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Convergence in EMU: What and How?

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Convergence in EMU: What and How?

Euro Area Scrutiny



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ECONOMIC GOVERNANCE SUPPORT UNIT

Convergence in EMU: What and How?

Abstract

One major characteristics of an optimal currency area is its ability to maintain or foster integration and convergence among its Member States. This objective requires reaching a stable economic and financial situation and developing resilience to shocks.

After reviewing the state of convergence in the euro area, this paper proposes a number of recommendations, aimed at improving convergence towards the steady state, as well as financial and cyclical convergence.

Recommendations focus on several policy areas, including cohesion policy, the statute of the ECB, public and private debt sustainability, fiscal rules and minimum wage policy.

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EXECUTIVE SUMMARY

Despite several reforms of the economic governance in the euro area, the identification of the kind of convergence useful for the good functioning of the euro area remains an issue. Should it be nominal or real? If it is real, should it rely on convergence towards a benchmark (and if yes, which one?) or should it rely on resilience to shocks?

I argue that for the good functioning of the euro area, real convergence is more important than nominal convergence. Two reasons emerge. First, nominal convergence with Maastricht indicators has proved ineffective at fostering or maintaining real convergence in the euro area. Maastricht indicators are not sufficiently embedded in a general framework, where interactions between key economic and social variables are taken into account. Second, the theoretical framework that makes it optimal to share a single currency among different countries or regions relies on real, not nominal, indicators of convergence and on their interactions.

I argue in favour of a comprehensive overhaul of economic and monetary governance in the euro area to ensure its optimal functioning. The final objective is twofold: the improvement in policy coordination between the euro area Member States and a better appropriateness of the criteria required to achieve real convergence for Member States on their way to join the euro area.

Until now, there have been many contributions to improve the functioning of the euro area. There are also reforms in the process of implementation. My attempt at contributing to the debate is twofold. First, I argue for a comprehensive reform agenda with a clear distinction between the different subsets of real convergence: convergence towards the steady state, financial convergence and cyclical convergence. Second, I propose recommendations and new elements to the debate, including new policy tools.

It is crucial that policy tools share a few important characteristics. They have to comply with the basic requirements of convergence in a monetary union, as they stem from the literature. To facilitate resilience to shocks, they should be timely and under the control of governments that must enforce them. Moreover, such policy tools must be transparent, so that the Council can use them for economic policy coordination, for the European Parliament to scrutinize them, and for the Commission to assess their enforcement.

Achieving convergence to the steady state is a prerequisite to the good functioning of any country. It is also a prerequisite to the good functioning of the euro area, to limit spillovers from a country of the euro area to the others. The steady state - or benchmark - can be defined with reference to the EU objectives, i.e. the achievement of balanced economic growth, price stability and full employment. Deviations from these three objectives would require the implementation of some policy changes. At the European level, convergence towards the steady state of each Member State requires cohesion funds, coordination of national wage policies and a euro area budget. The use of cohesion policy with the objective of improving convergence across euro area Member States should be further promoted, and the size of cohesion policy possibly extended to distinguish between euro area (with extra-payments) and non-euro area Member States. This latter device may incentivize euro adoption. Coordination on minimum wage policy across the euro area Member States would help reduce nominal labour costs divergences among them; it would also give some content to a European social policy. Finally, the use of a euro area budget with structural objectives to improve real convergence would be appropriate, as a form of additional financial means to cohesion policy in the field of public investment.

Convergence towards the steady state also requires financial stability. On the side of credit demand, financial stability requires solvency of the public and the private sectors that can be achieved after

some financial criteria are fulfilled. Public and private debt limits are such financial criteria and convergence towards these debt limits is a form of financial convergence. Deviations from these debt limits would identify a lack of financial convergence. Financial stability also requires resilience of funding supply, most importantly by banks in the case of the euro area, if financial shocks like a global financial crisis occur. Policy initiatives to achieve financial convergence first relate to the European Central Bank (ECB). Removing the risk of speculation on public debts in the euro area is a priority. In this respect, many complex solutions are proposed. Making it official that the ECB is *de jure* lender of last resort would be simple in theory, while requiring a Treaty change in practice. Public debt sustainability would still need to be ensured and controlled though, to limit moral hazard. Assessing debt sustainability is complex and the operational solution remains the adoption of debt limits. However, the 60%-of-GDP debt ratio has lost much relevance since 1999. It was based on the economic conditions of the early 1990s. Modifying the debt threshold to make it more compatible with the economic situation of euro area Member States since 1999 would also make it more easily acceptable by policymakers and the general public. Finally, the threshold on private debt used in the context of the Macroeconomic Imbalance Procedure (133% of GDP) should be transformed into an operational target, and should be attributed a corresponding policy tool. This tool could take the form of a specific countercyclical tax on banks.

Cyclical convergence relies on the prior knowledge of the functioning of all euro area Member States and on the prompt identification of shocks to these economies. The nature of the shocks, e.g. on demand or on supply, helps choose the appropriate policy tools to address them. Ten economic indicators may be sufficient for the identification of shocks. This would limit substantially the number of indicators necessary to assess the economic, social and financial situation of the euro area Member States. The number of tools necessary to foster euro area's resilience to shocks would also be limited: fully functioning automatic stabilisers, including the preservation of tax progressivity, and timely tax policies towards firms. Finally, the fiscal limit on the deficit to GDP ratio should be given less importance and a thorough budget analysis assessing the path towards the debt to GDP ratio would be the single basis for discussion during the European Semester. The logic of the fiscal framework would thus change: the obligation of result (achieving macro stabilization and debt sustainability) would substitute for the obligation of means (limiting the public deficit at 3% of GDP).

Last, countries in the process of joining the euro area should respect the same convergence criteria as euro area Member States: public and private debt sustainability (assessed with respect to debt thresholds), assessment of their outlook (drawing on ten indicators) and identification of possible shocks. Strong expected divergence of these countries from euro area countries would defer euro adoption.

« Le sens même de l'aventure européenne, c'est celle d'une convergence accrue »
E. Macron, Speech at the European Parliament, Strasbourg, 17 April 2018

1. INTRODUCTION

In its recent "Further step towards completing the EMU: a roadmap", published on 6th December 2017, the Commission proposed reforms of the euro area and devoted much attention to convergence. *"The notions of convergence and integration are at the heart of the Economic Union. To achieve sustainable prosperity, Member States need to continue to focus on the necessary reforms to modernise their economies, make them more resilient to possible shocks and improve their growth prospects. (...) Going forward, the Union framework should continue to support a process of reforms for real convergence. (...) (I)t will also be important to keep a strong social dimension to all activities. The principles and rights of the European Pillar of Social Rights (EPSR), which was proclaimed in Gothenburg on 17 November 2017, will provide a compass for renewed convergence towards better working and living conditions."* (pp. 12-13) Here, the processes of integration and convergence are linked explicitly and improvements in convergence, including the social dimension, are clearly required.

This briefing paper's objectives are to analyse and evaluate the possible types of convergence that are necessary for the smooth functioning of the euro area, as well as to suggest the modalities to achieve them. This document thus defines the different types of convergence discussed and implemented so far, and identifies those that are the most useful to the good functioning of the euro area. In this respect, it reviews some developments since the adoption of the euro.

Actually, convergence draws on multiple concepts. The type of convergence associated with monetary integration has been the "nominal convergence" or "Maastricht criteria" for the adoption of the euro. Recently, convergence associated to integration also refers to "resilience" to shocks, hence to convergence towards a formerly defined stable state of the economy, and to "real convergence", encompassing the "social dimension" in the above-mentioned quotation.

This paper critically discusses the relevance of these three different concepts for the smooth functioning of the euro area. First, Member States sharing the same currency should converge towards the achievement of the EU economic objectives: balanced economic growth, price stability and full employment. Second, large public and/or private debt to GDP ratios in a Member State fuel financial instability and may have some spillover effects on the other Member States, as the recent crisis has shown. The smooth functioning of the euro area thus requires the achievement by all Member States of public and private debt sustainability, hence financial convergence towards debt sustainability. Third, the euro area should be resilient to shocks: this requires identifying the shocks in real time. After such identification, policymakers can use the most appropriate tool.

Some indicators are required to assess the process of convergence or to highlight possible deviations. Indicators should be in limited number to remain operational and to ease cooperation at the euro area level. Finally, policy tools are also needed to fulfil convergence or to correct possible deviations.

In contrast with the existing convergence framework, some policy modifications may be worth introducing. They should highlight the multi-faceted convergence process and improve the functioning of the euro area. Recommendations follow.

2. CONVERGENCE IN THE EURO AREA

On January the 1st of 2019, the euro will be 20 years old. The question of the optimality of the euro – its capacity to benefit households, firms and governments all over the Eurozone – remains an open question. One major characteristics of an optimal currency area is its ability to maintain or foster integration and convergence among its Member States. The Member States must also be confident that the currency area will help them resist the most frequent shocks better than when they were not sharing the currency.

It appears then that two types of convergence are required to achieve an optimal currency area: convergence towards a stable situation *before* shocks occur, and convergence *after* shocks have occurred. Both types of convergence require a benchmark (what is the stable situation like?) and indicators to gauge the discrepancy *vis-à-vis* the benchmark. They both also need tools to improve convergence.

