independent Annual Growth Survey

5th Report

# iAGS 2017

# THE ELUSIVE RECOVERY





November 23rd, 2016

Financial support from
the S&D Group of the European Parliament
within the context of their Progressive Economy Initiative,
is gratefully acknowledged



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The **2017 iAGS** was produced during 2017 autumn by a team involving 4 institutes AK Wien (Austria), ECLM (Denmark), IMK (Germany), OFCE (France) and with the financial support of the S&D group of the European Parliament.

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**Released on November 23rd, 2016**

# THE ELUSIVE RECOVERY
## iAGS 2017

# EXECUTIVE SUMMARY

## An elusive recovery unable to solve the social crisis

**Nearly nine years after the meltdown of the financial system of developed countries followed by the euro debt crisis in 2012, recovery in Europe finally started in late 2014.** We expect that economic growth is going to slow down in the EU in 2017 (1.6% after 1.9 % in 2016) and in 2018 (1.5%) as tailwinds are turning into headwinds. Brexit is likely to hit UK growth and will have negative, but limited, contagion effects to the rest of the EU. Oil prices are up again and not much more can be expected in terms of competitiveness gains through the exchange rate channel. More importantly the slowdown of international trade and of emerging countries' growth is weakening external demand to the EU and hence another positive factor is waning.

**The aggregate fiscal stance for the euro area will be neutral in 2017, but the fiscal adjustment will resume in 2018.** This movement will progressively reverse the positive fiscal impulse of 2015 and 2016. A positive fiscal stance has just been recommended by the European Commission. For 2017, they suggest a fiscal expansion of up to 0.5% of GDP. This is surely a welcome change in approach, as it stresses the need to adopt a global view on the policy mix in the euro area. However, this objective is not compatible with the current country level policy decisions. In particular, at the time of writing it does not seem likely that Germany will heed the commission's call and make use of available fiscal space. In 2017 fiscal policy according current national plans will continue to weigh on GDP growth even if the aggregate fiscal stance is neutral: positive fiscal impulses are concentrated in countries where there is no activity slack —leading to a low multiplier effect— while fiscal consolidation persists in countries with significant economic slack and a high fiscal multiplier. This shows that the European Semester should not focus exclusively on the aggregate change of the structural balance, without a comprehensive discussion about its geographical distribution and macroeconomic impact.

**The multiplicity of risk sources encourages a wait-and-see attitude on the part of investors, a turning inwards, and discourages risk-taking.** In this context, households and businesses prefer savings over investment, retarding growth and capital accumulation and confirming the fears of an economy trapped in low growth. Moreover, the prospect of a Brexit has created a new source of uncertainty in Europe. On top of this comes the Trump election in the USA. This political and institutional uncertainty combines with other sources of macroeconomic (deflationary risk) and financial uncertainty (non-performing loans).

**This elusive recovery comes with a severe social cost as the reduction of unemployment is delayed.** In 2015, 22.9 million people in the EU were unemployed and among them 10.9 million people were long-term unemployed. At the current pace of reduction, the unemployment rate would take 7 years to return to its pre-crisis level. The problem is particularly acute in the countries hit by the crisis and among young people. This can lead to "scarring", preventing the accumulation of human capital and creating serious social problems; and in the long run it decreases young people's sentiment of belonging to EU, fuelling the political crisis.

**Europe needs more and better employment and a lower dispersion of incomes.** The labour market slack specifically harms the poorer. The gap between the poor and the middle class has widened severely in Southern European countries, but also in Germany despite the decrease in unemployment there, showing that the rise of inequalities has multiple causes. One option, although it depends a lot on national context, is to distribute more equally the overall working time within the labour force in order to lower income inequalities. Whatever, fighting unemployment and creating better jobs must be a number one priority for policy makers.

**Financing redistributive welfare states via the taxation of high wealth, high incomes and inheritances promotes economic growth and increases social stability.** Increased progressivity in the taxation of incomes is not only a matter of introducing higher marginal tax rates on high incomes: the tax base also needs to be broadened. Moreover, tax compliance has to be improved and aggressive tax optimization as well tax evasion should be eliminated. Finally, well-targeted social spending needs to increase to counteract the rise of poverty rates.

**A growth-oriented economic policy is necessary but not sufficient to obtain social progress and individual well-being. Policy makers need to move beyond the predominant, narrow focus on GDP growth, and aim instead at a broader set of economic, social and environmental targets**. A slowing

down of GDP growth need not be a disaster as GDP is a partial measure of well-being. It ignores non-market flows such as domestic work, damages to nature and social inequalities. A good society should reach a fairly distributed material well-being, full employment and good jobs, quality of life and ecological sustainability. Furthermore, we propose four other subsidiary targets that aim at providing a stable economic framework: financial stability, stable state activity, price stability and external balance. A council responsible for monitoring well-being composed of economic, social and environmental experts could enrich the debate.

## A new policy mix for the euro area

**The accommodative monetary policy implemented by the ECB has been supportive of the euro area economy.** The decrease in interest rates during the financial crisis and the unconventional policy decisions (the "Quantitative Easing" program) have provided a strong boost to investment. Even so, total investment in 2015 was 13 GDP points below its 2008 level. Yet this does not signal a monetary policy failure: our analysis shows that, without the ECB intervention, the investment rate would have been even lower, by 5.5 percentage points of GDP. Moreover, monetary policy has not so far led to bubbles on financial and housing markets in the euro area, contrary to a widespread belief.

**However, monetary policy has now reached its limits.** The current weakness of investment is not due to tight credit conditions but to low aggregate demand, on which unconventional monetary policy does not act directly. The marginal benefits of an additional round of quantitative easing in terms of new private investment seem very low. Moreover, the asset purchases of the ECB already represent a very large fraction of the flows of newly emitted public debt—though the stocks of debt are far from being exhausted.

**Monetary policy should therefore be complemented with active and coordinated fiscal policies. However, Europe's fiscal rules are too rigid and procyclical, preventing the attainment of these objectives.** The method used by the Commission to estimate the cyclical part of the deficit leads to an overly procyclical fiscal policy under the rules of the Stability and Growth Pact (SGP). Domestic fiscal policies are fettered and passive, except at the margin under quite bad economic conditions, thanks to EU rules and national "debt brakes" introduced as part of the fiscal compact. Public investment has suffered disproportionately under the austerity policies, in the absence of special SGP provisions protecting and supporting it.

**We identify two promising reform paths for the SGP: the golden rule of public finance and a modified expenditure rule.** The golden rule is a traditional public finance concept that deducts net public investment from both the headline and the structural deficit, so that net public investment would be financed via deficits. The spending rule implements a limit for non-cyclical nominal expenditure growth, that is determined by the medium-term growth rate of real potential output plus the ECB target inflation rate of 2%, stabilizing the expenditure-to-GDP ratio over the business cycle. The spending rule and the golden rule of public investment should be the major point of reference of the preventive as well as the corrective arm of the SGP. Both rules together avoid the procyclicality of the current framework while at the same time ensuring fiscal sustainability.

**The Juncker plan is broadly positive, but neither the needed stimulus in the short term nor the increase in potential growth in the long term are going to happen in the current form of the plan.** The new doctrine behind the Juncker plan was that a stimulus was needed at the euro area level and that an investment stimulus would achieve simultaneously a short-term macro boost to escape the secular stagnation trap, and a longer-term effect through higher productivity levels and assets build-up, that ensure the sustainability of public debt and pension systems in the long run. The Juncker plan is clearly undersized, with not enough fresh money on the table; more fundamentally, it is essentially a rather small extra insurance on investment projects, which is not different in nature from the already present effects of conventional and non-conventional monetary policy.

**A strong public investment push is needed, and is to some extent possible even under current fiscal rules.** Net public investment was negative in 2015 in the euro area: depreciation was larger than gross investment. But investment in public infrastructures—either installation of new capacities or maintenance of the existing ones—can significantly benefit long term growth, while providing a short-term boost to activity, given the large fiscal multipliers. Other expenditure categories, like education, health, child care, social work and integration, can also increase labor supply and productivity. We show that public investment financed by public debt can significantly increase net public worth. Due to short term Keynesian effects, amplified in a time of low inflation and high unemployment, allowing for 1% GDP of public investment that raises public debt by the same amount in 2035 would lead to an accumulation of more than 1.6% of GDP of public assets. Provided that public investment projects are well managed, the long-term effect on potential growth will improve the balance sheet of the public sector.

**Accelerating the path into the transition to a zero carbon economy is another way to produce the needed stimulus in the short term while building up sustainability in the long term**. As we argued in the iAGS 2015, market oriented instruments like emission trading schemes (ETS) and a carbon tax could be used to increase the rate of return on private investment in the transition. Third party financing in the field of energy efficiency of residential buildings is another way to solve the short termism of households stuck in lasting crisis. Compensation of "brown" capital holders, exposed households or declining sectors could then be a public investment in the transition. Dealing with the issue of competitiveness toward economic zones where carbon has a zero or low price could be implemented with border tax adjustments.

## Tackling macroeconomic and financial imbalances

**The rethinking of the mix between monetary and fiscal policies is not enough to tackle all the challenges faced by the euro area.** Current account imbalances, that were at the heart of the crisis that begun in 2009, are still present and threaten the very survival of the monetary union. Financial instability—notably the issue of non-performing loans—constitute another decisive challenge. Moreover, there is some degree of conflict between the various economic objectives: trade-offs must be identified and hard choices should be made.

**Almost all euro area countries posted a current account surplus in 2015 and intra-EMU trade imbalances have been reduced, but this does not mean that macroeconomic imbalances are no longer important.** The current account improvement in Southern countries is largely due to a compression of internal demand through austerity policies, and much less to an improvement in exports; faster demand growth, needed to bring unemployment down, risks widening deficits once more. Many northern countries, and especially Germany, are running huge current account surpluses that could lead to a euro appreciation, with negative consequences on the competitiveness of all euro area countries. Substantial nominal adjustments are therefore still needed to correct for these imbalances; what is critical is that they are achieved as far as possible symmetrically.

**The reconvergence of the euro area could be achieved through two pillars: a nominal one —via a golden wage rule— and a structural one.** The golden wage rule implies that nominal wages increase at the rate of domestic productivity augmented by the ECB inflation target of 2%. In the short run the rule

should be amended to correct for the existing nominal imbalances, *i.e.* wages increasing faster than the rule in the North, and slower in the South. Tools for the implementation of this coordinated wage policy include: generalization of wage floors and cross-country coordination of their increases, recentralization of wage negotiations and generalizations of collective agreements. Other tools relating to changes in indirect wages costs could also be mobilized. In parallel, policies centered on the convergence of productive capacities and standards of living must also be implemented; in the South, this includes structural investment in export capacities to raise productivity, improve non-cost competitiveness and, promote alternative energy production allowing full exploitation of comparative advantages.

**The Macroeconomic Imbalance Procedure (MIP) should be made symmetrical and should be completed by an analysis highlighting the link between different imbalances and the policy tradeoffs.** So far, the adjustment has remained asymmetric, weighing mainly on deficit countries. The MIP should be made more symmetric so as to encourage reflationary policies in countries with high current account surpluses. A bottom value should be introduced for nominal unit labor cost growth, and the same absolute value should be used for upper and lower thresholds for the current account. More fundamentally, the scoreboard hides the fact that some imbalances are linked —for example that surpluses in some countries have the same root cause as deficits in others— and that tradeoffs exist between the policy objectives. Reducing the internal current account imbalances makes it more difficult for deficit countries to achieve debt stabilization and full employment, because of the deflationary effect and the consequent rise of the real interest rate. Moreover, the correction of the external imbalance of the whole euro area —*i.e.* its high current account surplus— through a euro appreciation, would increase the internal divergence of the zone. Procedurally, the MIP should therefore be expanded with a broader and more systemic economic analysis. Substantively, the policy to mitigate such tradeoffs is a full utilization of fiscal space in all countries combined with an increase of inflation in surplus countries.

**In the medium run convergence with balanced, non-inflationary growth would require ambitious changes to the institutional design of the euro area.** A reform agenda, that as far as possible makes use of existing procedures, could start by revitalising economic policy co-ordination as laid down in Article 121 TFEU, with the Broad Economic Policy Guidelines as its central element. This change would enable the policy mix between aggregate-level monetary policy and predominantly national fiscal policies and incomes policies to be evaluated within a common and consistent framework. Member states should

use a mix, appropriate to the country in question, of fiscal and incomes policies, in order to ensure demand and nominal wage and price developments consistent with overall policy goals. The recently established European Fiscal Council and the envisaged productivity boards at national level should be given an extended remit to analyse the overall macroeconomic policy mix. In order to ensure the linkage between expert analysis and effective policymaking the existing Macroeconomic Dialogue (MED) - which brings together the social partners, the central banks and representatives of the Commission and national fiscal policy at EU level should be substantially strengthened, with a MED at the level of the Euro Area and each Member State.

**Financial risks weigh on future prospects, making it urgent to solve banking system troubles. Solving the non-performing loans (NPL) problem should be a top priority for policy makers.** NPL have reached ? 1 132 billion in the euro area and, more worrisome, they are concentrated in some countries. Bad bank schemes appear particularly well-suited to deal with large portfolios of NPL, even if some implementation details should be discussed (whether the bad bank should be at the European or national level; whether a European Fund should guarantee the new institution). Developing a secondary market for NPL —through securitization of those assets— is appealing. However, the subprime crisis has also shown that, if not properly structured, securitization can magnify financial instability and inflict serious damage to the wider economy. Insolvency frameworks should also be improved and the tax system should incentivize banks for building adequate provisions.

**While the basic diagnosis of fragmented and bank-centered capital markets is widely shared, there is no agreement about the relevance of the Capital Market Union (CMU).** The main objective of the CMU is to diversify Europe's financial system, to supplement bank financing with a sophisticated array of capital markets, and to overcome fragmentation, with the ultimate goals of "freeing up" inactive capital and stimulating the real economy. Yet, credit sluggishness is mainly explained by the lack of demand for loans on the part of companies, which face fundamental uncertainty and substantial excess capacity. Moreover, our research suggests that a deepening of financial interrelationships implicit in securitization can lead to higher systemic risks. In the medium and longer run this could well turn out to be counterproductive for economic performance. In addition, the inherent complexity of the interrelationships cast doubt on the claim and intention of the Commission's proposal that the new securitization markets can be kept simple, transparent and standardized.

# THE ELUSIVE RECOVERY

## A slowing down recovery

The economic, financial and institutional crisis which started in 2008 looks like it is never going to end. Nearly 9 years after the meltdown of the financial system of developed countries, after a violent recession followed by the euro debt crisis in 2012, a recovery finally started in late 2014. It has been pushed by a mix of fair winds, such as low oil prices, low interest rates, a lower effective exchange rate of the euro, a less negative fiscal stance in the euro area and unconventional monetary policies. Adding to those fair winds, the Juncker commission took stock of the worrying situation in 2015 and proposed the Juncker Plan to boost (mostly private) investment in the EU.

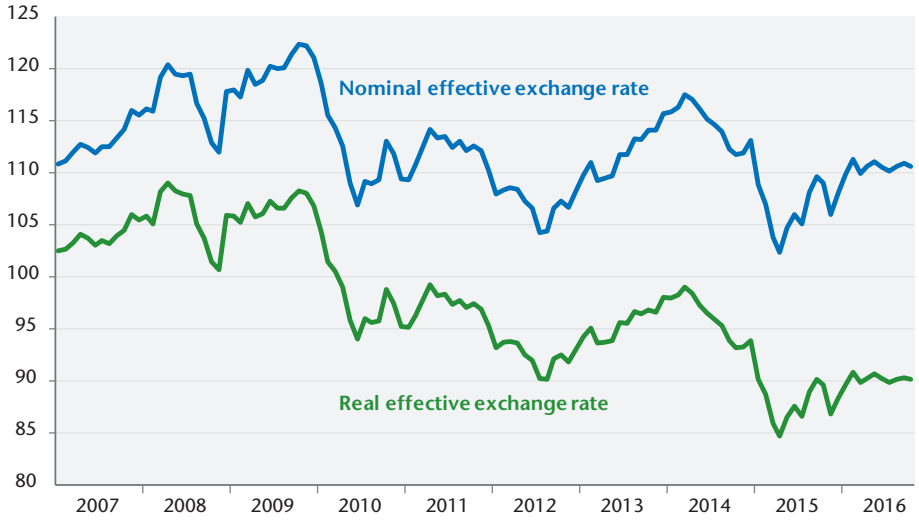
Table 1. **Breakdown of short term forecast for euro area**

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|
| **GDP growth** | 2.0 | 1.6 | -0.9 | -0.2 | 1.2 | 1.9 | 1.6 | 1.4 | 1.3 |
| **Effect of … on GDP growth** | | | | | | | | | |
| **Oil** | 0.0 | -0.3 | -0.2 | 0.0 | 0.1 | 0.5 | 0.3 | 0.0 | -0.1 |
| **Price competitiveness** | 0.4 | 0.4 | 0.5 | 0.1 | -0.2 | 0.4 | 0.3 | 0.2 | 0.1 |
| **Financial conditions** | -0.2 | 0.0 | -0.6 | -0.4 | 0.1 | 0.0 | -0.1 | 0.1 | 0.1 |
| **Fiscal policy** | -0.2 | -1.2 | -2.2 | -1.2 | -0.5 | -0.3 | 0.0 | 0.0 | -0.2 |
| **Emerging countries trade slowdown** | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | -0.2 | -0.1 | -0.1 | -0.1 |
| **Brexit** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 |
| **Carry over** | 0.2 | 0.5 | -1.1 | -0.3 | 0.8 | 0.1 | 0.1 | 0.0 | -0.1 |
| **Other** | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | -0.1 | -0.1 | 0.0 | 0.0 |
| **Sum of above effects** | 0.2 | -0.6 | -3.6 | -1.8 | 0.1 | 0.5 | 0.4 | 0.1 | -0.3 |
| **Growth in the absence of effects** | 1.9 | 2.2 | 2.7 | 1.5 | 1.1 | 1.5 | 1.3 | 1.3 | 1.6 |
| **Potential growth** | 0.9 | 0.9 | 0.8 | 0.8 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| **Output gap*** | -2.1 | -1.4 | -3.1 | -4.1 | -3.8 | -2.8 | -2.1 | -1.5 | -1.1 |

*Output gap is the ratio between the level of effect GDP and potential GDP and hence first difference of output gap is equal to the difference between GDP growth and potential growth.
*Source:* AMECO, iAGS calculation and forecast.

But despite all this, the recovery has been weak and the closing of the output gap is delayed again. We expect, as we detail in chapter 1 of this report, that economic growth is going to slow down in 2017 and in 2018 (Table 3 of chapter 1 in this report). Tailwinds are changing into headwinds (see chapter 1 in this report and Table 1). Oil prices are up again, and seem to stabilize around 55$/b. The effective exchange rate of the euro has been stable against the dollar (Figure 1). Not much more can be expected in terms of competitiveness gains through this channel. The sharp depreciation of sterling after the Brexit referendum is indeed reversing the trend and will lead to a slightly increasing real exchange rate in the next quarters. More importantly the slowdown of international trade and the slowing growth of emerging countries (as compared to before the crisis) reduce the external demand growth (Table 1) of the European Union and hence another positive factor is waning.

Figure 1. **Euro effective exchange rate, real and nominal**



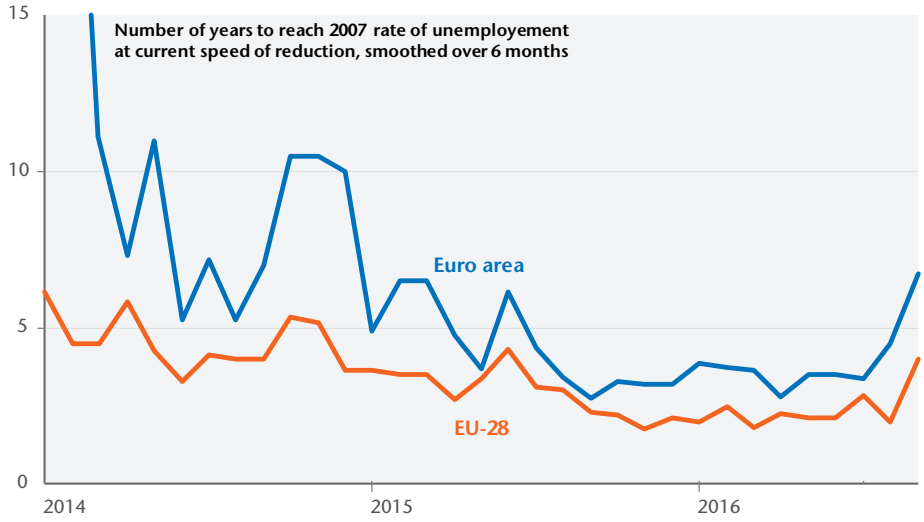

*Source:* ECB.

This slowing and elusive recovery comes with consequences. Unemployment has reached a high level, peaking in the second quarter of 2013 at more than 12% for the euro area and 11% for the UE28. As we document in chapter 2 of this report, high unemployment is one face of many aspects of a profound social crisis. After the 2013 peak, unemployment started to decrease. Figure 2 is showing the number of years needed, given the current pace of reduction in unemployment, to go back to the rate prevailing in 2007. The recent slowdown

is pushing this target back by 7 years. This illustrates why the recovery is elusive and how far we are from going back to the unemployment rates prevailing before the crisis. Combined with a forecasted further slowdown of the recovery, it suggests that it will require a long time to end the crisis which began in 2008.

Moreover, as we show in chapter 2, the slow clearing of the labour market is done partly through a wage adjustment, as the structural reform doctrine is advocating, and inequalities are raising at the bottom of the income distribution. That channel is strong in some countries, like Spain, where the share of wages in total value added has been sharply diminishing. Unemployment is weighting down on wages, whereas it is contributing to reduce internal disequilibrium of current accounts. However, it does so mainly by shrinking the demand for imports of euro area countries (see chapter 4 of this report). That is fueling "lowflation" and could end in deflation, locking the euro area in the wage deflation and unemployment trap.

Figure 2. **Pace of unemployment reduction**




*Source:* Eurostat, monthly unemployement data, iAGS calculation.

2 years ahead forecasts are not enchanting but prospects for future growth are worrying. Potential growth is slowing down, partly due to the 2008 crisis, as historical analysis suggests that the financial and banking crisis tend to have a lasting impact on economies.[1] Added to that, prospects for future growth in

1. See for instance analysis by Jordà *et al.* (2011) and Reinhart and Rogoff (2008).

developed countries are further reduced by population stagnation. Ageing population and reduction in fertility rates in developed countries, as well as the end of increases in participation rates, imply a significant slowing of the working age population and even a decreasing one in some countries (the core projection is that the labor force will be stable over the next few years for the euro area according to the 2015 Ageing Report). But productivity is also a concern. Multifactor productivity or total factor productivity (a comprehensive measure of productivity, table 2) is growing less than before, and less than in the US. That could be due to a mismeasurement of capital stock or of utilization rates of factors, especially in the crisis (explaining why numbers are so low when they include the most acute phases of the crisis). That could also be a consequence of capital misallocation, especially in the wake of the quasi bubble before the crisis. But it could also be a long trend in productivity, fueling the Gordon hypothesis of a coming secular stagnation and reviving the old analysis of the end of the dynamic of capitalism.

Table 2. **Total factor productivity growth**

**Annual average rate of growth in %/year**

| | 1987-1997 | 1997-2007 | 2007-2016 | 2012-2016 |
|---|---|---|---|---|
| **USA** | 0.9 | 1.2 | 0.6 | 0.5 |
| **GBR** | 0.8 | 0.8 | -0.2 | 0.4 |
| **EA-11** | 0.9 | 0.5 | -0.1 | 0.3 |
| **DEU** | 0.8 | 0.8 | 0.2 | 0.5 |
| **FRA** | 1.0 | 0.8 | 0.1 | 0.4 |
| **ITA** | 1.1 | -0.1 | -0.7 | 0.1 |
| **ESP** | 0.2 | -0.7 | -0.3 | 0.1 |
| **NLD** | 0.3 | 0.7 | -0.3 | 0.5 |
| **BEL** | 0.8 | 0.9 | -0.1 | 0.1 |
| **AUT** | 0.8 | 1.1 | -0.4 | -0.2 |
| **IRL** | 3.0 | 1.5 | 0.6 | 1.6 |
| **FIN** | 1.3 | 2.0 | -0.6 | 0.1 |
| **PRT** | 1.0 | -1.0 | -0.6 | 0.4 |
| **GRC** | 1.7 | 1.8 | -2.5 | -0.6 |

*Source:* OECD Economic Outlook 99, iAGS calculations. TFP is defined as rate of growth of GDP minus growth of production factors weighted with their share in GDP. Labor (not corrected for human capital) and non residential capital are taken into account.

By itself, a slowing down in GDP growth should not be a disaster. As we recall in chapter 2 of this report, GDP is a partial measure of wellbeing. It is an average index hiding a dynamic of inequalities. It is a monetary measure, accounting for monetary economic activity and ignoring non-market flows such as domestic work or damages to Nature. It is because of that a crude measure of social and environmental sustainability. So a full account of future prospects should disregard the GDP index and point to other kinds of indicators.

The slowing down of GDP growth, however, means that future monetary flows are not going to ease the weight of debts (public and private) as was the case, for instance, after WWII. The secular stagnation hypothesis, in its Gordon fundamental form, would ask for further adjustment of public finance.

## A policy mix unable to avoid the trap of secular stagnation

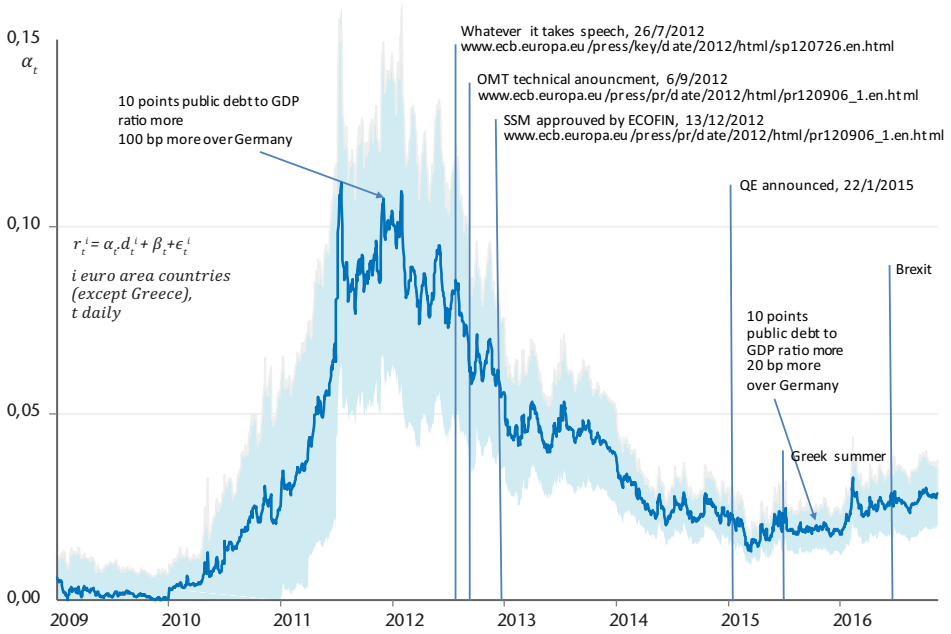
The euro debt crisis of 2011-2012 was temporarily solved with a decisive intervention by the European Central Bank on July 2012 (the famous "whatever it takes" from Mario Draghi). This intervention marked a turning point in the spirit of the Union, allowing for a limited solidarity between member States. The ECB has been the corner stone of this new doctrine (figure 3), first with the introduction of OMT and more recently with the launch of *Quantitative Easing*.[2]

Nevertheless, the explicit price for this change in doctrine has been a forced frontloading of fiscal consolidation. Thus, fiscal policy had a strongly negative impact from 2011 to 2013 (see table 1) and has contributed to the deepening of the crisis.

By giving its full expression to what was only a potential risk of a "sudden stop", frontloading was a mistake. Panic-driven austerity in the face of sanctions from financial markets does not restore any sort of confidence and can only deepen and diffuse a recession. As we argued in previous iAGS, reducing fiscal deficit at a time of large fiscal multipliers is inefficient. A better approach would have been to backload fiscal consolidation, given that intertemporal consistency of governments was guaranteed. That analysis is now, belatedly, nearly a

2. By relying partly on national central banks to buy assets, especially national sovereign bonds, the solidarity between member States is limited to 20% of total amount outstanding. This shows, if necessary, that resolute intervention of central banks is not necessarily equal to a transfer potential or actual between member States.

Figure 3. **Index of market discipline for member states**




*Source:* Eurostat, datastream, ECB, iAGS 2017 computations.

consensus among observers and one could argue that fiscal consolidation has been a proof that member states are indeed committed to fiscal stability (whatever it takes for them too, so to say). Based on that costly and nearly absurd demonstration, a more efficient approach to debt stabilization and reduction may be applied from now.

This situation refers to another type of secular stagnation than the Gordon sort. It is closer to the analysis of Larry Summers, building upon Hansen's work.[3] Some have formalized the idea of a multiple equilibrium economy where, through the interaction of balance sheets, investment, productivity and expectations, a fiscal stimulus could have a very strong effect on the short-term outlook of the economy, when the economy is in a severe recession or what was called a few years ago a liquidity trap (Krugman *et al.* (1998)). The IMF, in an influential analysis, concluded that fiscal multipliers could be as high as 3 in the short term in such situation, confirming the basic approach underpinning successive iAGS.

3. Whereas Hansen was also preoccupied by a Gordon type secular stagnation.

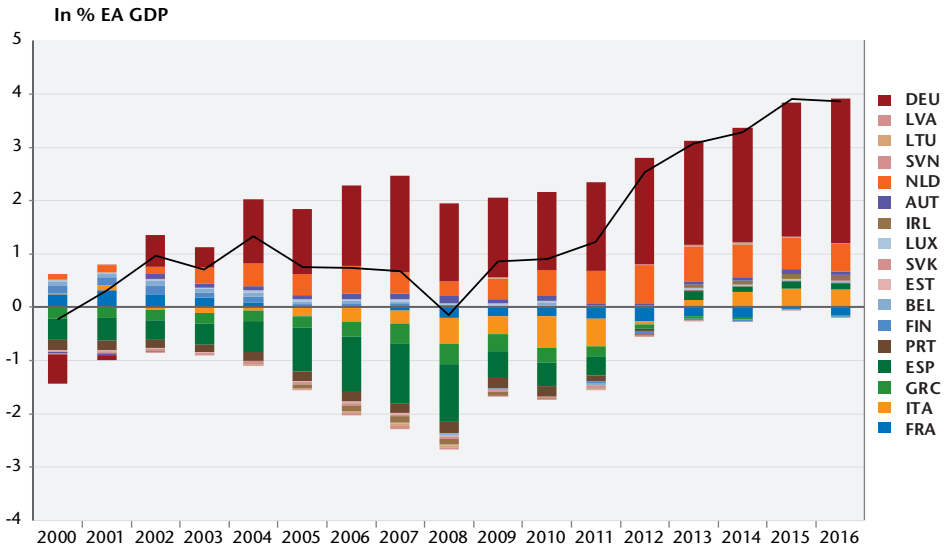
The negative fiscal stance came to an end slowly in 2015 and the Juncker plan was designed to reverse the negative impetus to the economy. The new doctrine behind the Juncker plan was that a stimulus was needed at the euro area level and that an investment stimulus would achieve simultaneously a short-term macro boost to escape the secular stagnation trap and to build up assets and achieve higher productivity levels to ensure sustainability of public debt and pension systems in the long run.

The Juncker plan has failed to deliver both. Its impact has been broadly positive, but neither the needed stimulus in the short term nor the increase in potential growth in the long term are going to happen in the current form of the plan (see chapter 3 of this report for a detailed analysis). The reason is that, at heart, the Juncker plan is a reduction in the interest rate that investors are facing by insuring their investment from some specific risks. The Juncker plan is to be understood as an extra insurance on investment projects, but not as a tool to reverse the logic of self-fulling secular stagnation. The insurance is a rather small reduction in the cost of capital and that reduction is not different in nature from the already present effect of conventional and non-conventional monetary policy. We document in chapter 3 of this report the combined effect of non-conventional monetary policy and the Juncker plan has been so far positive but insufficient to provide the stimulus needed. We also caution against excessive reliance on capital markets union to support a return to balanced and stable growth. Our analysis suggests that positive impacts should not be overstated, while a modelling exercise draws attention to potential stability risks of securitizing loans, one of the pillars of CMU.

## Euro area underperforming and the risk of the appreciation of the euro

Two symptoms of the insufficient overall momentum in the euro area are its weaker performance than comparable economies and the persistence of a large current account surplus (see Figure 4, 3.8% of EA GDP, 394 bn€ in 2015, much more than China's surplus). This surplus indicates that, globally, the euro area is saving and accumulating assets denominated in foreign currency.[4] It also means, that when monetary policy normalizes (and pressure to do so is building up very quickly), if the current account surplus is not reduced, then the appreciation of the euro will be unavoidable. That also means that assets accumulated with a lower euro will lose value.

Figure 4. **Euro area current account surplus**




*Source: OECD Economic Outlook 99*, iAGS calculations.

As argued in the iAGS 2016 and as developed in chapter 4 of this report, the appreciation of the euro (in effective terms) will amplify the centrifugal forces at play inside the euro area. Brexit has created a precedent, giving some appeal to the idea of a radical referendum in other countries, too. Conflicting interest over monetary policy and re-debalancing of the current account, could well open one or many other existential crises of the euro. What was experienced with pain and awe during the summer of 2015 and the Grexit scenario could well reproduce itself and finally the euro could break up. Joseph Stiglitz (2016) is even adding some concerns by arguing that the uncertain adventure of splitting the euro area into smaller more homogeneous parts could be a better solution than to keep it together the way it is. Let's not be tempted by the unknown of the exit, but rather, let's heed Stiglitz' warning that failing to change the Union is no longer an option.

4. It is presently difficult to calculate what the exposure of the euro area to other currencies is. Given the extent of the EA surplus, however, it is difficult to imagine that assets accumulated could be in euro. That is marking a sharp change since 2007 when the euro area was nearly at the current account equilibrium. Surplus countries were then accumulating assets inside the euro area (on a consolidated basis), insuring themselves from exchange rate risks. The counterpart may have been a larger risk of default, only partially materialized with the Greek partial default (PSI in 2011-12) and the reduction in the net present value of the debt of countries under the emergency financing of ESM/EFSF.

Figure 5 displays a panel of indicators summarizing the situation of the euro area and comparable economies, hit as much, if not more, by the 2008 financial and banking crisis. Different choices have been made. On the one hand, the euro area managed to stabilize its public debt more and has accumulated external surpluses, saving more than investing. On the other hand, the United-States and the United-Kingdom have been more pragmatic about public deficits and debt, have thus attracted saving from surplus countries and recovered quicker and sooner from the 2008 crisis. Of course, neither the US nor the UK had to suffer from the euro debt crisis because their central banks, unconstrained by the institutional complexities of the euro area, took up their role sooner and triggered non-conventional policies more effectively. One result is that productive public and private investment is picking up, building the grounds for future prosperity. We show in chapter 2 that, moreover, the idea that the euro area is less prone to increasing inequality, and that would render its economy less dynamic is a wrong one. Not only had the euro area less growth, but inequality has been on the rise as well. Once again, one of the drivers of inequality is growing inequality between member states, constituting another centrifugal force to the Union.[5]

The data on Figure 6 shows a diverging situation inside the euro area. Divergence between member states means that exposure to future shocks is going to be different. It also suggests that market mechanisms and calls to structural reforms are only a weak correction device. That argument is fully developed in chapter 4 of this report and one important conclusion is that to ensure convergence and current account rebalancing inside the euro area, decisive counteraction by policymakers will be needed: just letting more flexible labor market clearing mechanisms play will not deliver acceptable results. The adjustment of current account imbalances we have seen largely reflects demand effects and as such are not yet necessarily sustainable (chapter 4 of this report).

