability variable on inflation and unemployment rates. Both dependent variables are derived from literature and have become standard indicators for the performance of collective bargaining structures in comparative literature. Arguably, other indicators such as for example labor costs and income equality are important but we concentrate on indicators directly related to predominant debates (e.g. Calmfors and Driffill, 1988).

We are interested in the effects of instability of the institutional structure of collective bargaining and not primarily in the effects of the different institutional structures. Thus the focal explanatory variable in this study is a measure of institu-

tional instability. We base our measure of instability on basis of changes in the categorization of collective bargaining coordination by Visser (2014). The categorization is based on variations in the level on which collective bargaining takes place, the actors involved and the extent of coordination among actors within a particular institutional framework. The categories are: (i) company wide and uncoordinated bargaining; (ii) company wide, but weakly coordinated bargaining; (iii) industry wide but uncoordinated bargaining; (iv) industry wide and coordinated bargaining; (v) economy wide bargaining. According to the above theoretical reasoning, any change in a country from one of the above institutional structures to another implies negative effects on the efficacy of collective bargaining. The more changes in the institutional structure, i.e. the higher the institutional instability, the more hindered is the efficacy.

Any change from one category to another in one year to another implies that different actors, on different levels and with different relationships, are involved in collective bargaining. Consequently we operationalize our instability measure by defining a change in a country from one year to another from a particular institutional structure to another as one change which is numerically expressed by 1. We moreover, hypothesize that neither the direction of change (e.g. change to higher or lower levels) nor the magnitude of change (i.e., overleap of categories) is important. What matters is that the institutional structures and the relevant trust relationships have changed. Neglecting the direction of change theoretically might seem controversial, but as explained, the efficacy of collective bargaining in any institutional structure rests on mutual trust between actors and the trust relationship is disrupted independently of the direction of change.

As building up trust takes time, i.e. will take some years, it is likely that the effect of the institutional change continues to have an effect in the following years. It is also reasonable to expect that the effect of the change continuously fades over time as actors start to restore and build up trust again from year to year. In other words it is likely that actors will align their expectations to the new rules of the game in the new institutional structure over time. Thus the past casts a shadow over the efficacy of collective bargaining in the years following the change but the negative effect weakens over the years. However, there are no theoretical or empirical evidences available regarding the length of the *shadow of the past*. Therefore, we consider and test in our analysis alternative “operationalizations” of such a shadow of the past. We concentrate here on three versions: in the first we suppose that trust is restored in the year following the change so that there is just a one year “shock” following the change. In version two however we suppose that trust is gradually restored two years after the institutional change. Thus the instability variable is defined by considering the impact of institutional change by 1 in the year the change occurred ( $t_0=1$ ) and in the following two years. But, in the following year ( $t_1$ ) the effect of the change is weaker. The weaker effect is numerically expressed and mea-

sured by 0.8 ( $t_1=0.8$ ). In the second year after the change the effect shrank to 0.4 ( $t_2=0.4$ ). In the third year after the institutional change there is no effect ( $t_3=0$ ) as it is assumed that trust has been fully built up again. Building up trust in two years is an optimistic perspective of the effect of institutional change on collective bargaining coordination. Therefore, in version three we assume that building-up trust takes longer, i.e. there is a four year shadow of the past and the effect declines at a constant rate in the four year period after the institutional change:  $t_0=1$ ,  $t_1=0.8$ ,  $t_2=0.6$ ,  $t_3=0.4$ ,  $t_4=0.2$ ,  $t_5=0$ .

Repeated changes increase the institutional instability further as the effect of change accumulates. While the operationalization of version one corresponds with a “simple” dummy variable approach, the variable for the shadow of the past of 2 and 4 years leads to variables with a relative high variance over time. Our institutional instability measure considers all institutional changes by adding the effect of any new changes to the previous changes.

In addition to the focal explanatory variable, several more groups of variables enter the models in order to control for other possible factors affecting the dependent variables. The first category relates to the economic context and includes yearly (i) economic (GDP) growth, (ii) change of the exchange rates (to US Dollar), (iii) change in the terms of trade, (iv) change in the openness of the economies defined by countries’ imports and exports, and (v) inflation for explaining the unemployment rate and vice versa the unemployment rate for inflation. All these variables aim to control for different economic situations in which collective bargaining and institutional change takes place. The second category of control variables relates to other aspects of the industrial relations system and includes (i) trade union density, (ii) the fragmentation of the union system, and (iii) the existence and relevance of extension practices in collective bargaining. Closely related to the second category is the third category which relates to the institutional structure of collective bargaining coordination and includes the coordination structure and collective bargaining coverage. The variable coordination structure controls for the effect of the institutional structure itself. The fourth category of variables includes the remaining controls for other relevant factors. Besides a constant it includes lags of the dependent variables ( $Y_{t-n}$ ) in order to control for serial-correlations, and a dummy variable for the structural break in Germany due to the unification. In addition, the Hausman-test suggests the consideration of fixed-effects (*FE*) so that in all models a full set of country dummies enter the models. In order to test the robustness of the models, different lag structures of the independent variables were tested and further control variables were included and excluded. We also tested whether or not the effect of the collective bargaining structure is non-linear. Further tests were made on the timings of change, i.e. in which exact year the collective bargaining structure is different. All robustness checks support the results shown.

The models certainly raise concerns about endogeneity. Theoretically, it seems intuitive that the change in the institutional structure of collective bargaining is induced by a weak economic performance. To control for this, we apply a Two-Stage-Least-Square (*TLSLS*) estimation approach and use a change in union authority as an instrumental variable. A change in union authority is likely to affect our key independent variable but does not directly affect inflation and unemployment. We explicitly report the tests of three different versions of the instability variable: the instability variable with no shadow of the past, and a shadow of 2 and 4 years. Table 1 documents the results of the *TLSLS* estimation for all versions of the model for both dependent variables.

Beginning with the effect of institutional instability, table 1 shows that for both dependent variables and in all model variations, the hypotheses are confirmed. The more often the institutional structure of collective bargaining is changed and thus the higher the institutional instability, the higher the unemployment rate and the higher inflation. As this effect holds for all models and for both dependent variables, the conclusion can be drawn that institutional change in collective bargaining is costly and causes negative economic effects which should be considered in any attempt to reform collective bargaining. At least in the short run, i.e. up to 4 years after the institutional change, it is likely that the clear negative effect of the instability is not compensated for by the new institutional structure.

The general effect of the institutional bargaining structure is less clearly supported. The evidence shows that only the unemployment rate is affected by the institutional structure. For inflation, no such significant effect of the degree of coordination of collective bargaining can be observed. However, this mixed empirical support for the relevance of the institutional structures of collective bargaining might be explained by the fact that much of the explanatory power of these effects is captured by the country fixed-effects. Regarding the other controls, we see that most other industrial relations variables do not appear to have an impact on both dependent variables; only for the unemployment rate is there an effect of union density. In sum, the effects of the control variables confirm standard expectations. However, the upshot of the empirical analyses is that institutional instability has a clear negative effect on unemployment and inflation.

Table 1: The effects of institutional stability on inflation and unemployment, 33 countries, 1965–2010

Dependent var.:	Unemployment rate				Inflation	
	(1) No	(2) 2 years	(3) 4 years	(4) No	(5) 2 years	(6) 4 years
Shadow of past:						
Instability	4.577***(1.486)	2.998***(0.963)	2.779***(0.907)	3.817***(1.867)	2.578***(1.295)	1.862*(1.122)
Structure	-0.180***(0.086)	-0.171***(0.080)	-0.145*(0.081)	-0.137(0.087)	-0.128(0.083)	-0.087(0.070)
Coverage	-0.002(0.010)	-0.008(0.010)	-0.013(0.012)	-0.002(0.009)	-0.007(0.010)	-0.008(0.011)
Union density	0.074*(0.040)	0.077*(0.043)	0.113***(0.048)	0.050(0.038)	0.050(0.043)	0.068(0.050)
Fragmentation	0.043(0.088)	0.077(0.088)	0.116(0.104)	0.106(0.086)	0.127(0.092)	0.128(0.096)
Extension	0.146(0.263)	0.237(0.241)	0.175(0.252)	0.317(0.253)	0.396(0.258)	0.271(0.246)
Inflation	0.075(0.051)	0.006(0.065)	-0.012(0.077)	-	-	-
Unempl.rate	-	-	-	-	-	-
ToT	-0.025*(0.015)	-0.028*(0.015)	-0.026*(0.016)	-0.179***(0.088)	-0.186***(0.092)	-0.205***(0.097)
Openness	0.101(0.193)	0.074(0.188)	0.007(0.199)	-0.012(0.015)	-0.015(0.016)	-0.013(0.015)
Exchange rate	-0.013(0.008)	-0.009(0.009)	-0.009(0.010)	-0.121(0.196)	-0.142(0.192)	-0.254(0.173)
Eco. growth	-0.186****(0.025)	-0.187****(0.024)	-0.186****(0.026)	0.013(0.012)	0.017(0.013)	0.016(0.012)
Germany	0.473*(0.276)	0.435(0.279)	0.382(0.294)	0.085****(0.029)	0.083****(0.030)	0.091****(0.029)
Constant	1.093*(0.592)	1.127***(0.560)	1.136*(0.609)	0.054(0.208)	0.010(0.213)	-0.009(0.222)
Y <sub>t-1</sub>	0.866****(0.026)	0.864****(0.025)	0.867****(0.027)	0.176(0.541)	0.227(0.529)	0.194(0.500)
N x T	1003	999	976	1003	999	976
R-squ.	0.805	0.815	0.787	0.193	0.191	0.309
Adj. R-squ.	0.796	0.806	0.777	0.155	0.153	0.276

Note: ToT = Terms of trade; Eco. = Economic; Unempl. = Unemployment. Pooled time-series cross-section analysis, Two-Stage Least Squares (with variable union authority as instrument) with panel-corrected standard errors in parentheses. All variables are lagged by one year. In all the models a full set of country dummies is used; fixed effects (FE). \*\*\* $\alpha \leq .01$ ; \*\* $\alpha \leq .05$ ; \* $\alpha \leq .1$ . N x T: number of observations.

Source: European Commission Ameco 2013 database for inflation, unemployment, economic growth, exchange rate, openness, terms of trade. Visser (2014) for coordination structure, coverage, fragmentation, union authority and density.

## 6 Conclusions

The literature on the effects of different institutional structures of collective bargaining has until now focused almost entirely on the effects of the institutional structures themselves. Even though there is no widely accepted agreement upon which institutional structure is associated with the “best” performance, some of these studies have inspired policy makers in different countries to reform their national institutions of collective bargaining in order to achieve beneficial economic outcomes. However, the theoretical and empirical foundations for expecting positive macroeconomic results from these changes are not convincing. In part, this is due to the fact that the macroeconomic effect of change itself has largely been neglected in existing studies. In this article, we argue that change to collective bargaining institutions is costly because it leads to a disruption of mutual trust between the actors involved in collective bargaining. We explain that trust is of focal importance for the efficacy of collective bargaining as trust is needed for the provision of public goods, such as wage moderation. For this reason, any glitch in the various trust relationships between the actors involved is thus likely to lead to inefficient outcomes.

Using data for 33 countries during the period 1965 to 2010, we tested this hypothesis on the effect of institutional change, or institutional instability respectively, of collective bargaining on two “classical” indicators in the field: unemployment and inflation rate. The findings show that institutional instability is associated with negative effects. The analysis thus suggests that changes in collective bargaining institutions are costly. This effect is strong and robust for both inflation and unemployment. These findings imply that standard reasoning on the need for institutional reform of social dialogue clearly underestimates the costs of the reform itself. The results in this work also show that institutional change in the “better” direction does not necessarily lead to better economic outcomes *per se*! Any positive effect from a better performing institutional structure is likely to be dampened by the cost of the change – at least in the short-to-medium run.

As the negative effect of change is of a temporary nature – since mutual trust about expected behavior can be rebuilt – the results of this study do not support any deadlock in institutional reform. The same argument holds also for institution building. The results instead suggest that any new institutions of collective bargaining need time to establish their functioning. The actors involved in a new institutional structure need to learn the rules of the game, i.e. have to build up trust before full efficacy is achieved. It is likely that in completely new and innovative institutional environments this process takes even longer to occur than in a change from one “old” structure to a new one. The upshot of this is that patience in the functioning of new institutions of collective bargaining is necessary.

Looking beyond the time period studied in this analysis, the results are also able to shed new light on discussions of the success of recent changes and reforms in collective bargaining since the advent of the economic crisis. In various European

countries which have made bilateral agreements with the “Troika”, changes were demanded in collective bargaining and implemented on a national basis. However, in all these countries, the reforms were not only accompanied by social unrest, which in itself lead to economic “inefficiencies”, but the success of the reforms is also questioned, as economic indicators of “success” have not developed as expected. The results reported here do not exclude the possibility that the reforms were the correct policies to help these countries to recover and prosper economically in the long-run. However, they might explain how – even – if the reforms materialize and achieve the desired results in the long-run, it is unrealistic to expect observable positive effects in the short-to-medium term. This is because the inevitable negative effects of the change itself have dulled the positive effects of the reform so far. In fact, if the negative short-term effect is stronger than the expected positive effect of reform, the results may explain why many indicators in these countries, such as unemployment in particular, are even increasing. In addition, it might be likely that in a situation of economic uncertainty and social turbulence, the process of trust-building is more difficult so the negative effect prevails even longer, thus delaying any recovery in these countries further. Accordingly, one important implication of the study for policy making is that the timing of institutional reforms is crucial. Even if policy makers are sure (if this is possible) that the reform will prove to be successful in the long-run, it may be important for them to consider the situation in the short-run for the timing of their decision. They might have to balance a dilemma between, the sooner the reform, the sooner the long run positive effects vs. the situation getting even worse due to the short-to-medium negative effects.

Nonetheless, the results of this study clearly show that policy-makers should avoid changing collective bargaining institutions very often; institutional instability due to a series of changes leads to even higher costs. Our analysis shows that well-functioning collective bargaining institutions rest heavily on a stable institutional environment and stable relationships among actors.

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# Towards a golden rule of public investment in Europe<sup>1</sup>

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## **1 Introduction**

As the euro area economy is still far away from full recovery and inflation continues to be extremely low, the insight of both the public and policy makers as to the necessity of a macroeconomic policy change has increased, recently. The calls for a more expansionary fiscal stance, above all for a boost to public – or publically supported – investment have become louder, with the Investment for Europe Plan (Juncker-Plan) as the most prominent official policy reaction. Even before that plan there were some initiatives – as the introduction of the so called “investment clause” under the Stability and Growth Pact (SGP) – to support and protect public investment. However, quite obviously, those past initiatives have failed, as public investment in the euro area has decreased substantially since the onset of the crisis. In the so called periphery countries public investment expenditures have dramatically shrunk as a result of the austerity policies imposed on those member states.

Obviously, a different approach to fiscal policy and to supporting public investment is needed. One natural candidate for such an approach would be the so-called golden rule of public investment. The rule is widely accepted in the traditional public finance literature and would allow financing net public investment by government deficits thus promoting intergenerational fairness as well as economic growth. Public investment increases the public and/or social capital stock and creates growth to the benefit of future generations. Future generations contribute to financing those investments via the debt service. Failure to allow for debt financing will lead to a disproportionate burden for the present generation via higher taxes or expenditure cuts and therefore most probably to underinvestment which is exactly what has happened in Europe under the austerity policies.

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<sup>1</sup> This article is based on a more comprehensive study written for the Austrian Chamber of Labour (Truger, 2015a).

The EU Commission has to date strongly resisted the introduction of such a golden rule, because supposedly it would not fit into the fiscal framework of the reinforced SGP and the fiscal compact and put fiscal sustainability at risk (European Commission, 2004, p. 132 and 2012, p. 25). This, however, is somewhat ironic: Even the conservative German council of economic experts, as high ranking body of policy advice, not exactly known for an inclination towards loose budgets, had included the golden rule in its proposal for a German debt brake (SVR, 2007). Hence, the original blueprint for the German debt brake – and therefore also for the Fiscal Compact on the European level – included, in fact, a golden rule for public investment.

Therefore, the present article states the case for a golden rule and presents a concrete proposal for its introduction in the EU in order to strengthen and protect public investment and to increase growth in the short as well as in the long run while at the same time not sacrificing fiscal sustainability. Section 2 will give a brief account of the development of public investment over the last 15 years and show that austerity in the wake of the euro crisis has, in fact, led to disproportionately large cuts in public investment. Section 3 will present an attempt at operationalizing the theoretical concept of the golden rule. The basic theoretical idea and the short as well as long run growth effects of traditional public investment will be presented. Definitions of public investment different from the standard one from the national accounts will be discussed. Section 4 will then turn to the question of implementing the golden investment rule in the present European fiscal policy framework. The golden rule of public investment and a European Investment Program – similar to the 2008 European Recovery Programme – could be combined to boost and safeguard public investment and support the recovery. Section 5 briefly concludes.

## **2 Austerity and the neglect of public investment**

Fiscal policy in most developed economies has been dominated by consolidation measures after the strong increase in government debt as a result of the global financial and economic crisis in recent years. Fiscal restriction was particularly strong in the euro area because of the strict fiscal framework of the SGP and the additional policy reactions after the onset of the euro crisis. Above all the so called periphery countries (Greece, Ireland, Portugal and Spain) whose government bonds had come under speculative attacks from the financial markets were forced into austerity policies under the relevant rescue programs and/or by the European Commission/Council strictly enforcing and even reinforcing the tight framework of the SGP (Truger, 2013). The change in the general government structural primary budget balance (SPB) over time is a standard measure of the fiscal stance, i.e. the discretionary changes in fiscal policy. According to the standard EU Commission esti-

mates (European Commission, 2015a) the fiscal effort in the euro area as a whole was in the dimension of 3% of GDP within the three years from 2010 to 2013. In the periphery as an aggregate it was as large as almost 10% of GDP within the four years from 2009 to 2013. However, the European Commission has already admitted that those estimates based on the change in the structural (primary) budget balance tend to underestimate the true discretionary consolidation efforts and has developed complementary indicators to assess fiscal effort (European Commission, 2013, pp. 101–132 as well as Carnot and de Castro, 2015). Using the results by Carnot and de Castro (2015: 10) it must be concluded that the estimate of fiscal effort based on the SPB underestimates discretionary fiscal effort for Portugal by 20%, for Ireland by 45%, for Spain by almost 75% and for Greece by almost 90%. In this case, the true fiscal effort in the periphery as a whole from 2009 to 2013 would be 16% of GDP instead of “only” 10% as indicated by the SPB (see similarly Darvas et al. 2014, pp. 10–15).