2.1 Definitions of convergence

Different notions and concepts of convergence have been presented in the literature. Nominal convergence relates to the fulfilment of criteria expressed in nominal terms like inflation, long-term interest rates, public deficits and public debts. These criteria may constitute a benchmark for convergence: for example, countries converging towards similar inflation rates share the same competitiveness *vis-à-vis* the rest of the world (all else being equal). Inflation differentials are thus indicators of nominal convergence: the higher the differential, the lower convergence.

Real convergence relates to the catching-up of countries with low real GDP per capita towards countries with the highest real GDP per capita. The latter countries are thus the benchmark towards which all the other countries should converge. Measuring convergence rests on technical computations: beta convergence and sigma convergence. Beta convergence measures the relationship between GDP levels and growth rates across different countries: it occurs when countries lagging behind in terms of GDP levels grow faster than countries with higher GDP levels. Sigma convergence occurs when the dispersion of GDP levels declines over time: they tend towards a converging level.

Real convergence can be more theoretical and relate to Solow's neoclassical model. Stated briefly, poorer countries should move faster than richer countries towards the long-run steady state, i.e. the constant long-term level of output per capita. This concept of convergence has had a few successors (club convergence, gamma convergence) that have investigated the determinants of selected convergence across some economies. Solow's model assumes a constant technology level in the long run, hence a constant long-term level of output per capita, that has been largely debated since the developments of endogenous growth theories and contrasts with sustained US economic growth.

Legal convergence means abiding by commonly agreed rules and laws across different countries.

Cyclical convergence relates to the characteristics of the business cycles. It is fully achieved between countries when business cycles are concordant and of the same amplitude.

Last, real convergence also requires financial stability. A necessary condition for the achievement of financial stability is the respect of public and private solvency ratios. While the identification of optimal ratios is highly disputable, respect of some given thresholds should remain an important task of policymakers. This type of convergence is labelled 'financial convergence' in the following.

2.2 Why is convergence important in a monetary union? What kind of convergence?

The ways to improve the functioning of a monetary union (MU) are well-known at least since the inception of the Optimal Currency Area (OCA)'s literature (Mundell, 1961). They relate to convergence towards similar economic structures (market-oriented economies with high levels of competition and of inputs' mobility) and to resilience towards shocks. Under high market competition, prices and wages should be flexible and ensure equilibrium between supply and demand on goods, services and labour markets wherever in the MU. Inputs' mobility would help reduce unemployment in a country of the MU if wages there are sticky. Resilience to shocks would make the whole area stable: after a destabilizing shock in one or all countries forming the MU, the economy or the economies would go back to its or their former equilibrium without requiring a change in exchange rates.

The OCA literature remains the theoretical cornerstone of convergence analysis in a MU, with additional conditions related to the "quality of institutions". The latter can be viewed as a proxy of the degree of enforcement of OCA conditions or of the credibility of the institutions that comply with them. The "quality of institutions" can thus relate to "legal convergence".

Countries forming a MU lose two policy tools: monetary policy and exchange rate policy. Whether or not these domestic tools were effective at achieving macro stabilization is not the main issue here. The issue consists in defining the other policy tools and mechanisms that will make it possible to achieve a stable equilibrium in the MU and to smooth shocks to the economy.

There are different kinds of shocks, which can be broadly separated into supply and demand shocks, and symmetric and asymmetric shocks¹. Hence, there are different policies to cope with these shocks.

In a MU with a single monetary policy, symmetric demand shocks are easy to dampen. If the shock is the same and hits with the same amplitude all the member states of the MU, there should not be any difference between the policy implemented by a single entity (the ECB) and by the domestic entities. A positive (resp. negative) demand shock requires a monetary restriction (resp. expansion).

After asymmetric demand shocks – one country in the MU can be hit by a recession, not the others; or the size of the recession differs from one country to another -, the single monetary policy is not optimal but domestic fiscal policies can be. The country hit by the negative (resp. positive) demand shock should expand (resp. contract) its budget.

After supply shocks, either symmetric or asymmetric, macroeconomic policies are less helpful at stabilizing the economy. A negative (resp. positive) supply shock is associated with a negative (resp. positive) shock on production and with a positive (resp. negative) shock on inflation. Monetary and fiscal policies boost demand (provided they are effective), hence they boost output *and* prices. Structural reforms and tax policies are much more effective at dampening a negative supply shock or at accompanying a positive supply shock (if a positive shock occurs on productivity, it is understandable that public policies should not dampen the rise of productivity that will lead to a higher potential output). However, they take time to produce their effects and they are not suitable for macro stabilization. This is the reason why the OCA literature introduced market-related criteria. Shock-

¹ There are also permanent or temporary shocks. The macroeconomic literature has long assumed that demand shocks are temporary, whereas supply shocks are permanent, which makes the distinction between permanent and temporary shocks redundant with respect to the distinction between supply and demand shocks. It remains that some demand shocks, like a recession, may have long-lasting effects on the economy. A discussion on this issue is out of the scope of this paper.

absorption by market forces can substitute for the use of economic and public policies. Highly flexible markets with full mobility of inputs (capital and labour) will facilitate stabilization. In case of a negative sectoral shock in a country, input allocation should change and inputs should shift to another sector in the same country or to the same sector (or another one) in another country within the MU.

This typology of shocks and their consequences on the optimal design of policies in a MU involve some convergence requirements and specific tools. First, countries forming a MU should converge towards a stable equilibrium defined by the trinity: balanced growth, price stability and full employment. While these objectives are shared by any country, not only by countries in a MU, their achievement is more crucial in a MU where the minimization of negative spillovers between the countries forming a MU is a priority. Under this trinity, countries would get the benefits of a shared currency (lower transactions costs, more sizeable markets, higher financial liquidity, price and costs transparency) without bearing the costs (the loss of some policy tools necessary to offset their imbalances). The type of convergence involved here – convergence towards the stable equilibrium or steady state – mixes real convergence as exposed earlier (convergence towards the highest level of GDP per capita, for instance) and nominal convergence (price stability). Structural reforms and tax policies are certainly important to reach the steady state in the mid-run and, in the long run, to achieve a higher potential output. They are oriented towards the supply side and foster competition, flexibility and mobility, which are at the heart of an OCA.

Second, while there may be shocks to the economy, the smooth functioning of a MU requires resilience to these shocks. Indeed, whether the economies forming a MU are able to recover from shocks or not impinge on their willingness to participate and keep on participating in the MU. Resilience improves under cyclical convergence, i.e. when there is homogeneity in the business cycles of different countries. Under concordance and similar amplitude of business cycles, all the countries forming a MU require the same policy to go back to the former equilibrium. For example, after a symmetric demand shock, the single monetary policy will be optimal. Finally, when cyclical convergence is not fulfilled or when asymmetric demand shocks occur, fiscal rooms for maneuver are helpful for achieving full macroeconomic stabilization in the short-run. They can take the form of fiscal transfers (Kenen, 1969).

2.3 Convergence in the euro area: from Maastricht to EPSR

The latest prominent European integration process, namely the adoption of the euro in 1999, has been conditional on the fulfilment of *nominal* convergence criteria. However, they were not fully consistent with the European Union (EU) objectives as laid down in the Treaty of Rome in 1957, which include, e.g. the achievement of sustainable development, based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. As they stand, the EU objectives typically require tools to deliver *real* convergence between EU Member States. In contrast, *real* convergence was left to “market forces”, hence it did not involve the control of criteria or indicators.

The nominal criteria² include relative thresholds, respectively for inflation and long-term interest rates – a country willing to adopt the euro shall not depart from the average of the three best “pupils” in the

² Nominal convergence criteria remain valid as a prerequisite to becoming a member of the euro area.

EU³ -, absolute thresholds, respectively for public deficit (3% of GDP) and debt (60% of GDP)⁴, and the requirement to be member of the European Monetary System and to abide by the Exchange Rate Mechanism without any devaluation or revaluation over the two years preceding the adoption of the euro.

The decision to adopt nominal convergence criteria resulted from a political bargain⁵: the individual economic interest of most EU countries in the early 1990s was to share the monetary credibility of Germany, whereas Germany's economic interest was to foster European trade integration. Meanwhile Germany did not want to share its monetary sovereignty with high-inflation and high-deficit-and-debt countries. That required adding fiscal constraints.

Moreover, to remove the risk that euro's actual adoption would produce fiscal fatigue (or renouncement to fiscal convergence), the EU council adopted the Stability and Growth Pact (SGP), which transformed the fiscal nominal criteria into fiscal rules.

The Economic and Monetary Union was incomplete, though, because these fiscal rules substituted for fiscal union (and the coordination it should have induced) and because the expectation that real convergence would derive from nominal convergence, "market forces" and the tight enforcement of fiscal rules proved wrong (see e.g. De Grauwe, 1996, for a prophetic view on the shortcomings of nominal convergence criteria). Spain is the typical example in this respect. Before the advent of the global financial crisis of 2007, the Spanish government had achieved a public surplus, meaning it fully abided by the SGP rules. On the side of real convergence, things were less clear: the Spanish GDP per capita was converging towards the EU average but it hid strong macro imbalances like large current account imbalances, large increases in unit labour costs and a bubble on the real estate market. These imbalances finally led to a major crisis in Spain. In fact, Maastricht criteria of nominal convergence are not sufficiently embedded in a general framework where interactions between key economic and social variables are taken into account.