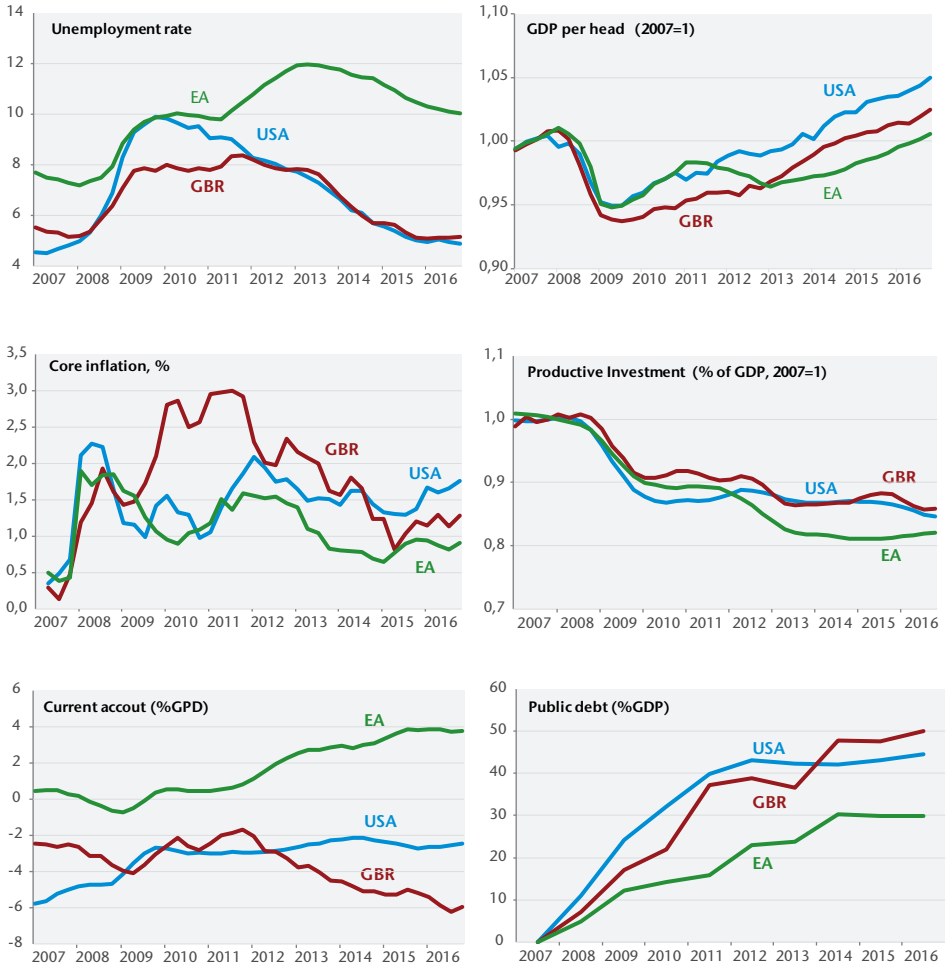
If an appreciation of the euro occurs and, correlated to if not caused by the tapering of unconventional monetary policy, centrifugal forces will be amplified even more. That should point to the urgency of solving the current crisis and escaping as quickly as possible the stagnation trap in which the euro area finds itself.

5. Prior to the crisis, as shown in chapter 2 of this report, inequalities between countries were declining.

What threatens the Union is not a Gordon type secular stagnation. May be member states are better equipped to deal with inequalities and social investment than are more individualist societies like the US or the UK. But the Union and the euro area could well die from their own poison, a self-inflicted secular stagnation and an incapacity to build an economic future.

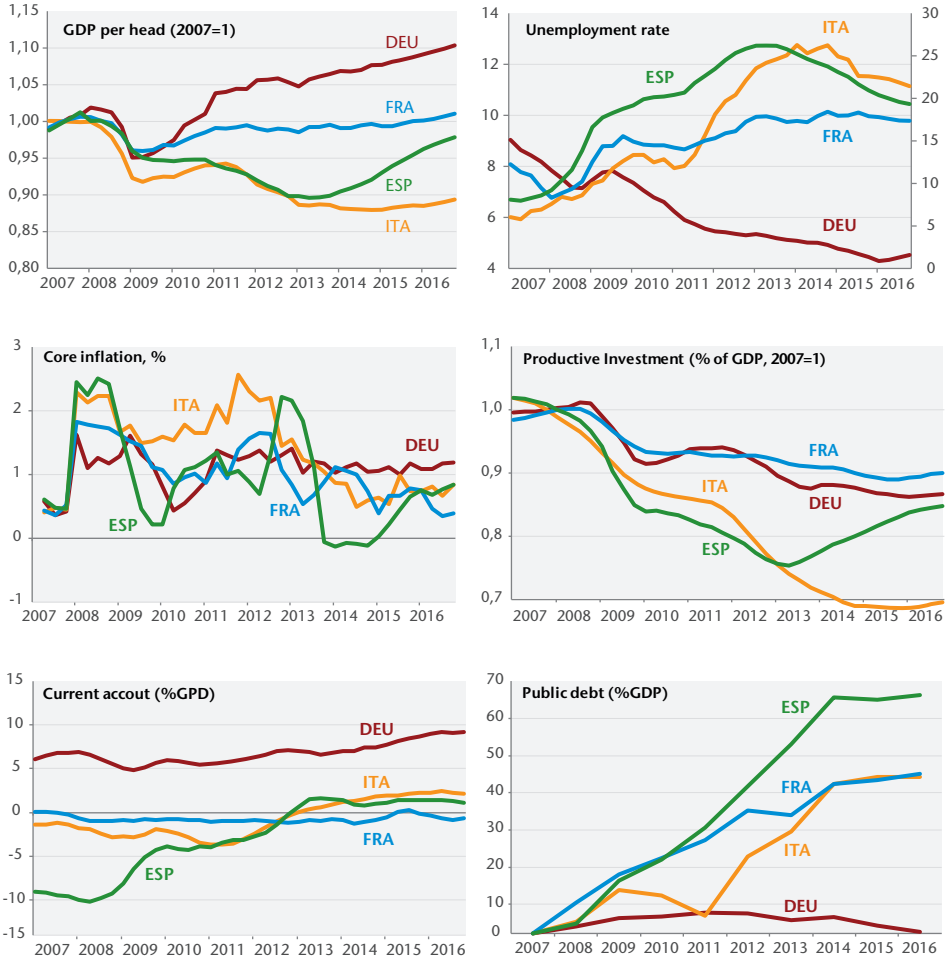
Stiglitz's dark prophecy has to be refuted.

Figure 5. **EA vs USA vs UK**




*Source: OECD Economic Outlook 99*, iAGS 2017 calculations.

Figure 6. **Largest euro area countries**

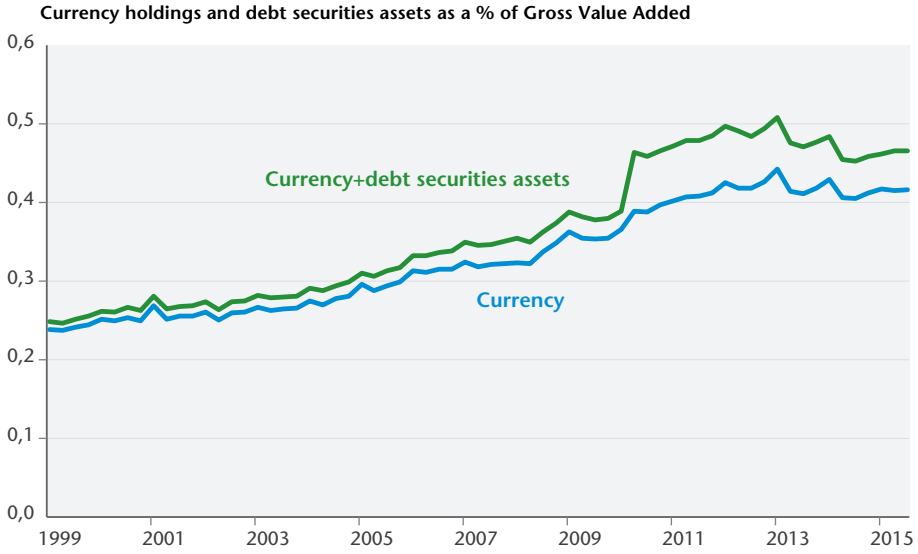



*Source: OECD Economic Outlook 99*, iAGS 2017 calculations.

## A time of multiform uncertainty

Investment is not picking up despite abundant liquidity, low rates, and free risk insurance from Juncker plan. Firms are holding cash (nearly half a year of value added) as shown in Figure 7. Deleveraging has been realized and public debt is stabilized and still confidence is not back. The continental wide paradox of thrift is continuing.

Figure 7. **Cash held by Non Financials Firms**




*Source:* ECB, *Quarterly financial accounts.*

Decreasing interest rates are failing to stimulate investment because uncertainty is multidimensional and not determined by financial considerations only or even primarily. We can identify at least 5 sources of uncertainty: (1) a social crisis as documented abundantly in chapter 2; (2) a political crisis with the rise of populist and sovereign parties, closely linked to the social crisis, but also to the apparent powerlessness of the current institutional set up to provide a way out of the crisis. The migrant crisis ends up scapegoating foreigners while blaming domestic elites; (3) a crisis of faith in the European construction, the extent of which was demonstrated by Brexit, ranging from dissatisfaction with a poorly functioning transnational democracy to the painful reopened discussion of the right size of the euro area; (4) a macroeconomic question, the possibility of a so called Summer secular stagnation, where the failure of coordination between economic agents translates into deflation and sluggish potential; (5) 9 years after the beginning of the banking and financial crisis, an on-going bank problem and a nearly still born Banking Union that is not up to cleaning up the balance sheet of banks and is preventing member states from doing so themselves (see chapter 3 in this report).

Such a multiform uncertainty would require a full political package. The answer is not only economic: it has to be systemic.

## Fixing it: what to do?

The political side of the solution is in reinforcing the Union. After Brexit, reinforcement of the Union should also be a clear redefinition of the legitimacy of the Union (the democratic component) and of the scope of the Union (what is federal? what is not?). The report of the 5 presidents had started a debate. But today, it seems everything is on hold.

The inequality and social question remains mostly on the shoulders of national governments. But dealing with social questions comes with fiscal needs, under the scrutiny of the Union and the fiscal rules. So first, one need to redefine those rules to allow for investing in future generations through public investment including education. Second, a step forward in fair tax competition is essential for the social cohesion of each member state and of the Union. Allowing for tax justice and avoiding loopholes, aggressive tax optimization and tax evasion in of the utmost importance when it comes to inequality.

The banking system's troubles must be resolved. Either, this is the moment to finish the Banking Union or redefine it to allow member states to intervene. The appealing idea of disconnecting sovereign bond holders from sovereign bond emitters may be unrealistic, but it is not a sufficient reason to let a zombie institution (the unborn Banking Union) not resolve zombie banks.

Internal imbalances need more than market mechanisms and structural reforms. We have proposed a golden rule for wages in the iAGS 2014, and our subsequent analysis reinforces that insight. It is not straightforward to influence wage and price formation in a market economy, but there are some direct instruments (minimum wage norms, trade unions legislation, detached workers, fiscal tools) that could be coordinated among member states to promote balanced and thus more sustainable economic growth. In Chapter 4 we discuss broadening the remit of the advisory Fiscal Council at European level and of national productivity boards (which should be cast as advisory convergence councils), for example by using the newly established National Productivity Boards. Implementation of an agreed and consistent policy stance would be facilitated by substantially strengthening that the Macro Economic Dialogue (MED), introducing a MED at the level of the euro area, ensuring its interaction with the Eurogroup, while ensuring articulation with member states by establishing national MEDs. What is key is a policy mix that is appropriate in aggregate and at the level of individual member states.

The macroeconomic question should be dealt by an active demand management. Backloading is possible now that member states have shown their commitment to fiscal discipline. Now that all euro area countries have or will soon reduce their public deficit under the 3 % ceiling, it is time to create fiscal space instead of enforcing a new wave of fiscal consolidation with the aim to bring down structural public deficits to 0.5% of GDP or the public debt ratios to 60%. Shifting from short term constraint to long term horizon creates fiscal space where it is needed. A golden rule for public investment would allow the fiscal targets to be reconsidered. When public investment is efficiently managed, then, one can expect a positive impact on potential growth. As the process of incorporating the Treaty on Stability Coordination and Governance and other intergovernmental advances in response to the crisis is underway, it would be wise to use that opportunity to incorporate those forward-looking elements in the fiscal discipline rules.

Academics (Bom and Lightart (2014) for a recent survey) agree on an elasticity around .1 between public capital stock and potential growth. That means that a permanent increase in public investment by .1% per year, with a 20-year lifespan of the investment (a higher life span multiplies the effect), would increase in the long term public capital stock by 2% and long term output by .2%/year. Our simulations in chapter 4 of this report show that, when this effect is added to the plain Keynesian effect (short term multipliers) and to wise backloading (higher fiscal multiplier when unemployment is high and monetary policy is at the zero lower bound), when limiting the ex-post increase in debt to 1% (full public financing of the investment, front loaded immediately) gross public assets can increase as much as 1.6% by 2035. A smart golden rule cannot rule out a choice when net public assets are increased by such a large margin.[6]

6. This effect depends a lot on the link between public investment and output. With an elasticity of .1 between the stock of public productive capital (to be understood in a broad sense) and the level of output, one gets 1.6% GDP of assets for 1% GDP debt so .6% GDP of net assets on average for EA member states. Bom and Lightart retain a range from .08 to .17. With an elasticity of 0.05, the increase in net assets in 2035 is nearly 0 on average in the EA and with an elasticity of 0.15 the effect is about 2.6% GDP for gross public assets. The effect depends on the country, because fiscal multipliers are larger in high unemployment gap countries. Thus, the effect ranges from 4% GDP of gross public assets for Spain with a .15 capital to output elasticity to a lowest for Germany (lower fiscal multiplier) 1.2% GDP of gross public assets with a capital to output elasticity of 0.1. This shows the importance of management and allocation of public investment as well as the consequences of back/frontloading.

The last point to add to this full package is the environmental question. We need an investment push to get out of the crisis and we need to invest in the future without wasting money on inefficient public investment. As we argued in the iAGS 2015, setting up a (or many) carbon price(s) would be one way to open a large set of high yield investment projects. Private returns would be so high that a boost in private investment would follow without the need for one public euro. With an adequate regulatory framework, market forces could ensure the correct allocation of money and answer to the needs of climate mitigation. The only drawback of a carbon price shock is that it will create many losers, from exposed households to owners of "brown" capital. Border tax adjustment could address the competitiveness question. Generous compensation scheme (including the receipts from the carbon prices, taxes, ETS) would deliver a short-term boost, complement the stimulus and provide a tool to ensure acceptance of climate mitigation.

# ECONOMIC OUTLOOK FOR THE EURO AREA

While a Grexit was avoided in the summer 2015, the same was not true for a Brexit, as on 23 June 2016 British voters chose to leave the EU. This should, however, be a slow process since the United Kingdom and the European Union have a period of two years following notification by the British government of its decision to implement Article 50 of the Treaty on the European Union to come to an agreement specifying the conditions for withdrawal. This is triggering a new political crisis in Europe that will have long-term implications, as the agreement will redefine not only trade relations between the EU and UK but also the conditions governing the movement of people.

In the short term, this raises the question of how the Brexit decision will affect growth not only in the UK but also in the rest of the euro area, especially as this impact will hit even as the wounds from the crisis have yet to heal. Unemployment in the euro area remains well above its level recorded before the Great Recession. Despite the numerous measures taken by the ECB, inflation is low and has not returned to the 2% target. The recovery that began in 2014 and gathered momentum in 2015 could be undermined, especially if the factors that initiated it gradually diminish.

While an end to the recovery should be avoided, the growth in the euro area will nevertheless slow down from 1.9% in 2015 to 1.3% in 2018. In these conditions, the trend to reduce imbalances should weaken, with unemployment falling slowly and inflation remaining below the 2% target until 2018. Furthermore, the fact that the recovery is losing steam raises questions about the potential sources of growth in the euro area. Eight years after the crisis struck, the euro area is plagued by multiple sources of uncertainty that might well be at the origin of a lack of investment.

Table 3. **Growth performance of EU countries**

| | 2016 | 2017 | 2018 | 2016 Revisions | 2017 Revisions |
|---|---|---|---|---|---|
| **DEU** | 1.9 | 1.3 | 1.4 | -0.1 | -0.5 |
| **FRA** | 1.4 | 1.5 | 1.5 | -0.4 | -0.5 |
| **ITA** | 0.8 | 0.8 | 0.5 | -0.8 | -0.4 |
| **ESP** | 3.1 | 2.1 | 1.8 | -0.3 | -0.9 |
| **NLD** | 1.7 | 1.7 | 1.6 | 0.0 | -0.1 |
| **BEL** | 1.3 | 1.4 | 1.1 | -0.2 | 0.0 |
| **FIN** | 0.8 | 1.2 | 1.8 | -0.2 | -0.3 |
| **AUT** | 1.7 | 1.5 | 1.5 | 0.1 | -0.3 |
| **PRT** | 0.9 | 1.1 | 1.4 | -0.9 | -0.7 |
| **GRC** | -0.4 | 0.7 | 1.2 | -0.3 | -1.1 |
| **IRL** | 2.3 | 2.9 | 2.4 | -1.4 | -0.7 |
| **EA** | 1.6 | 1.4 | 1.3 | -0.4 | -0.5 |
| **GBR** | 2.0 | 1.0 | 1.4 | 0.0 | -0.8 |
| **SWE** | 3.5 | 2.6 | 2.2 | 0.6 | -0.1 |
| **DNK** | 0.9 | 1.3 | 2.0 | -1.1 | -0.7 |
| **EU 15** | 1.7 | 1.4 | 1.4 | -0.3 | -0.5 |
| **New member states** | 3.2 | 3.1 | 3.0 | 0.0 | -0.1 |
| **EU 28** | 1.9 | 1.6 | 1.6 | -0.2 | -0.4 |

*Sources:* IMF, OECD, national sources, iAGS forecasts, October 2016.

## 1.1. Factors less favourable to growth

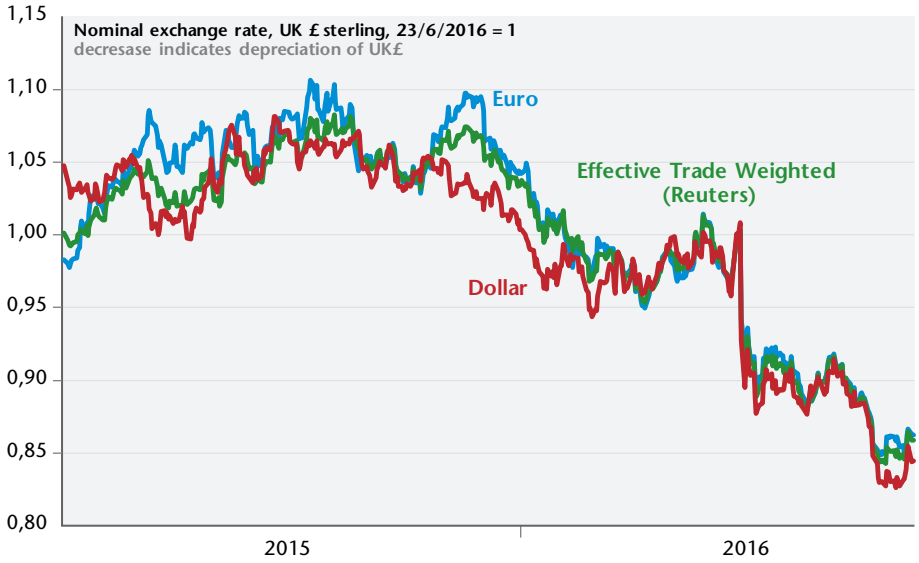
The year 2015 was marked by an acceleration of growth in the euro area, with GDP rising by 1.9% (Table 3). Several external factors have combined to initiate a process of recovery that finally pointed towards a significant reduction in unemployment and the start of a virtuous cycle of growth. Brexit is likely to hit UK growth. As for the rest of the euro area, the contagion effects will be negative, but limited. But what is happening most of all is that the various winds that have pushed ahead growth might be faltering.

### a) Brexit: contagion to the euro area would be limited …

The UK's withdrawal from the EU should be a lengthy process. The Brexit announcement will however affect short-term growth. Indeed, the pound depreciated as soon as the results of the vote came in. Between June and early

October 2016, the pound fell about 15% against the euro, and more than 17% against the dollar (Figure 8). This is the first vector through which Brexit will affect activity and inflation. This depreciation will on the one hand be favourable to the United Kingdom's foreign trade but will on the other lead to more imported inflation, thereby reducing the purchasing power of British households and thus their consumption. Moreover, the current situation is also marked by great uncertainty about the outcome of the negotiations.[1] This uncertainty could dampen investment in the UK, as firms adopt a wait-and-see position on decisions to invest or hire, which will put the brakes on production and employment.

Figure 8. **British pound exchange rate**



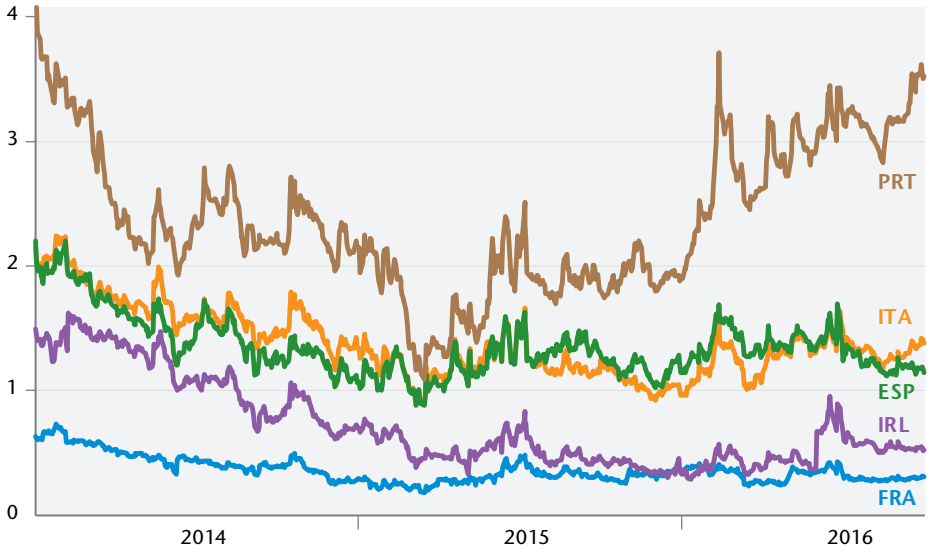

*Source:* Datastream.

Contrary to what had been feared, there has, up to now, not been a large-scale financial shock. The London Stock Exchange and the euro area stock market indices have remained buoyant. Nevertheless, the period of negotiations that is now underway will be accompanied by numerous declarations that heighten market volatility. As for interest rates, the expected increase in sovereign risk

1. Recall that even though recent studies suggest that uncertainty shocks have a significant impact on growth, measuring and quantifying this is still difficult. See Bloom (2009 and 2016).

has not materialized.[2] Government bond rates in the United Kingdom even fell after the vote. In the euro area, some long-term rates rose in the so-called peripheral countries, particularly Portugal (Figure 9). This is due, however, more to these countries' internal context. Only the rise seen in Ireland at the time of the vote might suggest that the markets expect greater contagion effects in this small and very open economy which is more exposed than other euro area countries to the UK's growth. In Spain and Italy, volatility seems to have increase after the results of the came in but no significant increase. The rise in sovereign yields for Italy during the summer would mainly be related to the risks in the Italian banking sector. Consequently, it seems for the moment that the risk of an exit from the euro area union has not become more likely.

Figure 9. **Interest rate spreads in the euro area**




*Source:* Datastream.

Finally, the UK economy will be hit the hardest, with growth halving between 2016 and 2017 (Table 3). In the rest of the euro area countries, growth will be amputated by at most 0.1 point, due to the relative appreciation of the euro and reduced British imports.

2. See Kierzenkowski *et al.* (2016).

### b) … but the winds propelling growth are faltering

While Brexit's impact should a priori be moderate, other factors that had especially promoted growth in 2015 will see their impact fade gradually from 2016. Oil prices will rise again, and while the depreciation of the euro relative to the dollar should continue, this will not be on the same scale as in 2014-2015, and it will be partly offset by a higher rate against the pound. Moreover, demand for euro area products will grow more slowly over the 2016-2018 period than between 2012 and 2015. Only fiscal policy will on average be propping up growth in the euro area, while it will continue to weigh down the British economy.

### c) The rebalancing of supply and demand for oil is pushing its price up again

The fall in oil prices that began in autumn 2014 continued until early 2016. The price of a barrel dropped from over USD 100 to below USD 50 in August 2015. A floor was reached in the first quarter of 2016 with a barrel at USD 34. The price is now rising, and supply and demand should reach equilibrium in 2017. We expect oil prices to stabilize between USD 50 and 60 in 2017 and 2018, as the record levels of stocks will limit the rise in prices. The fact remains that oil's boost for growth since mid-2005 will fade gradually from late 2016. In the four big European countries, the positive impact that oil had on GDP, about 0.5 point in 2015, will decline to 0.3 point in 2016, then 0 in 2017, and it will be slightly negative in 2018 (-0.1). The rise in oil prices will result in higher inflation and therefore a reduction in household purchasing power and business margins.

### d) Exchange rates: less depreciation for the euro but more for the pound

The anticipated divergence between the monetary policies pursued by the US Federal Reserve and by the ECB has led to the euro's depreciation against the dollar since mid-2014, with the level falling from slightly under 1.40 euros per dollar and fluctuating since early 2015 around 1.10. The Federal Reserve will continue its gradual normalization of monetary policy, while the ECB is not likely to raise rates before the end of 2018. In addition, it is continuing to provide strong support for the economy with the implementation of negative rates[3] and the continuation of securities purchases to the tune of 80 billion

3. See Blot and Hubert (2016).

euros. The euro-dollar exchange rate should drop a bit more, from 1.12 in early October 2016 to 1.05 in the second quarter of 2017, representing a 6.25% depreciation, while between March 2014 and October 2016 it depreciated by more than 19%. On the one hand, the impact of the divergence in monetary policy between the two areas has to a great extent already been taken on board by the markets in the exchange rate level. On the other hand, the euro area's current account surplus and the contrasting current account deficit of the United States are forces that tend instead to push the euro upwards. Ultimately, most of the expected depreciation of the euro has therefore already taken place, and further shifts will boost growth less in 2017-2018 than in 2015-2016. These effects will also be increasingly offset by the euro's relative appreciation against the pound. Conversely, while the pound's appreciation from mid-2013 to late 2015 cut the UK's growth by 0.1 point on average in 2014 and in 2015, the recent depreciation will help to cushion the impact of Brexit.

## e) Fiscal policy: a few pockets of resistance to ending austerity

After the phase of synchronized fiscal consolidation between 2011 and 2014 that held back growth in the euro area, fiscal policy was slightly expansionary in the zone in 2015 and remains it in 2016. Fiscal policy will become neutral 2017 and will once again cut average growth in the euro area in 2018. This assessment is consensual among ECFIN, the IMF and the OECD[4] (Table 4).

Table 4. **EA Aggregate Fiscal Stance (change in structural balance)**

**As % of potential GDP**

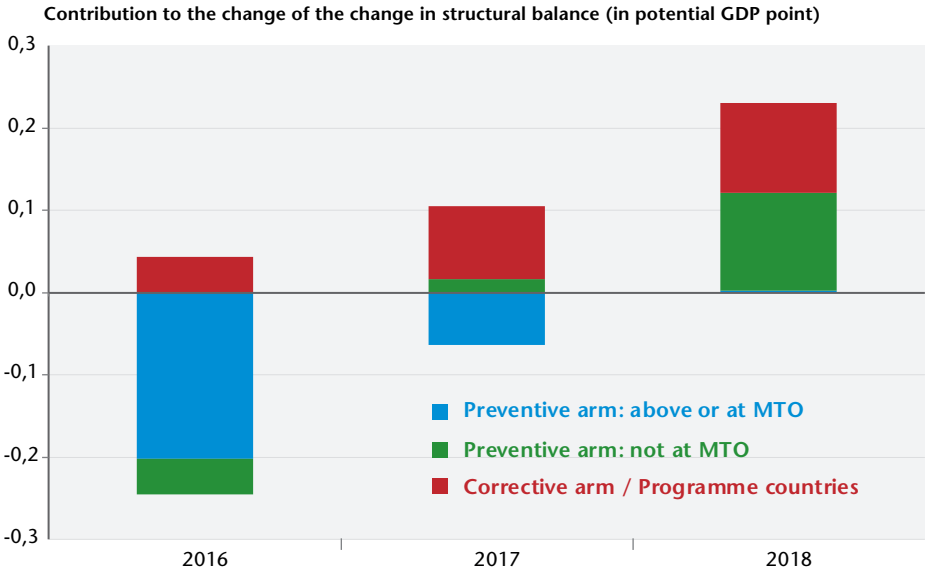
| | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|
| **iAGS** | -0.1 | -0.2 | 0.0 | 0.2 |
| **ECFIN, November 2016** | 0.1 | -0.2 | -0.1 | 0.0 |
| **IMF, October 2016** | 0.2 | -0.3 | 0.0 | — |
| **OECD, June 2016** | 0.1 | -0.2 | -0.1 | — |

*Note:* ECFIN's scenario for 2018 is made under a 'no-policy change' scenario and is not directly comparable to the iAGS scenario
*Source:* ECFIN (Spring Forecast), IMF (World Economic Outlook), OECD (Economic Outlook)

4. The differences in the aggregate fiscal stance may arise either from different assessment about fiscal policy either from potential growth estimates. However, between 2015 and 2017 the analysis converge among all the institutions.

The aggregate fiscal stance of the euro area hides the heterogeneity of fiscal policy, which persists among EA countries. This heterogeneity is explained essentially by the position of different countries vis-à-vis the Stability and Growth Pact (SGP). Countries less constrained by the fiscal governance, that is to say countries in the preventive arm of the SGP that are at their MTO, will implement an expansionary policy in 2016 and 2017 and a neutral policy in 2018 (Figure 10). On the other hand, countries in the corrective arm will implement a restrictive policy in 2016, 2017 and 2018. Between them, countries in the preventive arm whose structural balance is below their MTO, will implement a fiscal policy close to the EA aggregate: slightly expansionary in 2016, neutral in 2017 and contractive in 2018.

Figure 10. **Aggregate Fiscal Stance and the stability and growth pact**




*Sources:* National accounts, iAGS forecast, October 2016.

Our country-by-country fiscal policy assumptions are displayed on Table 5. In Germany, which has run a budget surplus since 2014, the government has room for manoeuvre, which will allow it to lower taxes and to avoid problems in handling the additional expenses related to the intake of migrants. Although Italy's budget deficit is under 3%, it is still constrained by its structural deficit well above its medium term objective (according to the European Commission, 1% of GDP in 2015 instead of 0%—and increasing 2016) and its high level of debt (133% of GDP in 2015), which it is supposed to bring down to 60% by

annual increments of 1/20th. Nevertheless, the requested adjustment path towards the MTO can be suspended under certain conditions: in 2016, the Renzi government justified a reduction in the effort by invoking the clause on structural reforms, the investment clause and the refugee crisis. Fiscal policy's support for Italy's growth will come to 0.3 point in 2016. As for Spain, which has lacked a government for nearly a year, the country has been granted a stay despite running a deficit of more than 3%; the fiscal impulse was positive in 2015 and 2016 and will be close to neutral in 2017-2018. Finally, France has continued its adjustment in 2016 and 2017, even if on a smaller scale than in 2011-2014. The end of the President's five-year mandate has been marked by smaller adjustments in public spending, while at the same time the implementation of the CICE (Crédit impôt compétitivité emploi) tax credit and the Responsibility Pact has eased the tax burden. In 2016 and 2017, the impact of this policy on growth will be minus 0.2 point on average. Outside the euro area, the UK's fiscal policy will continue to be restrictive, but much less so than earlier, and particularly with respect to what was expected before Brexit, as the government scales back its ambitions to cut the deficit in order not to exacerbate Brexit's impact on growth.

Table 5. **Fiscal stance**

% GDP

| | 2011-2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|
| **EA** | -0.8 | 0.1 | 0.2 | 0.0 | -0.2 |
| **AUT** | -0.8 | 0.0 | 1.0 | 0.1 | -0.1 |
| **BEL** | -0.3 | -0.1 | 0.3 | -1.3 | -1.1 |
| **FIN** | -0.1 | -0.4 | -0.1 | -0.2 | -0.1 |
| **FRA** | -0.9 | -0.3 | -0.2 | -0.1 | -0.4 |
| **DEU** | -0.6 | 0.2 | 0.5 | 0.2 | 0.1 |
| **IRL** | -1.7 | 0.2 | -0.3 | -0.2 | 0.0 |
| **ITA** | -0.8 | 0.0 | 0.3 | 0.3 | -0.4 |
| **NLD** | -1.1 | 0.0 | 0.2 | -0.2 | -0.6 |
| **PRT** | -2.2 | -0.7 | -0.9 | -0.1 | -0.5 |
| **ESP** | -1.7 | 0.5 | 0.1 | -0.5 | -0.2 |

*Note:* the fiscal impulse is the opposite figure than the change in structural balance
*Sources:* National accounts, iAGS forecast, November 2016.

Considering the weakening of the recovery, it is still appropriate to support demand in the euro area through an expansionary fiscal policy. A positive fiscal stance has just been recommended by the European Commission.[5] For 2017, they suggest a fiscal expansion of up to 0.5% of GDP. This is surely a welcome change in approach as it stresses the need to adopt a global view on the policy mix in the euro area. However, this objective is not compatible with the current country level policy decisions. In particular, at the time of writing it does not seem likely that Germany will heed the Commission's call and make use of available fiscal space.

Moreover, the evolution of the structural balance is not sufficient to evaluate the aggregate fiscal stance. This measure neglects some recent advances in economic theory. Mostly, the impact of fiscal policy on growth is dependent on the position of the cycle and of the composition of the fiscal policy. Once we take into account those elements the assessment about fiscal policy in the Eurozone is modified. Fiscal policy will have a null impact on GDP in 2016 despite the aggregate fiscal impulse of 0.2 point of GDP. Most of the expansionary policy is concentrated in countries where the output gap is closed, like Germany, with low multiplier effect. If the Italian fiscal impulse could be more growth-supportive its composition prevents it. The Italian fiscal impulse relies on tax decreases, with low multiplier effect, partially compensated by a reduction of expenses with high multiplier. Hence, the impact on Italian GDP is low. In 2017, the impact of fiscal policy will also be slightly negative (-0.1 point of GDP) while the structural balance will remain stable. Again, this is explained by the split of the neutral fiscal impulse: fiscal policy will be expansionary in countries with low multipliers (Germany) and will remain contractive in countries with high multipliers (France and Spain among others). Finally, if the announcements of the Stability Programmes are implemented, fiscal policy will contribute to lowering GDP growth rate by 0.2 point in 2018.

### f) Global trade is continuing to slow down

The last few quarters have confirmed the slowdown in the Chinese economy observed since 2014. In the second quarter of 2016, GDP growth came to 6.7% y-o-y, the lowest level recorded since 1992, with the exception of the first quarter of 2009 when the Great Recession hit. This slowdown is the result of the country's transition to a model of growth that is more oriented towards the

5. See the 16.11.2016 Recommendation for Council recommendation on the economic policy of the euro area.

domestic market. Given the increasing role played by China in the world economy, this transition is a source of turbulence, as we saw in the summer of 2015 when fears of a hard landing provoked a sharp fall in stock market indices in both the emerging and industrialized countries. The slowdown in China's growth and industrial output has held back demand for commodities and global trade.

However, the trajectory of world trade since 2012[6] points to a general slowdown in global trade that is due not only to China but also to a structural change in the dynamics of international trade. Over the period 1991-2007, global imports increased at an average rate of 7%. Since 2012, the elasticity of trade to world GDP has fallen sharply and is now near or even below 1. For 2016, world imports will fall by -0.3%. Our scenario is based on an increase in world imports of "only" 2.3% in 2017 and 2018. In the short term, this global trade shock will have uncertain effects on growth, since there will simultaneously be a reduction in imports in each country or geographic-area and a drop in exports linked to a fall in demand. The effect on the growth of each country or geo-area will depend on the magnitude of these two related shocks: a reduction both in imports and in demand for exports. In the longer term, the slowdown of trade might have a negative impact on growth if it triggers a reduction in transfers of technology.