The strong fiscal pressure in the euro area led to particularly strong cuts in public investment. Unlike many other spending categories public investment is not mandatory and – in the absence of institutions like the golden rule – politically relatively easy to cut. In fact, this is exactly what happened in the countries under severe budgetary pressures: In the periphery government gross fixed capital formation (=public investment) declined from slightly below 10% of total government expenditure to only 4.5% in 2013, whereas in most other countries it remained relatively stable. Darvas et al. (2014, p. 15–27) present a more detailed account of the composition of expenditure side consolidation measures from 2009 to 2013. Obviously, capital expenditure was the most widespread and largest component of consolidation measures, but compensation of employees and other current primary spending – as well as in some cases social spending – were also substantially affected.<sup>2</sup>

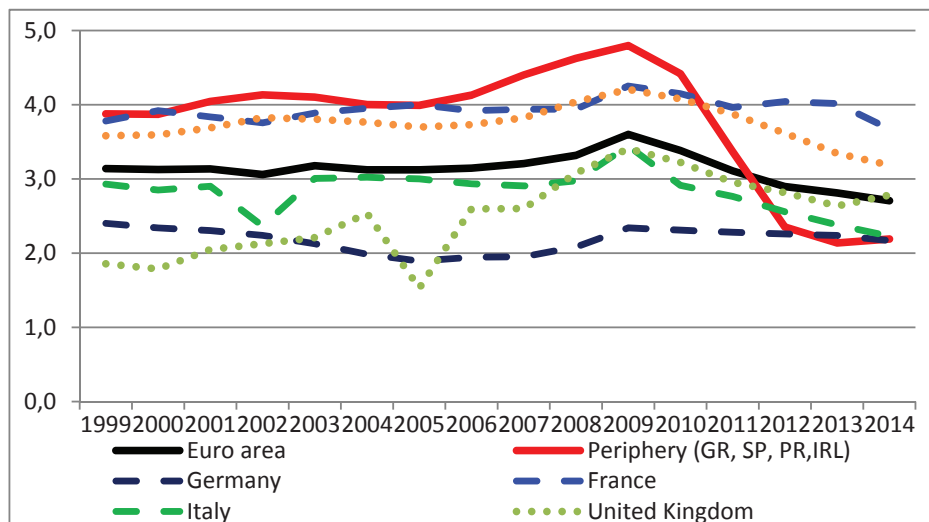
The development of gross public investment in relation to GDP clearly shows the decline (chart 1): It almost halved from more than 4% before the crisis to only 2.2% of GDP since 2013 in the European periphery. Net public investment, i.e. gross investment minus depreciation, decreased from about 2% of GDP to a negative –0.6% of GDP – the net public capital stock in the periphery was shrinking. For the euro area as a whole and for Germany net public investment was zero in 2013 (chart 2).

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<sup>2</sup> See Darvas et al. (2014) for an analysis of austerity’s effect on poverty and social hardship.

*Chart 1: General government gross fixed capital formation (ESA 2010) in the euro area, the European periphery and selected countries 1999–2014*

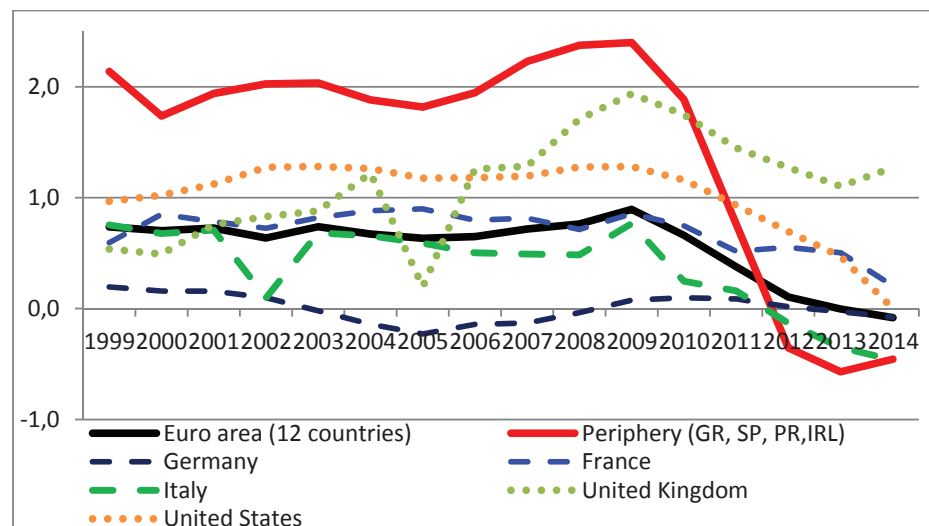
% of GDP



Source: European Commission (2015a); author's calculations.

*Chart 2: General government net fixed capital formation (ESA 2010) in the euro area, the European periphery and selected countries from 1999 to 2014*

% of GDP



Source: European Commission (2015a); author's calculations.

Therefore, there can be no doubt, that austerity policies in the euro area have negatively affected public investment in a disproportionately strong manner.

### **3 The “golden rule”: towards an operationalization**

#### **3.1 The pay-as-you-use-principle and intergenerational equity**

The golden rule has been a widely accepted traditional public finance concept for the handling of government deficits for decades (Musgrave, 1939 and 1959, pp. 556–575). It strives for an intertemporal realization of the pay-as-you-use principle in the case that present government spending provides future benefits. It allows financing such spending (=net public investment) by government deficits thus promoting intergenerational equity. Net public investment increases the public and/or social capital stock and provides benefits for future generations. Therefore, it is justified that future generations contribute to financing those investments via the debt service. Future generations inherit the burden of public debt, but in exchange they receive a corresponding public and/or social capital stock. Failure to allow for debt financing of future generations’ benefits will lead to a disproportionate burden for the present generation through higher taxes or lower spending creating incentives for the underprovision of public investment to the detriment of future generations. This general incentive problem may become exacerbated in times of fiscal consolidation when cutting public investment may seem the politically easiest way of reducing the budget deficit. As demonstrated in section 2, this danger has, in fact, materialized in the current crisis. Independently of the current crisis, there is evidence that fiscal contractions were a key factor responsible for the decline in public investment in earlier decades (Välilä et al., 2005; Turrini, 2004, pp. 9–26).

Although the general idea behind the golden rule is most plausible and easy to understand its operationalization is difficult. The most difficult problem is to find a workable and economically sensible definition of the term “public investment” that allows for government deficits. Theoretically, any government action that creates benefits – in the widest sense – for more than one period may qualify for this. However, the literature usually focuses on concrete future material economic benefits in terms of higher productivity and growth. The question for an individual potential investment project then becomes whether it creates enough public and/or social capital so that its returns are higher than or at least equal to its costs in terms of interest payments and possibly additional costs. Ideally, if the returns are high enough debt sustainability would automatically be satisfied as the additional growth would decrease or at least stabilize the debt to GDP ratio (IMF, 2014, p. 110). The optimal approach of defining public investment that qualifies for deficit finance would then be to include all public spending projects that create sufficient returns in terms of higher future productivity and growth. Obviously, such a classification process would be extremely costly and unfeasible in practice. Therefore, the central

question on a macroeconomic level is, whether general categories of public spending can be identified that are usually associated with sufficiently higher growth and productivity. Of course, such a pragmatic approach necessarily risks including types of public spending that should not be qualified as investment as well as excluding types of public spending that should correctly be classified as investment.

However, despite the difficult questions from a theoretical point of view that strives for optimality, the concept of the golden rule has many advocates in academia starting with Richard A. Musgrave (1939 and 1959), one of the founding fathers of modern public finance. In the context of the fiscal policy debate in the EU many economists have criticized the EU fiscal framework of the SGP for its lack of a golden rule of public investment and correspondingly proposed to introduce such a rule into the framework (e.g. Fitoussi and Creel, 2002, 63–65; Blanchard and Giavazzi, 2004; Barbiero and Darvas, 2014; Dervis and Saraceno, 2014). And, last but not least the German council of economic experts had delivered a proposal that was to become more or less the blueprint for the German debt brake, which explicitly expressed the need to include the golden rule as important element of the fiscal rule (SVR, 2007).

The critical question for the justification of the golden investment rule then is whether public investment is productive, i.e. whether it increases productivity and growth. The natural starting point for the analysis is the debate about the growth effects of traditional public investment, i.e. mainly traditional infrastructure investment as classified in the national accounts, as it has received the most attention in the literature.

### **3.2 (Traditional) public investment and growth in the long run**

The central question of the long-run growth effects of public investment has received much attention in the literature (for an overview see Romp and de Haan, 2005; Melo et al., 2013; Bom and Ligthart, 2014). From a theoretical point of view it is most plausible that public investment, especially if it focuses on “core” infrastructure like transport facilities (roads, railways, ports, airports), communication systems as well as power generation and other utilities should be productive and growth enhancing. The public infrastructure stock in this sense is simply indispensable for most productive processes: Without water and energy supply, without transport capacities most production processes would simply be unthinkable. It is, therefore, plausible to think of public infrastructure as an input factor that is complementary to private capital and labor inducing additional private investment and labor supply.

However, at least two qualifications should be made. First, for additional public infrastructure to be productive it should not be abundant. Although the quantity and quality of infrastructure is difficult to measure, on the basis of the World Economic Forum’s Competitiveness report the IMF (2014, 79–81) concludes that the overall

quality of infrastructure and that of roads has clearly (slightly) decreased from 2006 to 2012 in Germany ( France) and that it is lagging behind in Italy. This is at least a hint that there is room for improvement. It is also a hint that net public investment must not necessarily be into completely new infrastructure projects, but that maintenance investment may also have an important role to play. Second, although positive growth effects from core infrastructure investment are most plausible from a theoretical point of view, not all of public investment as defined in the national accounts is into core infrastructure. In fact, a substantial part of public investment is investment into equipment as well as public buildings, e.g. for administration, education and hospitals. For such investment a direct positive contribution to private production processes may be more difficult to establish. However, for those countries for which data on both the public capital stock as a whole as well as specifically on public infrastructure is available, the correlation between the two is strong, so that overall public investment may serve as a proxy for infrastructure investment (IMF, 2014, p. 80).

Empirically, as usual in Economics, the effects are contested in the literature. The famous study by Aschauer (1989) using a production function approach found a very high elasticity of output with respect to the public capital stock. This would have meant an extremely high return on public investment, indeed, much higher than imaginable for private investment. In the following debate many different definitions of public (infrastructure) capital were used, different estimation techniques and variations of Aschauer's original approach were introduced. Furthermore, apart from Aschauer's original production function approach also the cost-function approach, times series analysis as well as cross section estimations were applied. Although, the results differed very much and some studies found no or even negative effects of public investment on growth, the general conclusion is that there is a positive growth effect, but that it is much smaller than originally claimed by Aschauer (Romp and de Haan, 2005; Melo et al., 2013).

*Table 1: Implied marginal returns to public investment*

	All public capital		Core public capital	
	Regional	National	Regional	National
	%			
Short-term	17.4	10.2	24.0	16.8
Long-term	28.0	20.8	34.6	27.4

*Source: IMF (2014, p. 86); Bom and Ligthart (2014, pp. 907–908); author's calculations.*

Bom and Ligthart (2014) conducted meta-regressions including 68 studies with 578 estimates for the public capital-growth nexus and confirm this basic conclusion



for the period 1983 to 2008. According to their results, the average output elasticity of public capital is 0.082. Conditional elasticities vary depending on whether they refer to the short or the long run, to all public capital or core infrastructure and to regional or national investment. They are higher for core infrastructure, for regional investment and for the long run. Table 1 shows the implied marginal returns which are in the range between 10% (short run, national, all public capital) to 34.6% (long run, regional, core infrastructure). Whereas the latter marginal return is large enough to justify deficit-financed public investment even under pessimistic assumptions about the user cost of capital (real interest rate plus depreciation rate), the former would have to rely on more favorable conditions. However, the implied long term marginal returns even in the case of all public capital for national and regional investment with 20.8% and 28% are considerably high. All in all, therefore, one may safely assume traditional public investment to have considerably positive growth effects.

### **3.3 (Traditional) public investment and growth in the short run**

In addition to the more long-run supply-side effects the more short-run demand-side effects of public investment must also be addressed. The analysis proceeds in two steps. In the first step the question of fiscal policy effectiveness as such, irrespective of the particular instrument, must be clarified, before in the second step the comparative effectiveness of the different instruments, i.e. different expenditure or revenue side categories can be addressed.

As to fiscal policy effectiveness the traditional pre-crisis empirical studies usually found positive multipliers. As suggested by the standard Keynesian textbook models and the Haavelmo-Theorem expenditure multipliers were typically substantially larger than revenue side ones (see e.g. the overviews by Hemming et al., 2002; Arestis and Sawyer, 2003; Bouthevillain et al., 2009). Many of the more recent studies confirm the earlier multiplier estimates and in many cases even go substantially beyond them (Gechert, 2015 and Gechert and Rannenberg, 2014). As to the question of the relative size of the public investment multiplier, the pre-crisis literature as a rule of thumb found it to be (slightly) above one and therefore slightly larger than for other spending categories so that public investment in addition to its long term economic advantages could be seen as the most effective short-run fiscal policy instrument. Some of the recent studies even come up with much larger (relative) estimates of the investment multiplier. Auerbach and Gorodnichenko (2012) obtain values larger than two with a maximum estimate of larger than four whereas the estimates for government consumption spending are “only” at about 1.4.

Based on this result, Barbiero and Darvas (2014, p. 8–9) conclude that a more growth-friendly consolidation in the euro area would have been possible if public investment spending had been preserved at the cost of cutting current spending.

However, this conclusion does not seem fully convincing: While it is plausible to preserve public investment it is not clear whether cutting government consumption is the relevant and sensible alternative: First, although the multiplier estimate for consumption spending referred to is smaller than the investment multiplier, it is still substantially larger than one so that the damage of austerity policies would still have been very large even under the more “growth-friendly” strategy. Second, judgment should be based on a broad overview of different studies. Gechert (2015) and Gechert and Rannenberg (2014) conducted meta-regressions including 104, respectively 98 empirical multiplier studies controlling for different study characteristics. They also generally find higher investment multipliers as compared to their consumption counterparts (around 1.6 vs. 1), but the difference is certainly not as large as in the Auerbach and Gorodnichenko (2012) paper. Third, in the case that fiscal restriction is unavoidable, the whole set of available instruments should be taken into account. This leads to the conclusion that on average cutting government spending is unnecessarily painful, because the average estimates of the revenue side multiplier are much lower than those for the consumption or overall government spending multiplier. On average Gechert (2015) and Gechert and Rannenberg (2014) also find systematically smaller multipliers for government transfers.

This can, however, not serve as an argument for cutting social transfers for consolidation purposes: Apart from the highly problematic social impact, there is evidence that the transfer multiplier is particularly high during recessions (Gechert and Rannenberg, 2014). Therefore, a much more growth-friendly consolidation could be achieved via tax increases, which – from a standard Keynesian perspective – should mainly focus on high incomes and wealth. An even more growth-friendly consolidation could be achieved by spending part of the additional revenue from suitable tax increases on increased public investment or other expenditures.

All in all, therefore, the empirical literature on short-run effects of fiscal policy strongly supports protecting public investment from consolidation pressures and using it to stimulate the economy. However, the substantial demand-side effects of other spending categories, particularly government consumption, should also not be neglected.

### **3.4 Towards an economically plausible operationalization of public investment**

Some thoughts are necessary on whether the traditional concept of investment in the national accounts is fully adequate or whether some modifications seem necessary. One important thing to notice in this context is, that the definition of (public) investment has changed in the recent general revision of the system of national accounts and the transition from the old system ESA 1995 to ESA 2010 (Dunn et al., 2014). In general the transition to ESA 2010 and the accompanying further changes have led

to an increase in gross public investment with marked differences between the countries. For net investment on average the changes are small as the increases in gross investment have almost completely been compensated by correspondingly higher depreciation.

A first change has to do with spending on research and development. Whereas before the revision, mostly tangible assets (construction and equipment) and a small fraction of intangible assets were counted as investment, after the revision also spending on research and development is included. From an economic point of view this seems justified as it is highly plausible that public R&D spending in research institutions or universities or also as grants given to the business sector may be productive, although there is no clear evidence as to the growth effects, yet. In addition, public R&D spending suffered under the strong fiscal contraction (Veugeleers, 2014). This change should be the most important quantitatively in explaining the increase in gross investment for many countries.

A second change is highly problematic: Military spending on weapons systems is now counted as fixed investment, the reason being that “the new system recognises their productive potential for the external security of a country, over several years.” (Dunn et al., 2014, p. 10). However, this classification can be criticized on ethical grounds: Weapons systems are potentially destructive and if really used they destroy productive capital instead of increasing it. Indeed, that was precisely the reason, why they were previously recorded as immediately consumed under ESA 1995. Furthermore, it is highly questionable whether the fiscal framework should actively encourage military spending and a potential arms race. The ethical questions apart, spending on weapons systems can hardly be considered as a particularly growth enhancing expenditure category. Theoretically, it is not clear how the marginal contribution of military investment to national security should be measured. Indeed, military investment was explicitly excluded from many studies on the long term growth effects of public investment. Aschauer’s original contribution did not find military spending to be important for economic productivity (Aschauer, 1989).

A third change occurred in the delimitation of the government and the private sector. The classification has become stricter in most cases in the sense that some companies/non-profit organizations closely related to the public sector had to be reclassified from the private to the government sector. This statistical enlargement of the government sector may partly remove one shortcoming of the investment definition in the national accounts: Investment grants paid by the public sector to private companies are not classified as investment expenditure. In the case that a formerly private company which receives investment grants increasing its investment expenditures is reclassified to be part of the public sector, the additional investment spending will now be counted as government investment. However, if a public investment grant is spent on investment by a recipient company then from an economic point of view it should generally not make a difference whether the

company is classified as public or private. Therefore, for purposes of the golden rule, investment grants paid from the public to the private sector should be classified as public investment.

Of course, there may be other expenditure categories that may be equally or even more beneficial. A natural candidate is public spending on education or health care which in the existing system of national accounts is classified as current expenditure. It has been argued that privileging traditional, mostly physical investment in infrastructure and equipment and neglecting those other forms of investment in an economic sense may distort the optimal allocation of resources with potentially unclear implications for efficiency, growth and welfare (Turrini, 2004, pp. 29–30). However, in the presence of strong evidence for considerably positive growth effects of traditional public investment it would seem overcautious to forego the advantages of the golden rule. Indeed, a stepwise approach is much more convincing. The economic case for including other types of spending into the golden rule should be checked. If inclusion seems rational but at the current stage difficult to implement for statistical or other reasons, then the golden rule should as a first step be applied to traditional investment. As soon as the open questions with respect to other expenditure categories are solved, their implementation can follow as a second step.

Should other potentially growth enhancing types of government spending be classified as investment? In principle they should, as long as it can be shown that the growth effect to be expected is at least as large as that of traditional public investment. The natural candidate for this would be education expenditure. Education as investment in human capital is crucial within endogenous growth theory (Lucas, 1988) and empirical research suggests that the private as well as social rate of return of education can be assumed to be very high (Psacharopoulos and Patrinos, 2004; Card, 2001). Although it is difficult to reliably compare the estimated rate of return for different types of expenditure, it would at least be plausible to include public education expenditures under the golden rule. This is also the general conclusion drawn by most advocates of the golden rule.