The disappointing causality between nominal and real convergence and the finding that real divergence paved the way for a European sequel to the global financial crisis (see e.g. Sinn, 2014) raised new EU initiatives. They culminated with the "6-pack" adoption in 2011 and the establishment of the European Semester as a procedure to improve policy coordination in the EU beyond fiscal questions,

³ The three best "pupils" are the three EU countries in which inflation or interest rates are the lowest. It is possible that an EU country is unable to join the euro area for it cannot pass the inflation or interest rate criterion while the average includes the inflation or interest rate of one or more non-euro area members. It would have been wise to relate the inflation and interest rates relative thresholds to euro area members only.

⁴ The debt to GDP is not included in Protocol 13 to the Treaty on the Functioning of the EU as a convergence criterion *per se* in the consolidated version of 2008. The public finance criterion only refers to the fact that a Member State is not the subject of a Council decision under Article 126(6) of the Treaty that an excessive deficit exists. Meanwhile Protocol 12 to the TFEU on the excessive deficit procedure includes two thresholds, one for the public deficit to GDP ratio and one for the debt to GDP ratio. Since 2011, the threshold on public debt is a target for its dynamic evolution over time. The requirement is a 1/20th reduction per year of the gap between the actual debt to GDP ratio and the threshold.

⁵ See e.g. F. Giavazzi (1996): *"The four criteria (on inflation, the budget deficit, interest rates and exchange rates) were the outcome of a difficult political bargain, and they have little to do with economics. They represent the conditions Germany asked for when agreeing to give up the two symbols of post-war economic stability - the mark and the Bundesbank"* (EMU - the key to the crucial German question, Economic View, The Independent, 1st May 1996).

thus encompassing structural issues. This new step has helped deepen EU integration, with new indicators to control for macroeconomic imbalances across the different member states.

Since December 2011, the “6-pack” adds to the preventive and corrective tools of the SGP a Macroeconomic Imbalance Procedure (MIP) drawing on indicators pertaining to current account positions, competitiveness, and financial stability. The envisaged purpose is “to establish a surveillance procedure to prevent and correct macroeconomic imbalances” and “to provide an early-warning signalling of potentially harmful macroeconomic imbalances in Member States”. The surveillance relies on an in-depth analysis to assess whether or not identified imbalances may challenge future prospects for growth, price and financial stability. In this respect, the MIP helps identify and prevent possible hurdles on the convergence path towards the steady state. The in-depth analyses may give rise to economic policy recommendations by the Commission to address macroeconomic imbalances.

Last, the principles and rights of the European Pillar of Social Rights (EPSR), proclaimed in November 2017, provide a new direction for convergence towards better working and living conditions, as reflected in the Commission’s “Further step towards completing the EMU: a roadmap”. The EPSR adds a social content to the European Semester and targets social cohesion between the EU Member States. The EPSR acts as a complement to the MIP and adds new indicators via its Social scoreboard. They may tend to achieve stronger convergence of social system across euro area Member States and labour markets and may help achieve the optimality of the euro area⁶.

Until now, cyclical convergence has not constituted an objective of the Commission and the Member States. Economic and social surveillance during the European Semester draws on many indicators, among which the stage of the business cycle has a role in the assessment of the fulfilment of fiscal rules. Moreover, there are no instruments explicitly dedicated to smoothing possible heterogeneous business cycles across Member States.

However, cyclical convergence is not only key to make a MU optimal, it is also key in preventing the euro area from endogenously generating instability. The fact that euro area Member States may not be in a similar stage of their business cycles – some facing an upswing whereas some others face a downswing – means that inflation rates differ. With a common short-run interest rate set by the European Central Bank (ECB), it also means diverging and possibly destabilizing real interest rates. The lack of cyclical convergence between the euro area Member States thus produces heterogeneity in real interest rates that can trigger financial stability risks (see e.g. Franks et al., 2018). For long, financial convergence has not been a priority, although the lack of financial cycle synchronisation across countries forming a MU can generate resource misallocations (see e.g. Oman, 2018, for a recent investigation on the euro area).

Consequently, there is a third important facet of convergence that would help smooth the functioning of a MU. It is complementary to the concept of convergence towards the steady state, which is mostly related to the real economy, and to the concept of cyclical convergence, which improves resilience to shocks. The third facet relates specifically to banking and finance: convergence towards the steady state requires financial stability, hence financial convergence. On the side of credit demand, financial stability requires solvency of the public and the private sectors that can be achieved after some

⁶ The EPSR is incomplete without new policy tools to deliver its objectives. Indeed, the document entitled “New budgetary instruments for a stable euro area within the Union framework” (Commission (2017) 822 final, 6 December 2017) does not even mention the EPSR.

financial criteria are fulfilled. Financial stability also requires resilience of credit supply in case of financial shocks, like a global financial crisis: a drop of credit supply after a shock may intensify the crisis.

2.4 Convergence in the euro area: what do the data say?

The Commission reflection paper on the "Deepening of the economic and monetary union" (2017) proposed a narrative of the convergence that highlighted the drawbacks of the early stages of convergence: *"The convergence trends of the single currency's first years have proven partly illusory. (...) The crisis of the years 2007-08 marked the end of the convergence trend and the start of a divergence trend, which is only slowly being corrected. (...) These developments have fuelled doubts about the design and functioning of the EU's social market economy and the EMU (...)"* (p. 12)

Indeed, evidence on convergence in the euro area gives mixed results. Two recent contributions, from the ECB and from the IMF, are reviewed in the following.

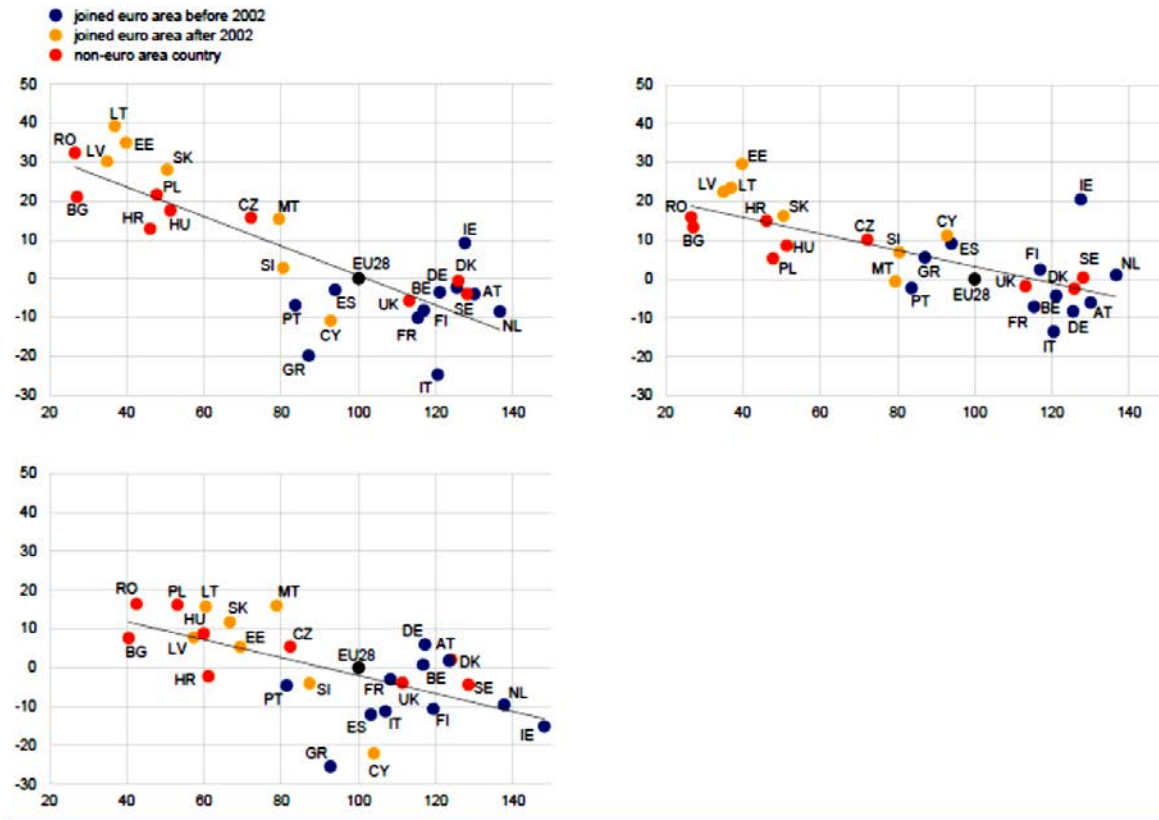
Nominal convergence has improved, although it has not been complete. Between 1999 and 2016, Diaz del Hoyo et al. (2017) report that all euro area countries, except France and Germany, have exceeded the Maastricht price stability criterion at a moment or another, whereas deviations from the long term interest rate criterion have been scarcer. Franks et al. (2018) also report that the convergence of nominal interest rates was "undone during the crisis". Then they argue that before the crisis persistent inflation differentials, even small ones, with converging nominal interest rates hampered real convergence. When inflation differentials do not reflect productivity differentials, the convergence of long-term nominal interest rates means that countries with positive (resp. negative) inflation differentials have the lowest (resp. highest) *real* long-term interest rates. This is therefore procyclical, destabilizing and requires compensating policies to either dampen or fuel the economy (depending on the position in the business cycle).