### g) The euro area is seeking new winds

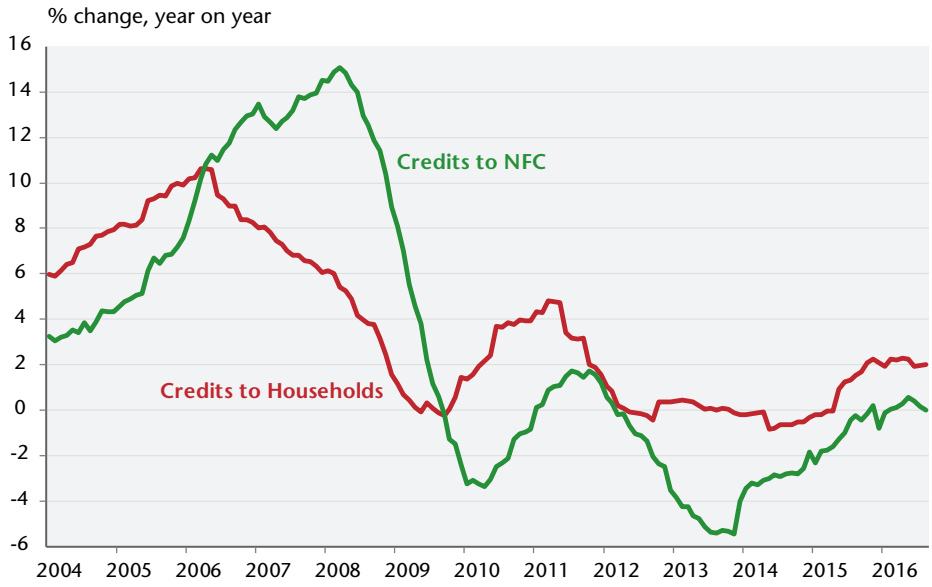
While for a long time the euro area lagged behind the global recovery that began in 2009, the recovery that started in the zone in 2014 (1.1%) and picked up pace in 2015 (1.9%) presaged more favourable prospects. While the recovery was still underway in the first half 2016, it is weakening. The slowdown will continue in 2017 and 2018, suggesting that a positive internal dynamic is having trouble taking over from the positive factors that helped initiate the recovery.

Both household consumption and business investment (and more recently household investment) fuelled the recovery in the euro area from 2014. Consumers benefited from the revival of job creation in 2014, which picked up pace in 2015 and 2016. In contrast, nominal wages grew only moderately in the euro area (1.2% in 2015), although they picked up with growth in Spain (0.6%), and progressed strongly in Germany (2.7%). Above all, low inflation

6. See IMF (2016).

has allowed real income to grow at a rate not achieved since 2006 (about 2% in early 2016). Falling oil prices can no longer be expected to have a positive impact, which will affect household purchasing power, even though nominal wages will accelerate in most countries. Job creation will also grow more slowly, in line with the slowdown in growth and with the increase in productivity, which will in turn affect household consumption, which will slow in most countries. Housing investment will on the other hand remain dynamic, due to the continuation of positive financing conditions. This should allow the rate of investment in housing to stabilize, thanks to continuing construction in Germany and the nascent recovery in Spain. Households in the euro area have benefited from low interest rates to renegotiate their bank mortgages; this has had the effect of cutting the level of interest paid by consumers. Nevertheless, the share of net interest in the disposable income has remained stable in the aggregate euro area in recent years, as interest received has fallen simultaneously by the same order of magnitude. As for outstanding loans, growth has been moderate and far lower than in the 2000s or even during the first phase of recovery in 2010 2011 (Figure 11).

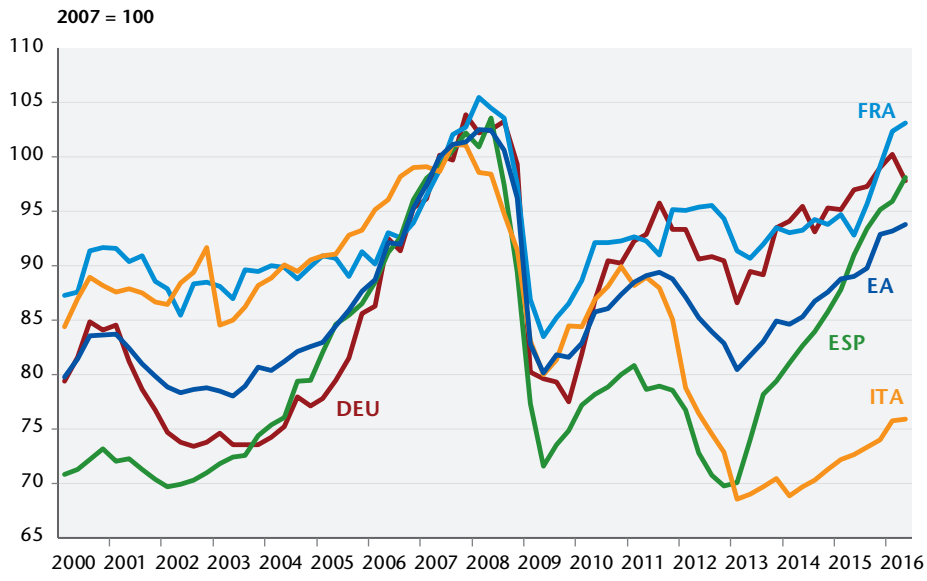
Figure 11. **Growth in outstanding loans in the euro area**




*Source:* ECB.

With respect to the volume of capital expenditure on machinery and equipment, no country has gotten back to its pre-crisis level (Figure 12). The situations are quite heterogeneous, however, and include a very critical state of affairs in Italy. The level of investment is still very low. The nascent recovery since 2014, has triggered a positive accelerator effect on investment. Moreover, recent tax measures allowing additional depreciation have improved the profitability of Italian investment and encouraged capital expenditures in the recent period. In Spain, the recovery has been spectacular spur by the conjunction of several positive factors. Domestic demand and exports have picked up substantially, in line with positive forces aforementioned (oil price, competitiveness and less fiscal consolidation), triggering an accelerator effect for investment. Spanish firms and households also benefited from decreasing interest rates and easing of credit supply conditions. In Germany and France, the decline was less pronounced, and the recovery relatively timid. However, the recovery has been more substantial in France in recent quarters, due to improved corporate margins (with support from the CICE tax credit and the Responsibility Pact) and additional depreciation measures, such as in Italy – measures that will continue to encourage investment in France and Italy.

Figure 12. **Productive investment for the private sector in the euro area**

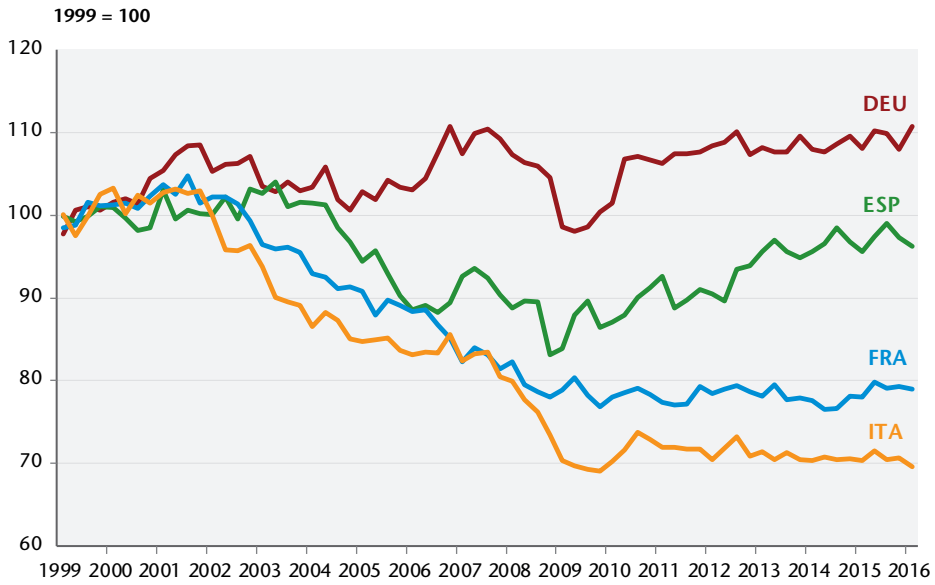



*Source:* Eurostat.

Overall in the period 2014-2018, the contribution of external trade to growth will reach about 0.1 GDP percentage point per year. Imports and exports will generally grow at a low rate in 2017 and 2018 (slightly above 2%), in line with more sluggish domestic demand and export demand that is growing much more slowly than in the mid-2000s.

There are nevertheless differences within Europe on export performance: Spanish companies have gained market share since 2007 (Figure 13[7]). This is to some extend due to a strategy of competitive disinflation, with unit labour costs falling by 6% in Spain since 2009, even as they continued to rise in France, Italy and Germany. In this context, Italy have lost market share whereas France stabilized its exports market share since 2007. The German case is atypical, since its companies have experienced slight gains, even though unit labour costs rose by 8% (against a fall of 1% over the period 1999-2007). Gains outside the euro area since 2014 can be explained by exchange rates, but Germany undeniably

Figure 13. **Export market shares**




*Source:* IMF, National accounts, OFCE calculations.

7. Export market shares are computed as the ratio of exports of goods in volume on an indicator of external demand, derived from imports of goods of trading partners. It takes into account the structure of external trade of the year 2013.

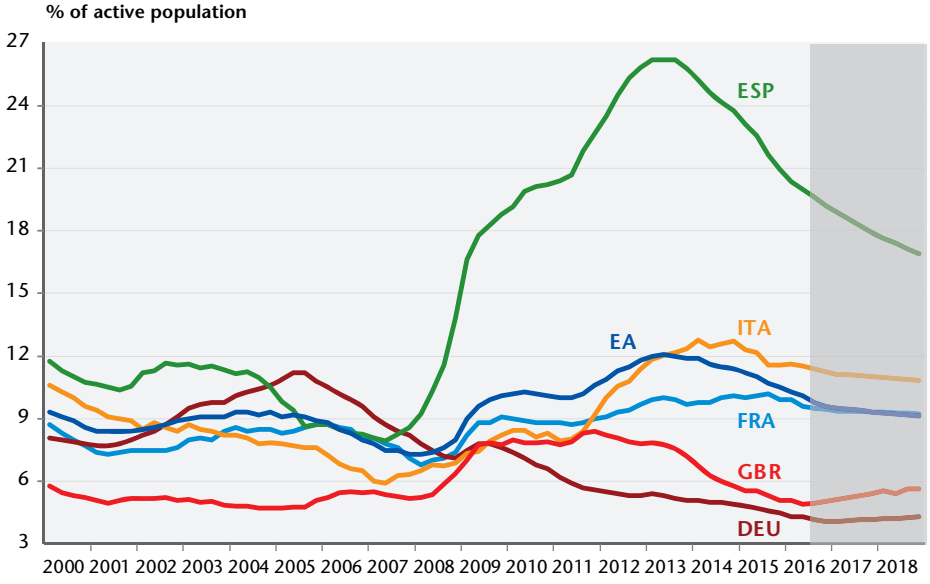
has a non-price advantage that allows it to retain its export positions. In 2017 and 2018, most euro area countries will stabilize their market share as the euro stabilizes. Spain should manage to maintain a high share, as it continues to enjoy a competitive advantage over the other European countries, which should also provide more solid support for its growth. In Germany, companies will lose market share because of an inflation differential with its partners.

## 1.2. Unemployment and the risk of deflation are persisting

### a) Unemployment rate remains high in the euro area

Europe's slower growth will affect the growth of employment and therefore the reduction of the unemployment rate. In countries where the rate has returned to or even dropped below the pre-crisis level, the unemployment rate will once again begin to rise (Germany and the UK) as growth slackens (Figure 14). In Germany, this will be coupled with stronger growth in the labour force due to the influx of refugees. Elsewhere, the unemployment rate should continue to fall (Spain, France and Italy), but at a slower pace.

Figure 14. **Unemployment rate**




*Source:* Eurostat, iAGS forecasts October 2016.

Employment would slow down in Spain from an annual growth rate of 2.9% in 2015 to 1.4 in 2018, and labour force would stabilize. Whereas the unemployment rate fell 2.4 percentage points in Spain in 2015, the decline in 2018 will be only 1.1 point. The unemployment rate would then come to just over 17% for the year, far from the 8% level in 2007, which was close to the French unemployment rate at that time. In Italy, the annual rate at which unemployment is being cut will fall from 0.7 point in 2015 to 0.2 in 2018, also in line with a decline in jobs creation (a 2.5% increase in 2016 but only 0.4% in 2018). As for France, over the period 2016-2018 the cumulative reduction in the unemployment rate will be only 0.6 point, thus returning to the level of early 2012. In this general context, underemployment will continue to be significant in the euro area, which will hold back inflation.

### b) Headline inflation is accelerating, but fails to meet the target

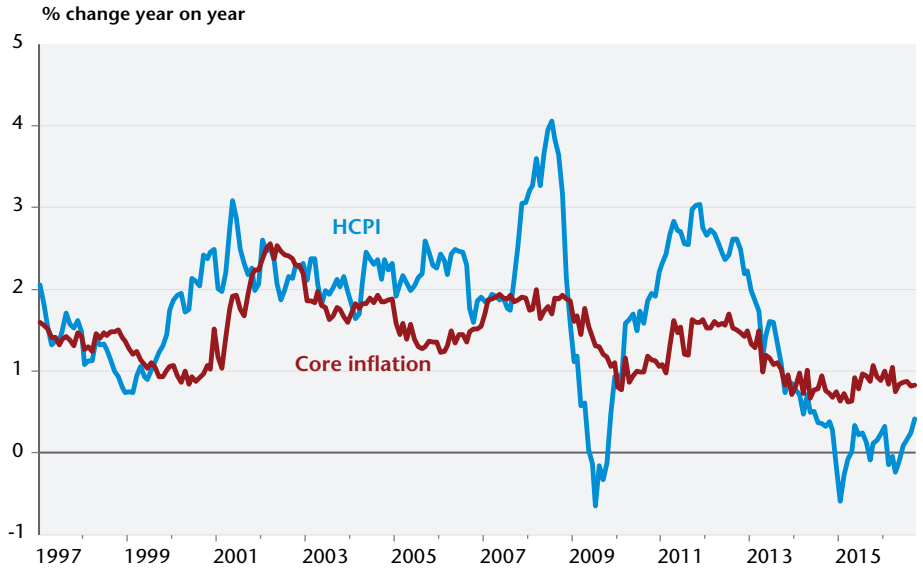
In September 2016, inflation in the euro area was still at a historically low level (Figure 15): 0.2% yoy. This continuing weakness can be explained in part by the sharp drop in oil prices that has occurred since the second half of 2014, with repercussions that are still being felt. This effect is nevertheless tending to fade, as falling prices are behind us, and we can now expect them to rise gradually. Inflation should then recover and reach 1.5% in 2017 and then 1.7% in 2018. The ECB's target will not, however, be met.

Above all, the level of underlying (and core) inflation[8] (0.8% in September 2016) shows that the euro area is still in a situation of sluggish price rises. Despite the ECB's quantitative easing, very low interest rates and a significant weakening of the euro, underlying inflation has still not risen above the 1% ceiling that it has been butting against for about three years. This situation is mainly due to two factors: the unemployment rate and the implementation of competitive disinflation policies in different countries. Moreover, expected inflation from professional forecasters indicate that it would remain sluggish (Figure 16) and fails to anchor on the 2% target set by the ECB in the short term (1 and 2 years). In the longer term, expected inflation is also below the 2% for professional forecasters. It is even lower according to market indicators suggesting that the risk of a sustained period of low inflation is still pervasive.

With an unemployment rate across the euro area that was even above 10.1% in the second quarter of 2016, and which is expected to diminish by only one

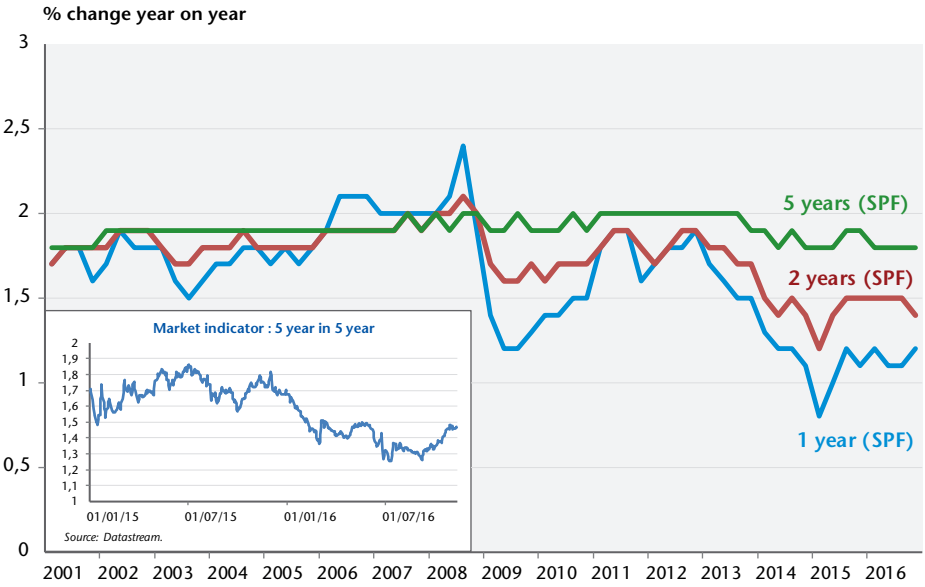
8. Note that the index of underlying inflation excludes food and energy prices.

Figure 15. **Inflation in the euro area**




*Source:* Eurostat.

Figure 16. **Expected Inflation in the euro area**

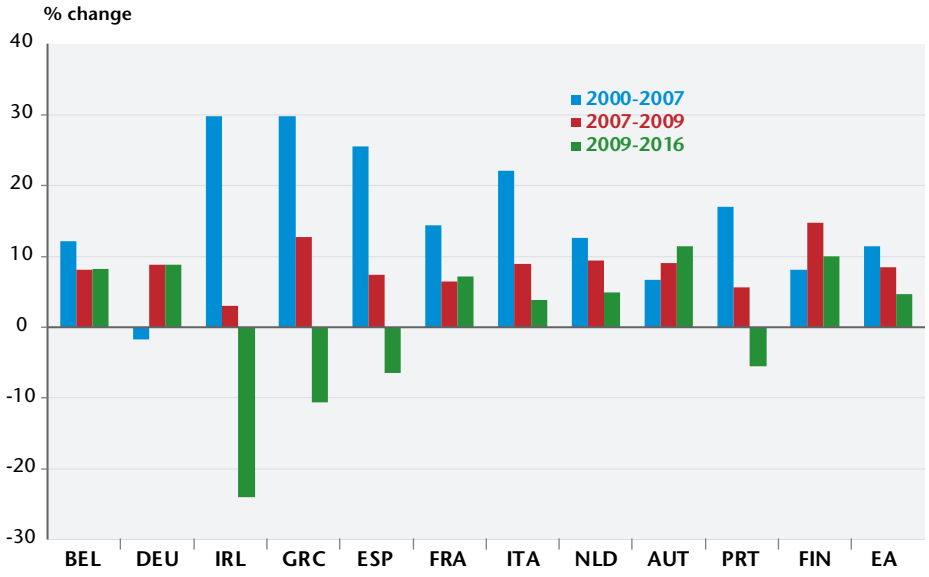



*Source:* ECB (Survey of professional forecasters).

point by the end of 2018, wage deflation pressure is still present. The risk is not equal in all countries. While in Germany the introduction of a minimum wage and full employment is stimulating wage increases, in Spain the slow reduction in unemployment, which would still exceed 17% in 2018, will keep inflation low: 0.4% in 2017 and 0.7% in 2018. France and Italy would lie in an intermediate zone, with inflation of around 1.5%.

In addition, since 2010, in a context marked by steep rises in unemployment and reform of European governance, the euro area countries, and in particular those hit by the sovereign debt crisis, have been encouraged to carry out structural reforms of their labour markets (France, Italy, Spain, Portugal, Greece and Ireland). These reforms have aimed to make labour markets more flexible by reducing job security provided by employment contracts and by enforcing greater decentralization in wage bargaining. They have in practice increased the pressure on employees, cutting their bargaining power and encouraging them to accept greater wage restraint, as happened in Germany in the 2000s. In some cases, (Ireland, Portugal and Greece), measures freezing or lowering the minimum wage have had an immediate impact on the cost of labour, as have measures lightening social and fiscal charges, such as France's CICE tax credit to enhance competitiveness. This process has resulted in a decline in unit labour costs since 2009 in Ireland, Greece, Spain and Portugal (Figure 17).

Figure 17. **Change in the unit labour costs of euro area countries**




*Source:* Eurostat.

While these adjustments can help reduce the current account imbalances that arose in the 2000s, they have also weighed on prices by putting downward pressure on labour costs, which undoubtedly explains part of the difficulty that the euro area is experiencing in getting back to a 2% inflation level. It can be added that at the euro area level, the increase in the unit labour cost is far behind the benchmark of the golden wage rule (see Chapter 4), which should increase by the inflation target set by the ECB. If we compare the increase in ULC in the seven years since 2009 (4.6 %) with the ones from 2000 to 2007 (12.7%), we see that in both periods the cumulative benchmark of 14.9% was missed. It notably illustrates that the adjustment has remained asymmetric with large decrease in unit labour costs in crises countries and subdued increase in surplus countries.

## 1.3. Does uncertainty contribute to a sluggish recovery?

The prospect of a Brexit has created a new source of uncertainty in Europe, one year after the tension over the situation in Greece, which could have led to a Grexit. This political and institutional uncertainty in particular is combining with other sources of macroeconomic and financial uncertainty.

### a) Multiple sources of uncertainty …

It is likely that a Greek exit from the euro area would have had a much greater impact in that it would have called into question the process of monetary unification itself. There is no monetary dimension in effect for a Brexit; the discussion will focus on trade relations and on the free movement of persons between the UK and the rest of the EU. The fact remains that this situation will result in a setback for the process of European integration. Beyond the British voters, there is a fairly widespread movement of distrust in the European project among EU citizens more generally.

While there has been a vast wave of reform of European governance, the European political project nevertheless seems to be out of momentum and lacking clarity, which could lead economic actors (households, companies) to turn inwards. In a very different political register, Spain's difficulties in forming a government, upcoming elections in France and Germany or Italian referendum are new sources of political uncertainty. What course will the new governments choose for construction of the European Union? What weight will have populists and sovereigntists in future policies?

The macroeconomic debates and uncertainties are just as numerous and concern both the nature of the recently observed changes in the dynamics of growth in international trade as well as the possibility of secular stagnation, a term used for a long-term period of weaker growth. Beyond the terminology, the questions being posed by the post-Great Recession world concern the potential for growth and trends in productivity.

Table 6. **Non-performing loans**

**% of non performing loans as of total loans**

| | 2010 Q2 | 2015 Q1 | 2016 Q1 |
|---|---|---|---|
| **AUT** | 2,6 | 6,5 | 5,1 |
| **BEL** | 4,0 | 3,6 | 3,4 |
| **CYP** | 5,6 | 37,6 | 38,7 |
| **DEU** | 2,5 | 2,3 | 2,8 |
| **EST** | 36,3 | 11,5 | 10,8 |
| **ESP** | 3,8 | 6,4 | 5,3 |
| **FIN** | 1,0 | 1,1 | 1,1 |
| **FRA** | 4,7 | 3,8 | 3,6 |
| **GRC** | 5,3 | 31,7 | 38,1 |
| **IRL** | — | 18,1 | 14,7 |
| **ITA** | 7,4 | 16,3 | 16,1 |
| **LTU** | 17,5 | 9,7 | 8,4 |
| **LUX** | — | 1,9 | 1,6 |
| **LET** | 17,7 | 7,2 | 4,8 |
| **MLT** | 5,3 | 6,4 | 5,0 |
| **NLD** | 2,3 | 2,7 | 2,3 |
| **PRT** | 3,2 | 14,7 | 15,4 |
| **SVN** | — | 18,7 | 13,9 |
| **SVK** | 3,8 | 7,4 | 5,6 |
| **EA** | 4,1 | 6,4 | 5,7 |

*Source:* BCE, Consolidated banking data, Gross non-performing debt instruments [% of total gross debt instruments], National accounts, OFCE october2016.

Furthermore, 2016 was marked by a resurgence of banking risk in connection with the situation of the Italian banks, which poses a serious threat to the country's public finances and its growth. The latest stress tests conducted in 2016 by the European Banking Authority (EBA) and the European Central Bank (ECB) on a sample of 51 European banks suggest that the Italian bank Banca Monte dei Paschi di Siena needs significant recapitalization. In addition to the case of this specific bank, the Italian banking system has a stock of bad debt amounting to over 16% of total outstanding loans, representing about 22% of GDP. This situation poses a major risk to the public finances, should the banking system need to be recapitalised, as well as to growth. The bad debt is a burden on the profitability of the banks, which may affect the banks' rates for the non-financial sector—as the banks seek to restore their profitability—or could force them to curb their supply of credit in order to deal with the risk to their balance sheets. While Italy concentrates a high level of risk to the banking system as a whole, Germany could in turn be plunged into new banking turmoil due to the critical situation of Deutsche Bank, which is facing the threat of a USD 5 billion financial penalty by the US courts for having misled investors by selling structured products backed by toxic mortgages in the United States. Because of financial fragmentation, national banks situation has a direct impact on economic situation of the country, not to mention the still present death kiss loop when national banks hold a large amount of public debt of their country.

Furthermore, the problem of bad loans is not only an Italian problem (Table 6), as the share of bad debt in outstanding loans exceeds 38% in Greece and Cyprus, and reached 14.7% in Ireland and 15.4% in Portugal. These figures are reminders that the euro area has never completely absorbed the shock of the financial crisis that erupted in 2007.

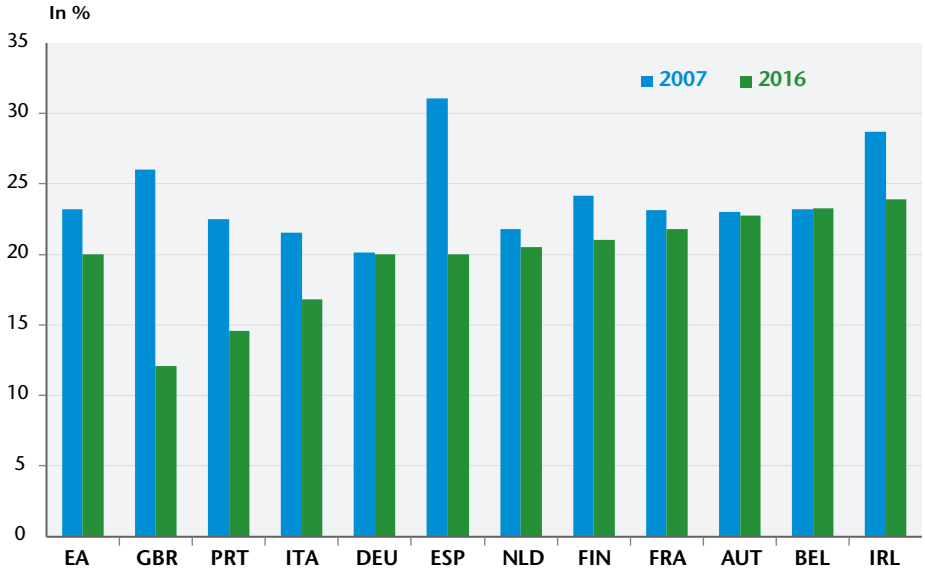
### b) … are holding back investment

This multiplicity of sources of risk and uncertainty could encourage a wait-and-see attitude, a turning inwards, and discourage risk-taking. The result would be a situation where households and businesses prefer savings to investment, which would slow growth and confirm the fears of an economy trapped in low growth and low inflation, validating ex-post analyses that point towards a decline in productivity and potential growth.

This may have contributed to the sluggish recovery in investment and why the overall investment rate in every euro area country is still below its pre-crisis peak

(Figure 18). The euro area's record current account surplus (above 3% in 2015) illustrates this situation of excess savings in the euro area.

Figure 18. **Investment to GDP ratio**




*Source:* ECFIN (Autumn Forecast) 2016.

## c) A new wave of fiscal consolidation?

Besides, the scenario described above does not account for a risk of a new episode of fiscal consolidation. The fiscal impulse is neutral for 2017 and slightly negative in 2018. But, some element may suggest that it could be made more restrictive. On the one hand, Spain can be expected to implement new measures of fiscal consolidation as it has not respected the nominal target for the public deficit in 2016. In the absence of government, the European Commission chose to postpone the implementation of sanctions, but with the new government now in place, the pressure for the introduction of new measures of budgetary measures would strengthen. On the other hand, euro area countries should also comply with other fiscal rules. First, the country-specific structural deficit targets, the so-called medium-term objectives (MTOs). Second, public debt is expected to converge to 60% of GDP. The reduction of debt should reach 1/20$^{th}$ of the spread between the current level of debt and the 60% target on average within three years. Third, an expenditure rule, which limits public expenditure growth (depending on potential growth). At present,

Commission and Council focus in their evaluation of fiscal policies as well as their policy recommendations on the first rule, as it is the most restrictive one and it is in the centre of the TSCG, the so-called Fiscal Compact. However, the political attention can change quickly, notably when all EA countries will comply with the 3% rule for public deficit. All the rules have to be kept in mind.

As long as the debt-to-GDP is above 60% and has not converged to that threshold, discussions on the need of further fiscal effort will not stop. Therefore, we simulate the path of public debt-to-GDP ratios until 2035, which is the horizon of the 1/20th debt rule incorporated in the revised SGP and in the Fiscal Compact. The simulated path of public debt depends on the fiscal impulses which have been forecasted in the euro area in 2017 to 2018. We then assume zero fiscal impulses beyond 2018. Simulations are realized with a model representing the main countries of the euro area: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal and Spain. Details of the model are available in a technical appendix to this chapter. The impact of fiscal policy on the economic activity depends on the fiscal multiplier effect, which is supposed to be time-varying. It is high when the output gap is negative (-1.5 for an output gap below -3%), supposed to be equal to 0.5 when the output gap is zero and it becomes small (0.2) when the output gap exceeds 3%.[9]

In the baseline scenario,[10] we suppose that interest rates in all euro area countries converge to the same level and that inflation expectations are anchored to the same inflation target (2%). Under these assumptions (initial conditions for the simulations are presented in the technical appendix), we compute the debt dynamics, structural balance, inflation rate and GDP growth rate (or output gaps) from 2017 until 2035. Results are reported in Table 7. The simulations suggest that France, Italy, Spain, Belgium, Portugal, Greece, and Finland would not reach a 60% debt-to-GDP ratio by 2035. Consequently, these countries would have to implement additional fiscal efforts to be able to comply with the debt rule. With public debt reaching 178% of GDP in Greece, consolidation would have to be substantial. The gap would also be significant for Spain (106%), Italy (99%), France (91%) and Portugal (89%). It must yet be noted that while the debt ratio in Italy and in Portugal would be far from 60%, it would decrease significantly between 2020 and 2035 indicating that the convergence is ongoing. Conversely, the convergence would not have started

9. See Appendix for details of the model and Blot *et al.* (2014).
10. The initial value of debt does not account future stock-flow adjustments, that reduce or increase the debt ratio.

in Greece or in Spain and would be very slow in France. Finally, though Belgium and Finland would not reach the 60% target, additional effort would be limited.

Considering a "no change in fiscal policy" beyond 2018, debt level would decrease below 60% in other countries, providing some fiscal space. Germany and the Netherlands would be in this situation, with public debt reaching 34% and 39% respectively in 2035. Ireland would also be concerned whereas Austria would be very close to 60%. The situations of public finances may also be illustrated by structural balances. France would record a structural deficit amounting to -2.3% in 2020 and the situation would still deteriorate from 2020 to 2035 because of hysteresis effects present in the model. Germany would benefit from a surplus increasing the room for manoeuvre to implement more expansionary fiscal policy in the future.

Moreover, the average output between 2016 and 2035 would still be negative for the euro area with Portugal and Greece being in the worst situation.[11] Actually, all countries but Germany and Ireland would be in a situation of negative average output over the period. The inflation rate would remain below the 2% target until 2019.

The next step is to assess whether countries are able to meet the ceiling by 2035. As for previous reports, the aim is to reach 60% for all countries. Then countries, which have a debt below 60% in Table 7, implement positive fiscal impulses. Considering current fiscal rules, we apply fiscal impulses capped at +/-0.5. Successive positive (if country-debt is below 60% in Table 7) or negative (if country-debt is above 60% in Table 8) impulses are implemented from 2017 until the debt-to-GDP reaches 60%. We find that all countries but Greece would be able to comply with the fiscal rule on public debt despite a significant consolidation effort. Yet, it may involve a significant additional effort. The cumulated fiscal impulse would reach 9.4 points of GDP. The cumulated effort between 2016 and 2035 would amount to 3.7 points in Spain (Table 8). In France, additional effort would amount to 3 points, which is 2.3 points above the expected effort announced until 2018. Italy, Portugal, Belgium and Finland would have to implement further consolidation with effort ranging from 1.6 points to 2.7 points.

11. It would be negative until 2022 for the euro area.

Table 7. **Public finance and output performances under the baseline scenario**

**(no risk premium. no fiscal impulse beyond 2018. time-varying fiscal multiplier,hysteresis effects)**

| | Public debt (% of GDP) | | Structural balance (% of GDP) | | Cumula-tive fiscal impulse | GDP growth rate (%) | | Average output gap | Inflation rate (%) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) 2020 | (2) 2035 | (3) 2020 | (4) 2035 | (5) 2016-2035* | (6) 2016-2020 | (7) 2021-2035 | (8) 2016-2035 | (9) 2016-2020 | (10) 2021-2035 |
| **DEU** | 60 | 33 | 0.0 | 0.6 | 1.0 | 1.3 | 1.0 | 0.5 | 1.6 | 2.0 |
| **FRA** | 95 | 91 | -2.3 | -3.1 | -0.7 | 1.6 | 1.4 | -0.3 | 1.5 | 2.0 |
| **ITA** | 129 | 101 | -0.8 | -0.5 | 0.2 | 0.7 | 0.3 | -0.3 | 1.3 | 2.0 |
| **ESP** | 102 | 101 | -3.1 | -3.6 | 0.0 | 2.3 | 1.4 | -0.1 | 0.7 | 2.0 |
| **NLD** | 61 | 41 | -0.3 | -0.3 | -0.7 | 1.6 | 1.3 | -0.1 | 1.0 | 2.0 |
| **BEL** | 99 | 65 | -0.2 | -0.3 | -2.1 | 1.3 | 1.6 | -0.6 | 1.8 | 2.1 |
| **PRT** | 121 | 87 | -0.4 | -0.5 | -1.5 | 1.4 | 1.1 | -1.4 | 1.4 | 2.1 |
| **IRL** | 82 | 51 | -0.9 | -0.1 | -0.7 | 2.2 | 1.9 | 0.9 | 0.7 | 1.9 |
| **GRC** | 178 | 182 | -4.8 | -6.4 | 0.3 | 1.8 | 1.2 | -2.5 | 0.9 | 2.2 |
| **FIN** | 66 | 79 | -2.1 | -3.8 | -0.4 | 1.6 | 1.7 | -1.0 | 1.3 | 2.1 |
| **AUT** | 77 | 61 | -0.6 | -1.2 | 0.4 | 1.4 | 1.5 | -0.8 | 1.5 | 2.1 |
| **EA** | 89 | 71 | -1.1 | -1.3 | 0.0 | 1.4 | 1.1 | -0.1 | 1.3 | 2.0 |

* In the baseline scenario. fiscal impulses are equal to 0 from 2019 to 2035.
*Source:* iAGS model.

Germany would benefit from fiscal space according to the debt criterion and may implement a fiscal stimulus of 2.6 points, which is 1.7 points higher than what is currently expected and shown in Table 8. The Netherlands would also implement expansionary fiscal policy in this scenario while the cumulated fiscal impulse would still be negative for Ireland but the fiscal effort would be reduced by 2.8 points in comparison to the baseline scenario. This would result in higher GDP growth for these countries. From 2016 until 2020, the average GDP growth would be 0.2 point higher. Conversely, growth performance in countries implementing a new wave of fiscal consolidation would be deteriorated: by 0.8 point in Greece, 0.4 point in Portugal, 0.3 point in Spain and 0.2 point in France and Italy. Besides, structural balance would become in surplus in 2035 for Italy, Spain, Portugal and Greece. In Greece, the surplus would reach 4% of GDP. This clearly questions the social sustainability of this policy. As illustrated in previous reports, there is obviously a trade-off arises between the debt objective and the growth objective. Though all countries but Greece would meet the 60% debt-to-GDP ratios in 2035, it would imply a reduction in growth for countries implementing additional fiscal consolidation and for the euro area.