However, at the present stage it is difficult to implement this in a convincing way. First, an exact definition of the relevant education expenditure would have to be given which is not straightforward. Second, in order to be consistent with the golden rule, net education investment would have to be measured, i.e. depreciation would have to be deducted. According to the SVR (2007, pp. 80–81) based on Ewerhart (2002 and 2003) depreciation of the German human capital stock, relevant for such a calculation, would be in the order of magnitude of 95% of total education spending. This particular result stems from the demographic development in Germany and must not necessarily be a very plausible way of quantifying depreciation of human capital investment. But it shows that there are some difficult conceptual issues that would have to be resolved before education expenditure could be properly included into the golden rule.

There are other expenditure categories that might be considered as investment under the golden rule. Indeed, from a supply-side perspective some types of social spending may well be highly productive, because they increase labor supply and production: Health expenditures, if effective, will contribute to a more stable and larger workforce. Spending on child care can substantially increase parents' labor force participation (Bauernschuster and Schlotter, 2015). And the same may be said for spending on social work and integration. All of this could lead to higher labor force participation and therefore contribute to higher growth and, at the same time, to one of the main Europe 2020 goals. However, it is not easy to find adequate definitions and estimating depreciation in order to arrive at net investment may be even more difficult.

The fact that at the current stage there are difficulties, however, does not mean that an economically rational and workable definition of potentially relevant other investment expenditures does not exist, at all. It only means, that for the first stage of introducing the golden rule one should better rely on the traditional definition of public investment from the national accounts.

## **4 Implementing the golden rule in the European fiscal framework**

### **4.1 A pragmatic proposal for a European golden investment rule**

As a pragmatic first step towards the golden rule it should apply for government fixed capital formation as defined in the national accounts with small modifications: Military spending on weapons systems should not count as investment whereas public investment grants to firms or non-profit organizations should be counted. The rule should apply to net investment, i.e. depreciation should be deducted for the rule to measure properly increases in the net public capital stock.

The golden rule could then be applied within the current fiscal framework of the SGP and the fiscal compact by deducting net public investment as defined above from member states' relevant deficit measures, i.e. from the government deficit under the corrective arm and the structural deficit under the preventive arm of the pact and the fiscal compact. In effect, this means that the threshold for an excessive deficit as well as the medium term budgetary objective would be increased by the amount of net public investment. In order to prevent a conflict between the golden rule of public investment and the goal of stabilizing public debt below 60% of GDP,

an upper limit for deductible net investment spending could be set at 1% or 1.5% of GDP.<sup>3</sup>

Conceptual advantages apart, the focus on net investment has the further advantage of providing a strong incentive for those governments that are currently providing negative net public investment, i.e. whose public capital stock is decreasing, because compared to the status quo their fiscal constraints would otherwise tighten. Although this is a welcome incentive in the medium term, countries should in the short term be given some time to adjust their net investment.

The European Commission and member states should over the medium term actively promote ways of improving the statistical measurement of public investment and of improving the government accounts, in particular as concerns the calculation of depreciation. Furthermore, research and debate should also be directed towards identifying other expenditure categories that could qualify as public investment and where applicable, towards how to include them under the golden investment rule.

## 4.2 Solid implementation of the golden rule in the medium term

One essential question is whether the introduction of the golden rule proposed here would be compatible with current EU law or whether a change of Council regulations or the Treaty would be necessary. With respect to the old Treaty, Blanchard and Giavazzi (2004, p. 15) argued that the old Art. 104.3 would have allowed implementing the golden rule without any treaty changes by changing the corresponding Council regulations, because it stated that in the report to be prepared by the Commission it should also be taken into account whether the government deficit exceeded government investment expenditure. However, since 2008 Art 2 (3) of Protocol No. 12 about the excessive deficit procedure annexed to the Treaty states that investment is to be understood as gross investment. Therefore, a permanent interpretation as net investment would probably be difficult to justify. In the end, this is a juridical question that is difficult to answer from an economist's point of view. The change of the Council regulation deemed necessary, however, would still require unanimous consent within the Council.

For some time, however, the introduction of the golden rule for public investment could probably be approximated even without any changes in the current institutional framework, if the European Commission and the European Council were

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<sup>3</sup> The limit might not be set as a threshold above which all net investment will be fully relevant for the public deficit but rather as a limit to the percentage of net investment that is deductible from the deficit measures in order to provide incentives for public investment as a whole and prevent the category as a whole from cuts. This may gain relevance if a gross definition of public investment would have to be used for the golden rule or if additional expenditure categories would be classified as public investment.

willing to more actively use the interpretational leeway within this framework (see table 2 for an overview of measures). Actually, the clarification as to the interpretation of the Pact that the Commission has just given can already be seen as illustrating steps in that direction (European Commission, 2015b).

At least, additional net investment could be justified if it came in the form of a temporary investment program, analogous to the way the Commission interprets contributions to the EFSI. Additionally or alternatively, it may be possible to treat an investment program as structural reform that temporarily allows for deviations from MTO or the adjustment path towards it. As to the “investment clause” it should be possible to implement it as a “small-scale golden rule” under these conditions. Reference to adverse cyclical conditions might help to increase leeway even further, although this could create the danger of a stop-and-go investment policy, if cyclical conditions improve as can be expected under an investment program. Finally, recourse to the exceptional clause of a severe downturn in the euro area or the EU could be made in order to justify slowing down the consolidation path and allowing for additional investment spending. All of this could further be supported if realistically high multiplier values were used in assessing the budgetary impact of additional investment, which may not be significantly negative or even positive. Reconsideration of the EU Commission’s method of cyclical adjustment – e.g. to be more in line with the OECD method and results – may create further leeway as it might increase the cyclical part of the budget deficit thus reducing the structural deficit (Truger, 2015b).

Some or all of the mentioned interpretational leeway could be used to push up public investment on the level that would be consistent with a golden rule in the medium term. However, the permanent recourse to exceptional circumstances which would be necessary to permit permanent use of the rule for public investment in general would most probably overstretch the interpretational leeway inherent in the current framework. Therefore, in order to solidly implement the golden rule on the EU level a permanent change in the institutional fiscal framework would be adequate and most probably also necessary from a legal perspective.

Such a change could be adopted as primary law in the form of an “Investment Protocol” that would be annexed to the Treaty under the simplified revisions procedure of Art. 48 of the Lisbon treaty (table 2). On the member states’ level further legal changes would be required if following the fiscal compact, there were other legal provisions put in place that would prevent a reinterpretation of the budget balance as net of net spending on public investment.<sup>4</sup>

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<sup>4</sup> See Burret and Schnellenbach (2014) for an overview of the state of implementation of the fiscal compact in the different signatory member states.

### 4.3 A European investment program and an expansionary overall fiscal stance to spark off the recovery

The implementation of the golden rule of investment would probably take some time until the necessary political and legal steps could be completed. It should therefore mainly be seen as a fiscal policy framework focused on safeguarding public investment in the medium term, and not so much as a readily available instrument for providing the – urgently needed – boost to the European economy in the short run. Because the Juncker Plan will not be able to provide this boost in the short run – and most probably not even in the long run – the golden rule would have to be complemented by other forms of short-term fiscal stimulus.

As argued in the previous section the leeway inherent in the current institutional framework is sufficiently large to permit such a stimulus. Probably the most convincing way to do this would be to use the provision concerning a severe downturn in the euro area or the EU to justify a temporary deviation from the consolidation path, thus allowing for a substantial European Investment Program (see table 2). The European Commission has explicitly made a comparison with the 2008 European Economic Recovery Plan (European Commission, 2008) to give an example of the potential use of this provision (European Commission, 2015b, p. 17). As a condition for the use of this provision it “should remain limited to exceptional, carefully circumscribed situations to minimize the risk of moral hazard.” (European Commission, 2015b, p. 17). Actually, one may well argue that the euro area is right now in such an exceptional situation after years of recession and stagnation and low inflation while monetary policy is at the lower bound.

Such a European Investment Program should provide an annual stimulus of at least 1% of GDP for two or three years. One option for the direction of the program would be to use it in order to start phasing in traditional net public investment up to the desired level after the final implementation of the golden rule. Alternatively or additionally such a program could also be used to allow for investment needs beyond the narrow national accounts definition to contribute to public investment in a broader sense.<sup>5</sup> Such a direction would meet concerns that the golden rule alone would only promote traditional tangible investment and neglect other important forms of investment in the economic sense of the word. This could be investment in education, including child care, but it could more generally focus on spending with a view to achieving the currently neglected Europe 2020 goals such as social inclusion or other areas that have strongly suffered from austerity over the last years. Last but not least the fiscal stimulus provided should not be thwarted by cutting

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<sup>5</sup> Aiginger (2014) has made a similar proposal which he called the “silver rule” proposal. Whereas the golden rule allows permanent debt financing of all net investment, the silver rule allows temporary debt financing of additional investment.



other public expenditure. Instead, the leeway within the current institutions should be actively used to provide a substantial fiscal stimulus to the European Economy.

*Table 2: 10 opportunities to strengthen investment and facilitate an expansionary overall fiscal policy stance in Europe*

Goals	Measures
Short term (use interpretational leeway within present framework to come close to the golden rule of public investment)	
Strengthening investment + Expansionary overall fiscal policy stance	1. More active use of the “investment clause”
	2. Allow for temporary investment programs (analogous to EFSI)
	3. Interpret temporary investment programs as structural reforms
	4. Incorporate realistic investment multiplier in budgetary analysis ex ante
	5. Use leeway in economically bad times
	6. Implement better methods of cyclical adjustment
	7. Temporarily higher spending with a view to Europe 2020 goals
	8. Use exception for severe downturn in EU or euro area
Medium term (solid implementation of the golden rule of public investment)	
EU implementation	9. Investment protocol as annex to the Treaty (simplified revisions procedure Art. 48)
National implementation	10. Change national legislation to allow deduction of net public investment from deficit where necessary

*Source: Author's compilation.*

## 5 Conclusion

Most parts of the euro area have seen seven years of deep economic crisis. Public investment which should have stabilized the economies and kept up their long-term growth potential has instead dramatically shrunk in the crisis-ridden countries of the periphery. The EU needs to address these problems. The previous strategy of tightening the fiscal constraints of the SGP has driven many member states into crisis and disempowered national fiscal policy as a macroeconomic policy instrument. Unfortunately, in the current situation, with depressed aggregate demand, deflationary tendencies and monetary policy at the lower bound, national fiscal pol-

icy is the only instrument left that could bring about a sustained recovery. The EU Commission shies away from this conclusion and tries to evade anything that might change the present institutional framework for fiscal policy.

In contrast, the golden rule of public investment proposed in this article would be one important element of the necessary institutional reform. A pragmatic version focusing on net public investment as defined in the national accounts minus military expenditures plus investment grants for the private sector could quickly be implemented. This would at once protect public investment from cuts and provide leeway for investment to recover. Over time the rule could be technically and statistically refined and potentially include other – more intangible types – of investment like education expenditures.

As political implementation would probably take some time, the golden rule would have to be complemented by expansionary fiscal policy to provide the urgently needed boost to the European economy in the short term. This could be done by a short term European Investment Program similar to the 2008 European Economic Recovery Program during the Great Recession. Such a program could also allow for investment needs beyond the narrow national accounts definition to contribute to public investment in a broader sense, e.g. for expenditure related to the currently neglected Europe 2020 goals such as social inclusion.

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# In sickness and in health: protecting and supporting public investment in Europe

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## Highlights:

- The long-term decline in gross public investment in EU Member States mirrors the trend in other advanced economies, but recent developments have been different: Public investment has increased elsewhere, but in the EU it has declined and even collapsed in the most vulnerable countries, exaggerating the output fall.
- The provisions in the EU fiscal framework to support public investment are very weak. The recently inserted “investment clause” is almost no help. In the short term, exclusion of national co-funding of EU-supported investments from the fiscal indicators considered in the Stability and Growth Pact would be sensible.
- In the medium-term, the EU fiscal framework should be extended with an asymmetric “golden rule” to further protect public investment in bad times, while limiting adverse incentives in good times. During a downturn, a European investment programme is needed and the European Semester should encourage greater investment by Member States with healthy public finances and low public investment rates. Reform and harmonisation of budgeting, accounting, transparency and project assessment is also needed to improve the quality of public investment.

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## 1 The purpose of public investment

Public investment should help societies achieve their goals, and should ultimately contribute to social welfare. High quality capital stocks in the areas of communication, education or transport are typically thought to entail considerable spillover effects that might stimulate investment by the private sector. Public order and safety are necessary for a stable institutional environment. Investments in social protection, healthcare and recreation support the labour force and social development. Housing and community amenities, such as water supply and street lightening, are preconditions of normal life. Environmental protection can support sustainable development. However, public investment might not always be free from the influence of interest groups. Even if the intent is to increase social welfare, public investment might not go to the right place, or might not be deployed in the most efficient way.

When assessing the impact of public investment on the economy, two issues have to be differentiated<sup>2</sup>:

- (a) the impact of public investment on medium/long-term growth and output,
- (b) the impact of cuts in public investment during the crisis.

On the first issue, the academic literature finds mixed results, for good reasons: accurate data is not available, it is difficult to isolate the influence of other factors and methodologies are different (see Appendix 2 for a survey)<sup>3</sup>. Nevertheless, a number of studies have found that certain types of public investment, such as infrastructure, are particularly beneficial.

On the second issue, there seems to be a consensus that cuts in public investment during a recession have greater negative impacts on the economy than cuts in other expenditure categories, or tax increases. During the recent global and euro-area financial and economic crises Europe saw drastic cuts in public investment in vulnerable member states and there was also a relative decline in most of the other member states: the share of public investment in primary public expenditure declined. Thus, fiscal consolidation strategies did not have growth-friendly compositions and likely exaggerated the output contractions. These developments are in stark contrast to developments in other advanced economies, in which public investment was used as a counter-cyclical fiscal-stabilisation tool.

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<sup>2</sup> A related issue is the complementarity of public and private investments. As Zachmann (2012) argues, long-term growth prospects are fundamentally determined by structural factors that are often complementary and inter-related, such as infrastructure, human capital, financial sector development and the quality of regulation. When addressing structural weaknesses, targeting individual shortcomings might not be beneficial if other barriers persist and therefore public investment might be best employed when it is targeted at individual shortcomings that are holding back an entire sector.

<sup>3</sup> By focusing on EU cohesion policy, the literature survey of Marzinotto (2012) found similar results.

Recognising the benefits of public investment and its particular exposure to fiscal consolidation in Europe, in summer 2013 the European Commission proposed a so-called “investment clause”, which allows member states that are in deep recession, but that have budget deficits below the 3% of GDP threshold and that respect the public debt reduction rule, to temporarily deviate from the fiscal targets of the Stability and Growth Pact (SGP), to the extent of the national co-funding of EU-funded investments. Four countries have applied to use this investment clause, with requests from Italy and Slovakia being rejected by the European Commission. The European Parliament did not find the investment clause sufficient and in October 2013 passed a resolution in which it proposed permanently and unconditionally excluding national co-funding of EU-funded investments from the indicators used in the structural deficit procedure. This proposal has been neglected so far.

What is the correct way to treat public investment in the EU fiscal framework? This paper addresses this question, after assessing developments in public investment in Europe and in other advanced economies.

## **2 Developments in public investment**

Unfortunately, comprehensive data on public investment is not available. The most widely used indicator, gross fixed capital formation, is a very imprecise measure of public investment, because it is largely a gross measure (i.e. it includes capital depreciation) and does not include investment by state-owned enterprise (SOEs) (see Appendix 1 for details). However, we must use this indicator because no other indicator is available for assessing long-term trends.

### **Long-term trends**

Panel A of chart 1 indicates that public investment in the main advanced countries has been characterised by a long-term downward trend since the early 1970s, while in the four cohesion countries of the EU-15 (Greece, Ireland, Spain and Portugal) and in the 12 Member States that joined the EU between 2004 and 2007 there was a gradual increase from 1995 up to 2008/2009. Since then, most countries have moved from expansive fiscal policies to very tight policies, with fiscal programmes heavily focusing on public investment.

As for the non-cohesion EU-15 countries (a group we call EU-core), general government gross fixed capital formation has dropped from about 5% of GDP in 1970 to less than 3%. Some decline is also evident for the United States, for which gross fixed capital formation has outperformed that of the EU-core since 1978. Switzerland used to have somewhat higher public investment ratios than the EU-core countries, while Japan used to have much higher investment rates, despite the major decline since 1995.

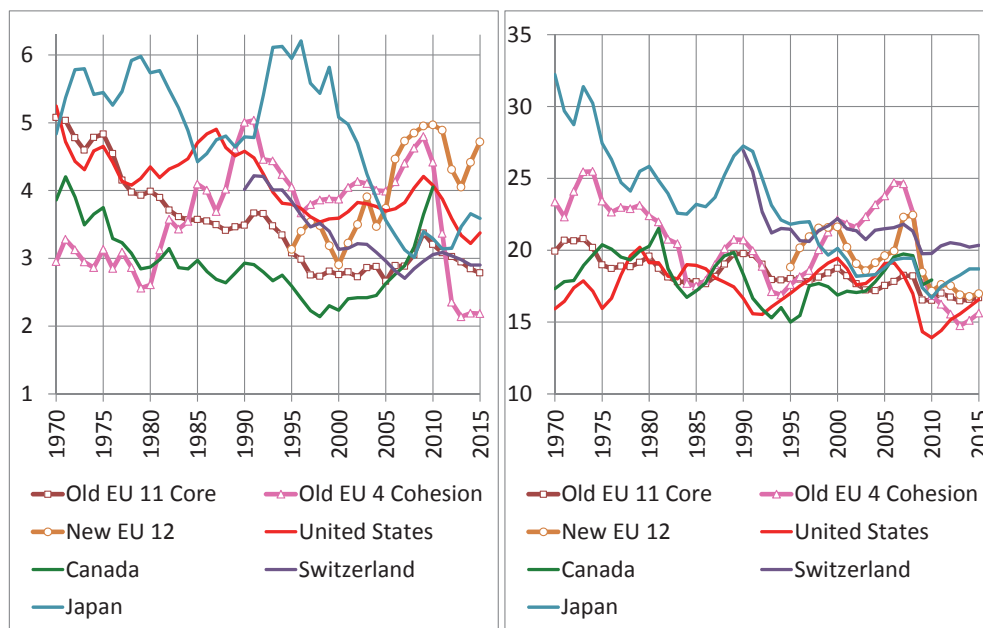


This long-term decline has not been offset by private gross fixed capital formation. In Panel B of chart 1 it is evident that private-sector investment also declined between 1970 to 2015 in EU-core countries, and also in Japan and Switzerland. In the United States, the level of private investment was lower in 1970 than in core EU Member States, while the private investment rate fluctuated along the business cycles since then. In the four EU-15 cohesion countries, there was also a gradual decline from 1970, but this lasted only until the mid-1990s, when a major investment boom started, which lasted until the global financial and economic crisis.

Chart 1: Gross fixed capital formation from 1970 to 2015

**A: General government**  
% of GDP

**B: Private sector**



Source: Authors' calculations using the AMECO database.