As for real convergence, Diaz del Hoyo et al. (2017) show that the GDP per capita relative to the EU28 has converged across EU Member States between 1999 and 2016, but that convergence has been weaker for euro area countries (black points on top-left chart in figure 1). Indeed, there is no clear relationship between the growth rate of the GDP per capita since 1999 and the level of GDP per capita in 1999. Convergence between euro area countries has improved only between 1999 and 2007, hence before the global financial crisis erupted (top-right chart in figure 1). After the crisis, convergence receded, most strikingly in small crisis countries like Greece and Cyprus, but also in a large country like Italy (bottom-left chart in figure 1). Franks et al. (2018) reach similar conclusions. The global financial crisis has had disruptive effects on real convergence. It appears that the convergence framework in the euro area has been ineffective or insufficient to maintain the convergence trend of the early years of the euro area.

Figure 1: Real convergence in the euro area.

GDP per capita relative to the EU28, initial level in 1999 versus cumulative change (1999-2016, 1999-2007 and 2007-16)

(GDP at current prices per capita in PPS; EU28 = 100; 1) top-left chart: x-axis: level beginning period 1999; y-axis: cumulative change in the level (1999-2016); 2) top-right chart: x-axis: level beginning period 1999; y-axis: cumulative change in the level (1999-2007); 3) bottom-left chart: x-axis: level beginning period 2007; y-axis: cumulative change in the level (2007-2016))

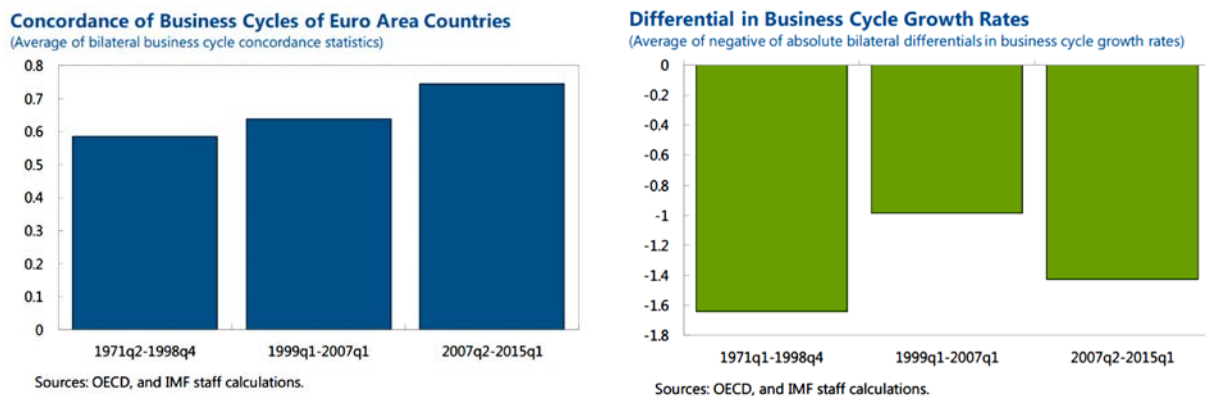


Source: Diaz del Hoyo et al. (2017, chart 3, p.23) with data from European Commission and ECB.

Franks et al. (2018) also investigate cyclical convergence and show that the existence of the euro has been coincidental with two opposing trends. The first one is the increase in the concordance of business cycles across the euro area Member States since the global financial crisis (left chart in figure 2). Business cycles have been more and more synchronized between euro area countries. The second one is the increase in the differential of real GDP growth rates between euro area countries: while business cycles have been more synchronised since the crisis, their amplitude has grown (right chart in figure 2).

These two trends have opposing consequences on the ability of ECB monetary policy to smooth the business cycle of the euro area at large. The first trend is positive in this respect: a single monetary policy can actually satisfy a larger number of countries if these countries share the same business cycle. Broadly defined, monetary expansion during a concordant downturn and monetary restriction during a concordant upswing will prove optimal. However, the differentiated amplitude of the business cycles between the same countries makes it difficult for the ECB to choose the good fit for fine-tuning. After concordant downturns of different amplitudes, countries most hit by the downturn require a sharp monetary expansion, whereas countries least hit require a small expansion. However, the ECB must implement a policy based on the euro area average. Hence, its policy will be too lax (resp. too restrictive) in the countries with the lowest (resp. highest) downturn.

Figure 2: Cyclical convergence in the euro area



Source: Franks et al. (2018, pp. 14-15) with data from OECD

Finally, Diaz del Hoyo et al. (2017) take a longer term perspective and shed light on two periods of relatively strong convergence between countries which adopted the euro by 2002. Both periods occurred *before* the adoption of the euro. The first period occurred between the early and late 1960s whereas the second occurred between the Single European Act in 1986 and the Maastricht Treaty in 1993. During other periods, with the exception of the one following the global financial crisis when divergence increased, convergence did not happen and standard deviation in GDP per capita remained steady.

To conclude, both contributions show that convergence, when it did happen, was incomplete and the recent period has given evidence of growing divergence between euro area Member States.

2.5 A critical view of euro area governance

The lack of strong and lasting convergence between euro area Member States can be related to some shortcomings in euro area economic governance. Policy tools, like fiscal transfers, or economic properties, like labour and capital mobility that should facilitate convergence, have been either insufficient or potentially costly.

The Council and the Commission have disregarded large cross-border fiscal transfers and given preference to domestic fiscal constraints. The issue of fiscal sustainability has prevailed over the issue of macro stabilization. The adoption of the amended SGP and the Fiscal Compact (as part of the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union) prevent “excessive” public deficits and help to curb public debt and ensure sustainability.

This fiscal framework has a number of shortcomings though. On the one hand, fiscal sustainability reduces to convergence towards a debt limit (60% of GDP) that is non-contingent and similar across Member States. On the other hand, although European fiscal rules may not prevent the use of automatic stabilisers to dampen asymmetric demand shocks, they have hampered the use of fiscal policy to stabilize the economy.

As far as fiscal sustainability is concerned, the Maastricht nominal criteria under Protocols 12 and 13 of the TFEU, the SGP and the MIP rely on limits on the fiscal deficit and on public debt. The fiscal limit relates to the “stabilising deficit”, i.e. the deficit (expressed in percentage points of GDP) for which the public debt to GDP ratio will converge towards a stable level. The “stabilising deficit” is contingent on the level of the public debt to GDP ratio and on the nominal growth rate of the economy. For example,

for a debt of 60% of GDP and nominal growth at 5% per year, the “stabilising headline deficit” is 3% of GDP. If it goes above (resp. below) this threshold, debt will grow above (resp. below) 60% of GDP (at constant nominal growth).

In the late 1980s-early 1990s, the average public debt to GDP of European countries was 60%, while the nominal growth rate was 5% (3% percent of real growth and 2% of inflation). The fiscal limit at 3% of GDP was therefore stabilising.

It is obvious that this rationale for the fiscal limits in the SGP is no longer valid. The Euro area public debt to GDP ratio has been close to 80% on average between 1999 and 2016 (based on the Maastricht definition) while the average growth rate has been 2.8% per year in nominal terms. Hence, the “stabilising deficit” in the euro area is 1 percentage point below the “3% threshold”. Consequently, a euro area deficit at 3% of GDP means a *growing* debt to GDP ratio. The fiscal headline upper limits of debt and deficit in the SGP are not consistent one with another. So why to keep the 3% and 60% of GDP thresholds that have lost relevance in the EU macroeconomic framework?

This inconsistency between deficit and debt limits is well known by many, including of course the Commission and the IMF (e.g. Andrle et al., 2015) and it helps explain the preventive arm of the SGP, which targets fiscal balance and an expenditure benchmark, and the Fiscal compact, that aims at limiting cyclically adjusted deficit at 0.5 % of GDP. Fiscal balance and limitations on discretionary fiscal policy pave the way for a *reduction* in public debt to GDP ratios. However, they are not consistent either with a public debt to GDP ratio at 60% in the long run. Assuming that nominal growth equals its average between 1999 and 2016, the strict application of the Fiscal compact would converge towards a stable debt to GDP ratio at 20%.

The SGP and the Fiscal Compact have also raised a number of issues in terms of stabilization. First, automatic stabilizers play an incomplete role in stabilizing household income or consumption in Europe and show a large discrepancy between the member states. The latest Report on public finances in EMU by the European Commission (2018) finds that 35% (resp. 65%) of a decline in market income (resp. household consumption) is absorbed by automatic stabilisers in the EU, ranging from 20% in Bulgaria (resp. 57% in Cyprus) to 45% in Austria (resp. 68% in Denmark). Under a macroeconomic perspective, it reports that automatic stabilizations of consumption and GDP are even smaller. Creel and Saraceno (2010) argue that the SGP relies on a contradiction: despite evidence of the declining effectiveness of automatic stabilization in the EU, the SGP relies almost exclusively on automatic stabilization for the conduct of fiscal policy.