Table 8. **Is it possible to reach a 60% debt-to-GDP ratio?**

**(baseline scenario except +/- 0.5 fiscal impulses depending on public debt gap *vis-à-vis* 60% target)**

| | Public debt (% of GDP) | | Structural balance (% of GDP) | | Cumulative fiscal impulse | GDP growth rate (%) | | Average output gap | Inflation rate (%) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) 2020 | (2) 2035 | (3) 2020 | (4) 2035 | (5) 2016-2035* | (6) 2016-2020 | (7) 2021-2035 | (8) 2016-2035 | (9) 2016-2020 | (10) 2021-2035 |
| **DEU** | 62 | 60 | -1.5 | -1.8 | 2.8 | 1.4 | 1.0 | 0.7 | 1.6 | 1.9 |
| **FRA** | 93 | 60 | -0.8 | -0.1 | -3.0 | 1.4 | 1.5 | -0.5 | 1.4 | 2.0 |
| **ITA** | 128 | 60 | 1.0 | 3.2 | -2.6 | 0.5 | 0.3 | -0.6 | 1.2 | 2.0 |
| **ESP** | 101 | 60 | -1.4 | 0.5 | -3.1 | 2.0 | 1.5 | -0.4 | 0.6 | 2.0 |
| **NLD** | 62 | 60 | -1.6 | -2.1 | 0.8 | 1.9 | 1.3 | 0.2 | 1.1 | 2.0 |
| **BEL** | 98 | 60 | -0.3 | 0.4 | -2.4 | 1.5 | 1.5 | -0.5 | 1.9 | 2.0 |
| **PRT** | 123 | 60 | 0.8 | 2.2 | -3.8 | 1.0 | 1.2 | -1.8 | 1.3 | 2.1 |
| **IRL** | 84 | 60 | -1.5 | -1.0 | 0.0 | 2.2 | 1.9 | 0.9 | 0.7 | 1.9 |
| **GRC** | 185 | 114 | -2.7 | 3.7 | -9.4 | 0.9 | 1.1 | -4.1 | 0.6 | 2.2 |
| **FIN** | 63 | 60 | -0.9 | -2.1 | -1.7 | 1.5 | 1.7 | -1.1 | 1.2 | 2.1 |
| **AUT** | 75 | 60 | -0.6 | -1.2 | 0.5 | 1.5 | 1.5 | -0.7 | 1.6 | 2.1 |
| **EA** | 88 | 61 | -0.8 | -0.2 | -0.8 | 1.4 | 1.1 | -0.2 | 1.3 | 2.0 |

*Source:* iAGS model.

Growth would be reduced in the euro area as a whole and heterogeneity in growth performance would widen as growth would deteriorate in countries, which have already suffered from the double dip recession. The countries with fiscal space are already those in which the unemployment rate has recovered to or close to pre-crises levels.

These simulations suggest that there is still a risk of a new wave of fiscal consolidation in the future, unless fiscal rules will be changed (see Chapter 3) or at least not applied strictly. This may still entail output costs and add deflationary pressures for the euro area and notably in countries where the output gap is negative and the unemployment rate high Greece, Portugal, Spain, Italy and France).

Chapter 2

# INEQUALITY AND SUSTAINABILITY IN A HEALING AND FRAGMENTED EUROPEAN UNION

As we will see in this chapter, there has been some improvement in the European Labour market in the last couple of years. However, unemployment remains high, especially long-term and youth unemployment. This raises the question of human capital depreciation, stigmatisation and unemployment hysteresis. At the same time both inequality and poverty are continuing have increased since the crisis started

European economic policy barely takes into account the academic consensus that measurement of economic performance and social progress is necessary and has to go beyond GDP. To facilitate evidence-based well-being oriented economic policy, we need to reform the European Economic Governance and to establish some kind of sustainable development indicators (SDI) to measure progress beyond economic growth. The SDIs should take into account the protection of the natural capital and social justice to help define and improve policies. SDIs show reasons for optimism in some areas, while substantial progress needs to be done in other areas, including poverty.

The chapter shows a very heterogeneous Europe in terms of unemployment, inequality and sustainability. Therefore, both EU as a whole and the dispersion between countries are analyzed in this chapter.

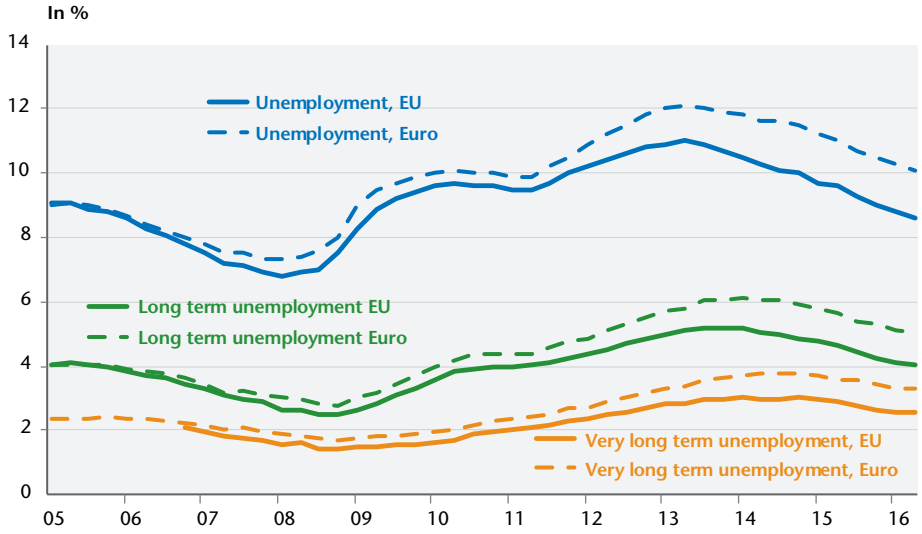
## 2.1. European labour market

The fact that the European labour market has suffered through the crisis is far from new. The good news is that the number of unemployed persons has fallen during the last couple of years, but the bad news is that we are still far from the pre-crisis (2008) level. Also in terms of employment, the EU has hardly regained its pre-crisis employment level by 2015.

In 2015, around 22.9 million people in the EU were unemployed. This is more than 3 million fewer than the high of 26.3 million in 2013, but it is still far from the 16.8 million unemployed in 2008 before the crisis kicked in. When it comes to long-term unemployment (defined as 12 months or more of unemployment), the level is of course lower. In 2015, 10.9 million people were long-term unemployed in the EU. Considering an even longer time horizon, 6.8 million people belong to the category "very long-term unemployed" (defined as 24 months or more of unemployment). In the following, we dig deeper into the different types of unemployment in the EU and the euro area.

The employment rate in the EU-28 and the EA-18 were almost identical from 2008 to 2011, where both areas first experienced a decrease and thereafter a stagnation. However, from 2011 to 2013 the stagnation continued for the EU-28, while the euro area experienced yet another decrease. From 2013, the rates seem to follow each other again in a decrease but there is a gap between them. This picture is confirmed by the unemployment rate in Figure 19.

Figure 19. **Unemployment rate in the EU and the Eurozone**



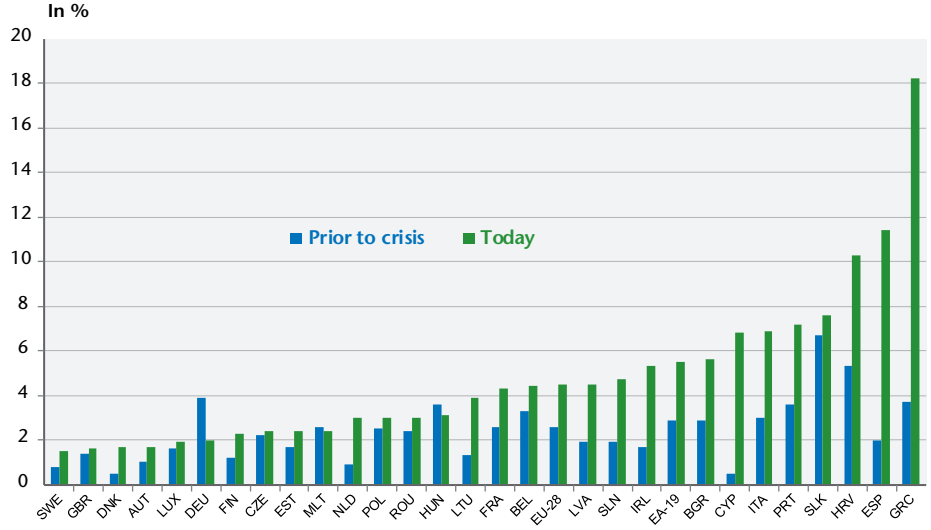

*Note:* percentage of active population. Long term unemployment is defined as unemployment of 12 months or more, while very long term unemployment is defined as unemployment of 24 months or more. The unemployment rates have been seasonally adjusted.
*Source:* Eurostat.

While unemployment finally is decreasing, the euro area was hit particularly hard by the crisis, as Figure 19 shows. For all the depicted types of unemployment, the euro area has a higher rate than the EU-28. While unemployment

and long-term unemployment for both the euro area and the EU have decreased from a high around 2013, the very long-term unemployment rate remains remarkably high in the 2nd quarter of 2016 (latest quarter for which data is available). Figure 19 also shows that despite the decreases, the current level is high for all the depicted rates when considering the entire period from 2005 to 2016. This is especially worrying for long-term and very long-term unemployment because people that are unemployed for a longer period of time, tend to lose touch with the labour market and their skills become outdated. As employers tend to see unemployment duration as a signal for low employability, the vicious circle of long term unemployment is accelerating further. This means that they will move further and further back in the queue for new jobs.

The unemployment rate for the EU has fallen, but it was still as high as 8.5 pct. in the 3rd quarter of 2016. In the 2nd quarter of 2016, the level of long-term unemployment was 4 pct., while the very long-term unemployment was 2.6 pct. As Figure 19 shows, the unemployment must continue decreasing for quite some time before we can expect to get close to the pre-crisis levels.

Figure 20. **Long term unemployment rates**



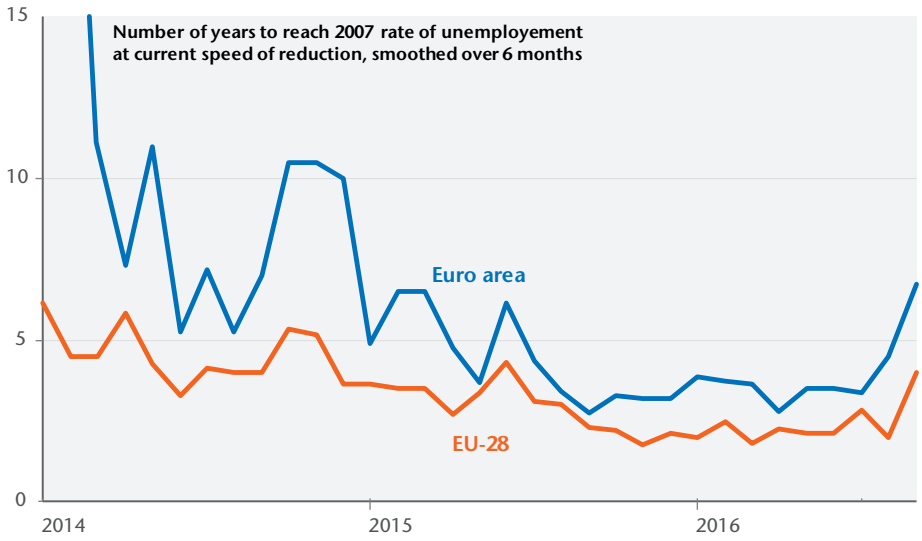

*Note:* Prior to crisis is 2008 and today is 2015
*Source:* Eurostat.

The picture provided by Figure 19, covers big differences among the European countries which will be investigated further in the following. Focusing on the

long-term unemployment rate, all countries but Germany and Malta have experienced increases in the rate from the start of the crisis in 2008 until 2015, which can be seen in Figure 20. Especially countries in Southern Europe have been affected by the crisis; e.g. Greece and Spain have experienced increases of 14.5 and 9.4 percentage points from relatively low levels.

Even though the unemployment rates have been decreasing, they are currently decreasing quite slowly. This can be seen in Figure 21, where the number of years it will take to reach the 2007 rate of unemployment, at the current speed of reduction, is shown. After a low level during the end of 2015 and the beginning of 2016, the rate has increased steeply since the summer of 2016. In September 2016, the EU-28 would be back to the 2007—level after 4 years, while it would take the euro area more than 6 years. This indicates that the necessary measures to speed up recovery have not been taken.

Figure 21. **Number of years to reach 2007 rate of unemployment at current speed of reduction**

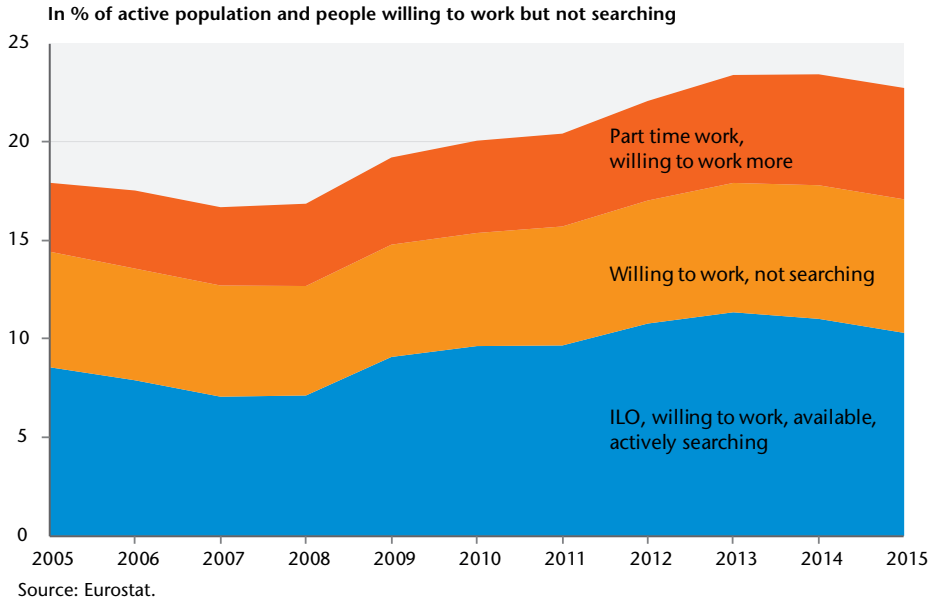



Source: Eurostat.

Figure 22 depicts unemployed (ILO), people willing to work but not actually seeking a job and people who work part time, but who are willing to work more. The figure shows that despite a decrease the last couple of years the levels for all 3 categories are still at a high level when considering the last decade. Labour underutilization (summing up people willing to work, but not

searching and those working part time, who wish to work more) follows the development on the labour market (Figure 19). However, the figure gives a picture of a labour market labour underutilization is a real issue. This is worth keeping in mind when considering the unemployment rate because it shows that there is a group of people that want to work (more) that are not a part of the general unemployment statistics.

Figure 22. **Underemployment and unemployment in the euro area**




Source: Eurostat.

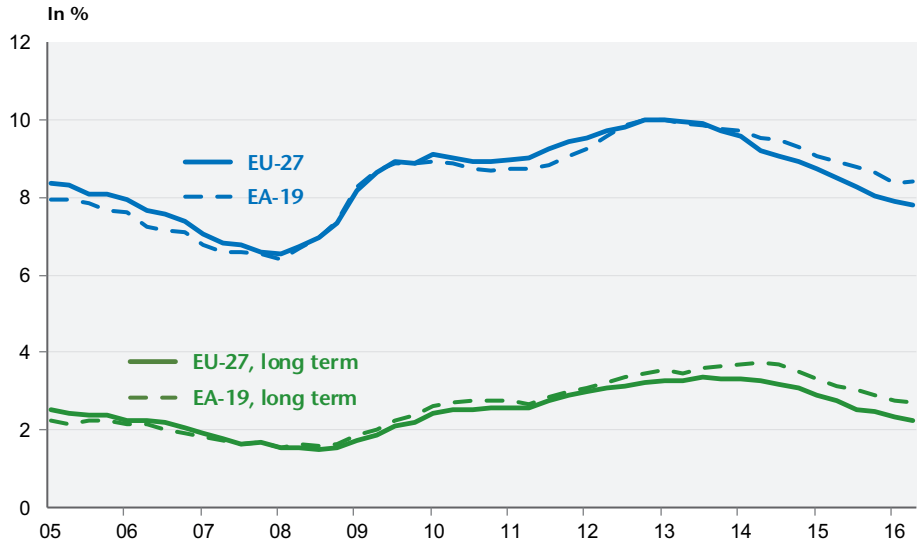
Just as unemployment over a longer period of time is of special interest, so is youth unemployment. In the very worst case, there is a risk that young people who start out being unemployed may never really become an integral part of the labour market. This has serious consequences not only for the persons involved, but also for society overall.

The youth unemployment (considering people aged 15-24) in both the EU and the euro area peaked in 2013 and has decreased since then. From 2013 to 2015, youth unemployment in the EU fell by more than 900,000 people. This does not mean that employment has risen by the same number because e.g. some young people have chosen to start studying or have left the labour force for other reasons. For the euro area, the decrease in youth unemployment in the same period was a little over 400,000 persons. Therefore, in 2015, the levels

of youth unemployment were 4.6 million and 3.2 million for the EU and the euro area, respectively. As for the general level of unemployment, there is still some way to the pre-crisis level.

The youth unemployment ratio (in contrast to rate) is the number of unemployed young people as a share of the total population aged 15-24. The ratio can be seen in Figure 23. While the ratio for youth unemployment has decreased notably from 2013, the ratio for long-term youth unemployment has decreased less. Recent decreases are very welcome improvements, but both ratios remain quite far from the low level of 2008. In 2016, still around 1/3 of the young unemployed in Europe were unemployed long-term.

Figure 23. **Youth unemployment ratio in the EU and the Eurozone**

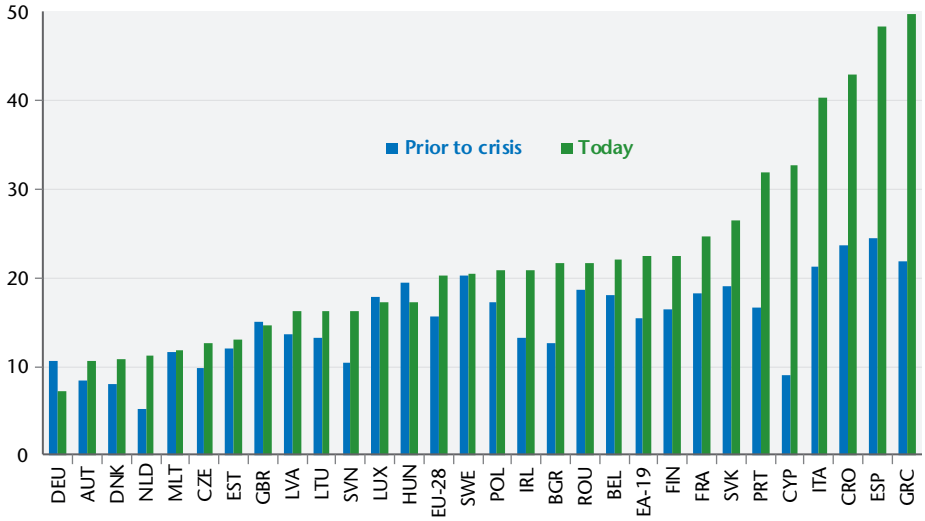



*Note:* Age 15-24. The youth unemployment ratio is defined as the number of unemployed of the age 15-24 relative to the total population of the same age. This is different from the youth unemployment rate which is defined as the number of unemployed of the age 15-24 relative to the number of people in the labour force of the same age. The numbers are seasonally adjusted.
*Source:* Eurostat.

Figure 24 shows the youth unemployment rates in different European countries prior to the crisis and today. The rates are higher than the ratios, because they measure the number of young unemployed relative to the labour force (and not the total population as it is the case for the ratio). The figure makes it clear that youth unemployment is a big problem and that most countries have experienced increases in the rates since the crisis began. Some countries such as Spain

and Greece are currently at extreme levels of almost 50 percent. On the other hand, Germany is one of the few countries that has experienced a decrease since 2008 and is currently at a level below 10 percent.

Figure 24. **Youth unemployment rates**



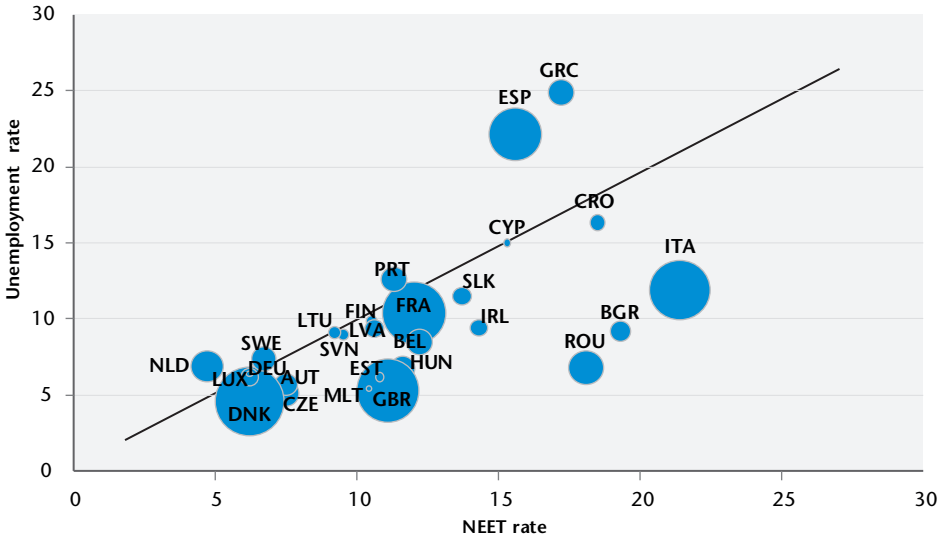

*Note:* From 15 to 24 years old. Prior to crisis is 2008 and today is 2015
*Source:* Eurostat.

The youth unemployment rate covers young people who are a part of the labour force and search for a job, but they can be studying at the same time. The NEET-rate takes this ambiguity into account and stands for Not in Employment nor in Education or Training. In 2015, the average of the EU-28 was 12 percent, but that covers big differences among the European countries. Especially, the South European countries have high NEET-rates of up to 21.4 percent in the case of Italy. In the other end of the scale, the Netherlands is at 4.7 percent. Compared to the very high youth unemployment rates, the NEET-rate indicates that many of the young people that are considered unemployed are also in education. Those who fall into the NEET-category are—as the name indicates—not studying, not working and not in training and it should be a priority to have as few young people as possible in this category.

Figure 25 shows the correlation between the NEET-rates and the unemployment rates in 2015. From the figure, it is clear that there is a positive correlation between the two, which is also to be expected. As the 45-degree line shows,

most countries have a higher NEET-rate than general unemployment rate. This is especially the case for Italy, Bulgaria and Romania. This indicates that even compared to the level of unemployment, there is a big group of young people who are neither working nor under education. As mentioned, this group should receive special attention. On the other hand, the figure shows that Greece and Spain must fight with both a high unemployment rate and a high NEET-rate.

Figure 25. **Correlation between the NEET-rate and the unemployment rate in 2015**




Note: From 15 to 24 years old. The unemployment rate is a total as a percentage of the active population. The bubbles depend on the population size in the different countries.
Source: Eurostat.

Just as different age groups have experienced the crisis and its aftermath differently, men and women have been affected differently by it. This is considered in further detail in box 1.

### Box 1. **Gender equality challenged by austerity policies**

The gendered effect of the crisis is well known (see amongst others Rubery and Karamessini, 2014; Eydoux, Math and Périvier ed., 2015). In general, the recession stage has affected more deeply male employment than female one, due to sex sectorial segregation. This so-called "He-Cession" phenomenon should be looked at with care: in some countries, like in the UK for instance, the share of women per sector has changed in the sense that they have been

more affected relatively than men (see Périvier, 2016). The austerity phase is not gender neutral: fiscal consolidation policies have jeopardized or stop the dynamic of narrowing the gender inequalities through different channels (Périvier 2016).

Employment losses in female dominated sector. Cuts in public spending have implied a reduction in public employment; freeze (or decrease) in wages and social rights for civil servants (Theodoropoulou and Watt, 2011; Leschke and Jepsen, 2011; Smith, 2009; Karamessini, 2014). For the same reason the He-Cession emerged during the recession phase, some countries experienced a She-Austerity : sectors in front line of austerity are dominated by female workers, cuts in public spending lead to job destructions for women. Female unemployment or under-unemployment has increased in consequence.

Austerity policies induce a decrease in generosity in work-life balance policies (childcare system, support for elderly …), due to cuts in public services. Women are the main users of these services; they are affected in their daily life through tougher constraints in work-life balance.

This effect is reinforced by the impact of deregulations of labour markets. This trend increases the difficulties for women to articulate their professional and family life, and it strengthens the complexities to synchronize social times for women, especially with young children. The degree of flexibility of labour market has grown through amongst others the suppression of regulations like limiting commercial shop opening hours (as in Greece and Spain for instance). The increasing power of employers to make substantial changes to individual or collective contracts and to change working hours (LABREF database, EC). Women are over-represented in the sectors that are the most sensitive to these changes in labour regulations (retail and services).

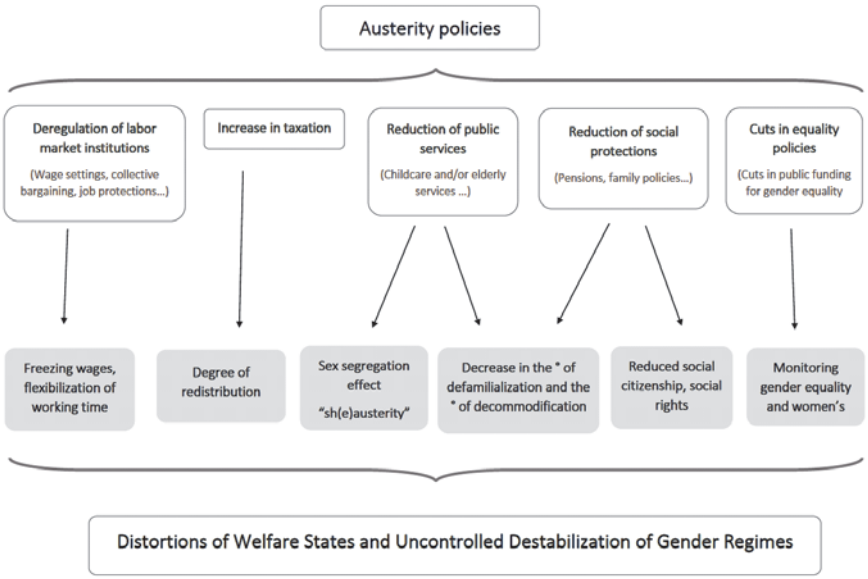
The reduction of social rights affects more deeply women than men, because of gender gap in careers and wages. Therefore, the withdrawal of specific compensations of these inequalities worsens the situation of women in precarious conditions. The degradation of work-life balance described previously will increase career interruptions for mothers, and consequently their social rights. In this respect, pensions' reforms are particularly harsh for women. The retirement age limit differentials between men and women retirees have been abolished and the retirement age for both sexes have been increased. Women have to work longer before being retired, the possibility for younger women with children to rely on family solidarity, as it is common in South countries, will be limited in the future (Verashchagina and Capparucci, 2014).

The role of family leaves in reducing the degree of sexual division of labour within families has been modified by austerity policies. In Spain (2013), the implementation of the extension of paternity leave has been delayed. In France, the reform of the parental leave (2014) presented as promoting gender equality imposes a sharing rule of the length of the leave. The reform aims to dedicate one year (out of three) of the leave to the father. But in the same time, the level of the lump sum allowance has been reduced (to reach the level of one third of the minimum wage). This new scheme remains unat-

tractive for fathers. The likely high non-take-up rate of fathers will reduce the cost of the parental leave for public finance.

In some countries gender equality and women's rights have been directly jeopardized by a reduction in the support to equality bodies. In Spain, some of the monitoring bodies for gender equality have been closed. In the UK (2011 and 2012), cuts in the budget of the Equal Human Rights Commission (EHRC) have been decided (see Karamessini and Rubery, 2014). These measures decrease the possibility to monitor gender equality.

The austerity measures induce a modification of the structure of European welfare states and gender regimes through a decrease in the degree of defamilialization and in the degree of decommodification of welfare states. Gender equality has been relegated to the background (Smith and Villa, 2014).




## 2.2. A glance at income inequality, poverty and social conditions

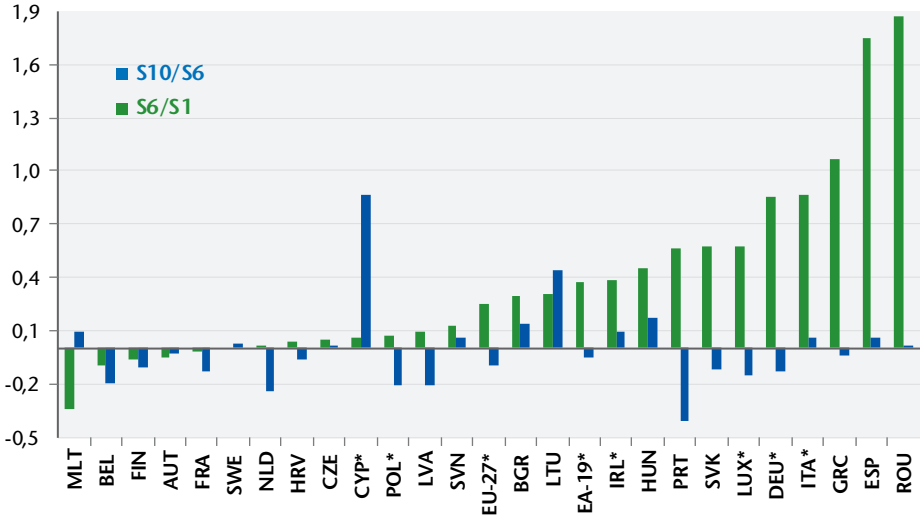
This part of the chapter looks into inequality measured in different ways e.g. in order to consider movements in the income distribution in further detail. In many cases, higher inequality is a result of the crisis with decreasing living standards and other severe consequences. The crisis has not hit the European countries the same way and within the countries, people have not been hit equally hard. It turns out that especially Southern Europe has been under pressure the last 8 years, while Eastern Europe has progressed. Considering different

age groups instead of countries, the tendency is an increase in the number of poor young people, while older people have fewer difficulties.

## a) Income inequality

Income inequality can be measured in different ways and in Figure 26, we consider income inequality by comparing different parts of the income distribution, in particular the 1st, 6th and 10th decile. This means that we are able to decompose changes in inequality into what is driven by the bottom, middle and top of the income distribution. For most countries, the S6/S1 has increased since 2008. This can be due to different scenarios explained in the figure note, but either way, the interpretation is clear; people at the bottom of the income distribution are poorer now relative to the people in the middle of the income distribution than they were in 2008. Especially Spain, Greece and other south European countries, but also Germany (despite a decrease in unemployment), have experienced big increases, so the gap between the poor and the middle

Figure 26. **Evolution between 2008 and 2015 of share of national equivalised income**

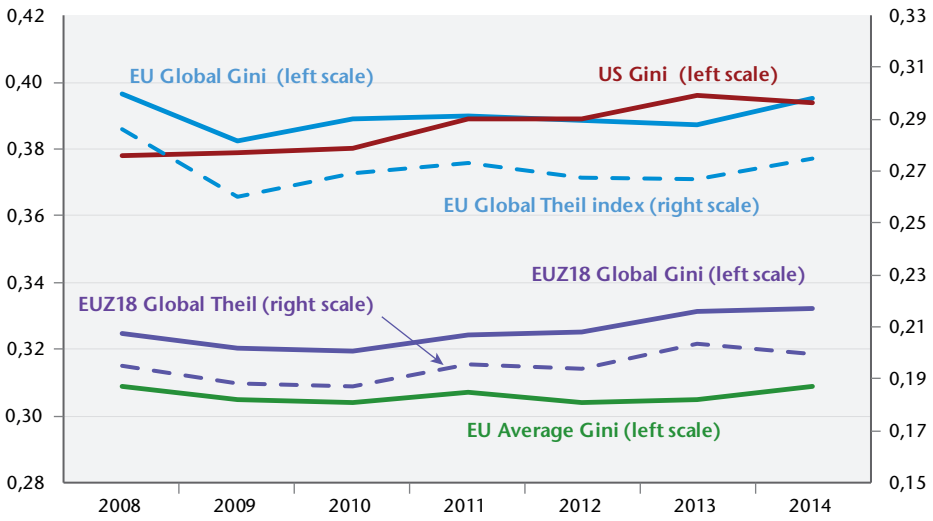



*Note:* (*) Latest data from 2014. BGR, DK and EST have been left out due to break in time series which shortened the period that could be considered to a degree that made it meaningless. This figure considers the share of national equivalised disposable income.
Here is an example of how to interpret the fractions: S6/S1 is the share of income received by the 6th decile divided by the one received by the 1st decile. An increase in this ratio means that the 6th decile has increased relative to the 1st decile or that the 1st decile has fallen relative to the 6th or both.
*Source:* Eurostat.

class in those countries has widened. In other words; the crisis mainly hit those who were already poor. When it comes to S10/S6, the ratio between the top and the middle of the distribution, most countries have not experienced that big changes over the period. Cyprus stands out with a big increase, while some other countries, e.g. Portugal and The Netherlands, have experienced decreases, which means that the economic distance between the richest and the middle class has decreased during the crisis.

To consider the overall level of inequality of disposable income in Europe, we consider averages of national Gini coefficients, according to Eurostat, a Global Gini coefficient and a Global Theil index (Figure 27). The two last compare all households regardless of residence. The Gini coefficient is a measure that represents the income distribution of a country in a single number between zero and one and it is higher, the higher the inequality. The difference between the Eurostat Gini coefficient and the Global Gini coefficient arises because the statistic calculated by Eurostat does not take inequalities between the countries into account, but averages inequality within each country. Therefore, the inequality is at a lower level than for the Global Gini.

Figure 27. **Income inequality in the EU, the Eurozone and the US**




Sources: EU-SILC, OECD, iAGS calculations.

The newest available data allows us to consider until 2014. In the EU, inequality measured by the Global Gini and Theil index has increased from 2013 to 2014 and so has the average Gini, which is on a much lower level because this

statistic, calculated by the Eurostat, does not take inequalities between European countries into account, but averages inequality within each country. For the Euro zone, inequality measured by the Gini coefficient and Theil index remain high compared to the 2008-level, however, the Theil rate has decreased slightly from 2013 to 2014. Finally, one should note that the Global Gini is more or less the same in the US and the EU in 2014.

Besides income inequality, the concentration of wealth in the Eurozone has gained considerable attention of economists and policy makers in the recent past. In particular, the 2010 dataset of the Household Finance and Consumption Survey (HFCS) by the ECB revealed that wealth inequality is by far higher than income inequality: the Gini coefficients for household wealth vary between roughly 0.45 and 0.75 across the Eurozone countries. Unfortunately, except for the ECB data there is a distinct dearth of information on private household wealth. The second wave of the HFCS has been conducted in 2014 and first results on the wealth distribution in the Eurozone are expected in spring 2017.

### b) **Regional convergence slowed**

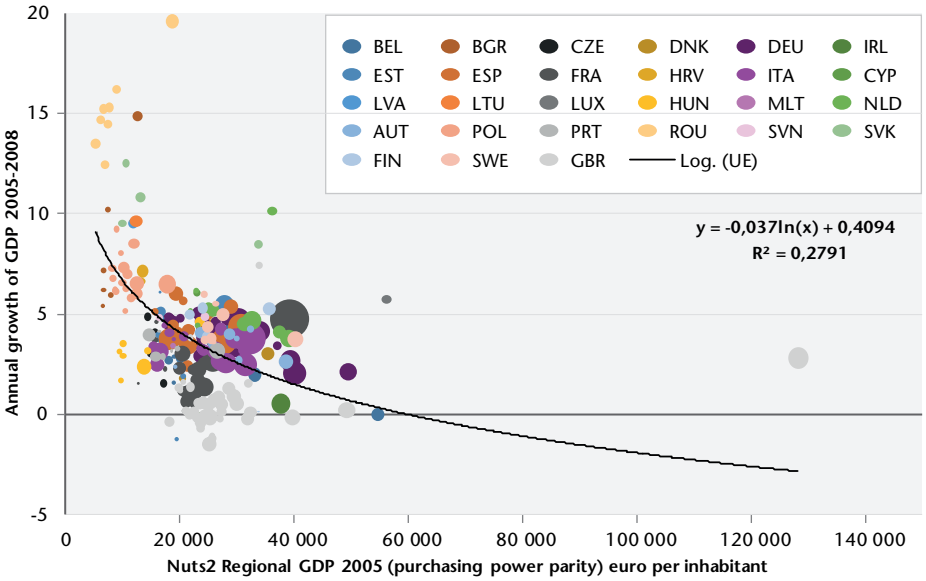
Income inequality can also be approached by considering if GDP levels in different European countries converge or diverge. This is the traditional way to investigate how inequality across the European Union evolves. Figure 28 shows that between 2005 and 2008, there was sign of regional convergence in the sense that the regions in countries that experienced the highest growth rates in GDP per capita tended to be the ones who initially had the lowest level of GDP.