Note: Old EU-core-9: Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands and the United Kingdom. Old EU-cohesion-4: Greece, Ireland, Portugal and Spain. New EU-12: Bulgaria, Czech Republic, Cyprus, Estonia, Hungary, Malta, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.

A number of hypotheses on the determinants of the slowdown in public investment have been proposed. One seminal contribution is Mehrotra and Vålilä (2006), who present a critical discussion of the determinants of the slowdown and provide evidence with a panel co-integration model for 1970–2003 for EU Member States. One of their main findings is a negative effect on public investment of discretionary fiscal consolidation and of high public debt. The cost of debt financing and the effort required to join EU economic and monetary union do not seem to be significant, in contrast to many arguments on the negative effect of the introduction of Maastricht requirements on public investment. Yet, gross fixed capital formation also declined in Switzerland and Canada until the mid-2000s, despite their healthy public sectors, which might bring into question the importance of fiscal consolidation episodes. Mehrotra and Vålilä (2006) also argue that it is unlikely that any political drive toward a smaller economic role for the state can account for the decline in public investment, because the share tax of revenues to GDP has not become less significant in recent decades.

Straub and Tchakarov (2007) add that in parallel with the decline in public investment, public consumption in the EU-15 has increased. They also note that public-private partnerships are a relatively recent phenomenon that have become significant only in a few EU Member States, and cannot therefore explain the long-term decline in public investment.

Overall, we conclude that the long-term decline in EU government gross fixed capital formation is broadly in line with developments in other advanced economies. However, the developments during the global and euro area financial and economic crises were strikingly different.

## Recent developments

Government investment was a primary target for fiscal consolidation. Panel A of chart 1 indicates that the share of public gross fixed capital formation in GDP declined from 4% in 2009 to 1.5% in 2013, on average, in Greece, Ireland, Spain and Portugal. At the same time, private gross fixed capital formation also collapsed in these countries, from more than 25% of GDP in 2007 to less than 15% in 2013. There was also a sizeable fall in public gross fixed capital formation in the 12 EU Member States that joined the bloc between 2004 and 2007 (the group we call New EU-12), and a minor decline in EU-core countries. These developments are in contrast to Canada, Japan and the United States, where public gross fixed capital formation has increased in recent years.

Table 1 looks at the composition of the change in public expenditure from 2009 to 2013, net of bank recapitalisation by the public sector. For all EU country groups, capital expenditure (defined here as gross fixed capital formation and capital transfers excluding bank recapitalisation) fell more than other primary expenditure cate-

gories between 2009 and 2013 in nominal terms<sup>4</sup>. There was a particular collapse in the four EU-15 cohesion countries (51%) and in Italy (24%). In the other EU-core countries, capital expenditure slightly declined (by 1%) between 2009 and 2013 in nominal terms, while all primary expenditures increased by 9%. These developments in the EU were in contrast to developments in the United States and Switzerland, where capital expenditure increased more rapidly than other primary expenditure (such detailed data is not available in our data source for other advanced countries). Table 1 shows the developments in the nominal value of public expenditure: taking into account inflation from 2009 to 2013, in real terms there were even more significant falls in capital expenditure in the EU.

What kinds of public investment were cut? Unfortunately, data is available only for gross fixed capital formation (not available for capital transfers, nor for measures of net investment) and only up to 2011, and therefore we can show only a partial picture for the first years of fiscal consolidation. As table 2 shows, in the four EU-15 cohesion countries, total gross fixed capital formation fell by 36% during this period and every main category suffered major cuts. The three largest categories of public investment are economic affairs<sup>5</sup> (almost one-half of public gross fixed capital formation), housing and community amenities<sup>6</sup> (12% share) and education<sup>7</sup> (10% share), which were cut by 28%, 61% and 37%, respectively. In Italy, where public gross fixed capital formation was cut by 16% from 2009 to 2011, most major categories suffered from cuts of similar magnitude, including economic affairs and education<sup>8</sup>. These changes refer to the period up to 2011, but in 2012 and 2013 additional major

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<sup>4</sup> See Appendix 1 for definitions. Among the 28 EU Member States, there were six smaller countries in which capital expenditures increased faster than other primary expenditures both from 2008 and 2009 to 2013: Austria, Bulgaria, Denmark, Hungary, Malta, Romania and Sweden. Looking at the 2009–2013 period only, capital expenditures also increased faster than other primary expenditures in Estonia, Latvia, Lithuania and Romania, but in these four countries fiscal consolidation started earlier and there were already major cuts in public investment in 2009: compared to 2008, capital expenditures increased less than other primary expenditures in these four countries, too.

<sup>5</sup> Economic affairs have nine sub-components: 1 General economic, commercial and labour affairs; 2 Agriculture, forestry, fishing and hunting; 3 Fuel and energy; 4 Mining, manufacturing and construction; 5 Transport; 6 Communication; 7 Other industries; 8 R&D Economic affairs; 9 Economic affairs n.e.c.

<sup>6</sup> Housing and community amenities has six sub-components: 1 Housing development; 2 Community development; 3 Water supply; 4 Street lighting; 5 R&D Housing and community amenities; 6 Housing and community amenities n.e.c..

<sup>7</sup> Education has eight sub-components: 1 Pre-primary and primary education; 2 Secondary education; 3 Post-secondary non-tertiary education; 4 Tertiary education; 5 Education not definable by level; 6 Subsidiary services to education; 7 R&D Education; 8 Education n.e.c..

<sup>8</sup> In Italy, there were two small categories (defence and social protection) which recorded increase from 2009 to 2011.

cuts were implemented in public investment and the November 2013 European Commission forecast notes further expected cuts in 2014: by an additional 15% in the four EU-15 cohesion countries and by 7% in Italy.

*Table 1: Fiscal adjustment strategies by main expenditure categories from 2009 to 2013*

	Greece, Ireland, Portugal and Spain	Italy	10 other EU-15 countries	New EU- 12	United States	Swit- zer- land
<i>% change in current prices</i>						
Total expenditure	-9	1	9	9	9	11
Interest expenditure	48	15	15	27	89	-6
Primary expenditure	-12	-1	9	8	4	11
Compensation of employees	-13	-4	7	3	3	10
Current transfers	1	7	12	11	12	11
Other current primary expenditure	-19	-6	8	15	-13	13
Capital expenditure	-51	-24	-1	-7	20	14

*Source: Authors' calculations using the November 2013 AMECO.*

*Note: New EU-12 refers to the Member States that joined the EU between 2004–2007. EU-15 refers to Member States before 2004. The aggregates involving countries with different currencies were calculated using constant exchange rates and therefore exchange rate fluctuations do not affect the values shown. Capital expenditure is the sum of gross fixed capital formation and capital transfers (see Appendix 1 for the definitions). Capital transfers also include public sector support to bank recapitalisation. Since we do not have detailed data on bank support, for countries in which the 2009 value of capital transfers was more than 10% larger than in 2006 and 2007, we used the average of 2006–2007 capital transfers for 2009, instead of the 2009 actual capital transfers. We made such a correction for: Belgium, Cyprus, Finland, Greece, Ireland, Latvia, Malta, Netherlands, Poland, Portugal, Slovakia, United Kingdom and United States. We also corrected the 2013 capital transfers data for Slovenia (unusually high transfer), Slovakia (negative transfer), Netherlands (unusually low transfer) and Greece (unusually high transfer): for Slovenia, Slovakia and the Netherlands we used 2012 data, while for Greece we used 2014 forecast (because 2012 data was also unusually high due to recapitalisation).*

*Table 2: Cuts in government gross fixed capital formation by function during the first years of fiscal adjustment from 2008/09 to 2011*

	Greece, Ireland, Spain, Portugal		Italy	
	Share in %	% change in current prices	Share in %	% change in current prices
<b>Total</b>	<b>100</b>	<b>-36</b>	<b>100</b>	<b>-16</b>
General public services	6	-44	16	-16
Defence	2	-65	3	42
Public order and safety	3	-28	4	-26
Economic affairs	46	-28	32	-15
Environment protection	6	-40	9	-14
Housing and community amenities	12	-61	11	-33
Health	7	-44	9	-13
Recreation, culture and religion	7	-30	7	-33
Education	10	-37	7	-14
Social protection	2	-27	2	11

Source: Authors' calculations using Eurostat's general government expenditure by function (COFOG) database.

Note: Share in 2008 and the change from 2008 to 2011 in the aggregate of Greece, Ireland, Spain and Portugal, and share in 2009 and the change from 2009 to 2011 in Italy.

### 3 Public investment in the EU fiscal framework

The previous section has shown that government gross fixed capital formation has been a major victim of fiscal consolidation in the EU. Therefore, it is clear that the EU fiscal framework was unable to foster public investment as a counter-cyclical fiscal stabilisation tool during the deepest crisis since World War II in EU countries with fiscal space, in contrast to other advanced economies. Furthermore, the EU fiscal framework could not even prevent major collapses of public investment in countries with vulnerable fiscal positions, despite the supporting role of the EU budget.

This dismal record is in spite of the claim by European Commission (2012b, p. 23) that “*The EU fiscal framework offers scope to balance the acknowledgment of productive public investment needs with fiscal discipline objectives,*” and several communications that growth-friendly expenditure categories should be preserved during fiscal consolidation. For example, a decade ago, the European Commission (2004, p. 30) noted that “*For the countries with high deficits, the budgetary consolidation strategy, based on expenditure restraint, should not be achieved at the expenses of the most “productive” components of public spending (such as public investment, education and research expenditures).*” The same suggestion was made more recently in the Annual Growth Surveys (AGS), which set growth-friendly fiscal consolidation as a key objective. For example, the 2013 AGS issued the following recommendation: “*The Member States should strive in*

*particular to maintain an adequate fiscal consolidation pace while preserving investments aimed at achieving the Europe 2020 goals for growth and jobs. The 2013 AGS underlines that Investments in education, research, innovation and energy should be prioritised and strengthened where possible, while ensuring the efficiency of such expenditure.”*

But what are the provisions in the EU’s fiscal framework that should shield productive investment when Member States implement their budgetary policies? We list three aspects plus the supporting role of the EU budget.

First, the Stability and Growth Pact (SGP) was strengthened by the recent reforms, making the EU fiscal rules more stringent. In particular, the so-called Six Pack<sup>9</sup> operationalised the public debt rule: Countries with a public debt in excess of 60% of GDP should reduce their public debt ratio at an average yearly rate of one-twentieth of the difference between their public debt ratio and the 60% of GDP threshold. Meanwhile, the Fiscal Compact (the inter-governmental Treaty on Stability, Coordination and Governance (TSCG), which entered into force on 1 January 2013 and is binding for all euro area Member States that have ratified it), requires a balanced budget with a lower limit of a structural deficit of 0.5% GDP (1.0% of GDP for Member States with a debt ratio significantly below 60% of GDP). These more stringent fiscal rules will limit even more the fiscal room for manoeuvre, which is likely to hinder public investment because it is the easiest target of fiscal consolidation.

Second, there are a few specific provisions for public investment, as summarised by European Commission (2012b). Public investment is a relevant factor when considering the launch of an excessive deficit procedure (EDP) against a country. In the preventive arm of the SGP, government gross fixed capital formation is averaged over a number of years in order to avoid annual peaks in investment, when defining the expenditure benchmarks and structural balance objectives. Supported by the request of the European Council (2013) to explore “*the possibilities offered by the EU’s existing fiscal framework to balance the productive public investment needs with fiscal discipline objectives ... in the preventive arm of the SGP*”, Rehn (2013a) clarified the intention already mentioned in European Commission (2012b) to consider allowing temporary deviations from the structural deficit path towards the MTO set in the country-specific recommendations, or the MTO for member states that have reached it, provided that (1) economic growth is negative or well below its potential, (2) the deviation does not lead to a breach of the 3% of GDP deficit ceiling and the public debt rule is respected, and (3) the deviation is linked to national expenditure on projects co-funded by the EU under its Structural and Cohesion policy, Trans-European Networks (TEN) and Connecting Europe Facility

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<sup>9</sup> The Six Pack consists of 5 regulations and 1 directive, which entered into force in December 2011 for all EU Member States. See at [http://ec.europa.eu/economy\\_finance/articles/governance/2012-03-14\\_six\\_pack\\_en.htm](http://ec.europa.eu/economy_finance/articles/governance/2012-03-14_six_pack_en.htm).

(CEF). Once weak economic conditions are no longer a factor, any deviation must be compensated for so that the time path towards the MTO is not affected. This set of criteria is called the “investment clause” and will be first implemented when assessing the national budgets for 2014 and the budgetary outcomes for 2013.

The European Parliament did not consider these provisions sufficient and passed a resolution on 8 October 2013 (European Parliament, 2013), in which it requested the European Commission and Member States to exploit the options for “*public expenditure related to the implementation of programmes co-financed by the European Structural and Investment Funds to be completely excluded from the definition of SGP structural deficits*”. As Prota and Viesti (2013) noted in their summary of the debate on the investment clause, this resolution was adopted by the European Parliament by 433 votes to 131, a very large majority. But this call was not heeded by the European Commission and a few days later, on 15 October 2013, Mr. Rehn reiterated in his speech at the ECOFIN that the European Commission will consider the three criteria listed in his letter of 3 July 2013 (Rehn, 2013a and 2013b).<sup>10</sup>

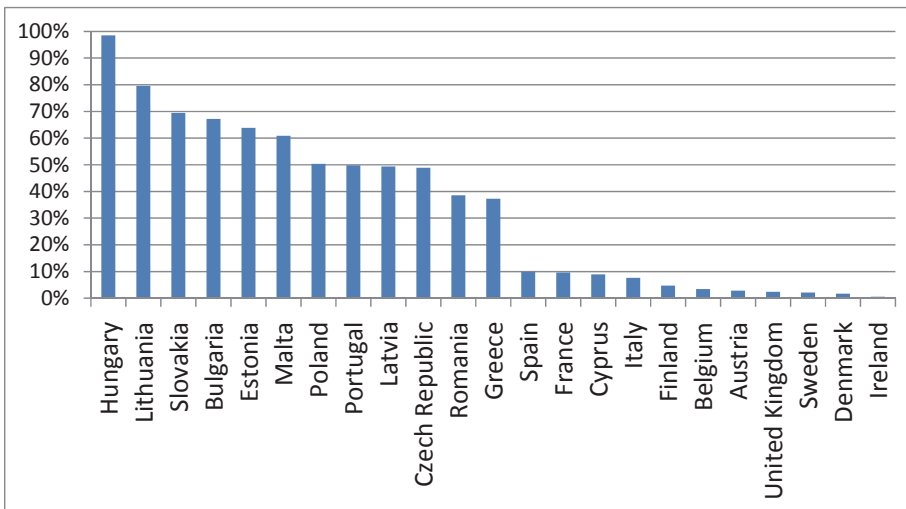
Third, in the corrective arm of the SGP, the Council, based on the recommendation of the European Commission, granted extra time to end the excessive deficit of a number of countries, which may help to safeguard public investment.

While not directly related to the EU fiscal framework, we also note that the substantial fall in public investment happened despite the supporting role of the EU budget, which aims to facilitate better use of EU funds by: (i) reprogramming funds towards the end of the end of the programme period, and (ii) the reduction of national co-financing through a temporary increase of co-financing rates up to 95% for assistance for Member States with the greatest difficulties (Greece, Hungary, Ireland, Latvia and Portugal). Chart 2 shows that EU-supported investment (including the national co-financing) was a very high share of public investment in most member states that joined the EU in 2004–2007, while the share is about one-half in Portugal and one-third in Greece. In other EU-15 Member States, including Spain and especially Ireland, the share is small.

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<sup>10</sup> In November 2013 the European Commission (2013) reported that four countries have applied for the investment clause, namely Bulgaria, Italy, Slovakia and Romania, of which Italy (due to breaching the debt reduction rule) and Slovakia (due to not correcting the excessive deficit in a lasting way) do not qualify for it, while the assessment for Bulgaria and Romania will be communicated later.

*Chart 2: Structural funds and national co-financing 2009–2011 average  
% of the sum of total public gross fixed capital formation and investment grants*



Source: European Commission (2012a) using data from Eurostat.

How significant can these provisions be in preserving public investment? Not very, in our view. Most EU Member States were under the excessive deficit procedure during the fiscal adjustments of recent years and therefore would have not been able to benefit even from the modest investment clause had that been introduced earlier. In the preventive arm, the treatment of public investment can have only limited effect. One reason for this is that the 3% budget deficit threshold and the debt reduction rule have to be respected for getting a temporary deviation from the MTO, but as Darvas (2013a) argued, it will be a major challenge for Italy and Spain to meet the debt reduction rule. Moreover, another condition for getting temporary deviation from the MTO is that the investment should be co-funded by the EU, but for Spain, Italy and Ireland, the share of EU-funded projects in total public investment was rather small during 2009–11 (chart 2) and this is unlikely to change in the future.

Therefore, we conclude that the EU’s fiscal framework is not really conducive to preserving public investment during economic slumps.

#### **4 An asymmetric “golden rule” for Europe?**

The dismal record with public investment during the crisis and the inability of the EU’s fiscal framework to preserve such investment should raise once again the issue of the incorporation of an appropriate “golden rule” in the EU fiscal framework. A golden rule would mean a fiscal rule that excludes capital expenditure from the



computation of budget deficit requirements. The European Parliament (2013) proposal, which was not acted on by the Commission, would be a light form of the golden rule, which would exclude investments co-funded by the EU from the Stability and Growth Pact (SGP) deficit requirement (see the previous section). Beyond this proposal, the question of a more comprehensive golden rule exempting “all” or “most” public investment should also be considered. Consideration of it should include whether such a rule should be symmetric over the business cycle or if it should be asymmetric in the sense of having different provisions for economic expansions and recessions.

A golden rule would have a strong rationale; see for example Blanchard and Giavazzi (2004), who advocated the exclusion of net public investment from the deficit considered in the SGP and the establishment of an investment agency in each country to deal with the investment budget, which should be separate from the current budget of the government. Even European Commission (2004) acknowledged that such a rule would have merits, but its involvement in the SGP during its first reform was rejected for the following reasons (Box II. 6. in European Commission, 2004):

- It could entail maintaining high deficit for long periods;
- It might create distortions, with physical infrastructure preferred to other forms of capital or current spending that might also be beneficial over the long run;
- The difficulties in deciding which expenditure categories should be granted special budgetary treatment;
- Net public investment is the relevant variable for intergenerational equity, but it is just a small fraction of gross investment;
- There would be significant incentives to record current expenditure as capital spending.