Second, the episode of austerity after the global financial crisis gives evidence that the EU authorities have underestimated the short-run effectiveness of discretionary fiscal policy and misunderstood the determinants of fiscal sustainability. Many papers and reports (e.g. among the early ones: Holland and Portes, 2012; iAGS, 2012; and recently Attinasi and Metelli, 2017, who show a composition effect) conclude that fiscal austerity in Europe has been self-defeating: it has reduced economic growth and public debt ratios have not declined.

Third, the design of the SGP and the Fiscal Compact introduces the objective of fiscal balance and a limit on the cyclically-adjusted deficit in the medium-term, which deny the effectiveness of discretionary fiscal policy in the long run. On the contrary, Benigno and Fornaro (2017) show that strong public investment policies can shift the economy out of a stagnation trap and bring it to full employment.

There are additional reasons why governance has failed to deliver convergence.

First, while EU authorities introduced strict fiscal rules, they relied on structural reforms to foster real convergence between member states. Mirroring their under-estimation of the potential growth effect of fiscal policy, EU authorities tend to over-estimate the potential growth effects of structural reforms. There are many issues with structural reforms though (Manassé and Katsikas, 2018). First, they take time to design and implement before they may be effective. They require consensus by many groups of people, e.g. policymakers, firms, and workers. Second, structural reforms and tax policies modify behaviours of firms and households, but only slowly. This is not optimal as far as macroeconomic stabilization is required. Hence, their impact on real convergence is delayed. Another issue relates to the costs of structural reforms: at least in the short run, structural reforms can be painful and may therefore prevent political consensus on the necessity for reforms, hence hindering convergence.

Second, the OCA conditions include perfect mobility of capital and labour between MU countries to help dampen the asymmetric shocks, but capital and labour mobility has had mixed performance in the euro area: capital mobility may have gone too far and labour mobility not far enough (see box 1).

Third, the EMU has had no tool to pool financial risks among the Member States. Consequently, domestic governments are liable on their own public debt on an individual basis. Actually, the euro area has no lender-of-last-resort for national governments. While this property supposedly removes the contagion risks between bonds' issuances from different governments, it may accelerate financial instability in the hit economy that would ultimately transmit to domestic and foreign banks (because of the possible doom loop between governments and banks and between banks themselves). It will then require a reaction by the ECB as the lender-of-last-resort for banks.

Fourth, the MIP has a number of shortcomings that hamper its effectiveness (see, e.g. De Grauwe, 2012). The list of indicators in the scoreboard is wide enough to fit the purpose of signaling macroeconomic imbalances. However, many indicators rely on an asymmetric view of imbalances and do not take the size of countries into account. The criterion on current account imbalances (below 4% of GDP for deficit countries, some of which are small countries, and above 6% of GDP for surplus countries, some of which are large countries) is a good example in this respect. Moreover, policy coordination draws on indicators on which Member States do not have full control. A parallel between the recommendations from the Commission in the framework of the SGP and those made in the framework of the MIP is helpful. It is conceivable that governments can change at least part of their budget to abide by the SGP, whereas it is unconceivable that they can change even a part of the current account imbalance in the short term in order to abide by the recommendations following the MIP.

Box 1: Labour and capital mobility in the euro area

Labour mobility concerns only 3.7% of the total working-age population aged between 20 and 64 living in an EU Member State other than their country of citizenship (Fries-Tersch et al., 2017). Half of EU28 movers originate from a non-euro area Member State and a fifth do not move in a euro area Member State. Hence, labour mobility in the euro area remains low and lower than in the US (Arpaia et al., 2016).

In contrast, capital mobility has been erratic. The integration of financial markets (i.e. full mobility of capital between countries) has been a major objective for the euro area for two reasons. First, homogeneity in financial and banking systems facilitates capital mobility and the best allocation of capital among Member States. Second, when some heterogeneity in financial and banking systems remains – e.g., the reliance on banks rather than markets for funding differs, or the level of competition in domestic banking system differs – cross-border financial flows may be limited and lead to suboptimal allocation of capital. In this latter case, there are two possible institutional responses: first, the implementation of structural reforms on banking and financial systems through the removal of legal barriers to cross-border capital flows, the harmonization of national regulation (e.g. with a Banking Union), and higher internationalization of domestic banking systems; second, a monetary policy to limit divergence in financial conditions across countries.

Reports by the Bank of International Settlements and by the ECB have extensively assessed the state of convergence in different financial markets since 1999. They generally pointed out that convergence was strong on the wholesale banking markets, on the sovereign bonds market and, to a lower extent, on retail markets, because the latter were retaining local features like different degrees of local competition. After the financial and sovereign debt crises though, financial integration has come to a halt, leading to financial “fragmentation”: not only have cross-border financial flows declined within the MU, but interest rates have also deviated across the Member States. It remains that the internationalization of banking activities across euro area Member States since the adoption of the euro has been very different from one Member State to another, leading to the conclusion that “fragmentation” has been a long-lasting feature of the euro area, even before 2012 (Blot et al., 2016).

Some doubts have emerged about the efficient allocation of capital in highly financialised economies. The relationship between the development (or depth) of finance and GDP per capita follows a bell-shape: there is an optimal level of finance above which the growth rate of GDP per capita starts to decline (Arcand et al., 2015). Finance may thus have gone too far and the reliance on capital mobility to smooth economic fluctuations may not be appropriate.

In a similar vein, M. Wolff (FT, Economics failed us before the global crisis, 20 March 2018) makes a very important point about the necessity of resilience of an economy. He writes: *“Economies would be more resilient if they were less highly leveraged and, in particular, if they depended less on holdings of money backed by risky assets owned by the highly leveraged financial intermediaries known as banks.”*

3. HOW TO IMPROVE THE FUNCTIONING OF THE EURO AREA?

European reforms have long followed the step-by-step process initiated by EU's founders. They are incremental and start from a sub-optimal situation to go a step further in the direction of more integration. Adopting this process for the economic governance of the euro area may mean adding new indicators of real convergence, for instance to the MIP, and making these indicators operational. This is not what I recommend because it would add more complexity to an already complex framework. Let me take only one example: fiscal rules. Euro area countries face five different fiscal constraints, much more than in federal states (Eyraud and Gomez, 2014).

Thus, a comprehensive overhaul of economic and monetary governance is certainly the best solution to ensure the optimal functioning of the euro area. The final objective must be twofold: the improvement in policy coordination between the euro area Member States and a better appropriateness of the criteria to the achievement of real convergence for Member States on their way to join the euro area.

Until now, there have been many policy contributions to improve the functioning of the euro area. There are also reforms in the process of implementation. After reviewing some of them, my attempt at contributing to the debate will be twofold. First, I argue for a comprehensive reform agenda with a clear distinction between the different subsets of convergence required for the smooth functioning of the euro area: convergence towards the steady state, financial convergence and cyclical convergence. Second, I bring new elements to the debate, including proposals for new policy tools.

In this respect, it is crucial that these tools share a few important characteristics. To facilitate resilience to shocks, they must be timely. They must be under the control of governments that must enforce them. Moreover, they must be transparent enough for the Council and the European Parliament to use them for economic policy coordination, and for the Commission to assess their implementation. Finally, the indicators on which these tools would draw should replace the nominal convergence criteria that are still the prerequisites to the adoption of the euro.

3.1 Convergence towards the steady state

Convergence towards the steady state relates to the situation of Member States before shocks are taken into account. Measurement must therefore rely on a sufficiently long period of study over which past shocks have been dampened or integrated in the information set of modellers. Convergence after shocks have occurred is part of cyclical convergence and is dealt with later.

Measurement of convergence towards the steady state can draw on some well-known technical methods like, e.g. beta convergence which measures the convergence of countries with the lowest income towards the countries with the highest income. It takes for granted that the latter countries are the benchmark that the former countries should achieve.

As shown in figure 1, real convergence occurs when the relationship between the initial level of GDP per capita, say when the euro was created in 1999, and the growth rate of GDP per capita across all the EU Member States since 1999 has a statistically significant negative slope. Lack of real convergence for a country appears when the pair "initial GDP per capita - growth rate" is distant from the statistically significant relationship. Using the estimated coefficient of the empirical relationship for all countries and the initial GDP per capita per country, one can forecast the domestic growth rate of GDP per capita consistent with beta-convergence. The lack of real convergence can therefore be computed as the distance between the forecast and the actual growth rate of GDP per capita.

Alternatively, the steady state, defined according to the trinity: balanced growth, price stability and full employment can be measured with the use of a macroeconomic model country by country. This would avoid the identification of specific countries as benchmark. Applied to all Member States separately (their respective behaviours might be different), the model would reproduce the functioning of each Member State and be used for forecasting. The expected GDP stemming from the model at a 5-year horizon might be a proxy for potential GDP. Deviations between actual GDP and this potential – a model-based output gap – would measure the possible lack of convergence *vis-à-vis* the steady state (see also section 3.3.1).

If some deviations from the steady state are identified, according to one or the other measurement techniques mentioned above, three European policy tools can be promoted. They would foster convergence of all euro area Member States towards a stable equilibrium with balanced growth, price stability and full employment. Of course, European policies shall only complement domestic policies. Governments are primarily responsible for the achievement of the steady state of their economy. However, the lack of convergence between Member States towards the steady state has impact on the optimality of the entire euro area. This spillover effect legitimizes the implementation of European policies in addition to domestic policies.