On the other hand, Figure 29 shows a picture with no trend towards regional convergence in the EU. From 2008-2014, it is less the case that the poorest countries have experienced the highest growth rates.

### c) **Increasing poverty since the crisis**

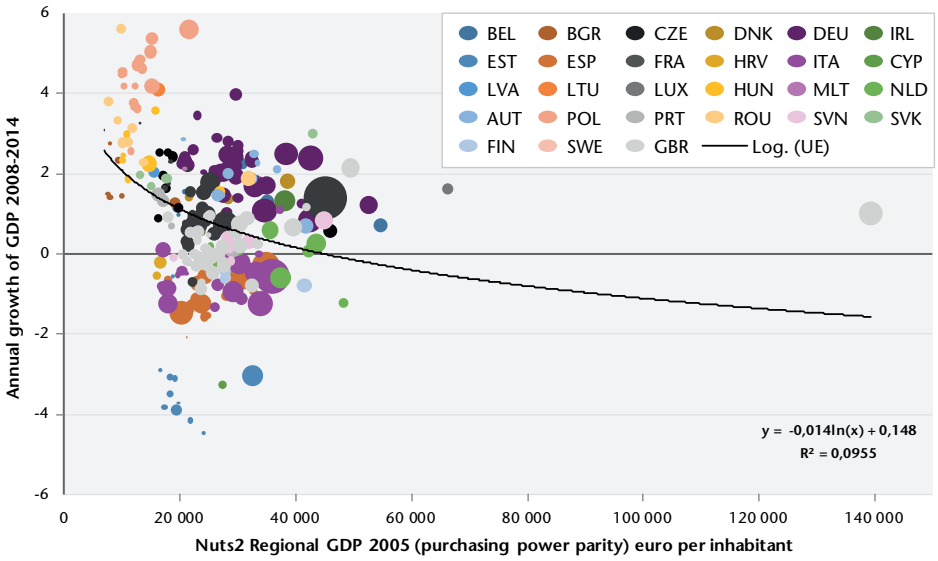
Both inequality and poverty have increased since the crisis started. When investigating changes in poverty over time, a preferred measure is the anchored risk-of-poverty rate. People with equalized disposable household incomes below 60 pct. of the median income after social transfers in their country are defined as at risk-of-poverty. Figure 30 shows how the rate has evolved in the EU and the euro area since 2008 with the risk-of-poverty rate anchored to median earnings in 2008. It is very concerning that the anchored poverty rate has increased to such an extent as it means that substantially more people today have less than 60% of the real median income in 2008. One might also have expected the rate to

Figure 28. **Regional convergence in the EU 2005-2008**




*Sources:* Eurostat, iAGS calculations.

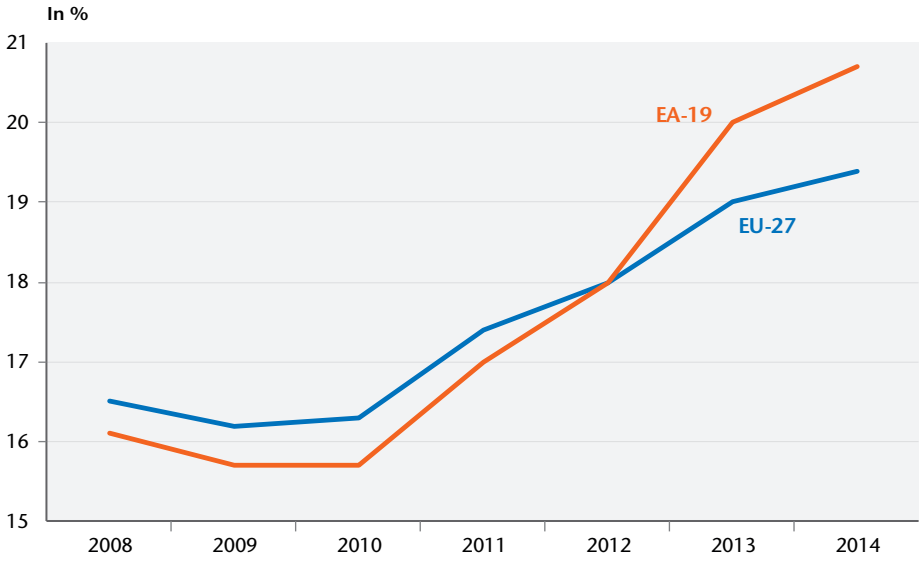
Figure 29. **Regional convergence in the EU 2008-2014**




*Sources:* Eurostat, iAGS calculations.

increase rapidly from 2008, but this was not the case. The rate was quite flat for both the EU and the euro area until 2010, where a sharp increase started, which seems to be correlated with austerity policies. The increase has been larger for the euro area, which in 2014 (the latest year for which data is available), has a rate of risk-of-poverty of 20.7 percent. For the EU, the rate was 19.4 percent.

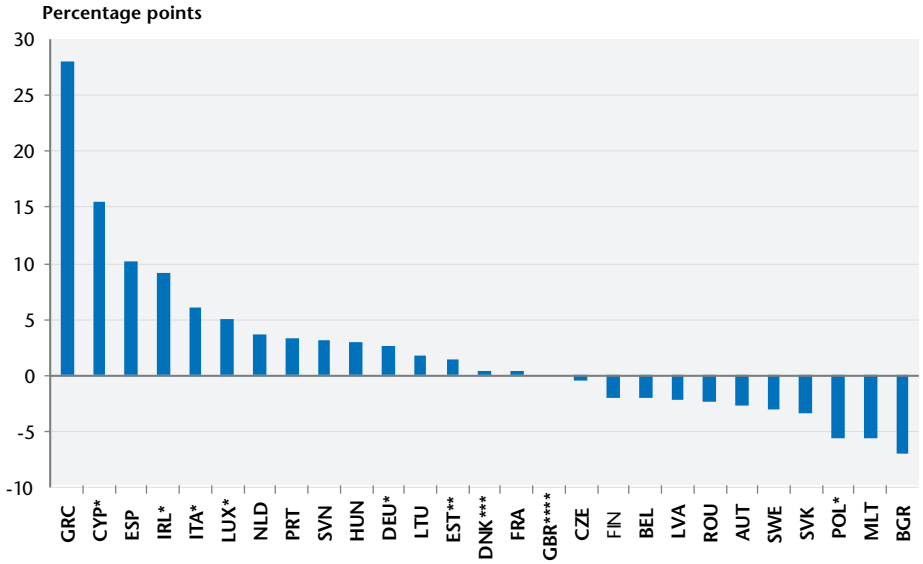
Figure 30. **Anchored risk-of-poverty rate**




*Source:* Eurostat.

Figure 31 shows the change in the anchored risk-of-poverty rate from 2008-2015 with the rate anchored in 2008. Most countries have experienced an increase in the rate during the period and especially Greece and Cyprus have suffered since 2008. In Greece, the rate has increased by as much as 27.9 percentage points. On the other hand, a number of countries have actually experienced decreases. Examples are Poland and Bulgaria, where the rate has decreased by 5.6 and 6.9 percentage points, respectively. Without a decisive policy change, the Europe 2020 target of reducing the number of Europeans living below national poverty lines by 25 percent until the end of the century will be clearly missed.

Figure 31. **Change in the anchored risk-of-poverty rate from 2008 to 2015**

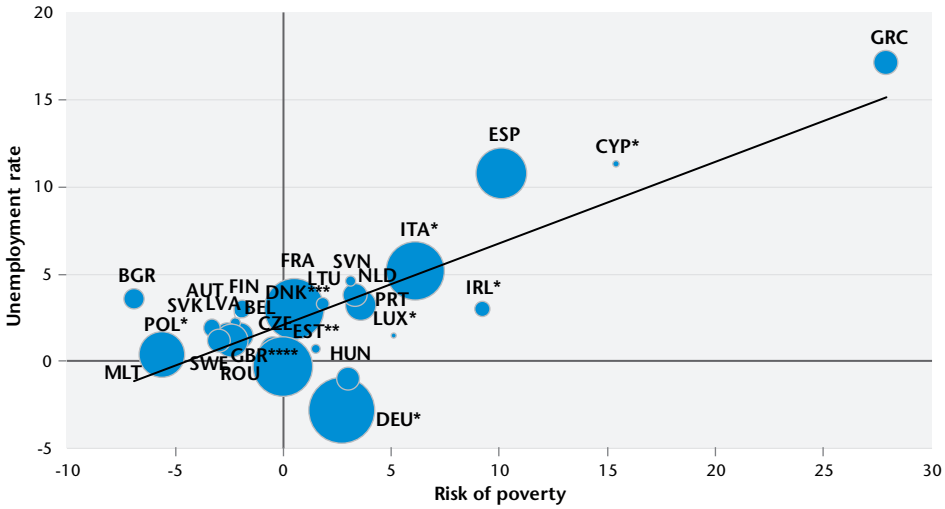



*Note:* (*) Latest data from 2014. (**) Data from 2011-2015 due to break in time series. (***) Data from 2008-2013 due to break in time series. (****) From 2012-2014 due to break in time series.
*Source:* Eurostat.

Figure 32 holds the change in the anchored risk-of-poverty rate from 2008-2015 up against the change in the unemployment rate during the same period. Most countries belong to the group that have experienced increases in the anchored poverty rate of less than 10 percent and increases in the unemployment rate of less than 6 percent. However, as earlier, South European countries such as Greece, Cyprus and Spain stand out with remarkable increases in both rates during the crisis.

Within the countries depicted above, different age groups have been affected differently. Figure 33 shows the percentage of people at risk-of-poverty and social exclusion by age groups in the EU-27. The risk-of-poverty here is not anchored, which means that the median income differs from year to year. As the figure shows, there is a clear difference between the age groups. The group of people aged 16-24 has the highest risk of poverty and since 2010, the group of people above 65 years have had the lowest risk of poverty. Since 2008, the people above 65 years of age have experienced a decrease in the rate of risk of poverty, while most of the other age groups have experienced increases. This is especially true for the young people aged 16-24. In 2014, which is the latest year for which data is available, the difference between people aged 65 and

Figure 32. **Correlation between change in the anchored risk of poverty and change in unemployment from 2008-2015**



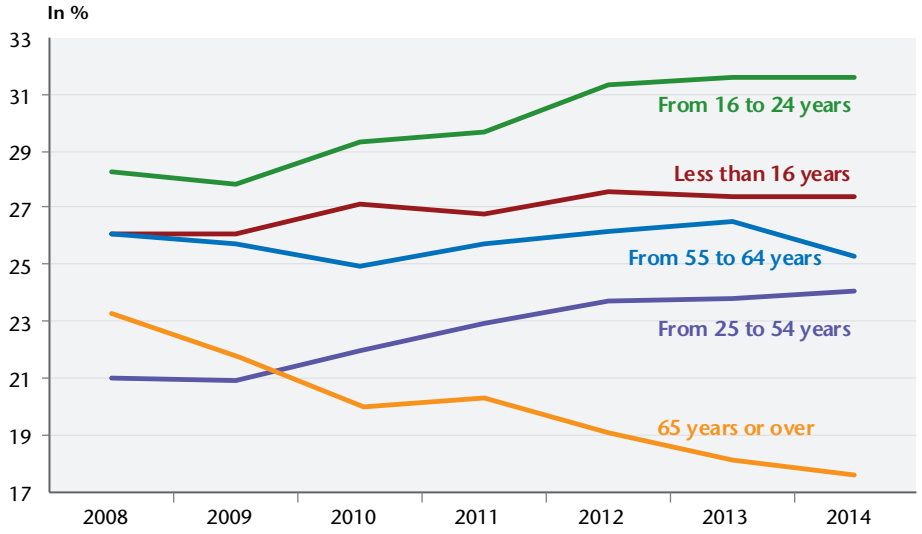

*Note:* For the anchored risk-of-poverty rate: (*) Latest data from 2014. (**) Data from 2011-2015 due to break in time series. (***) Data from 2008-2013 due to break in time series. (****) From 2012-2014 due to break in time series. The bubbles depend on the population size in the different countries.
*Source:* Eurostat.

above and people from 16-24 years old, was a much as 14 percentage points. The difference was only 6 percentage points in 2008. The youth unemployment is higher than for the employment overall, combined with the fact that more young people are being enrolled in education, are both explanatory factors as to why the risk-of-poverty rate is higher for those aged 16-24 than those aged 25-49.

It is worth to notice that from 2010, the prime-age parts of the labour market (the 25-54 years old) have had a higher risk of poverty and social exclusion than those of the age 65 or above. Many of those aged 65 or above receive a fixed pension benefit and the decrease in the rate of risk of poverty for them does not have to mean that the they feel richer, but might be due to pensions being a relatively stable income. If unemployment increases (which it has during the crisis), it means that an unchanged pension will be worth more relative to the median income and therefore, a number of people above 65 of age can find themselves above the risk-of-poverty limit without actually having a larger disposable income.

Finally, the risk-of-poverty for children younger than 16 years old is the second highest of those depicted in Figure 33. The rate has increased 1.3 percentage points since 2008. According to Eurostat, child poverty is mainly affected by the labour market situation of the childs parents, the composition of the household the child grows up in and the efficiency of government intervention through e.g. income support for parents with low income. A childhood in poverty can be very problematic and may have consequences for many years.

Figure 33. **Evolution of risk of poverty and social exclusion in the EU-27**



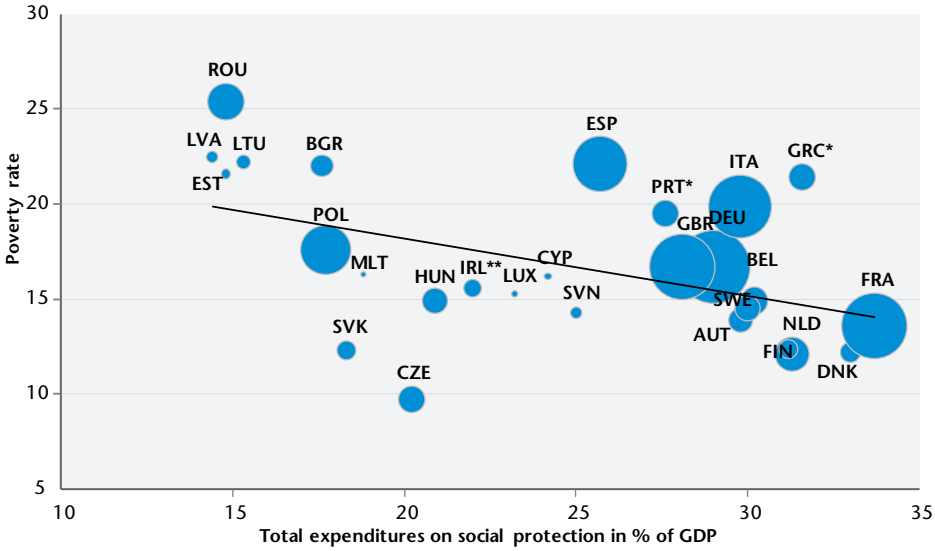

*Source:* Eurostat.

The countries with a high level of social protection benefits tend to have low levels of poverty as Figure 34 shows. Here it is countries as Denmark and the Netherlands, where the poverty rate is low and social protection expenditures are high, while Romania and Latvia have high levels of poverty and little spending on social protection. Keeping this link in mind, it is no wonder that poverty has risen (as e.g. Figure 31 shows) with the latest years of austerity.

## d) Other measures of poverty

While both the anchored risk-of-poverty and the risk-of-poverty is based on income, the severe material deprivation rate measures to what degree individuals experience inadequate access to basic amenities. In particular, the rate is defined as the declared inability to pay for a certain number of necessary items such as rent and utility bills.

Figure 34. **Correlation between the poverty rate and total expenditures on social benefits as a percentage of GDP**

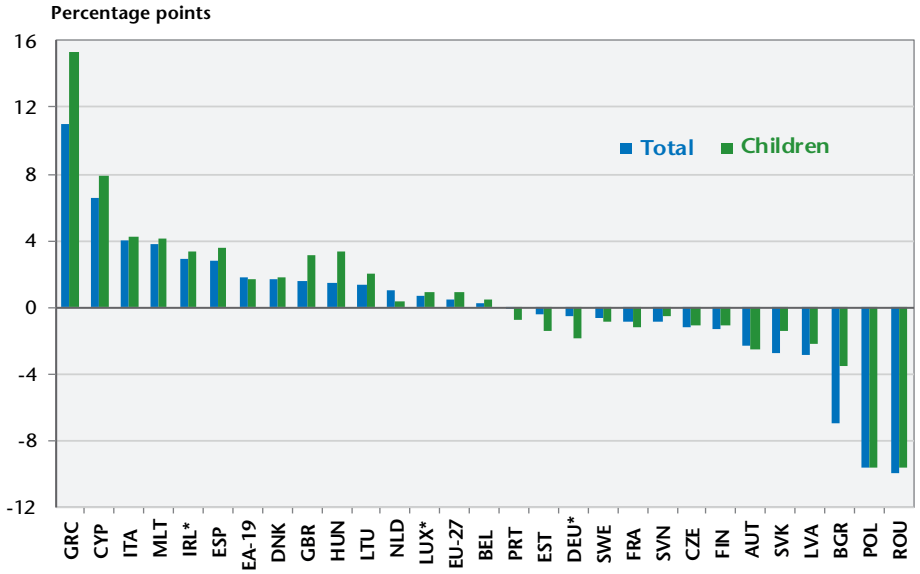



*Note:* Both the data for the poverty rate and total expenditures on social protection benefits as a percentage of GPD are from the latest year for which data is available. For the poverty rate that means 2015 and for the total expenditures that means 2013. (*) Latest data on expenditures is from 2012. The bubbles depend on the population size in the different countries.
*Source:* Eurostat.

Figure 35 shows the change in the severe material deprivation rate from 2008 to 2015 for both children and a total of both children and adults. It shows that around half of the countries have experienced decreases in the severe material deprivation rate, while the other half have experienced increases. Again, it is especially south European countries that have felt the crisis. Greece stands out with an increase of 11 percentage points for the total, while the rate has increased by over 15 percentage points for children. In most cases, the increases for children are a bit higher than for the total. This indicates that families with children have been more seriously affected negatively by the crisis than adults when it comes to access to basic amenities. A higher level of deprivation among children is serious and this lack of opportunities during childhood is likely to have long-term consequences for the concerned individuals as well as for society as a whole.

To look at regional trends within the EU from a somewhat long-term perspective, we calculated, an average rate of severe material deprivation weighted by the population of the countries in each category for Southern Europe, Eastern

Figure 35. **Change in severe material deprivation rate 2008-2015**

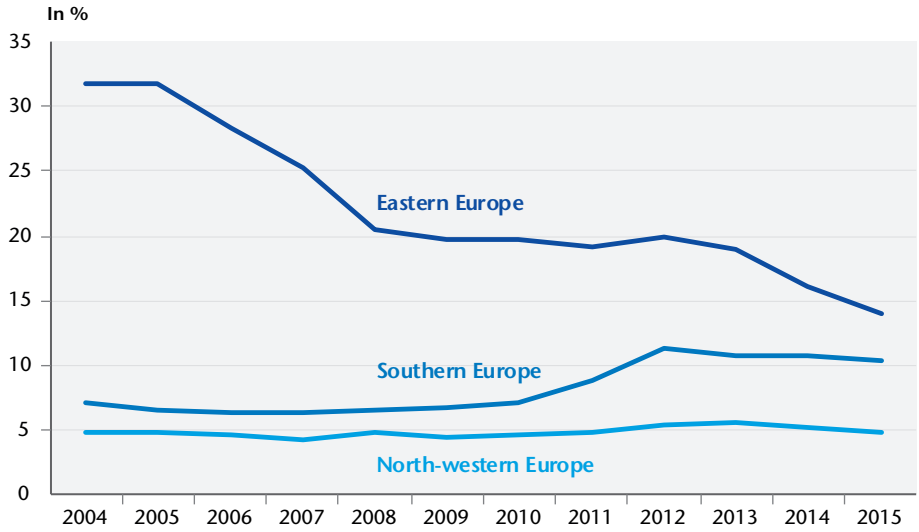



*Note:* (*) Latest data from 2014. The severe material deprivation rate is an EU-SILC indicator defined as the inability to do at least four of the following: to pay rent, mortgage or utility bills, to keep their home adequately warm, to face unexpected expenses, to eat meat or proteins on a regular basis, to go on holiday, to have a television set, a washing machine, a car and a telephone.
The indicator distinguishes between individuals who cannot afford a certain good or service, and those who do not have this good or service for another reason, e.g. because they do not want or do not need it.
*Source:* Eurostat.

Europe and North-western Europe in Figure 36. The starting point is 2004, where Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia joined the union.

The severe material deprivation rate in Eastern Europe decreased rapidly in the years after the eight East European countries joined the EU, but in the wake of the crisis in 2008, the rate flattened. Since 2012, the rate has decreased, but by a smaller rate than before. On the other hand, while the rate was quite flat for Southern Europe from 2004 to 2008, the rate almost doubled from 2008 to 2012. Since then, the rate has not changed much which means that the two rates are quite close the each other now. North-eastern Europe is at the lowest level of the three groups and has remained around 5 pct. during the entire period. Eastern Europe had a severe material deprivation rate of 14.1 pct. in 2015, while it was 10.4 for Southern Europe and only 4.7 pct. for North-western Europe. Even with the large improvement, Eastern Europe is still at a higher level than Southern Europe.

Figure 36. **Evolution of severe material deprivation**




*Note:* Eastern Europe consists of Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia, Slovenia, Latvia, Lithuania and Estonia. Southern Europe consists of Greece, Italy, Malta, Portugal, Spain and Cyprus. North-western Europe is the remaining countries in EU-27, i.e. Austria, Belgium, France, Germany, Luxembourg, The Netherlands, United Kingdom, Ireland, Denmark, Sweden and Finland. The rate of severe material deprivation is calculated as a weighted average based on the size of the population of the countries in each part of Europe.
*Source:* Eurostat.

## 2.3. Inequality: What can be done?

Inequality is many-faceted. Income differences between regions, gender, generations, and between capital and labour impact people and the economy in different ways. A growing body of literature recognizes that the widening inequality has detrimental effects on growth, social cohesion, and on the individual livelihoods (Berg and Ostry 2011, Ostry *et al.* 2014, Corak 2013, OECD 2015).

Addressing inequality requires intervention both ex-ante at the source and ex-post to attenuate market outcomes. A comprehensive package will thus comprise a kaleidoscope of measures that, first, affect the framework within which market economies function; second, strengthen the redistributive function of the European welfare state by more progressive taxation and sufficient public expenditure. These measures need to be conceived beyond the national level in order to address the inequality across member states. The financial and economic crisis since 2008 has made this imperative all the more pressing, since it has, if anything, cemented the decades-old trends of increasing inequality.

Regarding the first point, iAGS 2016 highlighted the imbalances in the relation between capital and labour in more detail. The report showed the long-term trend of falling wage shares and rising income shares of the top 1% across European countries in the last three decades. While we focused on the growth-inhibiting effects of rising inequality in iAGS 2016, these long-term trends also point to imbalances in the power structure between capital owners and employees. There are first signs of a more equable balance in countries like Germany due to the specific form of crisis management seeking consensus including social partners, and government measures to stabilize labour relations like the introduction of a minimum wage. However in peripheral countries, increasing economic pressure (especially due to high unemployment) enforced by a "new European interventionism in the area of wages" (Schulten and Müller 2012) led to a strong deterioration of industrial relations. In order to tackle this issue and improve the feasibility of wage coordination as an important element within a monetary union, a reversal of the one-sided European policies by promoting trade union representation, ensuring workers' rights, good jobs and living wages for all is required, as has been shown by many researchers (e.g. Checchi and García-Peñalosa 2008).

As a result of this policy, wages in the Eurozone as a whole did not increase sufficiently to reach the inflation target in the aftermath of the crisis (see chapter 1). With a considerable pay rise in the European Union as whole (and very likely the Eurozone as well), the positive effect on internal demand is expected to be larger than the negative effect on exports, leading to an overall positive effect on aggregate demand (Onaran and Obst 2016). Furthermore, an increase in wages helps to rebalance the large current account surplus of the Eurozone on a global level and ends the trend of decreasing or stagnating real wages, which hinders the economic recovery in the European Union, since lacking demand of private households hampers economic activity. As wage coordination on a supranational level still hardly exists, national collective bargaining institutions and/or statutory minimum wages could be tools to spur demand and ensure decent living standards for all workers. However, as current account imbalances were a major force aggravating the crisis in the Eurozone, wage increases should be differentiated (see chapter 4), e.g. stronger in countries with high import deficits and current account surpluses respectively.

Furthermore, labour market outcomes need to be improved by reducing unemployment and increasing job security. Fighting unemployment and creating not only more but also better jobs both in the public and the private sector, must be a number one priority for policy makers. In particular, the simple employment rate should be complemented by a target corrected for precarious work.

Given the direct influence of working time and unemployment on income and material deprivation, the overall economic workload has to be distributed more equally within the labour force in order to smooth income imbalances and prevent the negative consequences of excessive working time. Although it was the latter argument which was the major reason that led to the European Working Time Directive in 2003, distributional issues should become a focus for its upcoming revision. There is an increasing chasm between the under-employed on the one hand, and the over-worked—both in intensity and in the extent of working hours—on the other hand. Continuing the long-term reduction in work time, which has taken place since the mid-19th century, can be one way to counter many of the pernicious effects of the financial and economic crisis since 2008. It may contribute to lowering unemployment rates and to distribute paid work more equally. Improved work-life balance, positive health effects, and increased productivity count among its advantages on the individual level. Procedurally, work time reduction is a flexible instrument that can be achieved in several ways in the varying national systems of employment relations: It can be negotiated within collective bargaining systems or by legislation. Increasing the overtime premium paid by employers and putting all-in-contracts under strong legislative control can contribute to effectively reducing working hours. Meanwhile temporary reductions in work time can have positive effects, for instance in weathering transient output shocks (Herzog-Stein *et al.* 2013).

The persistent gender gaps and labour market segregation need to be addressed (see European Commission 2016). Women face lower hourly incomes and are employed in part-time work and in non-standard occupations more often than men. They are concentrated in low-pay sectors. They carry a disproportionate share of unpaid care work. Deep labour market segregation still persists, contributing to gender gaps in pay, pensions, decision-making, and wealth. Even though the financial and economic crisis since 2008 affected men more strongly initially, in the medium run women were hit harder by weak labour markets, as well as by the effects of austerity and cutbacks in social security systems. Legislation thus has to contribute to establishing equal working conditions and equal pay for the same work in all sectors and professions. Regulating wage transparency and conducting pay audits on the company level can play an important role for this goal. Women are not only over represented in part-time positions, but generally in low-wage and non-standard occupations. Although increasing minimum wages can help reduce income inequality and decrease poverty, more has to be done. Both men and women need to be able to combine a (shorter) full-time work position with care responsibilities, in order to combat the gender gaps in full-time and part-time positions. Parental leave

arrangements for the exclusive use of fathers have to be intensified. Additionally, public investment in childcare opportunities and all-day schools can lay the basis for the opportunity to participate in the labour market.

On the second point concerning public finances the role of the welfare state needs to be strengthened and the progressivity of tax systems increased.

Taxation and spending policies are essential tools to reduce inequality in market incomes and to stabilise growth in times of economic crises. Regarding the nexus between government spending and inequality, this chapter has shown that material deprivation increased particularly in those European countries with rigorous austerity measures and spending cuts after the crisis. Since the economic downturn has tightened the fiscal leeway across Europe, maintaining essential social services has become increasingly challenging. This underlines the importance of combatting poverty and material deprivation by the fiscal redistribution of income and wealth without damping economic growth. Both the OECD and the IMF (2015) attest that redistribution via taxes and transfers can foster, or at least does not harm, economic growth. Yet, tax structures in European countries are less progressive today compared to some decades ago. Increased progressivity in the taxation of incomes is not only a question of introducing higher marginal tax rates on high incomes; the tax base also needs to be broadened. Most of the tax exemptions and deductions in place today disproportionally benefit high-income and wealthy households. In order to re-balance the contribution of capital and labour to financing the welfare state, and with the aim of broadening the tax base, these exemptions should be abolished. Additionally, tax compliance has to be improved across Europe.

Abolishing bank secrecy and implementing systems for the automatic exchange of information on asset ownership between European countries are necessary preconditions for an effective taxation of undeclared income and of wealth. Globalisation and digitalisation have made it easier for companies and individuals to shift their tax base in order to avoid tax payments—often legally. Due to profit shifting, particularly by multinational companies, the EU lacks billions of Euros in their budgets each year. However, illicit activities like money laundering, extortion, or terrorism financing also benefit from secrecy jurisdictions. The ETUC calls for establishing a European Tax Investigation Agency, and full support of the OECD's Base Erosion and Profit Shifting (BEPS) initiative by European Union countries. In order to ensure a fair and effective taxation of income and wealth that makes wealthy individuals and corporations pay their share, international cooperation and transparency have to be strengthened.

On the expenditure side, social spending needs to increase to counteract rising poverty rates and rates of material deprivation since the financial and economic crisis. As the related Europe 2020 headline indicator has become even worse since the beginning of the crisis, the coverage of social protection has to be extended and benefit levels raised to guarantee a standard of living above the poverty line. It is the essence of the European welfare state to provide social transfers and especially social services to the whole population and not only to the poor. Thereby it ensures social insurance over the life cycle, combats poverty effectively and secures the willingness to contribute to the welfare system. Although expenditures for social security, health and education are particularly effective in combatting inequality (see for example Guger/Rocha-Akis 2016), the narrow fiscal leeway and austerity policies hamper the important welfare state objective of a fair distribution.

Wealth inequality has to be reduced. Wealth is much more unequally distributed than income and there is no evidence of an upcoming trend reversal. On the contrary, intergenerational wealth transfers, higher returns on larger wealth, and imbalances in the taxation between labour and capital might even increase and reinforce wealth inequality in the future (Piketty 2014). Wealth concentration does not only have detrimental effects for economic growth, but also for social stability. Taxing wealth is particularly well-suited to improve distributive justice, finance government spending, and strengthen economic growth at the same time. The OECD, the IMF and the European Commission (2015) recognize recurrent taxes on residential properties as an underexploited, yet growth-enhancing, revenue source with a tax base that is hard to move and to conceal. Furthermore, property taxes can easily be made progressive, for example *via* exceptions or by raising the tax rate with the value of the property. From an administrative point of view, transaction taxes are appealing, as transactions are easy to observe and the IMF emphasizes that, as a consequence, compliance rates are expected to be high. The most prominent proposal with respect to reducing wealth inequality has been made by Thomas Piketty (2014). He suggests a global tax on capital ownership, by which he refers to an annual tax that uses net wealth as the tax base.

Finally, social mobility should be enhanced through taxes on inheritances. In particular in order to promote intergenerational mobility, inheritance taxes are an effective measure. Substantive taxes on large inheritances contribute to decreasing wealth and income inequality and to equalizing opportunities for the next generation. While most European countries do levy inheritance taxes, there is room for improvement in other member countries.

All in all, Europe needs more and better employment, a higher wage share to stabilize growth, and a lower dispersion of incomes. Additionally, financing redistributive welfare states via the taxation of high wealth and income, and inheritances promotes economic growth and increases social stability of societies.

## 2.4. Special topic: How to foster a strong European social model which enables sustainable prosperity?

The increasing frustration of many citizens with the outcome of European economic policy becomes more and more visible. A watershed moment for this sentiment was the Brexit referendum. A few years before, the former French President Nicholas Sarkozy had already sensed that feeling and launched the "Commission on the Measurement of Economic Performance and Social Progress" (CMEPSP, see Stiglitz *et al.* 2009), led by Joseph Stiglitz, Amartya Sen and Jean-Paul Fitoussi. The basic assumption was that a growth-oriented economic policy was not sufficient to obtain social progress and individual well-being. The implicit question raised by the CMEPSP was: "How to facilitate evidence/indicator-based well-being oriented economic policy?" And the answer was that we need a broader set of societally relevant targets, measured by a new set of indicators.

The CMEPSP's final report kick-started various projects whose aim was to overcome the predominantly narrow approach of economic policy: The OECD launched the "How's Life?" Initiative (2011), the European Commission published a communication titled "GDP and Beyond" (2009), leading to intensive work by Eurostat to provide a new dataset on "Measuring Progress, Well-Being and Sustainable Development" (2011). At the national level, various related projects were initiated, for example the joint report of the French and German economic expert councils (CC 2010), a commission of the German Parliament (2013) or the Austrian yearly report "How's Austria?", first published in 2013 (Statistik Austria 2013). In parallel, on the global level, the UN launched a process in 2010 to improve the millennium development goals targeted at developing countries, which had started in 2000 to enable "people across the world to improve their lives and their future prospects" (UN 2015: 3). In 2013 this process was brought together with the sustainability agenda known as "Rio +20", leading to the "SDGs", the Sustainable Development Goals. At the European level, the European Council launched the EU Sustainable Development Strategy already in 2001. To monitor the continuous improvement of quality of life for current and future generations, Eurostat publishes a report every two

years (the last one in 2015, see Eurostat 2015) containing a large set of Sustainable Development Indicators, which will be analysed below in more detail.

All of these initiatives share the assumption that we need to overcome the predominant, narrow focus on specific economic goals like GDP growth, and aim instead at a broader set of economic, social and environmental targets. The CMEPSP highlights the importance of bringing these dimensions together by suggesting that "those attempting to guide the economy and our societies are like pilots trying to steering a course without a reliable compass" (Stiglitz *et al.* 2009: 9). If we had had better metrics at our disposal, we could have avoided some of the financial bubbles which triggered the economic crisis and we would be more conscious of the looming social and environmental crises. Regarding "the pilots' destination", the CMEPSP argues for high and sustainable well-being. While "economic resources" and "non-economic aspects of peoples' life" are decisive for current well-being, sustainability "depends on whether stocks of capital that matter for our lives (natural, physical, human, social) are passed on to future generations" (*ibid.*: 11). Furthermore, "diversity of peoples' experiences" has to be captured by taking into account distributional issues and not only measuring the average levels of well-being.

As a consequence, the metrics should be selected based on these assumptions. However, the CMEPSP is rather vague regarding the process of how to reach the destination (policies) and the means to get there (governance). However, these issues – destination, course, metrics and means – are highly interrelated. Consider, for instance, the current setup in the European Union: The destination is laid out by the Treaty on European Union (TEU), where the overall goal is stated as "the well-being of its peoples" (Art. 3 (1)). This is further specified in paragraph 3, which contains parallels to the CMEPSP (sustainable development of Europe, social progress, quality of the environment). It should be noted here, however, that this paragraph already contains the problematic logic which made the CMEPSP necessary, since it implicitly assumes that economic growth already covers material well-being which only needs to be augmented by other targets (price stability and a highly competitive social market economy). Besides the TEU, there are further objectives that are politically set, such as the European 2020 targets, fiscal targets, the annual priorities set out in the Annual Growth Survey (AGS) and others, none of which are directly linked to the well-being of the people but rather constitute constraints for sustainable economic development. Especially since the economic crisis, European policy makers tend to focus less on the overall objectives and more on the obstacles to macroeconomic stability, leading to a situation in which metrics such as the Scoreboard to detect macroeconomic imbalances and fiscal indicators receive far more

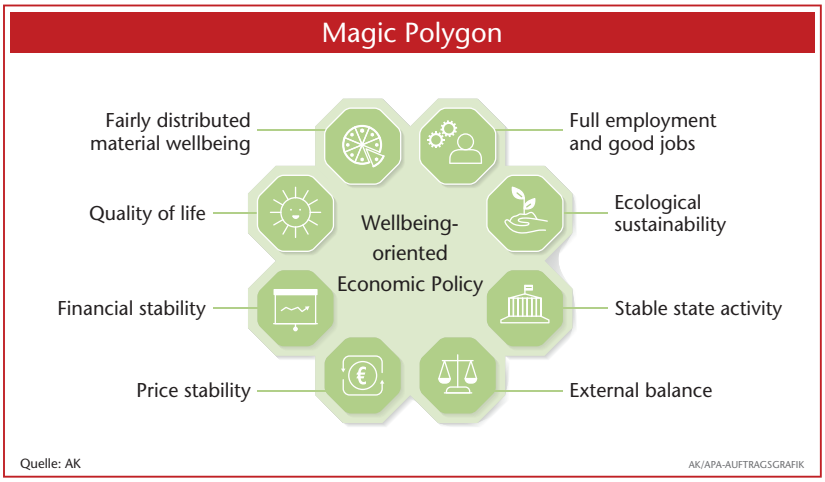
attention than indicators of well-being. As the Lisbon goals and the targets set out in the TEU enjoy much higher public support than the technocratic criteria of the Scoreboard, such a focus is particularly dangerous for the political backing of European institutions as a whole, which depend more on output-legitimacy than national institutions.