There are arguments both for and against these points<sup>11</sup>, but to inform the debate we can try to assess what would have happened if a golden rule was in place during the crisis in such a form that would have made cuts in net public investment irrelevant for meeting the fiscal targets. Table 3 shows that in the four EU-15 cohesion countries, government net fixed capital formation was sizeable before the crisis and there were major declines of about 3% of GDP by 2013, even turning to negative in three of the four countries and almost zero in Ireland. However, recent research suggests that the fiscal multiplier is higher during a recession than during expansions and is particularly high for cutting public investment, see for example, the estimates of Auerbach and Gorodnichenko (2012) which are reported in table 4. Baum, Marcos Poplawski-Ribeiro and Weber (2012) reached similar conclusions. Therefore, preserving government investment during the recent crisis may have led to smaller output and the consequent employment falls and would have in fact lowered the

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<sup>11</sup> Blanchard and Giavazzi (2004) challenge some of these arguments.

overall budget deficit if the multiplier is indeed greater than about two<sup>12</sup>. There is of course uncertainty about econometric estimates of the multiplier and different countries may be characterised by different multipliers. Yet even if the multiplier is less than two, but sizeable, preserving public investment would have reduced output and employment contraction at the expense of a not-so-large increase in the overall budget deficit.

If net public investment was irrelevant for the fiscal adjustment requirements under the SGP, then governments would have been forced to cut current spending, but they would have had the option to keep public investment. Certainly, since at the height of the crisis governments decided to cut investment more deeply and not current spending, governments may not have been happy with a fiscal rule that forces them to cut current spending instead of investments. In fact, the United Kingdom, where a golden rule was introduced in 1997, suspended it in 2008 (box 1), and Germany, where a golden rule was also in place earlier, replaced it with the so called “debt-brake” in 2011.

*Table 3: Net fixed capital formation of the general government  
% of GDP*

	2000–2009 average	2008/09	2013
Greece	1.5	1.7	–1.6
Ireland	2.5	3.7	0.2
Spain	2.1	2.7	–0.7
Portugal	1.5	0.9	–0.3
EU-11 core	0.5	0.6	0.3
EU-12 NMS	1.2	2.2	1.2

*Source: Authors’ calculations based on AMECO.*

*Note: The column 2008/09 indicates the pre-crisis peak in net public investment: 2008 for Ireland, Greece, Portugal and EU-12 NMS, and 2009 for Spain and EU-11 core. EU-11 core denotes 11 of the first 15 members of the EU, except Greece, Ireland, Spain and Portugal. EU-12 NMS denotes the 12 Member States that joined the EU between 2004 and 2007.*

<sup>12</sup> When the multiplier is larger than two and public revenues amount to 50% of GDP, a cut in expenditure is in fact increases the budget deficit even in nominal terms: a EUR 1 cut in public expenditures reduces output by more than EUR 2 and therefore the revenues by more than EUR 1.

*Table 4: Fiscal multiplier estimates of Auerbach and Gorodnichenko (2012)*

	Total spending		Consumption spending		Investment spending	
	Measure 1	Measure 2	Measure 1	Measure 2	Measure 1	Measure 2
Linear	0.87	0.58	0.82	0.89	2.07	2.75
Expansion	0.49	-0.80	0.12	-0.16	2.82	1.94
Recession	2.12	2.17	2.28	1.37	2.79	4.26

Source: Auerbach and Gorodnichenko (2012).

Note: Measure 1 is the maximum impact on output during 20 quarters. Measure 2 is the ratio of the sum of the output response (to a shock in government spending) to the sum of government spending response (to a shock in government spending) during 20 quarters, which has the rationale since the size of the multiplier depends on the persistence of fiscal shocks. The estimates are statistically different from zero except the multipliers of consumption spending during an expansion.

### *Box 1: The UK's golden rule and its suspension*

Creel, Monperrus-Veroni and Saraceno (2009) summarise the two key features of the UK Code for fiscal stability, which was in place before 2008: (1) the “golden rule”, according to which government borrowing should not exceed net capital formation over the cycle, allowing to “*spread the cost of durables over the financial years during which they will be used and to spread the burden of capital formation over the generation of taxpayers that will be benefiting from it*” and (2) the “sustainable investment rule” to prevent overinvestment and to limit net public debt. Creel, Monperrus-Veroni and Saraceno (2009) found, using a structural vector autoregressions (SVARs) that the introduction of the UK's golden rule in 1997 strengthened the positive effect of public investment on output.

Dupont and Kwarteng (2012) assess the reasons behind the failure of the UK's golden rule. They conclude that a main reason is that the rule failed to bring the budget back into surplus, as the rule required a balanced current budget over the economic cycle and therefore the government could always motivate a deficit as long as it could project surpluses in the near future. In this regard, Dupont and Kwarteng (2012) also conclude that the fiscal rules gave politicians too much flexibility, left no room for error and spending plans were based on over-optimistic forecasts.

Yet during the current crisis, a fiscal rule giving special status to net public investment would have improved outcomes: more growth-friendly composition of fiscal consolidation (as governments would have been forced to cut current expenditures, but not investments), lower output and employment falls in the short term (as the fiscal multiplier is smaller for current spending than for investments), and better

growth prospects in the medium- and long-term (because of the higher stock of public capital and reduced destruction of human capital resulting from longer-term unemployment). Even Turrini (2004), who on balance concluded that a golden rule is not desirable for the EU fiscal framework, noted that a golden rule “*may help to avoid an excessive compression of desirable investment projects especially during periods in which fiscal consolidations are needed to respect the requirement of fiscal discipline of the EU fiscal framework*”. So a golden rule can be particularly helpful during a crisis.

Beyond these crisis-related fiscal consolidation issues, the standard arguments in favour of a golden rule are also appealing:

- Intra-generational equity requires that the cost of public investment should be borne by future generations who will benefit from it and therefore capital expenditure should be financed through debt and not by taxes paid by the current generation (Blanchard and Giavazzi, 2004).
- In the presence of deficit limits, socially desirable public investment projects may not be undertaken (Turrini, 2004), and a golden rule could help to avoid strategic underinvestment (Peletier, Dur and Swank, 1999).
- In corporate accounting, the cost of investment is not charged to a single year when the investment is implemented, but distributed across the years of its use: this principle has merits and should be adopted in public sector fiscal rules by an appropriate golden rule.

Certainly, there are major conceptual and technical difficulties in selecting which expenditure categories should be granted special budgetary treatment, as also emphasised by Turrini (2004). But these difficulties should not prevent the consideration of a rule that would be effective in crisis times. Instead, proper provisions should be made to prevent the emergence of adverse incentives during good times, methodologies for calculating net investment and accounting practices should be harmonised across the EU, and the current and capital budgets should be separated, along with greatly increased transparency of the capital budget. We note that the EU fiscal framework builds strongly on the notions of potential output and structural budget balance: two unobservable variables, whose theoretical definitions are ambiguous. Yet an agreement was found on how to define and how to estimate these concepts. These estimates play major roles in the fiscal framework, despite well-known deficiencies, such as major revisions for the past (Darvas, 2013b). Analogously, the difficulties in defining the net investment measure to be excluded from the deficit considered in the SGP as least during bad times, should not prohibit the revision of the EU fiscal framework if that would improve economic outcomes.

A straightforward way to add an asymmetric golden rule to the current fiscal framework of the EU would be the following. Whenever the negative output gap exceeds a threshold, say actual output falls by more than 1% below potential output, the allowed structural deficit is increased by the amount of net public investment

compared to the benchmark of the current EU framework. A cut in net public investment would then by definition reduce the extra room for deficit. When the negative output gap is eliminated and actual output reaches potential output, a transition period lasting for e. g. three years would start during which the extra room for the deficit is gradually eliminated. Therefore, such a system would encourage governments to keep investment and cut instead current expenditures during an economic downturn, while allowing them to have a larger overall budget deficit than in the current EU fiscal framework. But the elimination of this extra room for the deficit in good times would address the concern of unduly favouring investments over other types of government expenditures at a time when governments have more fiscal space. The public debt rule could also be amended to make it consistent with the deficit rule. Such a system would not be prone to the drawbacks of the UK's golden rule as highlighted by Dupont and Kwarteng (2012).

## **5 Perspectives on public investment in the EU**

The two main developments in public investment in EU Member States are oppositely related with those in other advanced economies. While the long-term decline in public investment since the 1970s in EU-core countries is broadly in line with other advanced economies, developments during the global and euro area financial and economic crises have been different: Public investment increased in Canada, Japan and the United States, but there was a modest fall in EU-core countries, and a dramatic collapse in vulnerable EU Member States, despite support from EU funds. Since the fiscal multiplier during a deep recession is likely to be higher than normal times, and the multiplier for productive government investment is especially high, preserving public investment could have made a sizeable difference in terms of output, employment and medium-term growth potential, while not having a major negative impact on budget deficits and debt ratios.

The EU fiscal framework has very modest provisions on preserving public investment, which is typically the first target of fiscal consolidation. The recently-inserted investment clause, which might allow a temporary deviation from fiscal targets for EU funding-related investments if the economy is in a deep recession and the 3% of GDP deficit rule and the debt reduction rule are respected, is of almost no help. Therefore, something more decisive has to be done.

Unfortunately, the European Parliament's October 2013 call to exclude, permanently and unconditionally, all national co-funding of EU-supported investments from the fiscal indicators considered in the Stability and Growth Pact, has not been respected. In the short term, given the difficulties in making a more significant modification to the EU fiscal framework, this proposal would be a sensible way to support investment, even though it would have rather limited impact: in Spain, Cyprus, Italy and Ireland (four older EU Member States with high public debt ratios)

the share of EU-supported investment is rather low, while in Greece, Portugal and the newer Member States national co-financing is typically small. Yet even some help is better than none.

But in the medium term, more ambitious support for public investment should also be considered. A kind of asymmetric golden rule, which would exclude a measure of net public investment from the fiscal indicators of the SGP at least during recessions, would be a sensible option. Such a rule would have strong rationale, because it would lead to a more growth-friendly composition of fiscal consolidation, thereby limiting the fall in output and employment in the short term, and offering better growth prospects for the medium/long-term. The rule may also be asymmetric during the business cycle and work differently in good and bad times. In good times, it should be formulated in a way to prevent perverse incentives, such as an excessive preference of physical infrastructure over other growth-related expenditure. In bad times, the major goal should be the preservation of net public investment. The difficulties in defining, measuring and monitoring the net investment items to be excluded should not prevent a proper incorporation of the rule. As a comparison, indicators of potential output and structural budget balance are also included in the EU fiscal framework, even though they are very difficult to define conceptually and to estimate empirically, and earlier estimates were revised significantly. The incorporation of a golden rule should of course be accompanied by the harmonisation of EU accounting and reporting practices, the investment budget of the government should be separated from the current budget and the transparency of public investments should be increased.

Beyond an appropriate golden rule, which may help to prevent a collapse in public investment in vulnerable countries, the EU fiscal framework should use more actively public investment as a cyclical stabilisation tool during a recession, similar to what happened in a number of non-EU advanced and emerging countries recently. The first best option would be an EU, or at least a euro area, fiscal stabilisation instrument<sup>13</sup>. But if the development of such a common instrument is not feasible, two more realistic measures have to be implemented. First, a much more significant European investment programme is needed. The European Investment Bank seems to be the best institution to carry out such an investment programme (Darvas, 2012). Therefore, much more capital should be provided to the EIB beyond the EUR 10 billion agreed at the 29 June 2012 European Council and the internal procedures of the EIB should be revived to allow faster investments. Second, fiscal coordination through the European Semester should encourage Member States with healthy public finances to increase their investments when the euro area economy is weak. For example, Germany and Austria are among the countries in which there was public disinvestment, i. e. net public investment was negative recent years at a time

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<sup>13</sup> See Darvas (2012) and Wolff (2012).

when the stock of public capital relative to GDP is among the lowest in advanced countries (table 5). Yet despite the fact the Germany has out-performed both European and national fiscal targets, in the country-specific recommendations delivered by the European Semester, it did not receive a recommendation to increase public investment<sup>14</sup>.

Certainly, the quality of public investment is of utmost importance, as rightly emphasised by the European Commission (2012c), and smart and strategic choices have to be made for public investment to have forceful effects (Zachmann, 2012). Therefore, the fiscal reforms we have outlined should be accompanied by major budgeting, accounting, transparency and assessment reforms to ensure that public investment is effectively deployed to the right places.

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<sup>14</sup> See Darvas and Vihriälä (2013). Moreover, Zeuner (2013) concluded that there is major public investment backlog in Germany, yet public investment is even inadequate to maintain infrastructure.

*Table 5: Government net fixed capital formation and the stock of public capital*

	Government NFCF, 2013	Government capital stock, 2010
	% of GDP	
Estonia	2.6	N/A
Romania	2.5	N/A
Bulgaria	2.4	N/A
Poland	1.9	N/A
Latvia	1.7	N/A
Luxembourg	1.6	N/A
Sweden	1.2	49
Lithuania	1.2	N/A
Cyprus	1.1	N/A
United Kingdom	1.0	36
Malta	1.0	N/A
Slovenia	0.8	N/A
Hungary	0.8	N/A
United States	0.7	52
France	0.5	54
Croatia	0.4	N/A
Finland	0.4	43
Denmark	0.3	44
Netherlands	0.3	58
Ireland	0.2	51
Italy	-0.1	57
Belgium	-0.1	35
Germany	-0.2	42
Austria	-0.2	40
Portugal	-0.3	50
Spain	-0.7	52
Czech Republic	-1.0	N/A
Slovakia	-1.0	N/A
Greece	-1.6	49

Source: Authors' calculations using data from AMECO November 2013 vintage (NFCF) and Checherita-Westphal, Hughes-Hallett and Rother, 2012 (public capital stock).

Note: NFCF data of the United States is from 2011. The capital stock estimation is based on a number of assumptions and uses GFCF data, which does not include all public investment, nor privatisation (see Appendix 1), and therefore the results should be treated with caution. The countries are ordered according to the NFCF.



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## Appendix 1: What is public investment? Some definitions and clarifications

Conceptually, investment directly financed with the budget of public sector entities should be considered as public investment, but it is extremely difficult to measure it and all available indicators are imprecise. Here we consider the following indicators:

- Gross fixed capital formation of the general government;
- General government gross capital expenditure;
- Net fixed capital formation of the general government;
- Public-private partnerships (PPPs);
- Investment by state-owned enterprises (SOEs) and privatisation of SOEs.

The most widely used indicator of public investment is gross fixed capital formation (GFCF) of the general government<sup>15</sup>. The concept deals with produced tangible and intangible non-financial assets (e.g. dwellings, machinery, cultivated assets, software, major improvements to existing assets, reclamation of land from sea etc.). Financial assets, such as the ownership of companies, are excluded. It is important to notice that state-owned enterprises (SOEs) that are treated as “market operators”, such as railway companies or power-grid companies, are classified in the corporate sector and not as part of the general government and therefore government GFCF potentially misses a large part of infrastructure investment.

An alternative measure of gross public investment is the sum of gross fixed capital formation and government capital transfers<sup>16,17</sup>. But a drawback of this measure is that capital transfers also include government subsidies to private investments that are not a component of public investments. In chart 3 we compare gross fixed capital formation plus capital transfers (i.e. capital expenditure), and distinguish within the capital transfers the share of “investment grants” that in principle should net out the effect of other capital transfers that do not entail creation of fixed capital.

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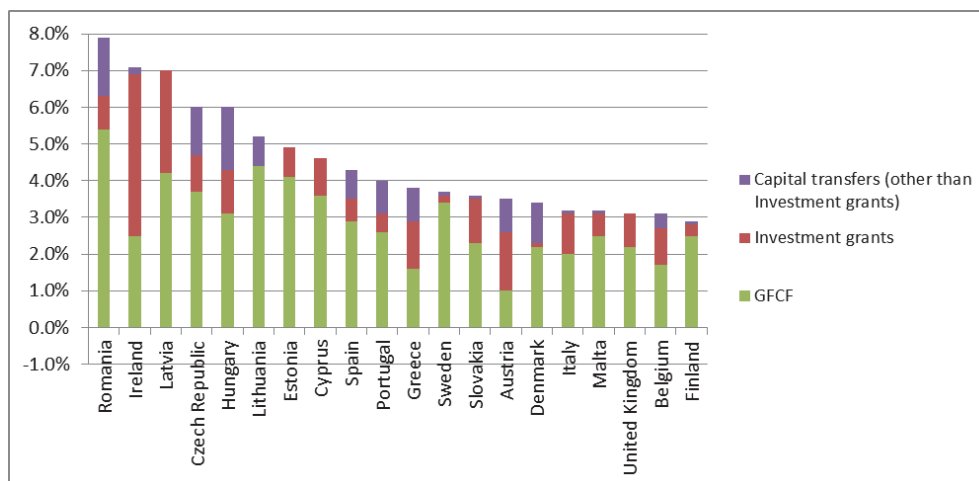
<sup>15</sup> A related concept is “Gross Capital Formation” (code P5 in the nomenclature used by the European System of Accounts – ESA-95), which is the sum of three components: Gross fixed capital formation (P51), Changes in inventories (P52), Acquisitions less disposals of valuables (P53).

<sup>16</sup> Capital transfers (D9) cover: i) Capital taxes (D91) – taxes on capital transfers: inheritance taxes, death duties and taxes on gifts. ii) Investment grants (D92) – consist of capital transfers in cash or in kind made by government or by the rest of the world to other resident or non-resident institutional units to finance all or part of the costs of their acquiring fixed assets, iii) Other capital transfers (D99).

<sup>17</sup> Capital expenditure is defined as P51 (Gross Fixed Capital Formation) and D9 (Capital Transfers Consolidated) in ESA-95.

*Chart 3: Gross fixed capital formation, investment grants and other elements of capital transfers in 2011*

% of GDP



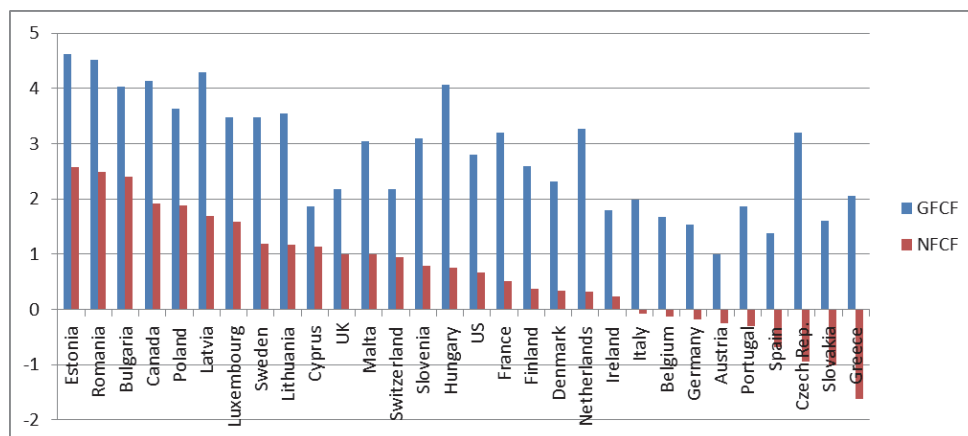
Source: Eurostat database, Government national accounts.

Note: Data on capital transfers and investment grants is not available for the EU Member States not included in the chart.