First, the cohesion policy helps achieve such a steady state, though it has not been fully effective so far. As such, cohesion policies (as part of the EU budget) certainly bear importance at fostering the achievement of EU objectives. The enlargement processes of the 1980s (Greece in 1981; Portugal and Spain, 1986) urged the implementation of public policies at the EU level to foster real convergence across countries and regions. As of today, a third of the EU budget is devoted to these policies. Promoting cohesion policy does not require a Treaty revision.

Empirical evidence on the impact of cohesion policy on real convergence points to its effectiveness. Becker et al. (2010) conclude that every euro spent on transfers related to the convergence objective leads to 1.20 € of additional GDP, hence it has a multiplier effect. Becker et al. (2012) later argue that allocation issues arise because some transfers exceed the (computed) efficiency maximizing level. Despite this, they conclude that EU transfers generate faster economic growth in the recipient regions. Rodriguez-Pose and Garcilazo (2015) find that the quality of government (like low corruption) increases the returns of cohesion expenditures in European recipient regions. Last, Pasimeni and Riso (2016) show that the EU budget has redistributive effects between Member States, although these effects mainly stem from the progressivity on the revenue side (on the side of national contributions to the budget). Overall, the equalizing effect of the budget is very small, at 1.1%, and the contribution of expenditures to convergence in GDP per capita between EU member states is only a third of that effect.

Second, nominal labour costs divergence in the euro area has fed price divergence between euro area Member States. Though price stability was more or less achieved on average at the level of the euro area, it hid larger price increases in the periphery than in the core. This divergence generated a loss of competitiveness in peripheral economies where nominal costs increased at a faster pace than productivity. According to some (e.g. Sinn, 2014), the loss of competitiveness has been responsible for the crisis of the euro area. Rebalancing between wage growth and productivity would be required to alleviate competitiveness gaps between euro area Member States. Pasimeni (2018) has shown recently a significant relationship between the growth rate of productivity per hour and the growth rate of compensation per hour that is not a one-to-one relationship⁷. Rebalancing thus requires more than an

⁷ Pasimeni (2018) studies a sample of 34 developed countries and finds robust results for a subsample of EU countries. His dataset goes from 1970 to 2017.

expected change in productivity. Coordination on wage policies between the Member States could be used instead (e.g. Janssen, 2017; Müller, 2017). To be operational for governments, coordination would have to draw on minimum wages (e.g. iAGS, 2014; Blot et al., 2017). As Pasimeni (2018) also shows, the gap between productivity growth and compensation growth mirrors a gap in current account balances: a higher gap between productivity growth and compensation growth is associated with a higher current account balance, i.e. a lower domestic demand. Hence, if countries with the highest current account surpluses let minimum wage grow faster than countries with current account deficits (or with the lowest current account surpluses), the gap between productivity growth and compensation growth would decline. This policy would have three advantages. First, it would reduce divergence between creditor and debtor countries. Second, it would reduce the risk of growing euro area trade surpluses when most euro area countries have a trade surplus and among them, the largest countries. It would then limit upward pressure on the euro exchange rate, hence limiting a possible decline in the price competitiveness of the entire euro area. Third, while Article 153 of the TFEU does not provide the EU competence with regard to wages and collective bargaining, there is ample evidence of interferences between the EU and Member States on these matters via recommendations of structural reforms. Moreover, these matters have long been part of Broad Economic Policy Guidelines (BEPG). A European coordination on (minimum) wage policy would give some content to social policy: discussions on (minimum) wage policy at the euro area level would occur during the European Semester, as recently advocated by Ragot (2017). These discussions could be part of a cooperative agenda between national productivity boards. They do not require substantial legislative changes at the EU level, if any.

Third, the use of a federal budget could limit deviations from the steady state. For instance, it could manage a coordinated investment policy in the euro area (e.g. Benigno and Fornaro, 2017). This policy could either target primarily Member States that are the most distant from the steady state or fund investments that would increase connections between countries, hence fostering competition and trade between them. With its structural objectives – fostering convergence towards the steady state – it would be in sharp contrast with the proposal of a Eurozone budget dedicated at improving macro stabilization after new shocks have occurred. A budget devoted to a coordinated investment strategy could be an extension of the Juncker Plan and would not require a Treaty revision.

3.2 Financial convergence

3.2.1 The ECB and the Banking Union

The crisis of the euro area has shown that it was highly sensitive to debt sustainability. Doubts on the capacity of governments of the euro area to pay interests or repay capital sparked a lack of confidence that questioned the euro survival and generated a wave of austerity. While there were some fundamental reasons to doubt the sustainability of public debts in some countries, there were also speculative forces that fed the lack of confidence in the euro area at large, as the generalization of soaring interest rates spreads showed. Removing these speculative forces from the management of public debt in the euro area is essential to the future of the euro area. This is a prerequisite to financial convergence between the euro area Member States.

Economically speaking, the best solution to remove the risk of speculation on euro area public debts is a change in the statute of the ECB: it should become the *de jure* lender of last resort (LoLR) for euro area governments (see Buiter and Rahbari, 2012; De Grauwe, 2013). It would certainly require a Treaty revision, but this would imply that a *de jure* LoLR would make the euro currency a “safe asset” under the sovereignty of a pool of euro area governments.

It may be argued that in the US, the LoLR function is limited to the US federal state and that the US states have no access to a LoLR. In this respect, the adoption of a *de jure* LoLR for euro area Member States would go beyond the US situation. However, the parallel with the euro area is not accurate (Wyplosz, 2017). While the legislation forbids the Federal Reserve to lend to US States, it also forbids buying and selling their debt instruments. This latter point is not true in the case of the ECB. It thus gives the ECB an incentive to test the reaction of financial markets to its deals on domestic debt instruments of euro area Member States. This testing period has finally led to a *de facto* LoLR after 2012.

In contrast with a *de jure* LoLR, a *de facto* LoLR is not formally and legally agreed and requires the implementation of non-standard monetary policy measures under a long-lasting zero-lower-bound (ZLB). What would happen of the euro area if the *de facto* LoLR disappeared during the next wave of speculation against the euro?

An argument against LoLR relates to moral hazard. The existing insurance against default that euro area Member States would get from a LoLR may mitigate incentives to reduce debts and deficits. Limiting moral hazard requires a strengthening of fiscal enforcement and/or the set-up of a public debt restructuring framework. While this argument is correct, it must be stressed that it would hold whatever the form of the LoLR: *de facto* or *de jure*. These requirements could thus be part of the discussions on the adoption of a *de jure* LoLR through inter-governmental negotiations. In contrast, the *de facto* LoLR has emerged *in reaction to* the fears of debt unsustainability and to the lack of debt restructuring framework.

The *de facto* LoLR has completed the creation of the ESM, but the optimality of this framework remains disputable. First, the credibility of the ESM requires very large funding, otherwise speculative forces may be able to test its resilience. The funding capacity is limited to €500 bn. Second, the ESM does not have a debt-restructuring framework. Third, it does not limit moral hazard (Wyplosz, 2017). As it stands, the Commission's proposal to adopt a European Monetary Fund (EMF) will not solve these issues.

The adoption of a *de jure* LoLR to improve financial stability in the euro area is not the only option though. Other proposals abound, e.g. separating senior and junior tranches of public debt (Bénassy-Quéré et al., 2018), creating European Safe Bonds (Brunnermeier et al., 2016) or Eurobonds (De Grauwe and Moesen, 2009; Delpa and Weizsäcker, 2010). All these solutions aim at balancing market discipline requirements and solidarity via some *new* financial instruments that will in the end introduce provisions for orderly defaults on (parts of) public debt. The creation of these new instruments requires prior agreements on risk-sharing and on funding. In contrast, funding is not an issue for the supply of euro, and risk-sharing has been limited so far by the use of the ECB capital key in the allocation of its non-standard purchases of public and private bonds. In this respect, the euro is already a *safer* asset than proposed common bonds.

While much attention has been paid to the so-called doom-loop between governments and banks, it is essential to the euro area that the European banking system is resilient to shocks and sustainable. The banking union fits into this general objective, although it needs to be completed. First, the lack of a European Deposit Insurance Scheme (EDIS) remains a Damocles' sword on the European banking system. Without EDIS, a bank run is still possible in the euro area. The microeconomic issue that it would reveal might become systemic if contagion sparks. Second, under the Single Supervisory Mechanism (SSM), the ECB is directly supervising large banks, while the SSM has delegated the daily power to supervise smaller banks to national supervisors. It requires a similar enforcement of the legislation across the different Member States to insure that small banks will be as resilient and sustainable as large banks in the euro area.

A common, if not entirely unique, European banking supervision and compliance with international banking standards (under Basel regulatory framework) could be sufficient to ensure confidence in the resilience and sustainability of the European banking system⁸.

3.2.2 Debt sustainability in the euro area

If the speculative risk is removed, the questions of moral hazard and the optimality of public debt remain. A “high” debt may well be “too high” and produce a liquidity risk and a default risk. The existence of a *de jure* LoLR does not mean that all public debt levels are acceptable. There are debts that generate imbalances and negative spillovers to the entire currency area. These debts must be limited. How?