In such a setting, it is likely that, in practice, economic policy-making does not pay sufficient attention to the most important objective of high and sustainable well-being. We therefore need governance reforms that put well-being first. This needs to be further specified by a framework of more concrete goals, backed by indicators to measure progress and a process to set discretionary priorities based on the current economic and social situation. At least in Germany a similar economic policy framework used to exist (the Stability and Growth Law put in place in 1967), which was called the "magic square" and based on four main policy goals: steady economic growth, price stability, a high level of employment, and balanced economic relations with other economies. Since some targets are in tension with others (most prominently low inflation and full employment), the "magic" task is to achieve these goals at the same time as much as possible, while taking into account the current economic situation.

Today, the magic square needs an update. For Germany, Sebastian Dullien and Till van Treeck proposed a magic square to foster sustainability, with the overarching policy goals economic, fiscal, ecological and social sustainability (Dullien and van Treeck 2013). In order to focus on well-being, we propose here a magic polygon that takes into account 1) the critique of GDP raised by the CMEPSP, 2) the financial crisis, 3) the higher concern regarding public debt and 4) the higher demand for job quality. We thus propose the following goals as the main policy goals: fairly distributed material well-being, full employment and good jobs, quality of life and ecological sustainability. Furthermore, we propose four other subsidiary targets that aim at providing a stable economic framework: financial stability, stable state activity (a stable or increasing level of public assets and long-term stability of public finances, see Dullien and Van Treeck 2013), price stability and an external balance.

The next step is to identify indicators that can measure the progress for each goal. To some extent we can draw on the Europe 2020 indicators for the four main policy goals and the Scoreboard to measure macroeconomic imbalances for the other targets addressing economic constraints. Statistik Austria has developed a viable set of 30 indicators to operationalize the CMEPSP recommendations and include Europe 2020 in a long process with a lot of national stakeholders. This set could be adapted to measure the main policy goals of the

Figure 37. **Well-being oriented economic policy making based on the Magic Polygon**




*Source:* AK-Wien.

Magic Polygon (Feigl 2016). Concerning the other four goals, the indicators on the current account balance, net international investment position (both on external balance), private sector debt and total financial sector liabilities (both on financial stability) can be taken from the Scoreboard. They should be complemented by the unadjusted equity to assets ratios of banks, the public structural balance with and without net investment, the consumer price index and/or GDP deflator and a structural current account balance.

Maybe the most important step is to find an economic governance structure which allows to make the appropriate decisions in regard to economic, social and environmental conditions. Some progress has been achieved here with the introduction of the European Semester. What is missing is a broad debate at the beginning of the European Semester, that is, starting already before the AGS, at least within the Parliament, the European Economic and Social Committee, the Macroeconomic Dialogue and the Council, based on the proposed indicator set provided by Eurostat. The aim is to overcome the narrow view on national economies and complicated, to some extent counter-productive rules focused on a tiny segment of the overall magic polygon and its indicators. Instead, the focus would shift to a policy which is oriented towards well-being for the EU as a whole. Instead of further narrowing the economic debate by creating expert councils responsible only for specific areas of economic policy, a council responsible for well-being with economic, social and environmental experts could

enrich the debate by providing a report with a qualitative assessment of the targets, indicators and the current situation.

Taken together, the proposals would allow for a much more coherent policy focused on the overall goal of well-being. However, as the SDGs are some kind of mixture between the four main policy goals proposed plus some of its indicators lifted to the goal-level instead of "only" being an indicator, our proposal can be easily modified to better suit the SDGs. A similar exercise has been done by Costanza *et al.* (2016), who try to transform the SDGs into a hybrid Sustainable Wellbeing Index as an alternative to GDP, underpinned by a "model of the entire system of the economy-in-society-in-nature" to achieve the SDGs at both the national and global level. As Europe is getting more globalized and the SDGs gain momentum at the global level, such an adoption could help to focus attention on an integrated policy that fosters well-being and social progress. However, as we are sceptical concerning indices aggregating a lot of different information to just one number which cannot be interpreted easily; as global governance is and will continue to be much weaker than the European one; and as the SDGs do not take the growing importance of goals linked to economic constraints (which have been at the centre of the European Governance reform the last years) into account, a Europe-specific approach as described above seems to have better changes of bringing a reorientation towards well-being and social progress in the EU. Finally, since the predecessors of the SDGs already date back to the 1970's and failed to gain importance due to a lack of political support, and enforcing mechanisms by the UN as well as technical problems (see Feigl *et al.* 2013), there is the danger that political support will not go beyond lip service.

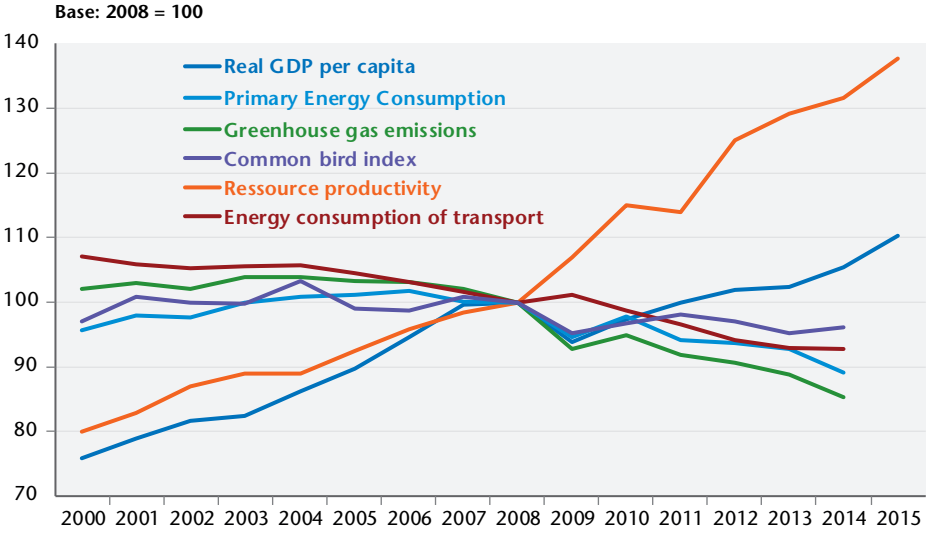
### a) Eurostat's Sustainable Development indicators

Out of 130 indicators, Eurostat has chosen 10 headline indicators in order to monitor sustainable development. Figure 38 and Figure 39 show the evolution of these indicators between 2000 and 2015 for the European Union. Of course, the trajectories of these indicators should not be compared to each other as the goals differ.

Out of the 10 indicators, 3 show a deterioration since 2008: the risk-of-poverty or social exclusion is increasing between 2008 and 2014 after a decrease between 2000 and 2008; the common bird index, which measures the population abundance and the diversity of a selection of common bird species is decreasing between 2008 and 2014 after a stagnation between 2000 and

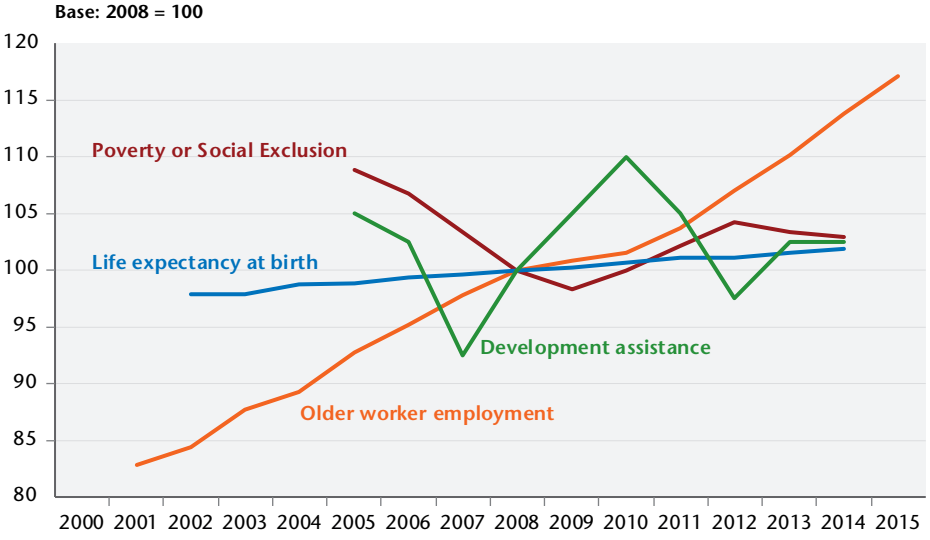
2014; development assistance as share of gross national income has also been decreasing since 2008.

Figure 38. **Evolution of headline sustainable development indicators, 2000-2015**




*Source:* Eurostat.

Figure 39. **Evolution of headline sustainable development indicators, 2000-2015**




*Source:* Eurostat.

The other 7 indicators show some signs of improvement. Economic development has improved. Real GDP per capita has recovered from its 2008-2009 decline. Moreover, there has been a decoupling of economic growth from resource use which shows in the rapid rise of resource productivity between 2000 and 2015. Likewise, greenhouse gas emissions have been on the decline since 2000 putting the EU on track to surpassing its 2020 emissions target (-20% since 1990). Primary energy consumption has also declined since 2008 after a rise between 2002 and 2006. Figure 38 also shows that energy consumption of transport has been on the decline since 2000. Despite increasing risk of poverty or social exclusion, other social development indicators have improved. Older (55-64) worker employment rate has greatly increased between 2001 and 2015 from 37.7% of this population to 53.3%. Moreover, life expectancy has increased moderately since 2000: between 2002 and 2014, a girl born in the EU gained almost three years of life expectancy from 80.9 years to 83.6 while a boy gained three and a half years from 74.5 years to 78.1.

Average European Union statistics can hide important differences between EU countries. The following figures show cross country evolution of some of the most important headline indicators.

Figure 40 shows a scatter plot of the evolution of poverty[1] or social exclusion and real GDP per capita between 2008 and 2014. The figure shows that countries which experienced a strong decrease in real GDP per capita (Greece, Cyprus, Spain) also experienced an increase in poverty or social exclusion. However, countries which experienced relatively strong increase in GDP per capita differ in the evolution of poverty and social exclusion: on one hand, Sweden, Estonia and Malta have seen poverty or social exclusion increase by between 13 and 19%; on the other hand, Bulgaria, Slovakia and Poland have seen poverty or social exclusion decrease by more than 10%. Overall, one can see, as expected, a negative relationship between the evolution of real GDP and the evolution of risk of poverty or social exclusion across EU countries.

Figure 41 shows a scatterplot of the evolution of greenhouse gas emissions and primary energy consumption across European countries between 2008 and 2014. Unsurprisingly, both are correlated. Estonia appears to be an outlier with increasing emissions and primary energy consumption. The evolution of both indicators is negatively correlated to the evolution of real GDP, which partly explains why it appears that Greece is doing so well. Other countries with a

1. Note that this is not the anchored risk of poverty and therefore, the median income changes from year to year.

positive evolution on these environmental indicators are Italy, Romania and Croatia. On the other side, Germany, Poland, Latvia and Malta have not decreased emissions or energy consumption by much.

Figure 40. **Evolution of real GDP per capita & risk of poverty or social exclusion, 2008-2014**

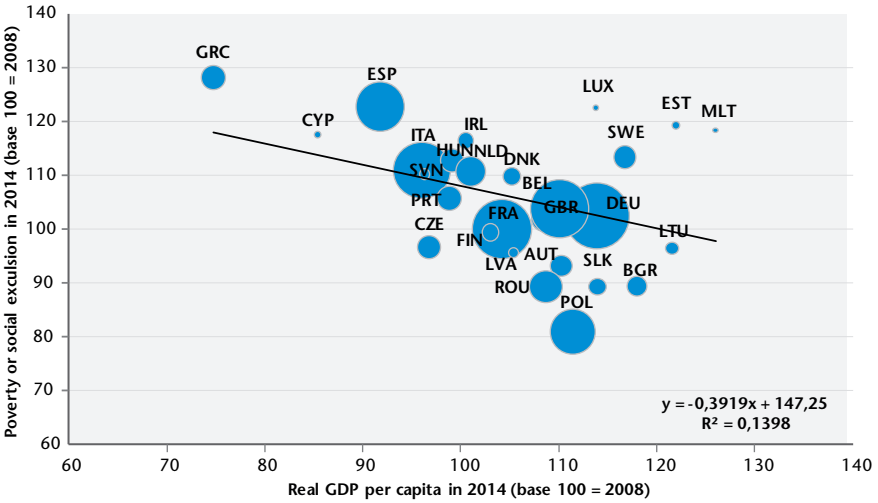
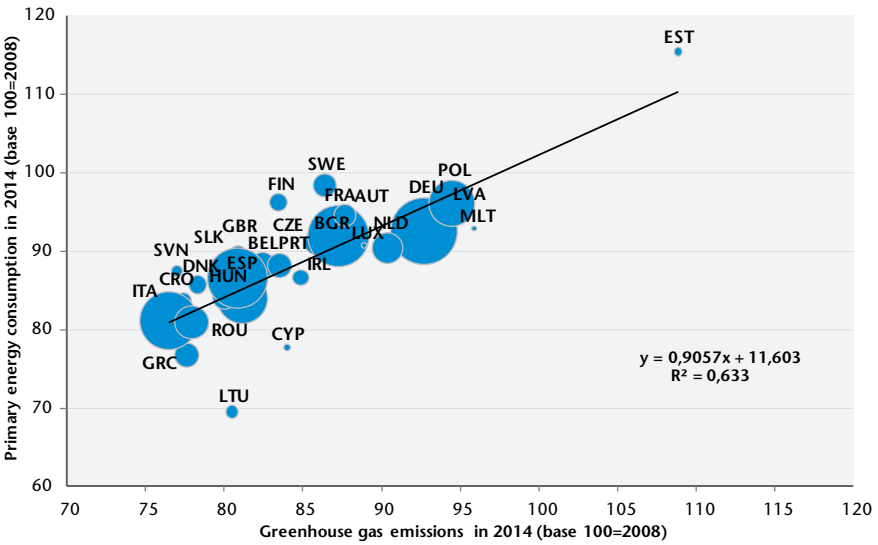


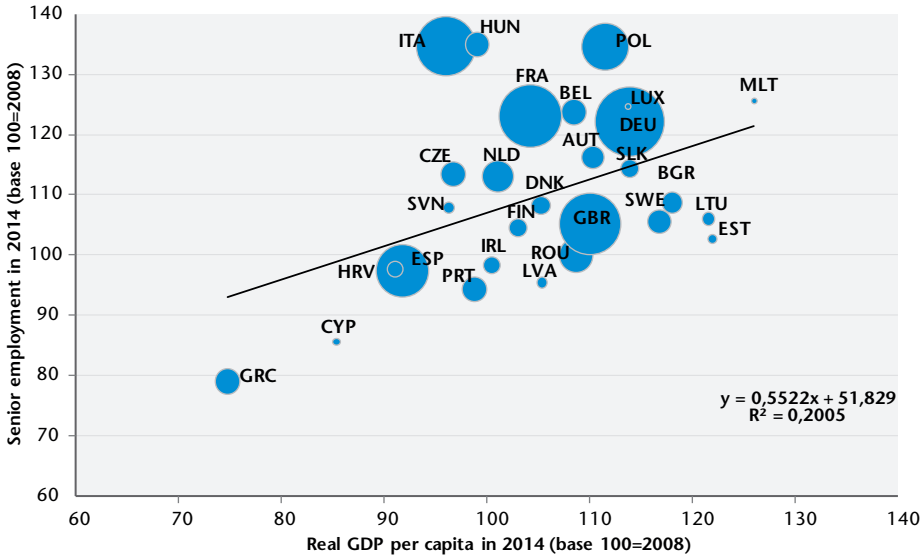

Figure 41. **Evolution of greenhouse gas emissions and primary energy consumption, 2008-2014**




*Note:* The bubbles depend on the population size in the different countries.
*Source:* Eurostat.

Figure 42 shows the evolution of senior employment (55-64 years) and real GDP between 2008 and 2014. Countries with higher GDP growth tended to increase senior employment the most. The causality can run both ways: higher GDP growth facilitates employment growth but on the other side the increase in senior employment directly affects growth.

Figure 42. **Evolution of real GDP per capita and senior employment, 2008-2014**




*Note:* The bubbles depend on the population size in the different countries.
*Source:* Eurostat.

# PROPOSALS FOR A POLICY MIX IN THE EURO AREA

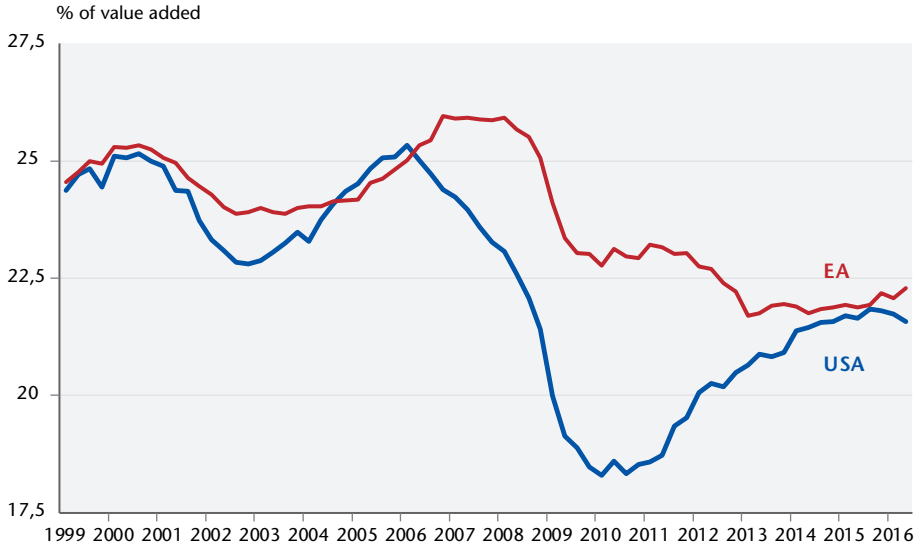
## 3.1. ECB monetary policies: real effects, financial risks?

Since 2009, central banks have implemented expansionary policies to support activity and prevent industrialized economies from falling into deflation. In a recessionary environment, policy rates reached an effective lower bound (ELB) which has led central banks to resort to unconventional measures. These policies have resulted in an expansion of their balance sheets, reflecting liquidities provided by central banks to the financial system and asset purchases. These actions have raised many questions about their impact on real activity because recovery has been weak in the Eurozone, notably compared to the United States and the United Kingdom (see chapter 1). In the following, we focus on ECB policies' impact on investment (section a) and on the impact of credit conditions on investment (section b). Questions have also been raised concerning the possible responsibility of monetary policy in generating financial bubbles (section c). The end of QE finally raises the issue of next engine of growth for the euro area (section d).

### a) Impact of ECB policies on investment

There are several key points about investment in the Eurozone which should be kept in mind. Investment accounts for around 20% of the euro area GDP. Total investment in volume has decreased by 13% from a peak observed in 2008Q1 until 2015Q4. The investment rate, measuring the ratio of total investment over value added, was at 26% in 2008Q1 and then fell to 21.7% in 2013Q1 (Figure 43). It has since stabilized around that value despite the ongoing recovery of economic activity. The difference with the situation in the United States is striking. The fall started earlier and was more abrupt in the US but it recovered faster and significantly – from 18.3% at the end of 2010 to 21.5 at the end of 2015.

Figure 43. **Total investment rate in the Eurozone and in the United States**




*Note:* total investment includes public, households and business investments.
*Sources:* Eurostat, Bureau of Economic Analysis.

Beyond this global picture, the composition of investment is also informative. Two features are worth mentioning:

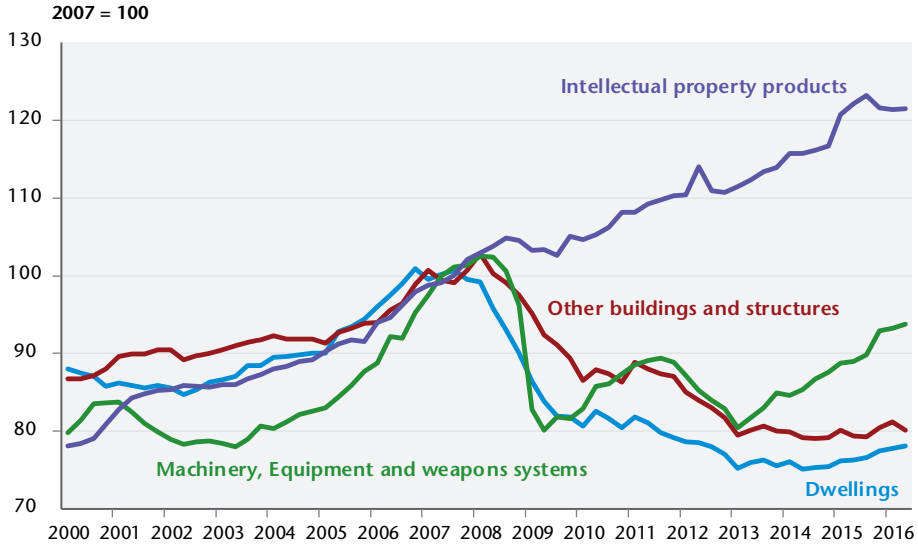
1. Since 2008Q1, the decrease of investment concerned all components of investment except intellectual property products[1] (Figure 44). The bulk of the decrease stems from the construction sector (residential and other construction) since its contribution amounts to 12.4 points—with nearly half from residential investment—from a 13pp decline. The contribution of the investment in machinery and equipment was lower (-3.3 points) while it was positive for intellectual property products (+2.8).

2. Investment was badly hurt by the crisis almost everywhere in the euro area but the divergence in the investment path between countries in the core and in the periphery is striking (Figure 45). The negative cumulative contribution of the decrease of investment in Italy, Spain, Portugal and Greece is close to 11 points (-4.8 for Italy, -4.0 for Spain and -2.2 for Portugal and Greece). Investment in Germany contributed positively (+1.1) while the contribution was negative for France (-1.7). For most Eurozone

1. Size matters, and it must be reminded that the flow of investment in property rights is very small in comparison with investment in the construction sector. The same comment holds from the geographical breakdown.

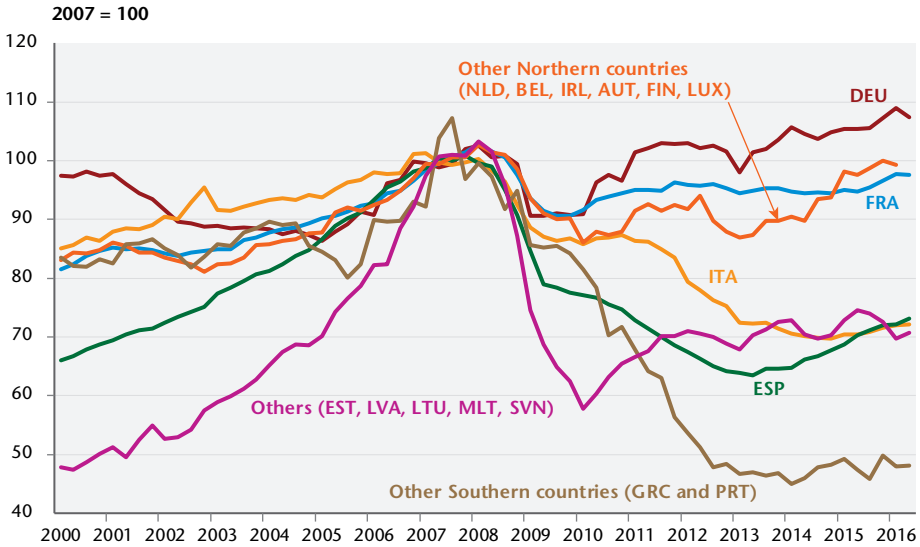
countries, investment in volume terms is still below its pre-crisis level. The only exception is Germany, while it is close to its pre-crisis level in other Northern euro area countries (Belgium, Finland, Austria and Luxemburg).

Figure 44. **Investment in the Eurozone – Asset breakdown**




*Source: Eurostat.*

Figure 45. **Investment in the Eurozone – Geographical breakdown**




*Source: Eurostat.*

Assessing the effectiveness of monetary policy to spur growth cannot be inferred merely by considering the correlation between investment (or another GDP component) and monetary policy stance. The stance of monetary policy has been very expansionary in the euro area since the end of 2008 when the ECB first cut its policy rate to the ELB, and then resorted to a large set of exceptional measures to address the liquidity problems in the banking system, the sovereign debt crisis, the slump in economic activity and the risk of deflation. At the same time, we have just documented the investment gap. From this negative correlation, it might be tempting to conclude that monetary policy failed to provide support to investment despite the sharp stimulus effort.

Yet such a conclusion would confuse correlation and causality. Things might have turned worse without the ECB's action. To assess more robustly the effectiveness of monetary policy, we need to resort to a counterfactual analysis.[2] The question is: What would have been the investment trajectory had the ECB not decreased the policy rate and not implemented unconventional monetary policy? To do so, we first estimate an equation linking investment to its standard determinants as identified in the literature. It is generally supposed that in the *long run*, the investment rate (gross investment divided by the gross value added) depends on the margin rate and the cost of capital. Firms tend to increase investment when their profitability increases and when the cost of raising funds – either through the banking system or from financial markets – decreases. Considering the investment rate as the endogenous variable implies that total investment is also related to demand. The *short run* dynamics of investment may also be influenced by total demand, the change in the cost of funding and the rate of capacity utilization. The role of demand is fundamental as firms invest because of the return on investment but subject to an expectation that increasing their capacity will match future demand.

Based on the estimated determinants of the investment rate and their coefficient (see appendix 1 for details), we can simulate the path of the investment rate in two alternative scenarios from 2008 onwards and compare them with what actually occurred. The gap between realized and simulated paths of investment gives insights on the effectiveness of ECB monetary policies.

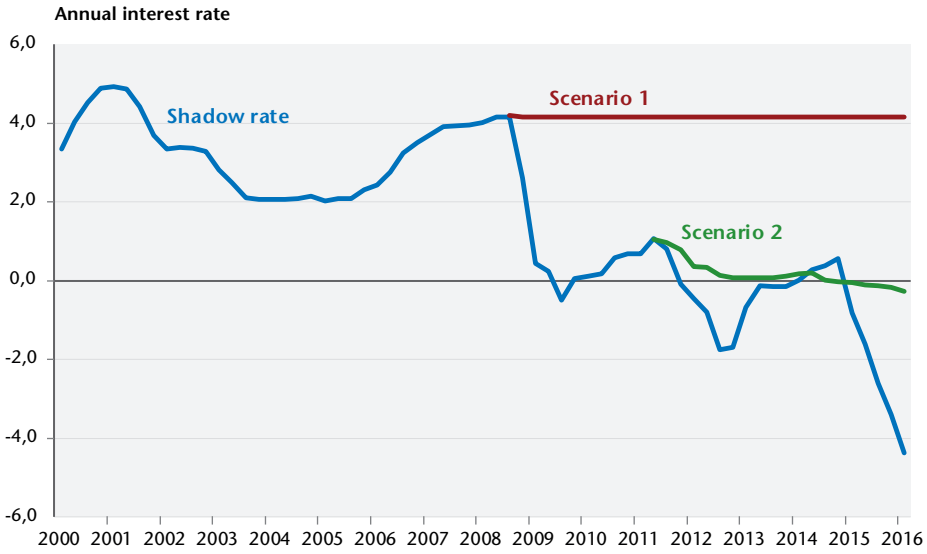
In the first scenario (the status-quo), we assume that the interest rate is fixed at its 2008Q3 value, i.e. at 4.2%, before the cut started in September 2008. This scenario builds on the (strong) assumption that the ECB implemented no policy

2. For a recent use of counterfactual analysis to assess the impact of monetary policy on GDP growth, see Pesaran and Smith (2016).

at all after the global financial crisis. The gap between the simulated status-quo and the actual path of investment highlights the impact of standard –the reduction in the interest rate– and non-standard monetary policy measures on investment. This scenario does not distinguish between conventional and unconventional policies. The second scenario deals with the impact of unconventional measures only. From 2011Q3 on, we simulate the investment rate under the assumption that the shadow rate (including conventional and unconventional policy measures in a single measure of monetary policy) has remained equal to the EONIA rate (which proxies for the conventional stance)[3]. Thus we simulate the investment path as if there had not been any unconventional policy measures, but only conventional ones.

The different policy rates are illustrated on figure 4. It shows the substantial policy gap between actual policy (depicted by the shadow rate computed by Wu and Xia) and scenario 1, hence highlighting the very expansionary policies which have been implemented by the ECB. The gap between actual policy and standard (or conventional) measures of scenario 2 is less impressive, for unconventional measures by the ECB have been strong only recently.

Figure 46. **Monetary policy stance under alternative scenarios**

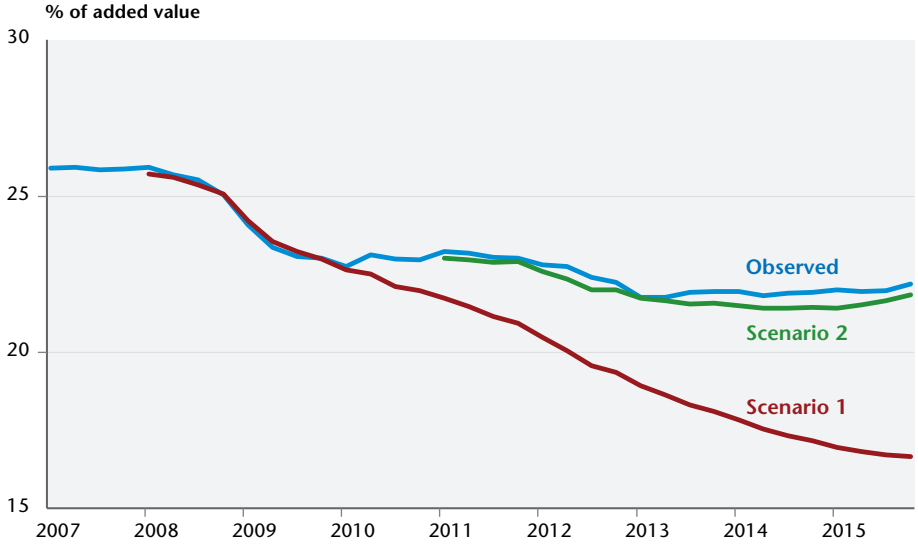



*Sources:* ECB, Wu and Xia (2016).

3. EONIA (Euro overnight index average) is a one-day interbank rate.

Counterfactual exercises are reported in Figure 47. They suggest that monetary policy has effectively sustained the investment rate. The main support comes from the decrease in the interest rate implemented during the crisis, hence from standard measures of monetary policy. Without them, the investment rate would have been significantly lower than its current level, indicating that the crisis would have been much more severe. On average between 2008Q1 and 2015Q4, the investment rate would have been 2.3 points below its actual level. In 2015Q4, it would have been 5.5 point lower than its actual level. The role of other unconventional monetary policy decisions may be gauged through the simulation of scenario 2. It suggests that the investment rate has been supported by non-standard measures but that the effect has been much less significant. In 2015Q4, the investment rate would have been just 0.3 point lower than its actual level.

Figure 47. **Investment rate under alternative scenarios**




*Sources:* Eurostat, authors' simulations.

This result is not surprising for at least two reasons. First, the aim of the unconventional measures was not only to support investment. Second, there is a delay between monetary policy stimulus and aggregate effect which are estimated around 18 months and 2 years. As non-standard measures have been implemented later than standard ones, their cumulative effect may not have been reached yet. Besides, it can be considered that the role of unconventional monetary policy is not fully captured in scenario 2. The non-standard measures

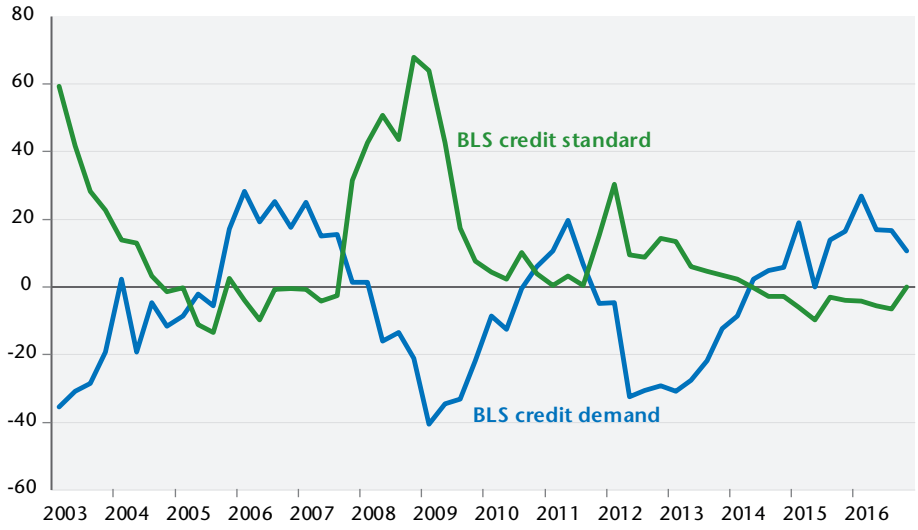
have also contributed to the very low level of the EONIA so that taking into account the difference between the EONIA and the shadow rate is not a perfectly strict measure of unconventional measures.

### b) Investment and credit conditions

Though effective, as the simulations seem to show, the role of monetary policy may have been mitigated by other negative determinants. ECB's decisions only impact on some variables in the financial and banking markets but the ECB has not a perfect control on the global financing conditions of firms. Investment is not only influenced by interest rate but also by demand factors, including the role of uncertainty, and by banks' behaviour, hence by credit supply.

Drawing on the Bank Lending Surveys (BLS) provided by the ECB, Figure 48 illustrates the tightening in credit supply (labelled "credit standard" in the survey), especially during the subprime crisis in 2008 and 2009 and during the sovereign debt crisis in 2012. Nevertheless, this tightening in credit conditions is not the only explanation behind the low credit volumes supplied to the private sector. Another explanation is that the financial crisis was a negative demand shock and that firms, especially SMEs, have lowered their credit demand. Moreover, this negative demand shock has been amplified by pro-cyclical fiscal policy. This low credit demand is also illustrated in Figure 48

Figure 48. **Demand and supply factors in the credit market in the euro area**




*Source:* ECB (Bank Lending Survey).

between 2008 and 2010 and again between 2012 and 2014. Since then, credit demand has improved though it remains volatile. A simple correlation analysis between the growth rate of the investment rate and the credit conditions suggests that both the supply and demand sides of the credit market matter. The correlation between investment and credit demand is 0.55, while it is -0.58 between investment and credit supply.