Certainly, net capital formation would be a better indicator of investment than gross capital formation, since usage and time depreciates the capital stock. A positive gross investment may actually imply disinvestment (i.e. decline of the capital stock), if gross investment does not reach the value of depreciation. GFCF of the general government is a gross measure in the sense that it does not consider depreciation, yet it also has a net component in the sense that the value of the acquisition of new investments is netted against sales or other disposals of existing capital goods<sup>18</sup>. When deducting capital depreciation, the differences between gross and net investment can be quite significant, as it is shown in chart 4. In a number of countries (Italy, Belgium, Germany, Austria, Portugal, Spain, Czech Republic, Slovakia and Greece) gross investment in 2012 was below capital depreciation and therefore the net public capital stock has declined. Unfortunately, it is even more difficult to measure capital depreciation than gross investment and therefore net capital formation is a less reliable indicator.

<sup>18</sup> These sales and disposals of non-financial assets include privatizations of government-owned non-financial properties, such as e.g. the sale of an office building: these are deducted from the value of new acquisitions of non-financial assets and are therefore accounted in a negative way in gross fixed capital formation. Privatizations of SOEs are not included in the concept and therefore do not affect gross fixed capital formation of the general government.

*Chart 4: Gross and net public investment (capital formation) in 2013  
% of GDP*



Source: AMECO database.

Note: 2012 data for the USA, 2010 data for Canada. Net fixed capital formation is available at current prices and then expressed as a share of GDP.

Public private partnerships (PPPs) further complicate the measurement of public investment. PPPs are an innovative financing mechanism of infrastructure investments. Until 2004, the treatment of PPPs in national accounts was not uniform across Europe, in the absence of EU-wide guidelines. The novelty of the instrument and the different treatment by EU Member States is also reflected in the absence of systematic data on PPPs. The European PPP Expertise Centre (EPEC)<sup>19</sup> regularly monitors European PPPs; according to recent analysis by the Centre, the aggregate value of PPP transactions that reached financial close on the European market in the first half of 2013 amounted to EUR 9 billion, which is a rather small amount compared to government GFCF in the EU. Unfortunately, the actual contribution of government into project financed through PPPs is rather difficult to estimate. Despite the lack of comparable data, we know that the share of PPPs is relatively small compared to government investment (Peree and Valila, 2007). In their study, Peree and Valila (2007) combine different sources on micro-level data on projects structured as PPPs to obtain estimates on PPPs at the aggregate level. According to the authors, until 2006 the only countries where PPPs seemed to have a systemic importance were the UK and Portugal, in which the average total project amount of PPPs (i.e. stocks) was around 20–33% of average public investment flow, while in all other countries even the stock value of signed public-private partnership contracts is small compared to annual public investment flows.

<sup>19</sup> [www.eib.org/epec/](http://www.eib.org/epec/).

Finally, we highlight that the treatment of state-owned enterprises (SOEs) further distorts the picture on public investment. While first principles suggests that SOEs are part of the public sector, investment by SOEs are not included in government GFCF (as we noted earlier), which is one reason why GFCF is a distorted measure of gross investment. When the public capital stock is calculated from government time series of GFCF, which is typically the case, then it misses the capital stock of SOEs which is therefore one more reason why the estimated public capital stock is also a distorted measure. Also, privatisation of SOEs should, by definition, reduce the public capital stock, but this effect cannot be incorporated by estimates for the capital stock for two reasons: the capital stock of SOEs is not incorporated in public capital stock estimates and there is no comprehensive data on privatisation either.

The unmistakable conclusion is that all available indicators on public investment and public capital are imprecise and major improvements would be needed in statistical services to be able to offer a correct and comprehensive picture on gross and net public investment and capital.

## **Appendix 2: Public investment and economic growth**

The empirical literature on the effects of public investment and capital on economic growth is somewhat inconclusive, though the majority of studies find positive effects. This might be due to several factors.

One reason for this inconclusiveness is the difficulties related to the definition and measurement of public investment, as we discussed in the previous section. This makes any selection of the variable to be used in the empirical analysis imperfect.

- Coverage: as we noted in Appendix 1, public GFCF, the indicator most widely used, does not include investment of SOEs and therefore this indicator potentially misses an important share of public investment.
- Gross vs net: net public investment is the proper indicator of additions to the public capital stock, but data on net investment are even less reliable.
- Composition of public investment/capital: A considerable portion of public investment is functional to the supporting of broad functions of government, such as the provision of public services, maintaining law and order, community amenities and administration, which can improve the business climate and the quality of public services, but they may have different impacts on economic performance than, for example, highways and schools. Lucas (1998) argued that public investment in education increases the level of human capital and this can be seen as a main source of long-run economic growth. However, not just investment, but current spending on education and health is also growth enhancing and therefore the most widely used indicator of public investment (GFCF) is narrow in the sense

that it does not cover all public spending that adds to a country's productive potential.

- Flow vs stock: the data on public capital stock would be better for analytical purposes than investments, but it is even more problematic to measure than public investment. Only a few studies attempted to estimate the stock of public capital, but these estimates rely on a number of assumptions which introduce major uncertainties. Furthermore, the capital stock estimates are based on historical GFCF, which, as we argued above, does not include all public investment, including the investment of SOEs. Also, capital stock estimates do not used to consider privatisation, which was a significant factor in reducing the public capital stock in a number of countries.

A second reason for the inconclusiveness of the empirical literature is the difficulty to isolate the effect of public investment on long term growth, because there are several other influencing variables. Moreover, the nature of infrastructure investment implies that the full impact of investment in roads, telecommunications, and other infrastructure on growth can only be realized with considerable lags, once effective networks have been established (Straub and Tchakarov, 2007). It is difficult to formulate a model that approximates well the delayed impacts.

Thirdly, the results might also depend on the type of methodology used. Traditionally, the effect of public investment on growth has been analysed with four major types of methods (Straub and Tchakarov, 2007; Turrini, 2004).

1. The first one entails the estimation of aggregate production functions that relate output to public capital stocks. A seminal article with this approach was Aschauer (1989), who found that, for the United States, public investment would exert a strong positive impact on production. This article has triggered a debate among academics, with subsequent analyses testing different levels of aggregations, but mostly leading to weak results. In a recent paper applying panel econometric methods, Calderón, Moral-Benito and Servén (2014) both statistically and economically highly significant impact of infrastructure on output, which is robust to alternative dynamic specifications and infrastructure measures.
2. The second strand of methodologies focuses on cost or profit functions of private sector firms, to assess whether public capital lowers business costs. The results arising from these analyses are quite ambiguous, though in most of the cases public capital is found to reduce the costs of private sector firms (Turrini, 2004).
3. A third strand of studies analyses, using mostly cross-section regressions, aims to study the impact of public capital on the growth potential of countries or regions rather than the level of output<sup>20</sup>. These papers assess whether public investment helps explain differences in cross-country or cross-regional growth, with the underlying concept that that public capital has an impact on the accumu-

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<sup>20</sup> Barro (1991), Easterly and Rebelo (1993), Holtz-Eakin and Schwartz (1995).



lation possibilities of the economy, rather than on the level of output. Positive results are obtained when using a subcomponent of public capital, namely infrastructure in transport and telecommunications.<sup>21</sup>

4. A fourth strand of literature uses vector autoregressions (VAR) to analyse the direction of causation. Yet even within this group of studies results are rather inconclusive, as for instance the evidence does not support the claim that public investment rather than consumption boosts growth<sup>22</sup> or that public investment pays by itself in the long run. Most of these studies focus on public investment rather than on public capital, as it was the case for aggregate production function studies. Pereira (2000, 2001) and Pereira and Andr az (2005) found that all types of public investment affect positively private output, yet core infrastructure investments display the highest rate of return, and that this positive effect is mainly due to a crowding-in effect on private investment. Voss (2002), in contrast with Pereira, showed that public investment tends to crowd out private investments. Sturm et al. (1999) found a positive and significant short-run effect of public investment, but no long-run effects, while Creel, Monperrus-Veroni and Saraceno (2009) and Tenhofen, Wolff and Heppke-Falk (2010) found long-term effects.<sup>23</sup>

Let us also highlight that Aschauer (1998) and Barro (1990) argued that the relationship between public investment and growth could even turn negative once public capital is above certain threshold. In fact maintaining or expanding the existing capital stock may require high tax rates, which would reduce growth, all else being equal.

Therefore, there are good reasons for mixed results in the academic literature, though a number of studies found the certain types of public investment/capital, like infrastructure, is conducive to economic growth.

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<sup>21</sup> Calderon and Serven (2003), Easterly and Rebelo (1993) for instance. Note that these works refer to Latin America.

<sup>22</sup> See, among the others, Perotti (2004).

<sup>23</sup> For a comprehensive literature survey, see Arslanalp et al. (2010).

# The economic rationale of an EMU fiscal capacity

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## **Abstract**

This paper explores the economic rationale of an EMU fiscal capacity. It explains that the EMU's architecture suffers from two structural weaknesses: a tendency to develop imbalances and an inherent deflationary bias. The analysis shows that the external imbalances developed during the first decade of the EMU were driven by the large demand shock brought forward by financial integration, rather than by differences in relative competitiveness. Results suggest that when capital flows stopped, the adjustment was significantly driven by an important fall in aggregate demand in deficit countries, with large output and employment gaps. The main leverage of the efforts to regain relative competitiveness was massive labour shedding. In the absence of a common instrument for demand management, the natural tendency towards an asymmetric path of adjustment, between deficit and surplus countries, determines an inevitable deflationary bias in the whole area. A common fiscal capacity should have been designed and linked with the relative (intra-EMU) external positions of the participating countries. This would have reduced external imbalances, periodically correcting them without a drag on aggregate demand; it would have also reduced the need for the system to exclusively rely on financial markets, thus reducing systemic risks; and it would have also provided an instrument for stabilization against common shocks. Its absence has undermined the stability of the monetary union.

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<sup>1</sup> The opinions expressed in this paper are the author's alone and do not reflect those of the European Commission. The author is grateful to Nicola Acocella, Mirco Tomasi and Lukas Vesely for their helpful comments; however any remaining error is entirely the author's responsibility.

## 1 The “twin divergences”

Seven years after the outbreak of the financial crisis the euro area has not yet recovered its pre-crisis level of real GDP, unlikely most other advanced economies. The Great Recession has hit all major economies, but its effects on the euro area have been comparably stronger and more prolonged. The establishment of the EMU was a peculiar case of an unprecedented divorce between the main monetary and fiscal authorities (Goodhart, 1998). Its incompleteness was fatally exposed once the financial crisis hit and it has often been pointed out as key explanation for the long recession (De Grauwe, 2013; Obstfeld, 2013; O’Rourke and Taylor, 2013; Spolaore, 2013; Acocella, 2014a; Pasimeni, 2014).

Since its creation to the beginning of the financial crisis the EMU achieved moderate growth<sup>2</sup> and convergence; from the financial crisis onwards, it has rather had stagnating growth and increasing divergences. Contrary to the common narrative, it can be argued that the financial crisis did not represent a proper asymmetric shock for the EMU. The crisis provoked as an immediate consequence a fall in output which was pretty similar across the whole area. All countries fell into recession in the same year and growth rates in each country in the years before and after 2009 were quite similar. The Great Recession, in the end, was not a typical asymmetric shock. Notwithstanding we observe increasing divergences among EMU countries and this suggests that a source of asymmetries does exist.

Since the beginning of the EMU, and until the outbreak of the crisis, the external positions of countries in the euro area were diverging considerably. Important deficits were gradually accumulated in part of the union, with corresponding surpluses in the rest. The euro area as a whole had a rather balanced external position. The imbalances accumulated confirmed the hypothesis that under a fixed exchange rate regime among economies with different business cycles, and without a full coordination of economic policies, even the minimum structural divergences in business cycles are likely to amplify divergences in the balance of payments (Friedman, 1953; Kaldor, 1971) and these differences are likely to persist (Fleming, 1971; Berger and Nitsch, 2010).

The external disequilibria of the current accounts reflected corresponding internal disequilibria between savings and investments (Eichengreen, 2010). Surplus countries were systematically generating an excess of savings, with a level of investment around 20% of GDP and a level of savings around 25% of GDP. The

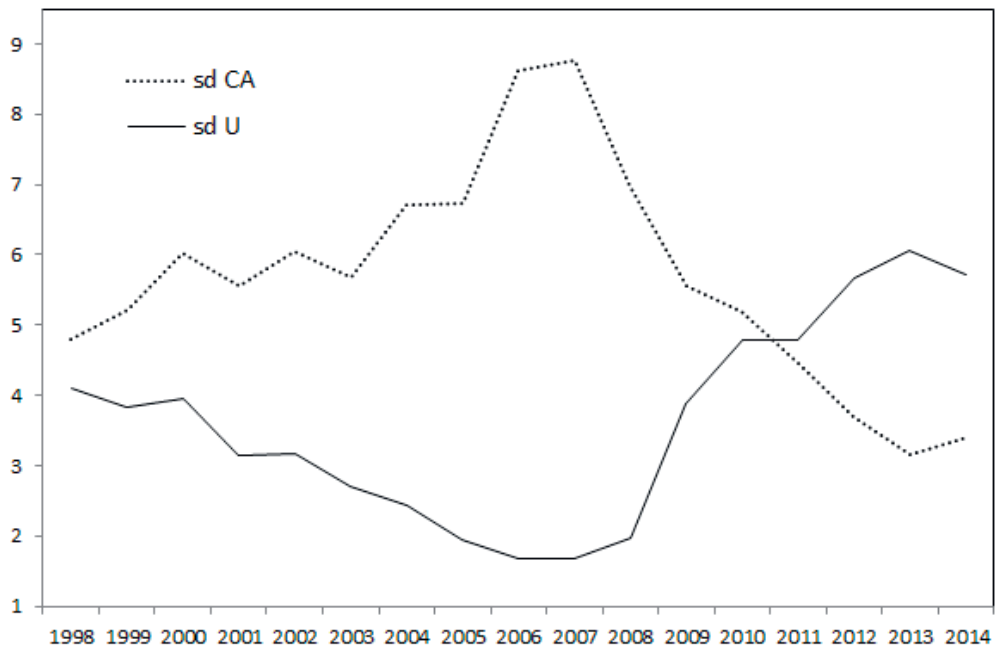
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<sup>2</sup> Average growth rates in the euro area were 2.3% per year from 1999 to 2007, compared to 2.9% for the USA, 3.0 for other advanced economies, 6.2% for emerging countries and 4.4% for the world as a whole. They have been slightly negative since 2008 (−0.1), while for the rest of the world they have been positive (1.1 for the USA; 5.1 for other advanced economies; and 3.3 for the world as a whole).

opposite happened in deficit countries, where these figures were inverted, showing a symmetric “excess of investments”. At the same time, however, the participating countries were converging in a number of other aspects. Some had argued that growing external imbalances, within the euro area, were a healthy signal of an efficient allocation of capital across the area (Blanchard and Giavazzi, 2002). Countries with lower income per capita were catching up, and unemployment rates were converging.

A key stylized fact of the EMU is the symmetric relation between external imbalances and convergence in employment outcomes: the growing divergences in the current account balances within the EMU were mirrored by decreasing divergences in the unemployment rates, as the following chart shows. Once the process reversed and the external imbalances started to narrow, unemployment rates diverged again.

*Chart 1: Divergences ( $\sigma$ ) in current account and unemployment rates in the EMU, 1998–2014*



Source: Author's calculations on IMF WEO database (April 2015).

During the first period, up to the crisis, the EMU relied on what the literature had called the “private insurance channel”: growing financial integration was channelling the excess of savings from surplus to deficit countries through financial

markets. Some had suggested that a monetary union among countries keeping their fiscal autonomy could compensate the lack of a common fiscal capacity through such a transfer mechanism brought forward by financial integration (Mundell, 1973; Eichengreen, 1992). The absence of exchange rate risks promoted financial integration among euro area economies, thereby increasing capital flows. With the establishment of the monetary union, an important signalling function of the exchange rate was lost (Michie, 2000; Tornell and Velasco, 2000), without being replaced by any other common institution. As Acocella (2014b) explains, in this case markets have difficulties in delivering the right signals of imbalances, underreacting or overreacting, and cannot properly correct them. This can even cause further imbalances, as free mobility of capital can create bubbles which mask them (p.17).

Capital flows accounted for around 12% of euro area GDP in 2001, and they skyrocketed up to 42% in just six years (Lane, 2013). This acted as an internal system of transfers, operating through the private sector by financial markets (Hale and Obstfeld, 2014), instead than through the long-advocated common fiscal capacity (Pasimeni, 2014). The functioning of the EMU became itself a kind of large asymmetric shock, even if a relatively gradual one (Krugman, 2012). This triggered an important demand shock in the area.

The relation between current account imbalances and financial integration is one of the major features of the pre-crisis global environment (Lane and Milesi-Ferretti, 2012), however, its speed and relevance increases in a currency union, where the smoothing role of the exchange rate disappears. Massive capital inflows have the power to foster asset booms, easy credit and excessive investments in the receiving countries (Vianello, 2005; Lane and Milesi-Ferretti, 2014). As a result, two different growth patterns emerged across the euro area: an export-led growth model in the core and a debt-led growth model in the periphery (Stockhammer, 2013). The two were closely interdependent (Hein, 2012).

Credit booms and asset-price bubbles in the deficit countries provided banks in surplus countries with strong incentives to increase their exposure. There is evidence (Hale and Obstfeld, 2014) that after the euro's introduction banks in surplus countries increased their borrowing from outside of the EMU in order to increase their lending to the deficit countries within the EMU. This behavior dramatically fuelled imbalances and increased the fragility of the whole banking sector.

A single monetary policy for the whole area could not be tailored on the diverging needs of the participating countries. It meant that interest rates could not move according to the requirements of different domestic conditions (Currie, 1997), with inflationary booms in some countries not shared by other countries that rather experienced stagnation periods. When there are divergences in inflation rates a common nominal policy rate set by the common central bank implies lower real interest rates in higher inflation countries, therefore "stoking up demand" in these countries, and reinforcing the divergences (Arestis and Sawyer, 2011).

## 2 Supply or demand?

The explanation of external imbalances accumulated in the euro area prior to the crisis has often put cost competitiveness at the centre, arguing that the divergences in unit labour costs (ULC) were the main driver of such imbalances. However, the mechanism described above seems to suggest that it was rather a gradual but large demand shock what drove the divergences in the external positions of the Member States.

We try to investigate this question by running a regression of the current account balance on domestic demand and on unit labour costs, in order to see which of the two factors explains better the changes in the external positions. The specification takes this form:

$$\Delta CA = \alpha + \beta \Delta \log (DD) + \gamma \Delta \log (ULC) + F_j + F_t + \varepsilon$$

Where  $CA$  is the current account balance in percentage of GDP,  $DD$  is domestic demand at 2010 constant prices,  $ULC$  is nominal unit labour costs<sup>3</sup>,  $F_j$  are country fixed effects, and  $F_t$  time fixed effects.