Identifying a sustainable or unsustainable public debt is very difficult *ex post*⁹. It is much more difficult in real time. Because no other applicable solution exists, debt limits remain a good option. They anchor expectations about debt sustainability, but to achieve that, these debt limits must be meaningful. If actual debt is above the debt limit during a relatively long period and interest rate spreads stay constant, the current debt limit is meaningless in terms of sustainability. Defining the good number is not easy, but the 60%-of-GDP limit has lost relevance since 1999 (see section 2.5). The “public debt sustainability threshold” should increase, requiring a Treaty revision. If the logic of the Maastricht negotiations more or less remained, the average public debt to GDP ratio of the euro area between 1999 and 2016 could be chosen instead of the average public debt to GDP ratio of the early 1990s. The average public debt to GDP ratio of the euro area between 1999 and 2016 is 80% of GDP (Maastricht definition). This choice would still urge a country like France to generate primary surpluses to reduce its debt, but to a lower extent, while it would give Germany more fiscal room for maneuver that its government would be free to use¹⁰.

Beyond the sustainability threshold on public debt, a sustainability threshold on private debt is also important. The global financial crisis had many determinants and private leverage and indebtedness were part of them. Securing private debts is therefore crucial to the real economy. In the MIP, the threshold on private debt has been set at 133% of GDP. It is the same whatever the country and it is consolidated for non-financial companies and households¹¹. There is at least one issue with this limit (independently of the actual quantification): it signals possible macroeconomic imbalances, but it is not an operational target. Consequently, there is no existing policy tool to help match the anchor. In contrast, with public debt, fiscal policy is the appropriate tool (although the proper definition of the appropriate policy can be discussed).

⁸ Regulation of the shadow-banking system, while certainly desirable, goes beyond the issue of the euro area economic governance.

⁹ Aldama and Creel (2018) argue that US public debt can be found unsustainable on a long sample (under a linear specification), although they show that periods of stabilizing fiscal policies have been sufficiently long and stringent to ensure overall US debt sustainability (under a non-linear specification).

¹⁰ By the way, the existence in the EU of national fiscal rules at odds with the European fiscal rules is very intriguing, at least because national governments incur larger administrative costs of compliance with another rule. What was true for the UK and its golden rule of public finance between 1997 and 2007 is still true for Germany and its debt brake.

¹¹ Non-consolidated private debts (as part of auxiliary indicators in the MIP) are also available although they bear no thresholds.

To remove the contradiction between an existing indicator of sustainability and the non-existing tool to achieve it, the private debt threshold should be transformed into an operational target and a new tool should arise. It might be a tax on financial companies. Actually, they are those that make high private debt possible. Meanwhile, the new tax should not prevent banks from carrying out their credit and market activities, provided they comply with the banking regulations. One may thus think about a domestic counter-cyclical tax on banks including a private debt target. The tax might move counter-cyclically *vis-à-vis* an indicator of economic activity, hence smoothing fluctuations, and increase when private debt exceeds the threshold. The tax might not be 'new' and be similar to the corporate tax, except it would specifically include a private debt target. It might be managed at the euro area level.

The proposal for a 'new' tax or for a modification of an existing tax seems either provocative or unrealistic, or both. However, the key argument here is: if the euro area needs a private debt limit – and it has one in the MIP -, it needs a policy tool to achieve it. Finding this tool is thus an important task and requires thorough analysis and assessment before implementation.

3.3 Cyclical convergence

3.3.1 The identification of shocks to the economy

The smooth functioning of the euro area requires resilience to shocks. It thus requires identification of shocks and information on the functioning of the economies of all euro area Member States before the shocks.

A set of indicators of surveillance will help in this respect. Currently, there are many of them¹².

A recommendation is to limit the number of indicators that are necessary to assess the economic, social and financial situation of the respective euro area Member States and to build forecasts on these economies. When indicators are not available at short notice, improvements should be recommended. The indicators should be: real GDP growth rate, inflation rate, interest rate spreads *vis-à-vis* the euro area average, apparent interest rate (i.e. interests on public debt divided by the nominal stock of debt), public deficit on GDP, unemployment rate, and activity rate. That makes only nine indicators, hopefully available at a quarterly frequency. A tenth one, GDP per capita, permits the assessment of real convergence *vis-à-vis* the benchmark (see section 3.1).

Most of these indicators are commonly used in macroeconomic models that enable to forecast the future trend of the economy and to estimate shocks and reactions to shocks. These are: real GDP, inflation, interest rate spreads, public deficit and unemployment rate. Adding the apparent interest rate is helpful in the assessment of public debt sustainability. As for the activity rate, it enriches the analysis of the labour markets, together with the inflation rate (as a proxy for the evolution of wages) and the unemployment rate.

¹² The MIP includes 43 indicators to which one should add 4 indicators of fiscal policy (public deficit, expenditure benchmark, cyclically-adjusted balance, and medium-term objective; the public debt to GDP ratio is also in the MIP) and more or less 30 indicators from the social board of the EPSR (there are cross-sections with the MIP on some indicators). There are not all used for convergence assessment although they all include information about the current economic and social situation and imbalances, hence convergence/divergence *vis-à-vis* the steady state, about the resilience of the banking sector, or about margins for maneuver on some policy tools (e.g. public deficits) that may help dampen shocks.

The variables do not include explicitly income inequalities, although the latter are relevant to assess the resilience of the euro area. Nevertheless, obtaining quarterly data for income inequalities at short notice is not possible. Evolutions of unemployment and activity rates may work as a proxy, though.

These 10 indicators are already under the surveillance of the Commission that uses them (and many more) to draw its analysis in the Annual Growth Survey. Thus, these indicators would not add any administrative burden to the national administrations that gather the information and to the Commission that analyses it. The advantage would be the reduction in the number of indicators to watch over.

The main novelty of the approach would be the identification of the nature of shocks after the economic outlook has been settled¹³. This could be part of the Annual Growth Survey. Once the nature of shocks is known, supply or demand-driven, the appropriate policy can be implemented and can improve the functioning of the euro area.

3.3.2 Timely, transparent, operational and effective policy tools

The optimal policy mix in the euro area after shocks have occurred requires a strict allocation of tools to specific objectives, in accordance with the Tinbergen principle.

The single monetary policy targets inflation but, more broadly, it should be targeting symmetric demand shocks, as argued previously. A positive (resp. negative) symmetric demand shock proves inflationary (resp. disinflationary), hence it requires a monetary contraction (resp. expansion).

After asymmetric demand shocks, fiscal policy must intervene under the following conditions: it must be timely – late reactions amplify shocks -, transparent – private agents must understand what the policy objective is otherwise they will not adjust their expectations to the stabilizing policy -, operational – it must rely on tools that governments actually control -, and effective – otherwise no stabilization will occur. The natural fiscal candidate is automatic stabilisers for they fulfil all the above-mentioned conditions. Three elements are worth highlighting, though, that need to be improved. First, as previously discussed, automatic stabilization is far from complete and equal across the EU Member States. Re-design automatic stabilizers should be a priority and during fiscal consolidation, tax progressivity and unemployment benefits and households transfers should be preserved, as they help smooth real shocks. Second, while automatic stabilization would dampen domestic shocks, they should remain national, in light of the subsidiarity principle. A budget of the euro area coordinating automatic stabilization may not be the best option in this regard. Third, automatic stabilisers must be symmetric: there may be deficits during bad times (after identified negative shocks), balance during normal times (when there are no shocks to the economy) and surpluses during good times (after identified positive shocks). Identification of the normal functioning of the economy and the identification of shocks, as discussed in the previous subsection, are thus essential parts of the proper management of the euro area. Automatic stabilisers will be symmetric under the following conditions (Creel and Saraceno, 2008): high progressivity of the tax and benefit system, high sensitivity of tax bases to economic fluctuations, high sensitivity of unemployment to economic fluctuations, and short lags in the effective payment of taxes. Recommendations to meet these conditions would improve the effectiveness of automatic stabilisers.

¹³ The methodology for identification is out of the scope of this paper. One could follow Blanchard and Quah (1989) and their econometric modelling including the evolution of GDP and unemployment. One could also estimate a larger vector of autoregressive variables, encompassing the nine first indicators above, and extract the unexpected evolutions that would inform on the size and nature of shocks.

After supply shocks, the situation becomes even more difficult. Indeed, the policy framework should not prevent an economy from increasing its potential output after a positive shock while it should have instruments to fight a negative shock. The natural instruments are structural reforms and tax policies. The former raise the issue of timeliness. Structural reforms take time to produce their effects and require some coordination with other economic policies to dampen their initial negative impact on the economy. They may also have an impact on inequality and in this respect, they must be implemented very carefully. Shifts in taxes on corporate firms also take time usually, because they are based on past profits. One possibility might be to implement shifts in corporate taxes via cyclical modulations of tax payments: if a negative supply shock occurs during period t , the tax payments by firms during period t based on profits at period $t-1$ would decrease to some extent and alleviate the shock. This discretionary policy would be stabilizing.

3.4 Recent institutional reform proposals in light of convergence

There have been several reform proposals by EU authorities to help improve the functioning of the euro area. Chronologically, the Five-president report of June 2015 states: *"The convergence process would be made more binding through a set of commonly agreed benchmarks for convergence that could be given a legal nature. Significant progress towards these standards – and continued adherence to them once they are reached – would be among the conditions for each euro area Member State to participate in a shock absorption mechanism for the euro area during this second stage."* (p. 5). The "shock absorption mechanism" fits very well in the context of the OCA that I have also used as a reference point.