### c) Monetary policy and financial bubbles

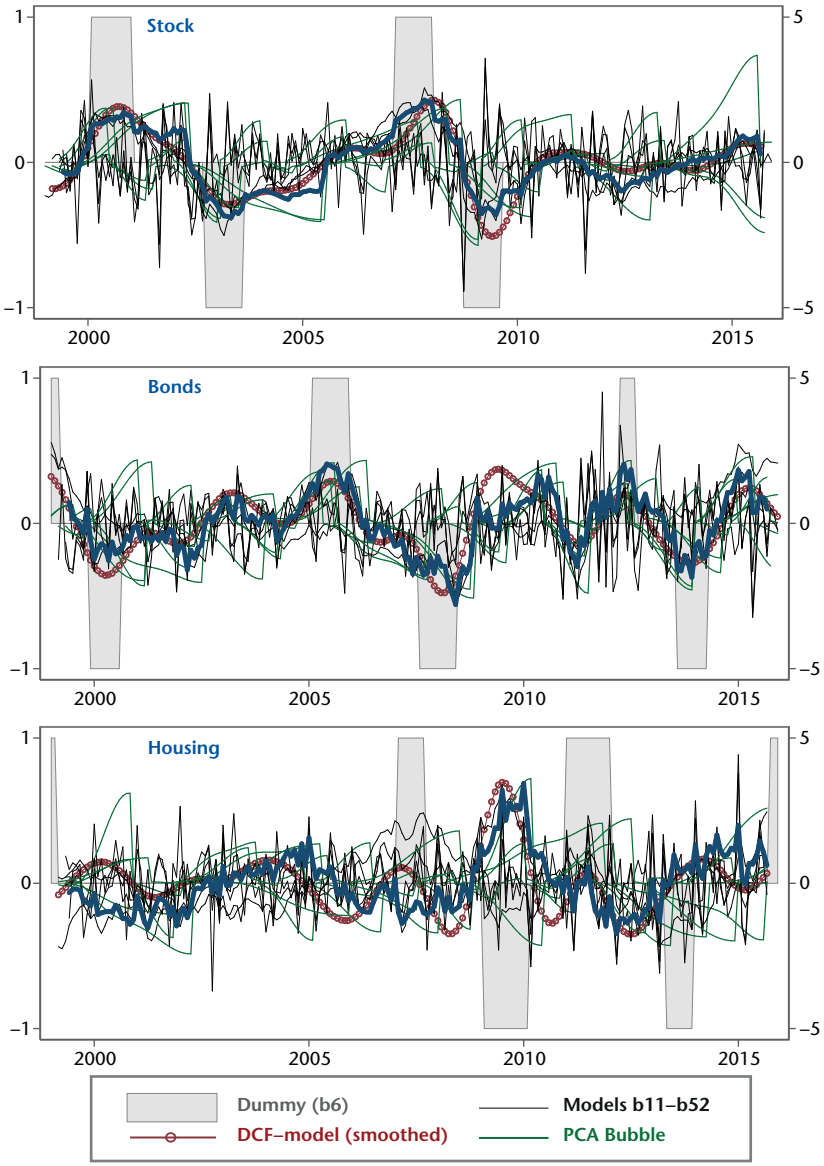
Since 2009, the ECB has implemented expansionary monetary policies to support economic activity and prevent the Eurozone from deflation. The efficiency of unconventional monetary policy measures have been extensively discussed in the literature since 2009[4] with most empirical studies focusing on the impact on asset prices. These studies suggest that expansionary monetary policy reduces market yields and increases asset prices.

More recently, the focus has turned to the potential adverse effects of expansionary monetary policies. Some financial commentators swiftly made out asset price bubbles when stock prices resumed their rise. This debate echoes the critics raised by Taylor (2009) who suggested that the sustained period of low interest rate in the United States between 2001 and 2004 fueled the boom in the housing market and caused thereafter the subprime crisis. However, not all increases in asset prices are bubbles. It is then needed to identify which part of the change in asset prices may entail a risk for financial stability and which is related to the normal response of asset prices to monetary policy. Disentangling the wheat from the chaff is a tricky issue as the fundamental and bubble components of asset prices are not observed and can only be identified in reference to a given theoretical and empirical model.

On the one hand, rational expectations models provide a first theoretical framework where the fundamental value is determined by the discounted sum of future cash-flows and where rational bubbles (movements in asset prices which are not related to the fundamental component) may also arise. Bubbles may also be represented in models where not all agents behave rationally.[5] An empirical literature has also relied on statistical definitions of bubbles where the latter are considered as excessive—positive or negative—changes in asset

4. See Borio and Zabai (2016) for a recent survey.
5. See Scherbina (2013) for a survey on how bubbles arise in rational expectations models or behavioral models.

Figure 49. **Bubble series and the estimated PCA bubble indicator for each asset class**




*Note:* bold blue line plots the bubble indicator for each financial market; the circle red line plots the discounted cash-flow model; the shaded areas plot the statistical approach à la Bordo and Jeanne; and the thin black lines plot the 9 other series of financial bubbles . The left-hand scale corresponds to the statistical approach (shaded area): the dummy variable is equal to 1 for booms, -1 for busts, and zero in "normal" times. The right-hand scale corresponds to other series of bubbles. They are centered and reduced and the unit is one standard deviation.
*Source:* Blot, Hubert and Labondance (2016).

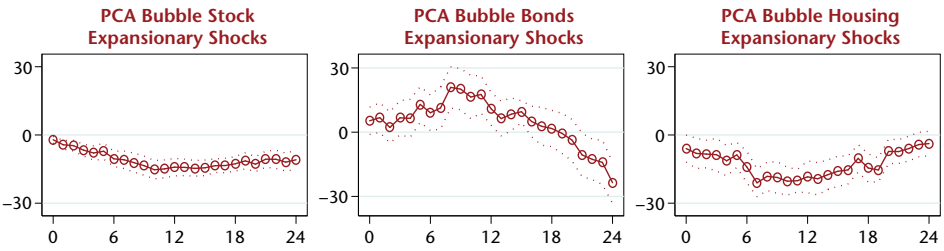
prices, or described boom or bust periods, identified either through a statistical filter or from methods determining turning points (peaks and troughs).[6]

As neither theoretical, nor empirical literature has reached a consensus on this issue, Blot, Hubert and Labondance (2016) propose an agnostic approach consisting in averaging the most commonly used models (see appendix 2 for details).

Financial bubble series are reported in Figure 49. They show that the recent increase in stock prices is not characterized by a financial bubble. As for the housing market, the size of the bubble component remains low in contrast with the period before the global financial crisis. Finally, the bubble component on the bonds market has declined since the onset of QE.

We assess the impact of unconventional monetary policy on the three bubble indicators using Jorda (2005)'s Local Projection method. Monetary policy shocks are measured following Romer and Romer (2004) and using the amount of assets purchased by the ECB for monetary policy purposes (the item 7.1 in ECB's weekly financial statements). Figure 50 plots the effect of unconventional monetary policies on the bubble components of stock, bond and housing markets over 24 months. It shows that, in contrast to the conventional view that loose monetary policy creates asset price bubbles, non-standard policies have a negative impact on the bubble components of stock and housing markets in the euro area. In line with the conventional view, we find that expansionary monetary policy has a positive effect on the bubble component of the bond market.

Figure 50. **Bubble responses to an expansionary shock to unconventional monetary policies**




*Source:* Blot, Hubert and Labondance (2016).

6. See Bordo and Wheelock (2007) or Jorda, Schularick and Taylor (2015).

Consequently, our results suggest, first, that it is not clear that the most recent period is characterized by bubbles, contrary to what is sometimes claimed, and second that there is no strong and stable causal link between monetary policy and asset price bubbles, except on the bond market. The evidence presented here suggests QE is neither fueling asset price bubbles nor is it a relevant instrument for central banks to control them.

### d) The Future of QE

The ECB's QE is close to its end. Until March 2017, two issues will arise. The first one relates to the availability of public assets for ECB's purchases. The second relates to the next driving force for the euro area.

As regards availability of public assets, it must be recalled that, despite its large size, ECB's QE has not exhausted euro area stocks of public debts, far from it. As illustrated in Table 9, ECB holdings of debt securities would represent 11.1% of total gross public debt of the euro area by the end of March 2017[7]. The ECB would hold, for example, 9% of Italian debt, 11% of French debt, 13% of German and Spanish debt, 15% of Finnish debt and 28% of Slovakian debt. The proportion of debt held by the ECB, though on an upward trend, is relatively limited in comparison with public debt holdings by other central banks in the world like the Federal Reserve, the Bank of England and the Bank of Japan. Indeed, the ECB would hold a smaller share of total debt in 2017 than the US Fed at the end of 2015, with its holdings of 13.5% of US public debt. The £375bn held by the Bank of England through its QE programmes[8] represented 22.5% of total debt issued by the British government. By the end of 2015, the Bank of Japan was holding more than a quarter of Japanese total public debt.

Now comparing QE purchases with euro area's financing needs[9] in 2015 shows that the ECB has not exhausted its purchasing limit of 33%. Indeed the total purchases of government public debt securities (excluding supranational purchases) by the ECB were €434.8bn in 2015 whereas estimates of financing needs amounted to €1,400bn. Even if securities are not purchased on the

7. Under a stable breakdown of purchases computed as the monthly average of purchases in 2015, we compute the expected amount and allocation of debt securities that could be held by the ECB in March 2017.
8. The QE in the UK started in March 2009 after the BoE announced £200bn purchases of Gilts. The programme came to a halt in October 2011 and resumed (it was then called QEII) to reach £375bn in November 2012.
9. Financing needs are calculated as the sum of new debt resulting from budget deficits and debt arriving at maturity.

Table 9. **Gross public debt and ECB holdings of sovereign**

| | Gross public debt (2015) Billion, national currency | Central bank holdings (31.12.2015) Billions national currency* | Central banks holdings (31.12.2015) as % of gross public debt* | Central banks holdings (PSPP+SMP) (31.12.2015) as % of gross public debt | Planned ECB holdings (31.03.2017) Billion euro * | Planned ECB holdings (31.12.2017) as % of gross public debt* |
|---|---|---|---|---|---|---|
| **BEL** | 437.7 | 15.9 (3.7) | 3.6 | 3.6 | 39.7 | 9.1 |
| **DEU** | 2 156.8 | 115.6 (26.6) | 5.4 | 5.4 | 289.1 | 13.4 |
| **EST** | 2.1 | 0.0 (0.0) | 0.0 | 0.0 | 0.0 | 0.0 |
| **IRL** | 203.7 | 7.6 (1.7) | 3.7 | 7.6 | 19.0 | 9.3 |
| **GRC** | 337.3 | 0.0 (0.0) | 0.0 | 4.6 | 0.0 | 0.0 |
| **ESP** | 1 087.3 | 56.8 (13.1) | 5.2 | 7.5 | 142.0 | 13.1 |
| **FRA** | 2 098.9 | 91.8 (21.1) | 4.4 | 4.4 | 229.4 | 10.9 |
| **ITA** | 2 174.4 | 79.2 (18.2) | 3.6 | 6.5 | 198.0 | 9.1 |
| **CYP** | 18.5 | 0.3 (0.1) | 1.5 | 1.5 | 0.7 | 3.8 |
| **LVA** | 9.4 | 0.7 0.2) | 7.3 | 7.3 | 1.7 | 18.2 |
| **LTU** | 15.8 | 1.1 (0.3) | 7.0 | 7.0 | 2.8 | 17.5 |
| **LUX** | 11.2 | 1.1 (0.3) | 9.9 | 9.9 | 2.8 | 24.8 |
| **MLT** | 5.6 | 0.3 (0.1) | 5.1 | 5.1 | 0.7 | 12.6 |
| **NLD** | 4 67.9 | 25.6 (5.9) | 5.5 | 5.5 | 64.0 | 13.7 |
| **AUT** | 2 91.2 | 12.6 (2.9) | 4.3 | 4.3 | 31.6 | 10.9 |
| **PRT** | 2 29.0 | 11.2 (2.6) | 4.9 | 10.2 | 28.1 | 12.3 |
| **SVN** | 32.4 | 2.2 (0.5) | 6.9 | 6.9 | 5.6 | 17.2 |
| **SVK** | 41.2 | 4.6 (1.1) | 11.2 | 11.2 | 11.6 | 28.0 |
| **FIN** | 1 30.3 | 8.1 (1.9) | 6.2 | 6.2 | 20.2 | 15.5 |
| **EA** | 9 758.4 | 434.8 (100.0) | 4.5 | 5.7 | 1 086.9 | 11.1 |
| **Supranationals** | | 60.1 | | | 150.26 | |
| **GBR** | 1 664.8 | 375.0 | 22.5 | | | |
| **USA** | 1 8189.0 | 2462.0 | 13.5 | | | |
| **JPN** | 1 197146 | 3 25001.9 | 27.1 | | | |

* PSPP only for the ECB. % of total sovereign purchases in brackets.
*Sources:* ECB, European Commission, OFCE.

primary market but on the secondary market, comparing assets purchases with yearly issuance of securities provides information on the liquidity impact of ECB decisions and thus on its ability to influence sovereign assets' prices. In the case of Slovakia (see Table 10), the ECB purchases amounted to 5.2 €bn in 2015 approaching 90% of Slovakian financing needs. If the ECB had realized its operations on the primary market, it would have acquired nearly all assets issued during the year. 10% would have been left to other investors forcing them to switch to other assets. With 115.6 €bn purchases of German bonds, the ECB has absorbed the equivalent of 66% of the country's financing needs. Supposing that ECB monthly purchases for 2016 are of the same amount as in 2015, the ECB would buy 79% of the German financing needs. To compare with the implementation of the QE I and QE II of the Bank of England, purchases realized in 2009 (resp. in 2012) have represented 97.2% (resp. 76%) of Gilt issuances.

Table 10. **Public financing needs and ECB yearly purchases of public debt securities**

| | Total financing needs in (€ bn) | | ECB PSPP purchases (€ bn) | | ECB PSPP purchases (in % of financing needs) | |
|---|---|---|---|---|---|---|
| | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 |
| **BEL** | 80.8 | 76.3 | 15.9 | 19.1 | 19.7 | 25.0 |
| **DEU** | 175.2 | 175.2 | 115.6 | 138.8 | 66.0 | 79.2 |
| **EST** | Na | Na | 0.0 | 0.0 | Na | Na |
| **IRL** | 20.8 | 16.7 | 7.6 | 9.1 | 36.4 | 54.4 |
| **GRC** | Na | Na | 0.0 | 0.0 | Na | Na |
| **ESP** | 231.9 | 236.2 | 56.8 | 68.2 | 24.5 | 28.9 |
| **FRA** | 376.3 | 395.9 | 91.8 | 110.1 | 24.4 | 27.8 |
| **ITA** | 349.9 | 323.7 | 79.2 | 95.1 | 22.6 | 29.4 |
| **CYP** | Na | Na | 0.3 | 0.3 | Na | Na |
| **LVA** | Na | Na | 0.7 | 0.8 | Na | Na |
| **LTU** | 3.1 | 2.8 | 1.1 | 1.3 | 35.8 | 48.1 |
| **LUX** | Na | Na | 1.1 | 1.3 | Na | Na |
| **MLT** | 0.5 | 0.7 | 0.3 | 0.3 | 52.9 | 50.0 |
| **NLD** | 73.7 | 56.6 | 25.6 | 30.7 | 34.8 | 54.3 |
| **AUT** | 25.2 | 24.9 | 12.6 | 15.2 | 50.1 | 61.0 |
| **PRT** | 35.9 | 31.3 | 11.2 | 13.5 | 31.3 | 43.1 |
| **SVN** | 3.5 | 5.5 | 2.2 | 2.7 | 63.0 | 49.0 |
| **SVK** | 5.2 | 6.8 | 4.6 | 5.5 | 89.6 | 81.6 |
| **FIN** | 16.9 | 17.5 | 8.1 | 9.7 | 47.9 | 55.4 |

*Note:* financing needs are calculated as the sum of new debt resulting from budget deficit and debt arriving at maturity.
*Sources:* ECB, IMF (Fiscal monitor, April 2015)

Another issue relates to the future economic outlook of the euro area. If growth continues to be weak (see chapter 1), the end of QE will come as a further drag on the euro area. However, another extension of QE, beyond March 2017, would be similarly cumbersome: it would highlight the weakness of economic growth in the euro area and it would be potentially inconsistent with the continuation of fiscal consolidation as the lack of safe assets would make it less easy for the ECB to implement its unconventional monetary policy.

To escape this trap – end or extension of QE – requires a better coordination between monetary policy and national fiscal policies. Two situations are possible. First, QE stopss but against the backdrop of weak economic growth, coordinated national fiscal policies must lead the policy mix and weigh on real objectives, like fighting unemployment, incentivizing innovations through adequate tax policies, and promote social and public investment with higher and well-targeted spending, rather than accounting objectives (like the fulfilment of fiscal rules)[10]. Second, QE may well be extended but national fiscal policies would also have to be active and deviate from current fiscal rules. In this second scenario, fiscal impulses could be lower than in the first; however, they would have to be positive in order to provide needed government assets for purchase.

In the current social and economic environment, the European fiscal governance is once again at stake. The application of fiscal rules has limited rooms for maneuver and it has forced the ECB to implement non-standard measures, then to extend them. Though these policies have certainly been somewhat effective at supporting investment, they ultimately require in return a change in the European fiscal stance. Unless new fiscal rules are adopted, a new expansionary coordinated impulse like under the Juncker Investment Plan will have to be provided.

## 3.2. Better coordination between monetary and fiscal policies: an agenda for governance reforms beyond the Juncker plan

The euro area faces slow growth in the short (chapter 1) and the long run (i.e. risk of secular stagnation, as discussed in iAGS 2016). Monetary policy, though partially effective in stimulating the real economy, is unable to generate the required growth alone at both horizons, but it can help governments to fund

10. In a recent ECB contribution, Vermeulen (2016) advocates the implementation of policies supporting private consumption.

the required stimulus. The Juncker Plan may be beneficial (though we lack a counterfactual) and it is going in the right direction, both in the short and the long run. The promotion of investment, public and private, is a reply to the depreciation of capital after years of low investment and the global financial crisis. However the Plan draws on limited amounts of *fresh-money* funds. The extension (decided in June 2016) in time—until 2020 rather than 2017—and in the amounts of public and private investment—from 315 to 500 €bn—has been accompanied by an increase from 21 to 33 €bn of *new* financing.[11] In proportion to EU GDP, this represents an extra impulse of 0.08%. Under the assumption of a fiscal multiplier of 2 (the fiscal multiplier is usually considered the highest for public investment; the multiplier is higher the lower the interest rate and the more cooperative the stimulus), the extension of the Juncker Plan would produce a cumulative effect of less than 0.2% on EU GDP. Under the same assumptions, the complete Juncker Plan would have a cumulative impact of 0.45% on EU GDP after 6 years.

These effects are not strong and ever more so when one considers the output gap of EU countries. Jarocinski and Lenza (2016) argue that the output gap of the euro area in 2014 and 2015 has been considerably larger (in absolute terms) than official estimates, reaching -6%. iAGS estimates for the euro area are respectively -4 and -3% in 2014 and 2015. Against this backdrop, not only are demand policies required but the Juncker Plan is largely under-sized, unless other demand policies are implemented. But is there some leeway for fiscal expansion under the current fiscal rules? Alternatively, what other fiscal rules at the domestic level could help sustain growth in the short and the long run, while achieving fiscal sustainability and coordination?

### a) Are current fiscal rules sufficient to foster growth?

In June 2015, then November 2015, the European Commission issued a communication on "commonly agreed position on flexibility in the Stability and Growth Pact (SGP)". The Council endorsed this position in February 2016. The position is mostly dedicated to the preventive arm of the SGP, hence on the attainment (and flexibility in the attainment) of the Medium-Term Objective (MTO) of a sound budgetary position.

11. This amount relates to EIB recapitalization and guarantees the EIB provides. With a leverage of 3, the EIB plans to raise 100 €bn of capital to trigger 500 €bn of investment.

Flexibility is threefold. First, fiscal adjustment requirements to match the MTO are differentiated in two ways and symmetrical. Annual fiscal adjustment is lower for countries whose public debt is below 60% of GDP than above it; it is also lower for countries which experience bad times rather than good times[12]. To get an idea of the implied margins for maneuver, a country with debt above 60% of GDP and an output gap between -3 and -1.5% will "gain" 0.25% of GDP in fiscal leeway, expressed in structural terms, if it experiences below-potential growth rather than above-potential growth. It will "gain" an additional 0.25% of GDP if it experiences negative real growth or output gap below -4%.

Second, the adjustment path towards the MTO will take into account structural reforms. Structural reforms which are "major", which have "direct long-term positive budgetary effects" and which are "fully implemented" may justify a temporary deviation from the MTO[13]. This adds to the exceptional circumstances under the corrective arm of the SGP. The maximum temporary deviation from the structural adjustment path is 0.5% of GDP. The deviation must start being partially adjusted one year after the deviation has been allowed.

Third, some public investments can justify a temporary deviation from the MTO. Conditions for eligibility are rather strict. Public investments must be "aiming at, ancillary to, and economically equivalent to the implementation of major structural reforms". For the latter quality to hold, it must be shown that the investment has "a major net positive impact on potential growth and on the sustainability of public finances". If one were to take this recently introduced condition "à la *lettre*", the fiscal austerity advocated in the EU between 2010 and 2015 would have to be considered "excessive" under the rules: fiscal austerity has undoubtedly been counterproductive in terms of growth prospects and debt sustainability. The recent introduction of a criterion for the eligibility of public investment is helpful as far as it goes but it is not a radical change in EU fiscal governance. The SGP has not been changed fundamentally and existing fiscal rules remain in place.

Moreover, eligible national public investments are "to a large extent" limited to those co-funded under the EU budget for smart and inclusive growth (46% percent of an overall EU budget of approximately 150 €bn per year, or 0.5% of EU GDP) and those co-financed by the Juncker Plan. It gives incentives to partic-

12. The Commission differentiates 5 economic situations, from the worst to the best: exceptionally bad times, very bad times, bad times, normal times, and good times.
13. The Commission and the Council judge whether a structural reform is "major" but only the Commission provides an explanation of its judgment.

ipate in common EU policies but since their associated amounts are relatively small, it also severely limits the fiscal leeway it introduces in the application of the preventive arm of the SGP.

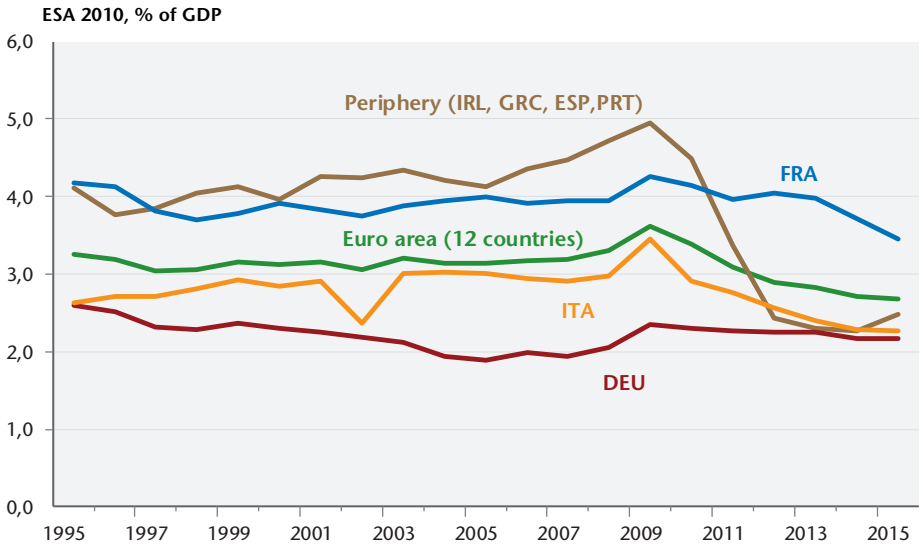
The introduction of more flexibility in the SGP is not a departure from the SGP and it does not solve two European problems. The first one relates to the institutional architecture. EU economic governance remains largely the same and is still suboptimal. The divergence across EU member states (see chapter 2) requires either fiscal transfers between EU members (in the vein of the optimal currency area literature) or active unfettered fiscal policies. EU governance is far from that: the active unfettered policy tool is in the hands of the sole supranational economic institution in the EU, namely the ECB, which is federal and mandated to reach average objectives (inflation, then output). In contrast, domestic fiscal policies are mostly uniformly fettered and passive, except at the margin under quite bad economic conditions. The application of the subsidiarity principle should dictate the use of domestic fiscal policies aiming at domestic objectives and whose externalities should not jeopardize euro area public finance sustainability or euro area external balance. It would require some assessment at the level of the euro area as a follow up to the strengthening of the EMU promoted by the Five Presidents and endorsed by the Commission.

The second European issue is the dramatic neglect of public investment which may require a stronger push than that pertaining to the needed flexibility of the SGP for stabilization purposes. In fact, public investment has suffered disproportionately strongly under the austerity policies pursued. This is exactly what could have been predicted in the absence of special provisions protecting and supporting public investment: cutting public investment spending is usually seen to be the politically easiest way of reducing budget deficits. Independently of the current crisis, there is evidence that fiscal contractions were a key factor responsible for the decline in public investment in earlier decades (Välilä *et al.* 2005; Turrini 2004: 9-26), as it was during the transition period to achieve the Maastricht criteria of public finances (Balassone and Franco, 2000).

Given the extreme degree of austerity in particular in the euro area since 2010, it is not surprising that public investment suffered dramatic cuts (Figure 51 and Figure 52). Gross public investment in the euro area as a whole fell from about 3% of GDP before the crisis to levels substantially below. In the periphery the fall was even more dramatic from about 4% of GDP to just about 2% of (a much lower) GDP since 2012. Net public investment, i.e. gross investment minus depreciation developed even worse: in recent years almost all euro area

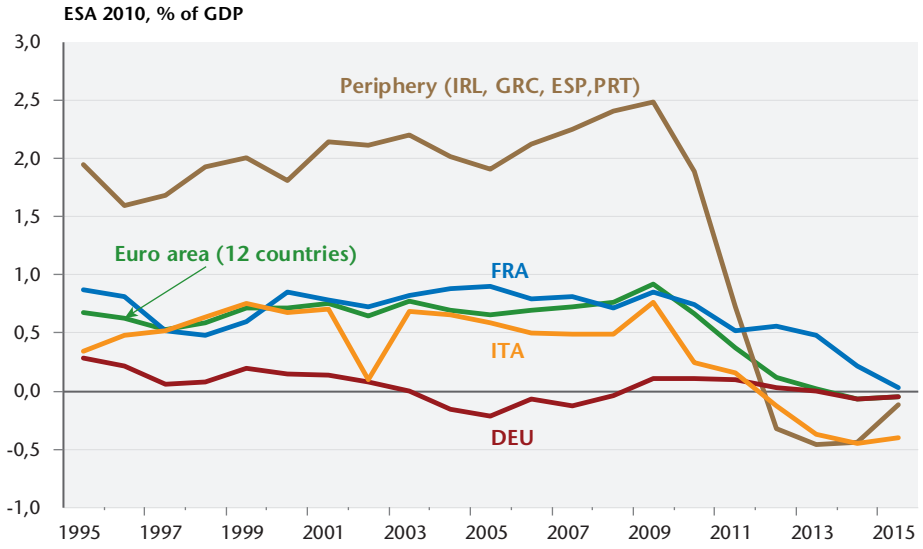
member states have recorded negative public net investment, i.e. the public capital stock has been decreasing.

Figure 51. **General government gross fixed capital formation in selected countries**




*Source:* European Commission (2016); authors' calculations.

Figure 52. **General government net fixed capital formation (ESA 2010) in selected countries**




*Source:* European Commission (2016); authors' calculations.

Although the cuts in public investment were particularly strong it should be noted, that no category of public spending was left unaffected (Barbiero and Darvas 2014). This is also true for public spending on education which suffered dramatic cuts in the periphery (Truger 2016a). As Darvas *et al.* (2014) show, not only the economic but also the social costs of austerity in the sense of an increase in poverty and social hardship were extremely large. Aiginger (2014) points to the fact that essential goals of "Europe 2020" have by now become close to unattainable. At the same time the original goal of austerity—decreasing the debt-to-GDP levels—has been missed because of the ongoing economic crisis.

### b) Beyond the current fiscal rules, paths to reform

One frequently made proposal in the debate about European fiscal policy is to apply stricter fiscal rules, or to allow for less flexibility in the application of the current rules so as to make them really binding. The hope is that if fiscal targets are reliably met this will restore confidence in the markets. Particularly conservative politicians and economists in Germany are in favour of this approach: Recently the German council of economic experts (GCEE) recommended: "The European fiscal rules should finally be enforced" (GCEE 2016: 16). In this context it is hard to overstate the political significance of Germany's supposedly successful debt brake model. The German debt brake provided the blueprint for the European Fiscal Compact's stricter fiscal rules and its ambition that limits on the public deficit should be enshrined in countries' constitutions (BMF 2012, p. 44). The rapid consolidation of the German federal budget coincided with the transition period before the debt brake fully came into effect, apparently causing some observers to think that there was a causal relationship between the two phenomena. According to the German Federal Ministry of Finance (BMF 2015, p. 10), the fact that actual borrowing in the past few years and projected borrowing for this year and for the entire financial planning period are below the maximum permissible new borrowing limit is a sign that the debt brake is working and is indeed "putting the brakes on" new borrowing.

However, a careful analysis reveals that praising the German debt brake as a role model is not backed by the facts (Paetz, Rietzler and Truger 2016). The apparent successes of the debt brake—the over-fulfilment of fiscal targets, rapid consolidation and emulation by other EU governments under the fiscal compact—are in fact a mirage. The consolidation outcomes, in particular the fact that Germany has posted fiscal surpluses for the past two years, result from the favourable economic and labour market development in Germany, espe-

cially the unexpectedly rapid bounce-back from the Great Recession. On top of this came substantial savings in interest payments due to the fall in interest rates, as much of the remaining euro area was mired in recession and the ECB pulled out the monetary stops.

The second, more fundamental point is that the favourable business cycle since the introduction of the debt brake has so far concealed its most insidious danger. On paper the debt brake is expressed in so-called "structural" or "cyclically adjusted" terms. In any one year the government may not borrow more than 0.35% of GDP—the same idea can be expressed in different equivalent ways—on average across the cycle, assuming that the output gap is zero, or after allowing for the current state of the business cycle. This is sensible, in principle, for two reasons. Firstly because governments cannot control the current (i.e. non-adjusted) deficit in the short run, and secondly because focusing on the current balance would make fiscal policy pro-cyclical. It would constrain government to tighten fiscal policy when the economy is weakening (and the cyclical deficit rising) and permit a destabilising loosening of policy when the economy is in a boom. The problem is that, for technical reasons, the government budget out-turn relevant for the debt brake does in fact contain a substantial cyclical element. This means that when the economy is weak the reported, supposedly structural but actually partly cyclical, deficit is too high, forcing the government into procylical tightening. Growth is depressed further, risking a downward spiral.

To show just how grave this risk is Paetz, Rietzler and Truger (2016: 11-15) conducted a counterfactual simulation using conservative estimations for the key parameters. The simulation is also conservative in focusing only on central government, leaving out federal-state finances. Real growth and inflation are, initially, the same as actually occurred in the years 2012 to 2016. The only change is that the unexpectedly quick and strong recovery 2010 and 2011, in which the German economy grew by 4.1 and 3.7% respectively, is assumed not to have occurred. Contemporary consensus GDP and inflation forecasts are used instead (GDP: -0.5 and 1.4%). Based on plausible assumptions for the response (elasticity) of the budget to the lower nominal GDP, they then estimate the (supposedly) "structural" budget balance that would have been reported. The calculations indicate that by 2012 the budget out-turn would have contravened the strictures of the debt brake, causing a tightening of German fiscal policy beginning in 2013. Via the multiplier this in turn depresses GDP compared to the actual values. By 2016 federal government spending would be more than 12% below the unconstrained value and more than 7% below the actual budget plan for the current year. And as a result the German

economy would not only have missed out on the two-year boom: GDP would have been depressed by a further 1.4pp. thanks to contractionary fiscal policy forced by the application of the debt brake. Last but not least, this, in turn, would mean that the debt/GDP ratio would have been more than 8pp higher.

Given the conservative parameterisation and the fact that federal state governments, many of whose finances are decidedly shakier and thus are more likely to be forced into pro-cyclical tightening, the authors consider these estimates to represent a lower limit for the economic losses. What is certain is that, absent a short boom five years ago, Germany would be struggling to fulfill its debt brake under conditions of a stagnating economy, quite similar to the situation that many member countries find themselves in. And most probably the German government would also feel the need to reform the current fiscal framework and/or to increase flexibility in order to avoid further pro-cyclical tightening.

### c) Adopting a smarter, economic, rule? The spending rule and the golden rule of public finance

Obviously, there is a need for smarter rules that support public investment, increase member states' budgetary flexibility so as to improve counter-cyclicality, but at the same time ensure fiscal sustainability and compatibility with the overall EU fiscal and economic policy framework.

Two potentially promising candidates in this respect are the Golden Rule for public investment (see e.g. Truger 2015a) and some type of spending rule approach, e.g. as recently proposed by Claeys, Darvas and Leandro (2016).[14] The former aims at implementing the traditional public finance concept of the golden rule within the framework of the SGP, i.e. deducting net public investment from both the headline and the structural deficit, so that net public investment would be financed *via* deficits. The latter aims at giving up the concept of the structural deficit within the SGP and instead using limits for nominal expenditure growth that are determined by the medium term growth rate of real potential output plus the ECB target inflation rate of 2%. Using medium term potential growth rates and the target inflation rate stabilizes expenditure growth over the cycle. Further stabilization is to be achieved by focusing on that part of government expenditure that is actually under the government's control, i.e. spending on unemployment as well as interest

14. Similar spending rule approaches have been proposed much earlier in the debate on fiscal consolidation in Europe (Horn and Scheremet 1999; Hein and Truger 2007).

payments will be excluded from the spending rule. Public investment is to be favoured by separating current and investment budgets just as in the golden rule proposal.

The two proposals might seem to be very different at first sight, but in fact they are rather similar. If the same definition of public investment and depreciation, the same orientation at medium term real potential growth plus inflation target based on the same concept of cyclical adjustment of GDP is used and the way they are embeded into the relevant fiscal framework is the same, they are almost equivalent apart from some minor technical issues.

However, in order to really ensure that both rules are really smarter some conditions as to their implementation and as to some necessary changes in the fiscal framework of the SGP have to be met. First, a suitable definition of public investment will have to be agreed on. Second, the pro-cyclicality inherent in the current fiscal framework will have to be effectively avoided. Third, fiscal sustainability and compatibility with the overall fiscal and economic policy framework will have to be established.

Regarding public investment, privileging simply makes sense from an economic point of view. The Golden rule has been a widely accepted traditional public finance concept for the handling of government deficits for decades. It has many advocates in academia starting with Richard A. Musgrave (1939 and 1959), one of the founding fathers of modern public finance. In the context of the fiscal policy debate in the EU many economists have criticized the EU fiscal framework of the SGP for its lack of a golden rule of public investment and correspondingly proposed to introduce such a rule into the framework (e.g. Fitoussi and Creel 2002: 63-65; Blanchard and Giavazzi 2004; Barbiero and Darvas 2014; Dervis and Saraceno 2014). And, last but not least the German Council of Economic Experts had delivered a proposal that was intended to become more or less the blueprint for the German debt brake, which explicitly expressed the need to include the golden rule as important element of the fiscal rule (GCEE 2007); unfortunately that key part of the proposal was dropped.

It strives for an intertemporal realization of the pay-as-you-use principle in the case that present government spending provides future benefits. It allows financing such spending (=net public investment) by government deficits thus promoting intergenerational equity. Net public investment increases the public and/or social capital stock and provides benefits for future generations. Therefore, it is justified that future generations contribute to financing those investments *via* the debt service. Future generations inherit the burden of public debt, but in exchange they receive a corresponding public and/or social

capital stock. Failure to allow for debt financing of future generations' benefits will lead to a disproportionate burden for the present generation through higher taxes or lower spending creating incentives for the under-provision of public investment to the detriment of future generations. This general incentive problem may become exacerbated in times of fiscal consolidation when cutting public investment may seem the politically easiest way of reducing the budget deficit. The recent experience with austerity policies shows that this danger is real and has, in fact, materialized.[15]

The central question on a macroeconomic level is, whether general categories of public spending can be identified that are usually associated with sufficiently higher growth and productivity. Ideally, if the returns are high enough debt sustainability would automatically be satisfied as the additional growth would decrease or at least stabilize the debt to GDP ratio (IMF 2014: 110). The natural starting point for the analysis is the debate about the growth effects of public investment, as classified in the national accounts, as it has received the most attention in the literature. It is note-worthy that the ESA 2010 national accounts contain traditional infrastructure investment and also expenditure related to research and development.

The central question of the long-run growth effects of public investment has received much attention in the literature (for an overview see Romp and de Haan 2005; Melo *et al.* 2013; Bom and Ligthart 2014). From a theoretical point of view it is most plausible that public investment, especially if it focusses on "core" infrastructure like transport facilities (roads, railways, ports, airports), communication systems as well as power generation and other utilities should be productive and growth enhancing. The public infrastructure stock in this sense is simply indispensable for most productive processes: Without water and energy supply, without transport capacities most production processes would simply be unthinkable. It is, therefore, plausible to think of public infrastructure as an input factor that is complementary to private capital and labour, inducing additional supply.