Table 1: Estimated current account equation in the euro area, 1999–2014

	Dependent variable = CA			
	OLS Panel		OLS Prais-Winsten AR(1)	
	(1)	(2)	(3)	(4)
Sample	EA	EA	EA	EA
Years	1999–2014	1999–2014	1999–2014	1999–2014
ULC	−0.146 (−0.04)	−1.471 (−0.41)	3.130 (0.92)	2.350 (0.69)
DD	−43.410*** (−16.29)	−45.896*** (−16.39)	−40.743*** (−15.93)	−42.596*** (−15.85)
Constant	0.851*** (5.66)	161.479*** (2.63)	0.735*** (5.20)	126.292** (2.16)
R-sq	0.490	0.498	0.497	0.506
Obs	270	270	270	270
Country FE	✓	✓	✓	✓
Time FE		✓		✓

Note: The table reports the estimates of OLS Panel and Prais-Winsten AR(1) regressions. Dependent variable is the change in the current account balance in percentage of GDP. The annual data are from Ameco. Values in parentheses are t-statistics. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

<sup>3</sup> Ratio of compensation per employee to real GDP per person employed.

Table 1 summarizes the results for the equation explaining changes in the current account balance with changes in domestic demand and ULC. The role of domestic demand is statistically significant at the 1% level in all specifications of the model, while the same is not true for ULC. The results hold true when we control for time fixed effects, or when we use the Prais-Winsten estimator, and also when we use both. These results suggest that demand fluctuations are more important than relative competitiveness in explaining the current account imbalances in the euro area.

They also confirm what had been pointed out in the recent literature on current account in the euro area: the hypothesis that intra-EMU trade imbalances were caused not so much by changes in relative cost competitiveness, but rather by demand shocks (Storm and Naastepad, 2014). Di Mauro and Forster (2010) also argue that over the last twenty years the correlation between unit labour costs and export growth has been decreasing. Several studies had proved that, particularly in the euro area, changes in relative cost competitiveness were not the significant determinant of current account imbalances (Gabrisch and Staehr, 2013; Gaulier and Vicard, 2012). Divergences in unit labour costs were more a consequence than a cause of demand shocks triggered by capital flows.

In order to further analyse this relation, it is worth investigating whether there is any diverging path among surplus and deficit countries within the euro area. The imbalances accumulated up to the crisis divided the area in two main groups of countries, with opposite stances<sup>4</sup>. We run the same regression splitting the euro area in deficit and surplus countries.

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<sup>4</sup> Several classifications have been attempted to define these two groups, based on geographical criteria (core versus periphery), financial problems (stressed versus non-stressed), or trade balances at a certain point in time (surplus versus deficit at the beginning of the crisis). This last criterion is more objective, but it seems more correct to apply it to the cumulative stance developed up to 2007. In other words, the division of EMU countries in the two groups of surplus and deficit, used in this paper, is based on the cumulative CA balance up to the crisis.

*Table 2: Estimated current account equation in euro area deficit and surplus countries, 1999–2014*

Dependent variable = CA

	OLS Panel				OLS Prais-Winsten AR(1)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sample	EA Deficit	EA Surplus	EA Deficit	EA Surplus	EA Deficit	EA Surplus	EA Deficit	EA Surplus
Years	1999–2014	1999–2014	1999–2014	1999–2014	1999–2014	1999–2014	1999–2014	1999–2014
ULC	7.851* (1.90)	-57.981*** (-5.98)	6.139 (1.47)	-59.568*** (-6.16)	10.090** (2.54)	-43.550*** (-6.00)	9.047** (2.25)	-43.523*** (-6.09)
DD	-47.266*** (-15.76)	-45.777*** (-5.43)	-49.596*** (-15.52)	-49.755*** (-5.68)	-44.727*** (-15.37)	-33.742*** (-6.628)	-46.313*** (-14.92)	-36.692*** (-5.37)
Constant	0.916*** (4.63)	1.665*** (0.299)	172.332** (1.99)	105.885 (1.58)	0.816*** (4.29)	1.231*** (5.58)	120.980 (1.43)	88.745 (1.62)
R-sq	0.594	0.286	0.599	0.298	0.599	0.303	0.604	0.321
Obs	165	105	165	105	165	105	165	105
Country FE	v	v	v	v	v	v	v	v
Time FE			v	v			v	v

*Note: The table reports the estimates of OLS Panel and Prais-Winsten AR(1) regressions. Dependent variable is the change in the current account balance in percentage of GDP. The annual data are from Ameco. Values in parentheses are t-statistics. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .*

Table 2 summarizes the results for the two groups of countries. The coefficient for domestic demand is still statistically significant at the 1% level in all specifications, for both surplus and deficit countries. However, ULC are significant at the same level only in surplus countries. The same results hold true when we control for time fixed effects. They show that demand factors were certainly determining current account positions in both parts of the euro area; however improved relative competitiveness played a role only in surplus countries.

This may suggest that the demand shock was the key driver of external imbalances within the euro area, but efforts to improve relative competitiveness in surplus countries were also contributing. The results confirm the findings by other studies (Diaz Sanchez and Varoudakis, 2013) who found that, in deficit countries in the euro area, unit labour costs play a “negligible” role in explaining growing external imbalances.



### 3 The adjustment

The “private insurance channel” was at the core of the EMU functioning, allowing for those transfers from surplus to deficit countries that could not occur through any common institutional or policy arrangement, as a common fiscal capacity. A key difference between a transfer system exclusively based on financial markets and one based also on a common institutional setting is that the former behaves in a more pro-cyclical way. As a matter of fact this mechanism was broken by the financial crisis, which, even if originated in the USA, challenged the solidity of the EMU’s architecture: capital flows from surplus to deficit countries came to a sudden stop (Lane, 2013). The “private insurance channel” instead of acting as a stabilizer suddenly contracted. Its resilience and the sustainability of a monetary union based on it proved weak. Imbalances built until that point became a source of concern. Current account deficits were not backed anymore by intra-euro area transfers, even if in the form of private capital flows; therefore they became unsustainable. The euro area then faced an urgent rebalancing problem.

The burden of the adjustment fell mainly on deficit countries, under bigger pressure to restore equilibrium in the external balance. In the absence of those capital flows which had sustained and fuelled so far the external imbalances, these countries had to drastically compress domestic demand, in order to reduce imports. Current account imbalances considerably narrowed and deficit countries reduced their current account deficits by 80% between 2007 and 2013, a reduction equal to 0.7% of world GDP (Lane and Milesi-Ferretti, 2014). The narrowing of external imbalances has been achieved even more rapidly than their accumulation, and it has been associated with a comparable rise in intra-EMU divergences.

A more detailed analysis of the adjustment process can help us understand how this occurred. We can investigate the relevance of cyclical factors in this adjustment, and to this end we test the impact of a cyclical indicator, like the output gap, on the current account stance. At the same time, and as suggested by the “twin divergences”, it is interesting to study to what extent unemployment is associated to the current account positions. Therefore, the equation to be estimated is the following:

$$\Delta CA = \alpha + \beta \Delta Y^* + \gamma \Delta U + F_j + F_t + \varepsilon$$

Where  $CA$  is the current account balance in percentage of GDP,  $Y^*$  is the output gap,  $U$  is the unemployment rate,  $F_j$  are country fixed effects, and  $F_t$  time fixed effects. It seems also useful to understand if the relation between these factors and the current account balance is a stable characteristic of the system over time, or if the change imposed by the crisis has played a role. To disentangle this effect, we split the sample in two periods, a first one, from the inception of the EU until the outbreak of the crisis (1999 to 2008), and a second one, covering the adjustment period (2009–2014).

*Table 3: Estimated equation of current account balance on output gap and unemployment, pre-crisis (1999–2008) vs adjustment period (2009–2014)*

		Dependent variable = CA							
		OLS Panel				OLS Prais-Winsten AR(1)			
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sample		EA	EA	EA	EA	EA	EA	EA	EA
Years		1999–2008	2009–2014	1999–2008	2009–2014	1999–2008	2009–2014	1999–2008	2009–2014
OUTPUT GAP		–0.125 (–1.09)	–0.193** (–2.06)	–0.101 (–0.86)	–0.215** (–2.24)	–0.145 (–1.30)	–0.172* (–1.95)	–0.121 (–1.07)	–0.201** (–2.22)
UNEMPL		0.332 (1.56)	0.365** (2.02)	0.331 (1.56)	0.399** (2.18)	0.307 (1.55)	0.439*** (3.12)	0.308 (1.56)	0.457*** (3.25)
Constant		–0.173 (–0.93)	0.481** (2.02)	189.718 (1.35)	–293.217 (–1.04)	–0.167 (–0.93)	0.454** (2.35)	175.219 (1.30)	–314.847 (–1.33)
R-sq		0.042	0.270	0.052	0.281	0.044	0.291	0.055	0.305
Obs		152	102	152	102	152	102	152	102
Country FE		v	v	v	v	v	v	v	v
Time FE				v	v			v	v

*Note: The table reports the estimates of OLS Panel and Prais-Winsten AR(1) regressions. Dependent variable is the change in the current account balance in percentage of GDP. The annual data are from IMF-WEO April 2015. Values in parentheses are t-statistics. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .*

Table 3 summarizes the main results of the regression, with the split into two periods. First of all, both the output gap and the rate of unemployment help explain the external imbalances in the euro area in a statistically significant way. The coefficient associated to the unemployment rate seems bigger. Secondly, we note that in the adjustment period, compared to the pre-crisis years, the explanatory capacity of the model, composed only by these two elements, increases substantially; the R-sq is multiplied by a factor of six. Thirdly, the coefficients associated with the two explanatory variables, output gap and unemployment rate, are statistically insignificant in the pre-crisis period, but the systematically become significant during the adjustment period, under all estimation used (panel or Prais-Winsten) and regardless of the controls for time fixed effects.

These results have strong implications for the hypothesis we wanted to test. First, we find confirmation that the outbreak of the crisis has changed something in the functioning of the EMU, and in particular on the underlying determinants of the current account positions of the Member States. Second, while unemployment rates

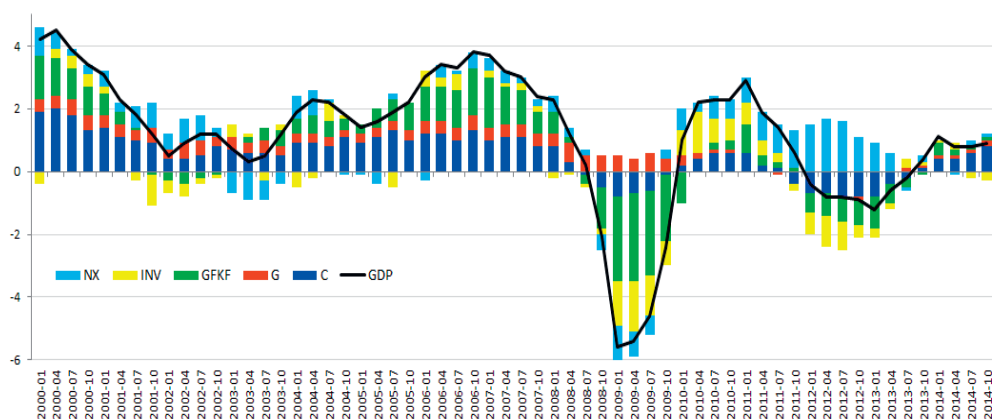
and output gaps do not seem to have been significant drivers of the accumulation of external imbalances, they do play a key role in explaining the subsequent adjustment of those imbalances. This confirms the cyclical nature of the adjustment in the euro area (Tresselt and Wang, 2014). The reduction of external imbalances within the euro area implied an important fall in aggregate demand, through a reduction of imports in deficit countries. Third, in the adjustment period, the relative importance of unemployment seems to increase, even over the cyclical fluctuations.

Even if external imbalances had mainly been driven by demand shocks, rather than changes in relative cost competitiveness (Di Mauro and Forster, 2010; Gaulier and Vicard, 2012; Diaz Sanchez and Varoudakis, 2013; Gabrisch and Staehr, 2013; Storm and Naastepad, 2014), a big effort was done in deficit countries to regain relative competitiveness by reducing relative unit labour costs (ULC). The combination of large negative net foreign asset positions and market pressure forced deficit countries to reduce relative prices in order to reorient spending towards domestic goods and services, and production to the tradable sector. Being in a currency union, devaluation had to be achieved through a fall in domestic prices relative to trading partners (Kang and Shambaugh, 2015). For this reason the adjustment focused also on reducing unit labour costs, and labour shedding has been the main driver of this adjustment.

The reduction of unit labor costs in deficit countries has largely come from falling employment. This pattern of adjustment has had an impact on the functional distribution of income. In particular, policy measures removing rigidities and improving flexibility in the labor markets have often been associated with a decline in the overall wage share in the economy. This, in turn, has an impact on aggregate demand in the euro area. Being the euro area a large domestic market, its relatively limited trade openness implies that the benefits of overall wage moderation in the entire area on the international competitiveness may not offset the costs caused by a fall in domestic demand. The negative effects on overall aggregate demand of a reduction in the adjusted wage share confirm this hypothesis (Lavoie and Stockhammer, 2013).

The key problem is that each country could have an incentive to moderate wages (removing rigidities, reducing ULC, decreasing wage shares), thus reducing domestic demand, in order to gain relative competitiveness, but at the euro area aggregate level this determines a deflationary spiral (Stockhammer et al., 2009). The illustration of this phenomenon is given by the decomposition of GDP growth of the euro area by expenditure component:

Chart 2: Contributions to year-on-year volume growth of GDP by expenditure component, in the euro area (2000–2014, quarterly)



Source: Author's elaborations, on ECB data.

The two falls of GDP in the euro area were associated with very different situations: in 2008 and 2009 the euro area experienced a deep recession, like all other major economies in the world, and all expenditure components of GDP fell significantly, gross fixed capital formation and changes in inventories in particular. The private sector was deleveraging, then for a short period of time the public sector took over and partially compensated the fall in demand with countercyclical fiscal policies, which became the only source of growth.

Between 2011 and 2013, instead, the recession was very much specific to the euro area, household consumption and investments by firms fell significantly, government spending did not play any countercyclical role, the only component supporting growth in the euro area was net export. In other words, the second largest domestic market in the world turned into an export-led economy.

#### 4 An inherent deflationary bias

When the financial crisis triggered a worldwide collapse in aggregate demand and a sudden stop to the “private insurance channel”, the EMU found itself deprived of any common instrument for demand management: an extremely limited common budget, no “built-in” fiscal stabilizers, and an explicit no-bail-out clause. Any reaction had to be operated at national level, but fiscal rules implied that a premature “exit strategy” had to be initiated (Acocella, 2011).

The original EMU architecture assumed that an ECB mandate to pursue price stability and fiscal rules preventing excessive government deficits would ensure macroeconomic stability (Godley, 1992; Obstfeld, 2013). The building criteria did

not take full account of unemployment as a key indicator and “an all-out threat to monetary stability” (Dornbusch, 1996), nor of the current account positions in the convergence criteria (Arestis and Sawyer, 2011)<sup>5</sup>.

The focus was on fiscal rules, which determined a constraint on fiscal policies in the overall fiscal stance of the area, for two main reasons. First, the “overdone insistence on fiscal criteria” (Dornbusch, 1997) implies that EMU countries are permanently under pressure to maintain their fiscal balance. But, as a consequence, this requires a similar pressure to increase either net exports or net investment.<sup>6</sup> This in turn means that savings or imports have to fall, or investments or exports have to rise. Restrictive monetary and fiscal policies, then, imply that a fall in income remains the main policy leverage to achieve balance (Arestis, 2000; Michie, 2000). Second, since at the EMU level there is no common fiscal policy, no fiscal capacity, nor the possibility to run budget deficits, national governments are the only entity allowed to run budget deficits, but they have to do so in a currency they do not control (Arestis and Sawyer, 2011, De Grauwe, 2013), therefore they become more exposed than others to sovereign debt crises.

A contraction of demand, as the one generated by the global shock of 2008, reduces tax revenues and puts pressure on public finances. If, as required by the rules, the immediate response consists in spending cuts and/or higher taxes, domestic demand further contracts and fiscal policy becomes fully pro-cyclical (Currie, 1997). If this happens at the same time in countries that intensively trade among themselves, even external demand shrinks (Stockhammer et al., 2009). The pro-

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<sup>5</sup> The overarching legal bases of the EU, the Treaties, subordinate the objective of full employment to the one of price stability. The two objectives are not on an equal footing, the second being pursued “without prejudice to” the first. The guiding principles give prominence to keeping fiscal balances under control and warn against the risks of balance of payments disequilibria. In order to comply with these principles, national policies have to deploy their policy tools towards maintaining relative competitiveness and avoid expansionary fiscal policies. The Common Provisions of the Treaty on European Union (TEU) mention in Article 3 the aim of full employment, however the Treaty on the Functioning of the European Union (TFEU) explains that the “primary objective” of the “single monetary policy and exchange-rate policy shall be to maintain price stability” and only “without prejudice to this objective” they “shall support the general economic policies in the Union with a view to contributing to the achievement of the objectives of the Union as laid down in Article 3 of the TEU”. Moreover “the Member States and the Union shall entail compliance with the following guiding principles: stable prices, sound public finances and monetary conditions and a sustainable balance of payments”. (Articles 119 and 127).

<sup>6</sup> The “sectoral financial balances” approach (Godley, 1999) explains that at any point in time the sum of the sectoral balances of the private domestic sector, the government budget and the external one has to be zero:  $(G-T) + (X-M) + (I-S) = 0$ . This implies that if the government deficit is to be permanently limited, then the external balance and the net investments balance have to face similar pressures.

longed fall in aggregate demand can also hamper potential output through hysteresis effects (Blanchard and Summers, 1986).

Within the euro area there were quite different patterns of adjustment of external imbalances; deficit countries reduced their imbalances by more than 80%, while the overall external position of surplus countries remained broadly unchanged (Lane and Milesi-Ferretti, 2014). This is due to the different nature of the pressures deficit and surplus economies are subject to, once a sudden stop in the underlying capital flows between them occurs. In the absence of incoming transfers or exceptional financial assistance, large external deficits become unsustainable, while this is not necessarily the case for surpluses, since they do not depend on foreign investors to finance domestic consumption and investments (Blanchard and Milesi-Ferretti, 2012).

This analysis is far from being a new one: the “secular international problem” of balance of payment imbalances that “throw the main burden of adjustment on the country which is in the debtor position on the international balance of payments” was at the core of John Maynard Keynes’ reflection on a more stable international monetary system (Keynes, 1940). Adjustment is “compulsory for the debtor and voluntary for the creditor”, as Keynes put it.

The problem of the asymmetric pressure to rebalance faced by surplus and deficit countries is also at the core of the EMU macroeconomic performances and greatly affects its growth model. On one side, prolonged divergences in the balance of payments between countries in the monetary union imply that unused surpluses keep aggregate demand on a sub-optimal level. On the other side, the efforts by deficit countries to adjust their external balances through deflationary measures generate contractionary pressures on the whole area. This creates a deflationary bias in the system and prevents it from achieving sustained growth and full-employment.