The EP resolution on a "Budgetary capacity for the euro area" (adopted in February 2017) introduces the concept of a "convergence code": *"Beside the Stability and Growth Pact, the convergence code (...) should focus for a five-year period on convergence criteria regarding taxation, labour market, investment, productivity, social cohesion, and public administrative and good governance capacities within the existing Treaties. (...) A euro-area fiscal capacity should be complemented by a long-term strategy for debt sustainability and debt reduction and enhancing growth and investment in euro-area countries, which would bring down overall refinancing costs and debt/GDP ratios."* The ten macroeconomic variables I propose to watch over grasp most of the information that would be included in the "convergence code". They would also connect with debt sustainability, although I recommend dealing also with private debt sustainability.

On 6 December 2017, the Commission set out its proposals of reform with a balanced focus on market discipline and on budget integration. In the accompanying Communication on "New budgetary instruments for a stable euro area within the Union framework", the Commission specified that *"support to structural reforms could be achieved through two complementary instruments: a reform delivery tool [and] technical support for specific actions at the request of the Member States"*.

These tools may prove very important in the convergence process towards the steady state. The Structural Reform Support Programme (SRSP) helps support investment in cohesion, education, training, transport, energy and digital infrastructure, innovation, environment and small and medium sized companies. Its success is its main drawback: demand for technical support is much higher than available means and has required a Financing Decision to increase from ten to twenty between SRSP 2017 and SRSP 2018 the number of countries receiving support. Funding should double by 2020. Further strengthening support to domestic reforms, via the reform delivery tool, certainly goes in the good direction for the smooth functioning of the euro area. Nevertheless, it will need being concentrated on euro area Member States, otherwise a risk of scattering of means will emerge.

Finally, the Commission proposes in the same document the adoption of a “*stabilisation function at European level (that) would provide the possibility to activate resources rapidly to deal with shocks that cannot be managed at the national level alone.*” This proposal raises several remarks. First, it goes in the good direction to ensure a better resilience of euro area Member States to shocks. Second, it opens discussion on the identification of shocks, like deviations from trends. However, it does not propose – at this stage – a *systematic* method to identify these shocks and distinguish between demand and supply shocks. As I argued earlier, this is an important path of reform. The conditions for “*eligibility*” are contradictory. “*Eligibility*” relates to compliance with the EU surveillance framework although the latter has not been much successful at achieving the EU objectives and at enforcing fiscal rules so far. Moreover, under its current form, the EU budget is balanced and therefore irreconcilable with macroeconomic stabilization of large shocks (which it was not responsible for until then). To be effective, the stabilization function should be associated with a *debt* capacity over the long run. The size of the stabilization function is also quite limited: in May 2008, the Commission announced “*back-to-back loans under the EU budget of up to €30 billion*” for the European Investment Stabilization Function for the next Multiannual Financial Framework (2020-2027). Per year, this extra financial support would represent 0.04% of euro area gross national income.

Finally, the preferred way of envisaging the stabilization function by the Commission is *via* a public investment support. The rationale can be traced back to the decline in public investment that follows a negative shock. The stabilization function would then remove the risk of sacrificing public investment on the altar of austerity. Nevertheless, if shocks are well-identified, austerity measures will no longer appear as a panacea after a shock, unless it is a positive demand shock, and the slack on public investment will disappear. Moreover, as a stabilization function, automatic stabilisers are more timely than public investment policy to dampen a “*large asymmetric shock*”. I thus recommend the use of a euro area budget dedicated to a common public investment policy to foster convergence towards the steady state, and not to foster resilience to shocks. Stated differently, the euro area budget should be structural, complementing cohesion policy, rather than cyclical.

4. POLICY RECOMMENDATIONS

As a conclusion, some policy recommendations stem from the reform analysis. They are separated according to the different subsets of real convergence. I also mention the countries joining the euro area.

Some recommendations, certainly recommendations #4, #5, #6 and #10, require a Treaty revision. While it may make them less easily applicable, it does not make them less necessary to the good functioning of the euro area.

4.1 Convergence towards the steady state

Recommendation #1: Before the adoption of the next multi-annual financial framework, the effectiveness of the cohesion policy in the euro area should be assessed. Investigation should continue focusing on the quality of the means attributed, via the regular checks and controls, and it should also focus on the achievement of the goal: real convergence across euro area regions. If effectiveness is confirmed, the use of cohesion policy with the objective of improving convergence across euro area Member States should be promoted and the size of cohesion policy possibly extended to distinguish between euro area (with extra-payments) and non-euro area Member States. This latter device may incentivize euro adoption.

Recommendation #2: Coordination between national productivity boards on minimum wage policy across the euro area Member States would help reduce divergence in unit labour costs; meanwhile, it would help the euro gain support from European populations. It would show that EU authorities do not only agree on maximal constraints, like debts, but also on minimal quantitative requirements. To be operational, euro area countries with minimum wages by sector, like Italy, would have to agree on a common national policy.

Recommendation #3: The use of a euro area budget to foster convergence towards the steady state via a coordinated European investment policy is an interesting option. Such a budget would extend the Juncker plan and give additional means to cohesion policy in the field of public investment. This recommendation contrasts with the adoption of a Eurozone budget dedicated at improving macro stabilization after new shocks have occurred. The implementation of a policy stimulus on public investment in order to stabilize the economy comes at the risk of producing only a delayed effect.

4.2 Financial convergence

Recommendation #4: to remove the risk of speculation on public debts in the euro area, the statute of the European Central Bank should indicate that it is *de jure* lender of last resort for euro area Member States. In contrast with the current situation with a *de facto* lender of last resort, the recommended change would occur after discussions with the Member States about the fiscal framework. Its actual enforcement would be part of the deal.

Recommendation #5: The threshold on debt to GDP ratio could shift from 60% to 80% (Maastricht definition). After twenty years, the euro area has had a few business and financial cycles. Taking the average debt to GDP ratio over this entire period would be more consistent with the macroeconomic and financial environment of euro area Member States than sticking to the former threshold.

Recommendation #6: The threshold on private debt included in the MIP (133% of GDP) should be transformed into an operational target and complemented with the adoption of a policy tool. This tool could take the form of a specific tax on banks.

4.3 Cyclical convergence

Recommendation #7: One could limit the number of indicators that are necessary to assess the economic, social and financial situation of the euro area Member States to ten indicators. These indicators would be sufficient to draw scenarios on the outlook of all euro area countries and to identify the shocks that have hit these countries. They are: real GDP per capita, real GDP growth rate, inflation rate, interest rate spreads *vis-à-vis* the euro area average, apparent interest rate (i.e. interests on public debt divided by the nominal stock of public debt), public deficit on GDP, unemployment rate, and activity rate, to which the ratios of public and private debts to GDP should be added as targets for financial convergence.

Recommendation #8: The functioning of automatic stabilizers in the euro area Member States is a priority. They must fully play. Although the SGP allows the full play of automatic stabilisers, they are not entirely effective in practice. The conditions for an effective functioning of automatic stabilisers may not be met: high progressivity of the tax and benefit system, high sensitivity of tax bases to economic fluctuations, high sensitivity of unemployment to economic fluctuations, and short lags in the effective payment of taxes. Improving these conditions would enhance the effectiveness of automatic stabilisers.

Recommendation #9: Timely tax policies towards firms, like a modulation of payments on corporate taxes, would alleviate the real costs of negative supply shocks. They would be part of discretionary fiscal policy.

Recommendation #10: The current fiscal framework introduces an obligation of means (fiscal discipline with the convergence of the public deficit and public debt towards reference values, *cf.* article 126 of the TFEU). The logic of the fiscal framework could change: the obligation of result (achieving macro stabilization and debt sustainability at the reference value of recommendation #5) could substitute for the obligation of means. This would remain in line with article 121(1) of the TFEU which states that “*Member States shall regard their economic policies as a matter of common concern and shall coordinate them within the Council*”. The “*common concern*” would be macroeconomic stabilization and public debt sustainability. A budget analysis assessing the path towards the debt to GDP ratio would be the basis for discussion during the European Semester. This analysis would assess regularly the effectiveness of automatic stabilisers and discretionary policies and it would not put too much emphasis on the deficit to GDP ratio. The latter ratio could eventually be dropped from article 126 of the TFEU. The fulfilment of TFEU obligations related to the public deficit has led to self-defeating austerity. This should never happen again.

4.4 Countries joining the euro area

Recommendation #11: Countries in the process of joining the euro area should face the same convergence criteria as euro area Member States: public and private debt sustainability (via the achievement of debt thresholds), assessment of their outlook drawing on the ten aforementioned indicators and identification of shocks. Strong expected divergence (as a result of analysis along recommendation #7) of these countries from euro area countries would defer euro adoption.

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One major characteristic of an optimal currency area is its ability to maintain or foster integration and convergence among its Member States. This objective requires reaching a stable economic and financial situation and developing resilience to shocks.

After reviewing the state of convergence in the euro area, this paper proposes a number of recommendations, aimed at improving convergence towards the steady state, as well as financial and cyclical convergence.

Recommendations focus on several policy areas, including cohesion policy, the statute of the ECB, public and private debt sustainability, fiscal rules and minimum wage policy.

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