This case is particularly relevant for the EMU, today. First of all, countries in a monetary union lack the potential contribution of the exchange rate to the adjustment process, having to fully rely on the internal adjustment of relative prices and wages. This implies that the process becomes then considerably more painful (Lane and Milesi-Ferretti, 2014). Secondly, if the economy is close to a liquidity trap, like it happens today, interest rates already close to the lower bound cannot decrease to balance increased savings. Therefore, large surpluses in some countries reduce aggregate demand and output in the others. If, moreover, the room for expansionary fiscal policies is limited, as it is the case in the EMU, the burden of the adjustment on deficit countries becomes even more painful (Blanchard and Milesi-Ferretti, 2012).

The institutional incompleteness of the EMU and the partial macroeconomic arrangements made the system biased towards low growth and high unemployment. If (1) the pressure for adjusting is asymmetric; (2) there are no common institutions

to promote and coordinate demand management; (3) the response can only be provided at national level; and (4) the margins of manoeuvre left to national governments are mainly towards restrictive policies; then the whole area has an inherent deflationary bias, which determines subdued growth rates in good times, or longer stagnations and recessions in the worst cases.

In the absence of common institutional arrangements to promote and coordinate expansionary policies in the whole area, the EMU faced a cruel trade-off: growth with imbalances, or balance without growth. Either it had to rely on the pre-crisis growth model, when financial integration was substituting the missing common fiscal capacity, channelling resources from surplus to deficit countries, and fuelling unprecedented imbalances. Or it had to impose restrictive policies at national level, with the aim of consolidating public finances and achieving balanced external positions, at the price of a drag on growth. In the worst case scenario, if deflationary policies are prolonged, it may also face the even more unpleasant situation of imbalances without growth. The system lacks an instrument capable of defusing this dangerous mechanism.

## **5 What kind of fiscal capacity?**

It had been argued that a common fiscal capacity for the EMU was unavoidable (Kenen, 1969; Eichengreen et al., 1990; Solow, 2005), that a monetary union was “unattainable” without fiscal integration and not just fiscal harmonisation (Kaldor, 1971; Feldstein, 1992), and that its absence was the “major design failure” of the EMU (Eichengreen, 1998; De Grauwe, 2013). In the EMU, economic cycles are less synchronized than in more complete federations, therefore a common fiscal capacity would have played an important role and fiscal centralization would have also enhanced private risk-sharing mechanisms (Poghosyan et al., 2015). The lack of such a common mechanism of fiscal capacity is more worrying when we consider the two inherent characteristics of the EMU architecture previously described: the permanent risk of a deflationary bias and the tendency to generate imbalances.

The two problems are linked to each other through the balance of payments constraint. When the economic integration of a currency union is driven by capital flows channelled through financial markets, balance of payment disequilibria are likely to arise. If imbalances are to be adjusted, and the natural pressure to adjust is asymmetric between deficit and surplus countries, then few options remain in a monetary union: foreign financial assistance, which is often accompanied by moderation of domestic demand, and the internal adjustment of relative prices, which reinforces the deflationary trend. For this reason, the design of an alternative adjustment mechanism, like a common fiscal capacity, should have been based on the relative external positions of the participating countries.

This idea, as we have anticipated, is not new. Keynes' plan for an international clearing union of 1942 was conceived precisely on the basis of this underlying analysis, in view of the Bretton Woods monetary arrangements. Keynes was concerned about the asymmetric consequences of a mercantilist strategy in a fixed-exchange rate system and with their impacts on effective demand and employment. The building up of balance of payments imbalances increased the risk of having to apply deflationary measures in deficit countries to adjust and restore competitiveness. This would in turn create periodic falls in aggregate demand and prevent the system from achieving full-employment.

The absence of an organized system of international payments was the key institutional weakness Keynes wanted to address with his plan, which aimed at building the necessary institutions to prevent a disorderly international system (Piffaretti, 2009). He suggested the introduction of an international clearing union (among national central banks) to apply to international payments the same institutional arrangement governing payments within nations, centred on a system of banking clearing (Piffaretti, 2009).

He proposed an international closed system of payments that, within a currency union, ensured symmetric rebalancing between deficit and surplus countries, with restrictions on speculative capital flows, limits on holding international reserves, and the possibility to adjust the exchange rate to reflect changes in efficiency wages. This system would have been capable of ensuring full employment in all countries (Keynes, 1942). If this plan was too ambitious<sup>7</sup> to be applied at a global level, its relevance for a smaller but tighter international monetary system like the EMU is evident. The European Commission, therefore, took this view into account in a series of technical reports issued during the seventies, in preparation of the monetary union.

The "Marjolin Report" (EC, 1975) developed an analysis of the conditions to be fulfilled to create a monetary union in Europe. It acknowledged the need for a central authority "with a relevant important budget"<sup>8</sup>, and for "centralized fiscal and social security systems ensuring a certain degree of redistribution". It stressed the necessity of closer political and financial integration and went even further proposing a "Community Unemployment Benefit Fund".

Another report by the European Commission (the "MacDougall Report", EC, 1977) conducted an analysis of the role of public finances in the European integration, with a particular focus on the stabilisation effects of a common budget. It high-

<sup>7</sup> Keynes himself defined it an "ideal scheme, complicated and novel and perhaps Utopian", but also "a measure of financial disarmament" (Keynes, 1940, in Piffaretti, 2009).

<sup>8</sup> The report even quoted examples of what was meant by "relevant": the proportion of the "Bund" in Federal Germany, around 13% of GNP; and the proportion of federal expenditures on GNP in Canada, about 16%.



lighted that inequalities between countries in the Community were not higher than regional inequalities within countries, and that the redistributive function of the national budget at regional level reflected corresponding positions of the regions in their balance of payments on current account.

The report found that within countries between one half to two-thirds of a short-term loss of primary income in a region due to a fall in its external sales was automatically offset through lower payments of taxes and insurance contributions to the centre, and higher receipts of unemployment and other benefits. It also studied the extent to which inter-regional income differences within countries were reduced by central or federal public finances, in eight case studies (Germany, UK, France, Italy, USA, Australia, Canada and Switzerland). It found that around 40% of the differences were reduced by internal fiscal transfers, through the common national budget.

In recent years, several authors have highlighted the relevance of the original intuition by Keynes of the link between coordinated fiscal policies and relative positions in the balance of payments (Piffaretti, 2009; Hein, 2012; Whyman, 2015). The key issue is the operation of the international adjustment mechanism, and whether that mechanism is automatic or coordinated, and also sufficiently compatible with overall aggregate demand to provide full employment (Kregel, 2009). This requires international policy coordination (Guttman, 2009; Lane and Milesi-Ferretti, 2014).

Hein (2012) highlights the need that countries running permanent current account surplus expand domestic demand and thus increase imports (or appreciate their currencies), so that the whole burden of adjustment is not carried by the deficit countries, but most of all this would sustain aggregate demand, which will be needed in the future, not only in the short run but also in the long run. If structural divergences among EMU countries determine external imbalances, there is a need for a fiscal capacity to support the rebalancing and the long term equilibrium of the external positions.

Whyman (2015) explains in detail the relevance of these ideas for the present EMU situation: the reliance on export-led growth, the asymmetric nature of the adjustment, and the consequent deflationary bias, all increase the threat to its sustainability. Only if creditors are encouraged to increase the economic activity, then their imports from deficit countries, could a higher level of aggregate demand be restored, and full employment sustained. A decrease in current account surpluses, through a combination of real exchange rate appreciation and higher domestic demand in surplus countries, can lead to higher output in deficit countries (Blanchard and Milesi-Ferretti, 2012).

The relevance of Keynes' analysis for the definition of a common fiscal capacity in the EMU translates into the link between relative positions in the external balance of participating countries and their contribution to a common budget. This is the

way a common fiscal capacity ensures that relative intra-EMU surpluses are used to sustain overall aggregate demand and do not have the perverse effect of exporting unemployment to the neighbours. It is a form of built-in automatic rebalancing mechanism, which guarantees intra-EMU equilibrium, symmetry, aggregate demand and full employment.

The advantages of a common fiscal capacity linked to the relative, intra monetary union, external positions of the participating countries, are multiple. First, such a scheme tends to reduce the external imbalances; in Keynes– words it is “a measure of financial disarmament” that if it was maybe too ambitious at a global level, it seems nevertheless desirable in the relations within an economic and monetary union. Second, it periodically corrects those imbalances in a symmetric way, ensuring that surpluses do not remain unutilised and that the absorption of deficits does not pose a drag on aggregate demand. Third, it reduces the need for the monetary union to exclusively rely on the efficiency and stability of financial markets to promote integration. By doing so, it considerably reduces systemic risks. Fourth, it provides an instrument for stabilization against common shocks. Fifth, it substitutes an inherent deflationary pressure in the system with an expansionary stimulus, propaedeutic to full employment.

## 6 Conclusion

This paper has tried to illustrate the economic rationale of an EMU fiscal capacity, without touching upon the political rationale for having, or for not having had, it. The functioning of the EMU during its first decade caused major asymmetries and imbalances. These were amplified by the shock originated by the global financial crisis, but the system was and still is deprived of the instruments to cope with them.

The pre-crisis growth model was based on the “private insurance channel”, which was at the same time the glue keeping the monetary union together and a major source of imbalances. It operated as a de facto substitute for the missing fiscal capacity, channelling the excess of savings generated in countries with growing trade surpluses towards those with increasing trade deficits and indebtedness. A single nominal interest rate implied lower real interest rates in higher inflation countries, generating incentives for capital to flow there, further inflating the bubbles. This unprecedented rise in cross-country capital flows drove an enormous demand shock, which is at the basis of the large external imbalances.

The analysis then shows that the external imbalances were driven by the large demand shock brought forward by this mechanism, especially in deficit countries, rather than by differences in relative competitiveness. Divergences in unit labour costs were more a consequence than a cause of demand shocks triggered by capital flows. Intra-EMU financial integration sustained the development of external

imbalances, in a kind of vendor-financing operation by surplus countries to deficit ones.

Once capital flows suddenly stopped, the need for rebalancing materialised. External imbalances rapidly narrowed; the analysis shows that the adjustment was significantly driven by an important fall in aggregate demand in deficit countries, with large output and employment gaps. Even though external imbalances had not been primarily caused by relative competitiveness, having accumulated large negative net foreign asset positions and threatened by markets pressure, deficit countries had to reduce relative prices by reducing unit labour costs, and the main leverage of the adjustment was labour shedding.

Different patterns of adjustment of external imbalances between surplus and deficit countries implied that the efforts by the latter to adjust their external balances through deflationary measures generated inevitable contractionary pressures on the whole area. The “secular international problem”, of balance of payment imbalances that “throw the main burden of adjustment on the country which is in the debtor position on the international balance of payments”, fully materialized, suddenly making Keynes’ worries (1942) very relevant again.

These two key features of the EMU’s architecture, its tendency to generate imbalances and an inherent deflationary bias, are linked to each other through the balance of payment constraint. Removing this constraint required a common fiscal capacity the EMU has never had. Limiting the building up of those imbalances required that the design of such a fiscal capacity be linked to the relative, intra-EMU, positions of the Member States in the balance of payments. This would have automatically reduced the imbalances, periodically correcting them without a drag on overall aggregate demand; it would have also reduced the need for the system to exclusively rely on the efficiency and stability of financial markets, thus reducing systemic risks; it would have provided an instrument for stabilization against common shocks; and it would have substituted the inherent deflationary bias of the system with an expansionary stimulus, propaedeutic to full employment.

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## Contributing Speakers

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**Ewald Nowotny** is the Governor of the Oesterreichische Nationalbank (OeNB) and a Member of the Governing Council of the European Central Bank (ECB). Before taking on his current position in September 2008, he was CEO of the Austrian BAWAG P.S.K. banking group and served as Vice-President and a member of the Management Committee of the European Investment Bank (EIB) and held a number of other high-level positions in financial institutions. He held research tenures and professorships at the Johannes Kepler University of Linz, Harvard University, TH Darmstadt and the Vienna University of Economics and Business, where he was also Vice-Rector and a Member of the University Board.

**Paul De Grauwe** holds the John Paulson Chair in European Political Economy at the London School of Economics (LSE). Prior to joining LSE, Paul De Grauwe was Professor of International Economics at the University of Leuven in Belgium. He was a member of the Belgian Parliament. He was also a visiting scholar at the International Monetary Fund, the Board of Governors of the Federal Reserve, the Bank of Japan and the European Central Bank.

**Otmar Issing** is President of the Center for Financial Studies and Chairman of the Board of Trustees of the House of Finance at the Goethe University Frankfurt. He is Honorary Professor of the Goethe University Frankfurt and the University of Würzburg, and, inter alia, acts as International Advisor to Goldman Sachs. From 1998 to 2006, he was a member of the Executive Board of the European Central Bank, responsible for the Directorates General Economics and Research.

**Christina Jordan** is an economic advisor in the Cabinet of the President of the European Council, Donald Tusk, where she covers, inter alia, Europe's Economic and Monetary Union. Prior to joining Donald Tusk's cabinet, she worked as an economist in the Directorate General for Economic and Financial Affairs of the European Commission.

**Othmar Karas** is a Member of the European Parliament (EP) and heads the delegation of the Austrian People's Party (ÖVP) to the EP. He is an active member of the Committee for Economic and Monetary Affairs and the Special Committee on Tax Rulings and Other Measures Similar in Nature or Effect.

**Waltraud Schelkle** is an Associate Professor of Political Economy at the European Institute at the London School of Economics, where she has been teaching courses on the political economy of European integration since fall 2001. She is an Adjunct Professor of Economics at the Economics Department of Freie Universität Berlin. Her research interests include the evolving economic governance of EMU and social policy reforms directed at financial markets.

**Marek Dabrowski** is a Non-Resident Scholar at Bruegel in Brussels, Professor at the Higher School of Economics in Moscow, a Fellow at CASE – Center for Social and Economic Research in Warsaw and Chairman of the Supervisory Board of CASE Ukraine in Kyiv. He was First Deputy Minister of Finance in Poland (1989–1990), a member of the Polish Parliament and a member of the Monetary Policy Council of Narodowy Bank Polski.

**Stefan Ederer** is Senior Researcher for macroeconomics and European economic policy at the Austrian Institute of Economic Research (WIFO). Before joining WIFO, he earned a doctorate in economics from the Vienna University of Economics and Business and was Visiting Research Fellow at the University of Cambridge and the University of Leeds.

**Plamen Iossifov** is a Senior Economist in the Emerging Economies Unit of the International Monetary Fund (IMF), where he analyzes disinflation and banking union modalities in non-euro area countries as well as private-sector indebtedness and deleveraging in Europe. He was on external assignment at the European Central Bank, where he contributed to country surveillance and research on non-euro area EU countries.

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**Ad van Riet** has served as Senior Advisor in the Directorate Monetary Policy of the European Central Bank (ECB) and as Secretary of the ECB Occasional Paper Series since fall 2011. Having studied economics at the Erasmus University Rotterdam, he started his career with De Nederlandsche Bank in 1987. He joined the European Monetary Institute in end-1994 and the ECB, when it was established in mid-1998.



**Margit Schratzenstaller-Altzinger** has been a research staff member at the Austrian Institute of Economic Research (WIFO) since 2003, where she also held the position of Deputy Director between 2006 and 2008. She was a member of the Austrian Fiscal Advisory Council and lectured at the University of Vienna, the Vienna University of Economics and Business and the FH Wien University of Applied Sciences.

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**László Andor** is a Mercator Senior Fellow at the Berlin-based Hertie School of Governance and a visiting professor at the Université libre de Bruxelles. He taught political science and economic policy in Budapest, and was editor of the social science journal *Eszmélet*. He worked as an advisor for the Budget Committee of the Hungarian Parliament and the Prime Minister's Office. He was EU Commissioner for Employment, Social Affairs and Inclusion in the Barroso II Commission 2010–2014.

**Francesca Carta** is an economist in Economics, Statistics and Research Department of Banca d'Italia, which she joined in 2013. She obtained her Ph.D. in economics from the Toulouse School of Economics in 2014 and worked as a research and teaching assistant at Bocconi University.

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**Paul Ramskogler** is a Principle Economist in the Foreign Research Division of the Oesterreichische Nationalbank, working on European monetary integration issues. He recently returned from a research visit at the OECD, where he investigated the origins of the financial crisis. He has gained extensive teaching experience.

**Bernd Brandl** is a Reader in Management at the University of Durham Business School. His research deals with methodological, empirical and theoretical questions in employment relations and international human resource management (HRM)

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**Zsolt Darvas** is a Senior Fellow at the Brussels-based top-ranked think tank Bruegel. He is also a Senior Research Fellow at the Institute of Economics of the Hungarian Academy of Sciences and at Corvinus University of Budapest. Before joining Bruegel in late 2008, he served as Research Advisor of the Argenta Financial Research Group in Budapest. He served as Deputy Head of the research unit of the Magyar Nemzeti Bank, which he had joined in 1994.

**Paolo Pasimeni** is an economist at the Directorate General for the Budget of the European Commission. Before, he worked for the DG Employment, Social Affairs and Inclusion, where he coordinated the relations with the OECD, represented the Directorate General in the macroeconomic dialogue, and coordinated the study Feasibility and added value of a European unemployment benefit scheme. In previous assignments at the Commission (from 2007 onward), he worked on structural and cohesion funds, research and innovation, evaluation and impact assessment.

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No. 15 Recent Developments in the Baltic Countries – Determinants, Linkages and Challenges <i>Vienna, 23 March 2009</i>	9/2009
No. 16 Dimensions of Inequality in the EU <i>Vienna, 8 September 2008</i>	11/2009
No. 17 Limited Fiscal Space in CESEE: Needs and Options for Post-Crisis Reform 68 <sup>th</sup> East Jour Fixe of the Oesterreichische Nationalbank <i>Vienna, 28 February 2011</i>	11/2009
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No. 19 Are House Prices Endangering Financial Stability? If so, How Can We Counteract This? <i>Vienna, 9 and 10 March 2014</i>	3/2015
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# Periodical Publications of the Oesterreichische Nationalbank

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*German | annually*

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<http://www.oenb.at/en/Publications/Oesterreichische-Nationalbank/Annual-Report.html>

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<http://www.oenb.at/en/Publications/Economics/Monetary-Policy-and-the-Economy.html>

## **Fakten zu Österreich und seinen Banken Facts on Austria and Its Banks**

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*English | twice a year*

This online publication provides a snapshot of the Austrian economy based on a range of structural data and indicators for the real economy and the banking sector. Comparative international measures enable readers to put the information into perspective.

<http://www.oenb.at/en/Publications/Financial-Market/Facts-on-Austria-and-Its-Banks.html>

### **Financial Stability Report**

*English | twice a year*

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This publication presents economic analyses and outlooks as well as analytical studies on macroeconomic and macrofinancial issues with a regional focus on Central, Eastern and Southeastern Europe.

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### **Statistiken – Daten & Analysen**

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<http://www.oenb.at/en/Publications/Economics/Conference-on-European-Economic-Integration-CEEI.html>

The proceedings have been published with Edward Elgar Publishers, Cheltenham/UK, Northampton/MA, since the CEEI 2001.

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