However, at least two qualifications should be made. First, for additional public infrastructure to be productive it should not be abundant. Although the quantity and quality of infrastructure is difficult to measure, on the basis of the World Economic Forum's Competitiveness report the IMF (2014: 79-81) concludes

15. Using a Dynamic Stochastic General Equilibrium model, Creel, Hubert and Saraceno (2013) show that adopting the Golden rule would have limited the real costs of fiscal contraction in European countries, in comparison with the public deficit limit and the Fiscal compact.

that from 2006 to 2012 the overall quality of infrastructure and that of roads has clearly (slightly) decreased in Germany (France) and that it is lagging behind in Italy. This is at least a hint that there is room for improvement. It is also a hint that net public investment must not necessarily be into completely new infrastructure projects, but that maintenance investment may also have an important role to play. Second, although positive growth effects from core infrastructure investment are most plausible from a theoretical point of view, not all of public investment as defined in the national accounts is core infrastructure. In fact, a substantial part of public investment is investment into equipment as well as public buildings, e.g. for administration, education and hospitals. For such investment a direct positive contribution to private production processes may be more difficult to establish. However, for those countries for which data on both the public capital stock as a whole as well as specifically on public infrastructure is available, the correlation between the two is strong, so that overall public investment may serve as a proxy for infrastructure investment (IMF 2014: 80).

Table 11. **Implied marginal returns to public investment**

**In per cent**

| | all public capital | | core public capital | |
|---|---|---|---|---|
| | Regional | National | regional | national |
| **Short term** | 17.4 | 10.2 | 24.0 | 16.8 |
| **Long term** | 28.0 | 20.8 | 34.6 | 27.4 |

*Source:* IMF (2014: 86); Bom and Ligthart (2014: 907-908); authors' calculations.

Bom and Ligthart (2014) conducted meta-regressions including 68 studies with 578 estimates for the public capital-growth nexus and confirm this basic conclusion for the period 1983 to 2008. According to their results, the average output elasticity of public capital is 0.082. Conditional elasticities vary depending on whether they refer to the short or the long run, to all public capital or core infrastructure and to regional or national investment. They are higher for core infrastructure, for regional investment and for the long run. Table 11 shows the implied marginal returns which are in the range between 10 per cent (short run, national, all public capital) to 34.6 per cent (long run, regional, core infrastructure). Whereas the latter marginal return is clearly large enough to justify deficit-financed public investment even under pessimistic assumptions about the user cost of capital (real interest rate plus depreciation rate), the former would have to rely on more favourable conditions. However, the implied long term marginal returns even in the case of all public capital for

national and regional investment with 20.8 and 28 per cent are very high. All in all, therefore, one may safely assume traditional public investment to have considerably positive growth effects.

In addition to the longer-run supply-side effects the short-run demand-side effects of public investment must also be addressed. As to the question of the relative size of the public investment multiplier, the pre-crisis literature as a rule of thumb found it to be (slightly) above one and therefore slightly larger than for other spending categories so that public investment in addition to its long term economic advantages could be seen as the most effective short-run fiscal policy instrument[16]. Some of the recent studies even come up with much larger (relative) estimates of the investment multiplier. Auerbach and Gorodnichenko (2012) obtain values larger than two with a maximum estimate of larger than four whereas the estimates for government consumption spending are "only" at about 1.4. Gechert (2015); Gechert and Rannenberg (2014) conducted meta-regressions including 104, respectively 98 empirical multiplier studies controlling for different study characteristics. They also generally find higher investment multipliers as compared to their consumption counterparts (around 1.6 vs. 1), but the difference is certainly not as large as in the Auerbach and Gorodnichenko (2012) paper. All in all, therefore, the empirical literature on short-run effects of fiscal policy strongly supports protecting public investment from consolidation pressures and using it to stimulate the economy.

Should other potentially growth enhancing types of government spending be classified as investment? In principle they should as long as it can be shown that the growth effect to be expected is similar to that of traditional public investment. The natural candidate for this would be public spending on education, which is close to research and development already included in national accounts. Education as investment in human capital is crucial within endogenous growth theory (Lucas 1988) and empirical research suggests that the private as well as social rate of return of education can be assumed to be very high (Psacharopoulos and Patrinos 2004; Card 2001). Although it is difficult to reliably compare the estimated rate of return for different types of expenditure, it would at least be plausible to include public education expenditures under the golden rule. This is also the general conclusion drawn by most advocates of the golden rule.

16. In an empirical evaluation of the Golden rule of public finance implemented in the UK, Creel, Monperrus-Veroni and Saraceno (2009) found a multiplier effect of public investment close to 1 in the short run and close to 3 in the long run.

However, at the present stage it is difficult to implement this in a convincing way. First, an exact definition of the relevant education expenditure would have to be given, which is not straightforward. Second, in order to be consistent with the golden rule, net education investment would have to be measured, i.e. depreciation would have to be deducted. Thus there are some difficult conceptual issues that would have to be resolved before education expenditure could be properly included into the golden rule.

There are other expenditure categories that might be considered as investment under a golden rule. Indeed, from a supply-side perspective some types of social spending may well be highly productive, because they increase labour supply and production: Health expenditures, if effective, will contribute to a more stable and larger workforce. Spending on child care can substantially increase parents' labour force participation (Bauernschuster and Schlotter 2015). And the same may be said for spending on social work and integration. All of this could lead to higher labour force participation and therefore contribute to higher growth and, at the same time, to one of the main Europe 2020 goals. Obviously, it is not easy to find adequate definitions and estimating depreciation in order to arrive at net investment may be even more difficult.

The fact that at the current stage there are difficulties, however, does not mean that an economically rational and workable definition of potentially relevant other investment expenditures does not exist, at all. It only means, that for the first stage of privileging public investment one needs a pragmatic political decision based on empirical results about the expected growth benefits. Relying on the traditional definition of public investment from the national accounts may not be the worst option in that regard.

Decreasing the pro-cyclicality that is inherent in the current EU fiscal policy framework is extremely important. The cyclical adjustment of public finances plays a major role in the European Commission's concept of budgetary surveillance within the framework of the SGP (Larch and Turrini 2010). With the exception of the excessive deficit threshold, all target values for the government budget balance are expressed in terms of structural, i.e. cyclically adjusted, values, and the cyclical condition of the economy plays a major role in assessing the necessary consolidation effort and potential exceptions. The most important concept in this respect is the structural budget balance, i.e. the cyclically adjusted government budget balance corrected for one-off measures in terms of which the consolidation requirements under the SGP and the FC are expressed.

The main problem is that the method is far from being unequivocal, and compared to OECD and IMF estimates the one employed by the EU Commis-

sion has proven to be especially sensitive to an endogeneity bias, i.e. the problem that potential output is highly sensitive to variations in actual output (see e.g. Klär 2013; Truger and Will 2013; Heimberger 2014). During economic contractions – especially during large and durable contractions such as those observed in the Euro crisis – the estimates of potential output are revised substantially downwards. For an illustration assume that the spring 2010 forecast for potential GDP had not been revised since then. Then in 2015, for almost all countries, with the exception of Germany, the output gap would have been substantially higher had it not been for the crisis induced downward revision of potential GDP since spring 2010. For the EMU-12 as a whole the output gap would be estimated to be -6.7% of GDP instead of the official estimate of just -1.7%. The iAGS output gap estimate is -3% of GDP whereas Jaroczynski and Lenza estimate it to be -6%. The dramatic downward revisions of potential GDP in the official Commission calculations have substantial consequences for the calculation of structural budget balances and the assessment of consolidation efforts. These efforts will usually be underestimated because a substantial part of the fiscal effort is wiped out, as a larger part of the actual deficit is registered as structural although in fact it may well just be cyclical, i.e. caused by a temporary contraction.

Therefore, using less cyclically sensitive methods of estimating potential output and drawing on the medium-term potential growth rate as proposed by Claeys, Darvas and Leandro (2016) would mean substantial progress. Additionally, using a spending rule avoids problems with the estimation of the budgetary semi-elasticity that is used to calculate the cyclical part of the budget deficit. However, for the spending rule to really avoid pro-cyclicality, unlike in the proposal by Claeys, Darvas and Leandro (2016), the spending rule would have to be amended in the preventive arm of the SGP, but also be the major point of reference in the corrective arm: If instead the public deficit limit at 3% of GDP remained to be the central indicator, there could be an inconsistency between the deficit limit and the spending rule in the mid-run. As a matter of fact, expenditure growth under the spending rule might produce a growing deficit. In the short run, this would be compatible with the SGP's corrective arm, but not automatically in the mid run if recovery had not occurred yet and tax receipts had not increased: expenditure composition and/or taxes (or tax bases) would have to be modified to match the deficit limit and the medium-term objective (of close to balanced budget). The spending rule would not rule out fiscal contraction in bad times.

The leeway for more expansionary fiscal policies under both the golden rule and the expenditure rule proposed by Claeys *et al.* (2016) could be substantial. Both

would basically allow debt financing of net public investment which could give a large stimulus depending on the level chosen by the member countries. If only the pre-crisis average level was reached, the stimulus would be about 0.7 percent of GDP, but much more would be possible. The leeway for non-investment spending would depend critically on the estimate of medium term potential growth. In the calculations by Claeys, Darvas and Leandro (2016) the limit for expenditure growth is currently not much above actual expenditure growth, resulting from the fact that potential growth estimates have been revised downwards substantially. However, in the past years the effect would have been very substantial, in particular for the crisis countries. In Spain for example the feasible expenditure growth rate exceeded the actual rate by 9 percentage points in 2012 (Claeys, Darvas and Leandro 2016: 13).

As for public finance sustainability, both rules could lead to higher deficit-to-GDP levels depending on the definition of net investment and depending on the leeway they create for higher deficits. This may cause a problem for sustainability in the sense that it may collide with the 60% threshold for the debt-to-GDP ratio. However, if public investment is defined such that it is really growth-enhancing both in the short and in the long-run then the conflict may disappear. Moreover, the spending rule proposed by Claeys *et al.* includes a closure rule decreasing the permissible expenditure growth rate by 0.02 percentage point for every 1% deviation from the 60% limit. A similar effect could be achieved in the current framework by adjusting the MTO if after some time the debt-to-GDP level increases strongly. However, such a debt-feedback mechanism reduces spending leeway for those countries facing higher debt levels, which are also those that may require the greatest fiscal leeway. In contrast, the golden rule is not *a priori* complemented with a debt-feedback rule. Even so the golden rule is compatible with debt stabilization.[17] Both rules could be complemented with an additional closure rule taking into account the current account position such that countries with current account surpluses gain fiscal leeway while countries with deficits lose it.

17. Under the golden rule of public investment, the cyclically-adjusted deficit target would be exempted from expenditures on net investment. It would not be exempted from interest payments. Hence, a higher net investment financed with public debt leads to higher interest payments (all else equal) which weigh on the deficit target. To match the target, interest payments face a ceiling due to the existence of a floor on non-cyclical non interest payments expenditures. The ceiling on interest payments is, at constant interest rates, a ceiling on debt to GDP ratio. Consequently, the golden rule does not prevent effective debt management and therefore incentivizes the implementation of the most-productive investments as they will facilitate debt stabilization and sustainability via economic growth. See Creel (2003) for details.

### d) Using the room for maneuver under the current rules for more flexibility and higher public investment

One essential question is whether the introduction of the golden rule of public investment—at best combined with a better expenditure rule—would be compatible with current EU law or whether a change of Council regulations or even the Treaty would be necessary. The golden rule would permanently change the interpretation of the relevant deficit definitions in a way that is not completely in line with the Treaty. And the expenditure rule, which is already part of the preventive arm of the SGP (although it needs a reformulation, as the actual one is not very well specified), has to become the major reference point in the excessive deficit procedure. Therefore, most probably, legal changes would be necessary in both cases. This would be an impediment for immediate implementation, however, the necessary changes could be adopted as primary law in the form of an 'Investment Protocol' that would be annexed to the Treaty under the simplified revisions procedure of Art.48 of the Lisbon treaty (see table 4) On the member states' level further legal changes would be required if following the fiscal compact there were other legal provisions put in place that would prevent a reinterpretation of the budget balance as net of net spending on public investment. Of course, these changes on the national level would be ambitious, but they would probably be supported by the fact, that the reason for the legal requirements, the regulations on the EU level, would no longer exist. Before discarding the options as politically unrealistic it should also be noted that the official plans stated in the five presidents' report will require substantial legal changes as well, so that obviously some political will for change may be presupposed.

Nevertheless, it would probably take some time until the necessary political and legal steps could be completed. They should therefore mainly be seen as a fiscal policy framework focused on safeguarding public investment and flexibility in the medium term, and not so much as a readily available instrument for providing the—urgently needed—boost to the European economy in the short run. Therefore the question arises whether there is a way to complement the more medium term changes by some form of short-term fiscal stimulus and flexibility within the current institutional framework. It is indeed possible to use the leeway inherent in the current institutional framework for such a stimulus provided the European Commission and the European Council were willing to more actively use the interpretational leeway within this framework (see Table 12 for an overview of measures). Actually, the clarification as to the interpretation of the Pact that the Commission has given in 2015 as well as the final position on the Commonly agreed position on Flexibility in the Stability and

Growth Pact by the council can already be seen as illustrating important if still timid steps in that direction.

Table 12. **Various opportunities to strengthen public investment and facilitate an expansionary overall fiscal policy stance in Europe**

| Goals | Measures |
|---|---|
| **Short term (use interpretational leeway within present framework to increase budgetary flexibility and boost public investment)** | |
| **Strengthening investment + Expansionary overall fiscal policy stance** | (1) Allow for temporary investment programmes (analogous to EFSI)<br>(2) Interpret temporary investment programmes as structural reforms<br>(3) Incorporate realistic investment multiplier in budgetary analysis *ex ante*<br>(4) Increase flexibility for cyclical conditions<br>(5) Use exception for severe downturn<br>(6) Implement better methods of cyclical adjustment |
| **Medium term (solid implementation of changes regarding public investment)** | |
| **EU implementation** | (7) 'Investment protocol' as annex to the Treaty (simplified revisions procedure Art.48) |
| **National implementation** | (8) Change national legislation to allow necessary changes based on the golden rule of public investment combined with a better spending rule |

*Source:* authors' compilation based on Truger (2015a).

At least additional net investment could be justified if it came in the form of a temporary investment programme, analogous to the way the Commission interprets contributions to the EFSI (1). Additionally or alternatively, it may be possible to treat an investment programme as a structural reform that temporarily allows for deviations from MTO or the adjustment path towards it (2). Admittedly, the conditionalities and limits set by the Commission and the Council in their current interpretation (co-financing of EU projects, limit of 0.5% of GDP, mostly for countries in the preventive arm) certainly prevent a substantial and sustained fiscal stimulus, but at least the provisions may be used for some stimulus and political pressure may be built up to push for a more generous interpretation in application or for a more generous official reinterpretation.

Reference to adverse cyclical conditions might help to increase leeway even further (4), although this could create the danger of a stop-and-go investment policy, if cyclical conditions improve as can be expected under an investment

programme. Probably the most convincing way to increase member states' fiscal space in the short run would be to use the provision concerning a severe downturn in the euro area or the EU to justify a temporary deviation from the consolidation path, thus allowing for a substantial European Investment Programme. The Commission has explicitly made a comparison with the 2008 European Economic Recovery Plan (European Commission 2008) to give an example of the potential use of this provision (European Commission 2015b: 17). As a condition for the use of this provision it "should remain limited to exceptional, carefully circumscribed situations to minimise the risk of moral hazard." (European Commission 2015b: 17). Actually, one may well argue that the euro area is right now in such an exceptional situation after years of recession and stagnation and low inflation while monetary policy is at the lower bound.

All of this could further be supported if realistically high multiplier values were used in assessing the budgetary impact of additional investment which may not be significantly negative or even positive (3). Reconsideration of the EU Commission's method of cyclical adjustment (6) – e.g. to be more in line with the OECD method and results – may create further leeway as it might increase the cyclical part of the budget deficit thus reducing the structural deficit (Truger 2015b). In fact, as has been mentioned above, one may well argue that the negative output gap calculated by the European Commission underestimates the bad cyclical condition of the euro area economy by at least 1.3 percentage points (iAGS) to 4.3 percentage points (Jarocinski and Lenza 2016) in 2015. Applying the standard budgetary semi-elasticity this would first of all substantially change the structural balance calculations by about 0.7 to 2.2 percentage points creating substantial leeway for the countries under the preventive arm of the SGP. As fiscal effort calculations would also be affected positively this would also help the countries under the excessive deficit procedure. Finally, the dramatically more negative cyclical condition would both create more leeway to use the exceptional clause under the EDP.

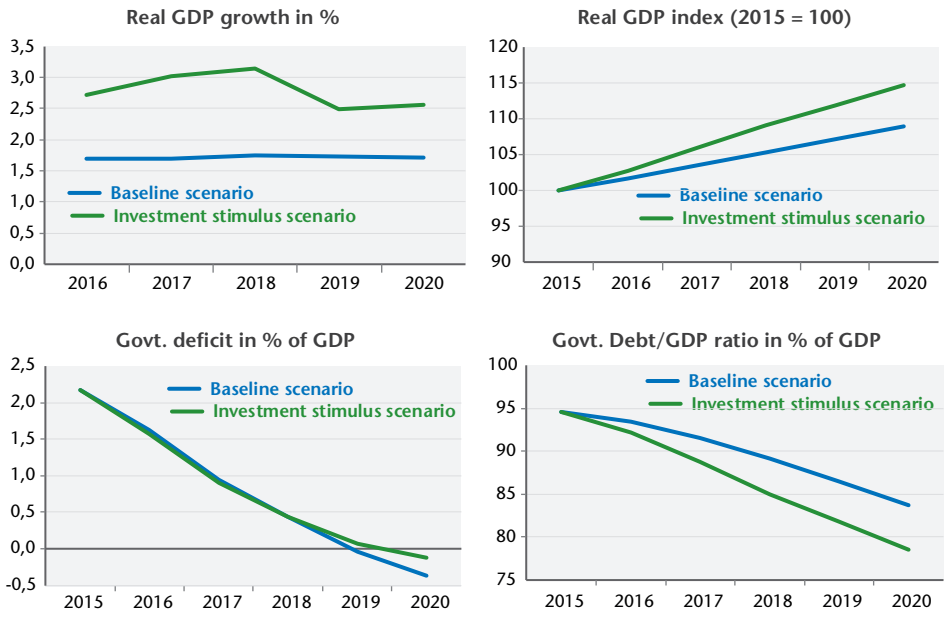
Using some of these measures, it should be possible to implement a fiscal stimulus programme for public investment in the definition deemed necessary in the dimension of 1-2% of GDP for several years. What could the macroeconomic consequences of such a programme be? Would it be able to spark of a self-sustaining recovery in the euro area if implemented soon?

In order to address these questions we present the results of some simple multiplier-based simulations (Truger 2016b). The simulations are not meant to be completely realistic or comprehensive as they are not based on a sophisticated macroeconomic model of the euro area. Instead they present some cautious,

plausible, multiplier-based estimates of what the macroeconomic consequences of a public investment stimulus could be if it were introduced for five years from 2016 to 2020 in order to allow deficit financing of net public investment by 1.5% of GDP. The simulations focus on real GDP, real GDP-growth, the government deficit and the government debt-to-GDP-ratio.

In the first step the feasible government investment stimulus compared to the baseline scenario (projected development based on (extrapolations of) the national stability programmes from 2015 to 2020) is determined. In the second step this stimulus is multiplied with the government investment multiplier. This in turn is determined by a 30% addition to the standard fiscal (expenditure) multiplier. In line with a simple income-expenditure model with a proportional income tax (t) and income dependent imports with the marginal propensity to import (m) and the standard marginal propensity to consume (c) as well as the meta study by Gechert (2015) the standard multiplier for the euro area as a whole is set at 1.45 and the investment multiplier at 1.9 which seems plausible given the recent empirical multiplier estimates referred to in the previous section.

Figure 53. **Selected macroeconomic indicators for baseline and investment stimulus scenarios for the euro area-12**




*Source:* Authors's calculations based on Truger (2016b).

The first-round effect of the fiscal impulses was then calculated by multiplying the fiscal impulse by the relevant multiplier leading to a corresponding increase in real GDP. This in turn leads to an improvement in the general government budget balance according to the country-specific budgetary semi-elasticities (Mourre *et al.* 2014). Depending on the specific multiplier value, public investment spending is self-financing to considerable degree. Whether the self-financing effects open up additional fiscal leeway depends on whether they are interpreted as cyclical or as structural. According to the pro-cyclical method of cyclical adjustment by the European Commission (Truger 2015b and 2015c) a substantial part of the improvement would be interpreted as structural, so that it could be used for further fiscal stimulus.[18] This in turn starts an additional expansionary process. In order to simulate the revisions of the potential growth estimates the resulting time-series for the real GDP values from 1991 onwards were filtered with the modified Hodrick-Prescott-Filter (mHP-Filter) used by the Swiss administration for the Swiss debt brake (see Bruchez 2003).

This leads to second-round expansionary effects, which lead to an increase in GDP according to the standard fiscal multiplier, which in turn influences the (structural) budget balance. In order to add a degree of realism a small inflationary reaction was added by increasing the price level by 0.3 percentage points for every 1 percentage point increase in real GDP.

For the calculation of the fiscal impulses in the ex-ante-simulations government net fixed investment as implied by countries' (extrapolation of) stability programmes was used. Under the assumption that all governments would increase net investment in a stepwise manner[19] until the 1.5 percent of GDP-limit was reached, investment stimuli according to the left-hand column of Figure 11 would be realised. In the case governments in the baseline scenario already had positive net investment under the golden rule this increases their leeway for other expenditures.

The resulting multiplier-based increase in GDP and—according to the mHP-Filter-simulations—also in potential GDP would then lead to a structural improvement of the budget balance which in turn could be used for further

18. If leeway for the investment stimulus was created by using a new method of cyclical adjustment that lead to a larger negative output gap this second round effect would be precluded or potentially smaller. However, in this case the room for manœuvre would be larger right from the start so that the overall results should be comparable.
19. The stepwise approach is taken so as to not cause a sudden explosion of investment demand which may lead to an increase in the public investment deflator.

fiscal expansion. The induced additional fiscal leeway is substantial and as large as the initial investment stimulus. All in all the macroeconomic effects are quite impressive. If the golden rule were operating from 2016 onwards, fiscal policy could be expansionary by a cumulated 3.0 percent of GDP in the euro area as a whole until 2020 which would improve macroeconomic performance substantially (see Figure 53). Real annual GDP growth could on average be 1 percentage point higher with only a minor increase in the budget deficit due to a high degree of self-financing. The debt-to-GDP ratio could even be lower by 5 percentage points. The simulation only captures the short-term demand effects, however, if—as can be expected from the empirical literature on the long term growth effects—productivity capacity is affected positively by the investment stimulus, the positive effects may well be persistent.

Even if highly stylised, these analyses suggest that there would be very substantial economic and employment benefits from using the leeway within the existing framework in order to boost public investment.

## 3.3. Conclusion

We have seen that ECB policies, both standard and non-standard, have had a real impact on investment. Reforming the economic governance architecture therefore means fiscal reforms and flexibility in the implementation of fiscal rules. Regarding reforms, we advocate cautiousness in the assessment of the German debt brake. The success of the German rule has been very dependent on exceptional circumstances, namely unexpected growth. Consequently, we do not advocate the endorsement of this kind of rule. Rather, we promote reliance on a reformed spending rule combined with the golden rule of public investment which would give domestic fiscal leeway for increasing public investment without impairing debt sustainability. A domestic push to public investment would accelerate recovery and would boost potential output. With the golden rule effective from 2016 onwards, fiscal policy could be expansionary and raise annual real GDP growth by 1 percentage point on average till 2020. Due to large self-financing effects, the budget deficit would hardly increase and the debt-to-GDP ratio could even be lower by 5 percentage points. Furthermore the positive effects may well be persistent, as the long term growth rate is also affected positively by the investment stimulus.

## Appendix 1. Investment equation for the euro area

Monetary policy influences the investment rate through the cost of funding. The estimated equation makes a distinction between the impact of monetary policy in the long-run and in the short run. Monetary policy is measured by the shadow rate, which is the implicit interest rate set by the ECB and taking into account the unconventional monetary measures. For sake of simplicity, the total cost of capital only takes into account the interest rate set by banks on loans to non-financial corporations. Hereafter, we do not account for a potential effect of monetary policy on banks' spread, which may also be another channel through which monetary policy has influenced credit conditions and final demand. Consequently, the measured impact of monetary policy on investment that we compute may be considered as a lower bound.

The estimated equation (an error-correction model) for total investment in the euro area is represented by the following equation:

$$\Delta\left(\frac{I_t}{VA_t}\right) = \underbrace{-0.086}_{0.04} + \left(\begin{array}{c}\left(\frac{I_{t-1}}{VA_{t-1}}\right) - \underbrace{0.023}_{0.00}.Marge_{t-1} - \underbrace{0.035}_{0.00}.Shadow_{t-1} \\ - \underbrace{0.151}_{0.00}.BankSpread_{t-1} + \underbrace{2.09}_{0.07}\end{array}\right)$$

$$- \underbrace{0.214}_{0.14}\Delta \mathrm{I}_{t-1} + \underbrace{0.138}_{0.08}\Delta \mathrm{I}_{t-2} + \underbrace{1.108}_{0.31}\Delta \mathrm{VA}_{t-1}$$

$$- \underbrace{0.006}_{0.00}\Delta \mathrm{CUR}_{t-1} + \underbrace{0.03}_{0.00}.\Delta Shadow_{t-1} + \underbrace{0.006}_{0.00}.\Delta Shadow_{t-2}$$

With I the investment, VA the value-added, Marge the margin rate, Shadow the indicator of monetary policy calculated by Wu and Xia (2016) and that takes into account the unconventional monetary policy measures. The bank spread is the gap between the interest rate on loans for non-financial corporations and the EONIA rate. CUR stands for the rate of capacity utilization. In the long term, an increase in margins has a significant positive impact on the investment rate. The cost of funding (measured by the indicator of monetary policy and the bank spread) affects negatively and significantly the investment rate. The model is estimated by OLS for the euro area. The sample period for estimation is 1999Q1 / 2015Q4. Data are taken from Eurostat, ECB and Datastream.

## Appendix 2. Identification of financial bubbles

Following Blot, Hubert and Labondance (2016), bubbles are identified on three different financial markets: stock, bond and housing, by focusing on the common component from different bubble models, using euro area data from January 1999 to September 2015. These models are the following:

1. Cash-flow model adjusted for risk-premium (estimated with OLS and ECM).
2. Full-information price model (estimated with OLS and ECM) yielding the best prediction of the fundamental value from a set of macro and financial variables.
3. HP-filter model, where the fundamental is the trend and the bubble is the cycle.
4. Statistical approach, where the boom (resp. bust) period is defined as a deviation from the trend above (resp. below) 1.3 standard-deviation (Bordo and Jeanne, 2002).

For each of the first 3 models, two types of bubble components are defined:

A. standard residuals/cycle component;

B. sum of the (Christiano-Fitzgerald) filtered residuals/cycle component, as long as these residuals/cycle component have the same sign.

From these models 11 series of bubble for each asset price (stock, bond and housing) in the euro area can be identified. Using Principal Component Analysis (PCA), Blot *et al.* (2016) estimate the first component of the 11 series for each asset class and consider it as a bubble indicator. With such an approach, the bubble indicator maximizes the common variance among the 11 series, with no prior about which bubble model is best, and drops idiosyncratic evolutions specific to each bubble model. This procedure should be seen as model averaging with estimated weight (the PCA eigenvalues).

Chapter 4

# MACROECONOMIC TRADE-OFFS IN THE EURO AREA

*"For the euro area to gradually evolve towards a genuine Economic and Monetary Union, it will need to shift from a system of rules and guidelines for national economic policy-making to a system of further sovereignty sharing within common institutions, most of which already exist and can progressively fulfil this task. In practice, this would require Member States to accept increasingly joint decision-making on elements of their respective national budgets and economic policies."*

***Report of the Five Presidents***

## 4.1. The imbalances question

The last year Report of the Five Presidents highlighted the necessity of progress in the EU in four directions: achieving "a genuine Economic Union, (…) a Financial Union, (…) a Fiscal Union, (and) a Political Union". The associated roadmap for completing the EMU includes a greater focus on employment, a better implementation of the Macroeconomic Imbalance Procedure, a better assessment of fiscal stance and fiscal sustainability, the completion of the Banking Union and the launch of a Capital Markets Union. They thus pointed to a very large set of ambitions which renewed the debate about the consistency of existing 6-pack, 2-pack and Fiscal compact, which were mainly related to fiscal and competitiveness issues.

This roadmap raises an important question: is it possible within the given institutional setting to close the unemployment gap (the difference between actual and natural rates of unemployment), that is to say increase the "well-being of the peoples" (Art. 3 TEU) in a sustainable way, achieve public finance sustainability, reduce macro imbalances, and ensure the liquidity and solvency of financial institutions and other objectives at the same moment?

Achieving these different objectives is difficult because the needed adjustments may seem unattainable for economic and institutional reasons, and because of internal inconsistencies, *e.g.*:

- The reduction of external macro imbalances can be achieved by an improvement in competitiveness in deficit countries, which can be reached via wages cuts or low wage growth. These structural reforms, if they are exclusively related to the labour markets, are no panacea and may be unacceptable by populations who already suffer from high unemployment and reduced purchasing power. Moreover, they are in contradiction with the objective of a fairly distributed well-being and with closing the unemployment gap, since they slash demand and therefore activity in the short run. They may also weigh on inflation and feed deflation pressures in the euro area. Therefore, they are also inconsistent with the objective of price stability of the EMU, and with the achievement of fiscal sustainability: deflation increases the real value of debts and thus slow-downs the ability of countries to reduce their debt-to-GDP ratios. Alternative policies could be implemented for reducing external macro imbalances without harming other objectives: faster wage growth in surplus countries, investment in export capacity and lower energy dependency in deficit countries.
- Fiscal sustainability remains intrinsically related to fiscal austerity which weighs on price developments, public investment and on output; those outcomes finally weigh on fiscal sustainability as they increase the real value of debt or the debt-to-GDP ratios; moreover, low growth prospects do not help closing the unemployment gap.
- The asymmetry in the reduction of macro imbalances, as it stands out in the Macroeconomic Imbalance Procedure, has led to the generalization of current account surpluses all over euro area countries. In this context, the market mechanism that would reduce current account imbalances is a euro appreciation. Such an appreciation would be detrimental to the closure of the unemployment gap: it would indeed reduce exports, but then also economic growth in a euro area whose recovery remains fragile.
- As we show in Chapter 2.4, governance reforms are necessary to put well-being first and establish a framework to deal with economic trade-offs. Actual institutional design of the EMU and its use by MS does not result in enough coordination of economic policies to achieve targets like the SDGs or the ones of the Europe 2020 Strategy, since they do not take into account the above mentioned internal inconsistencies.

This chapter aims at quantifying and better understanding the sources of current account imbalances and high public debt levels.Reducing imbalances implies some medium-term trade-offs between growth (in the sense of material well-being and employment), inflation, fiscal balance and current account balance. This chapter highlights these trade-offs against the backdrop that the euro area will be forced into an equilibrium of low growth and low inflation that will make it more painful to reduce external and public disequilibria. It demonstrates the difficulty of simultaneously reducing all imbalances, all the more that deflation and euro appreciation risks increase the cost of the reduction of imbalances. Besides, such reduction needs higher MS economic policies coordination, to avoid asymmetric adjustments that would be more painful, as we have warned in chapter 3 of the iAGS 2016 Report.

Regarding the difficulty of achieving these different targets, and to make the adjustment easier, we must consider some new economic policies. First, given a better coordination of economic policies between MS, relaxing the inflation target beyond recommended symmetric adjustments in countries with high current account surplus would open new fiscal space for MS without impinging on ECB's price stability objective. Second, relaxing fiscal rules especially to finance public investment within the objective of fiscal stability (see also Chapter 3.2) would also give new fiscal space. When public investment is efficiently managed, then, one can expect a positive impact on potential growth. That means that a permanent increase in public investment, with a long lifespan of the investment, would increase public capital, potential growth and net public assets.

## 4.2. Identifying current account imbalances and nominal adjustment needs

Current account imbalances are at the heart of the euro area crisis that begun in 2009. Those imbalances are even seen by some as a threat to the very survival of the euro area (EA). What are we talking about exactly? What are the economic causes of these imbalances? Which policies could help with their unwinding?

The current account of a country is the sum of the trade balance (the balance of exports and imports, of goods as well as of services) and of the balance of income and transfers (wages, interests, dividends and gifts received by residents from abroad, minus those sent abroad by residents). It measures the capacity of a country to finance its economic activities domestically: if the current account

is negative, the country needs to import capital from abroad and therefore accumulates foreign debt; conversely, if the balance is positive, the country exports capital and becomes a foreign creditor.

When a country has a flexible exchange rate regime, the adjustment of the exchange rate is the principal equilibrium device that corrects imbalances. Concretely, if the current account deficit becomes so important that foreign capital stops financing it, the domestic currency depreciates; in turn, this depreciation stimulates exports and discourages imports, and the current account balance improves.[1] In practice, however, this equilibrating mechanism does not always work as in this textbook case. Exchange rates can move sharply for reasons other than fundamentals, and can drive economies away from equilibrium at least for certain periods before forcing a correction.

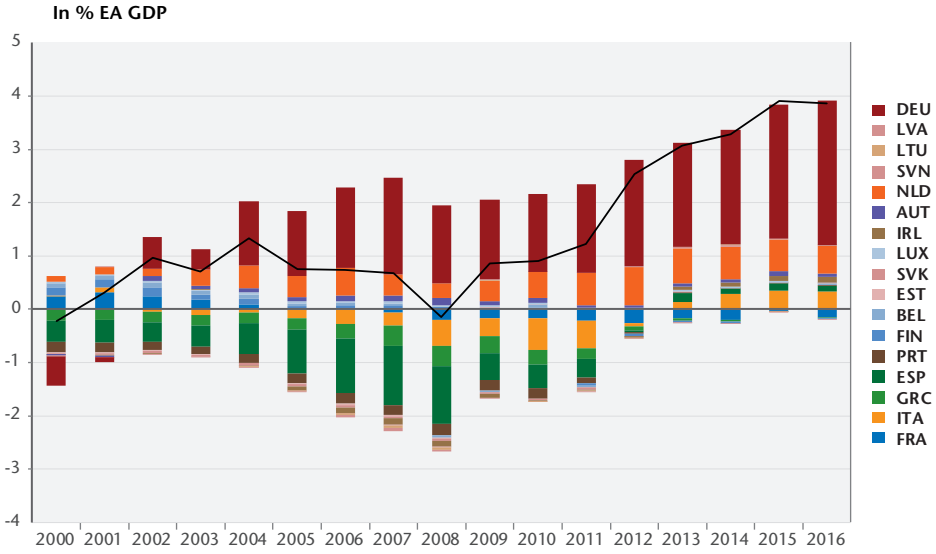
Within a monetary union like the euro area, this adjusting mechanism does not exist, by design. Large surpluses or deficits can appear without having a self-adjusting mechanism kicking in. The challenge is therefore to put in place other equilibrating mechanisms. Failing that, the cohesion of the monetary union may be threatened: this is precisely the point at which we have arrived today.

### a) The dynamics of current accounts in the euro area

Figure 54 pictures the evolution of current accounts of euro area countries. Two periods can be clearly distinguished. The first one, which goes from 2001 to 2008, corresponds to the deepening of imbalances between countries that, for convenience, we term northern countries and southern ones. Germany, which was initially running a small deficit, gradually builds up a very large surplus; a similar move can be seen in the Netherlands and in Austria. On the contrary, deficits in Italy, Spain, Greece and Portugal increase very significantly. France, which was in surplus in 2001, gradually slides into deficit during this period, and can therefore be classified with southern countries according to this criterion.

1. More precisely, depreciation has two effects on the trade balance: a volume effect, and a price effect. The volume effect is positive because the depreciation discourages imports (which become more expensive) and stimulates exports (which become more competitive). But the price effect is negative because, at a given volume, the value of imports increases while the value of exports decreases, which harms the current account. The technical condition on the various elasticities which determines whether the volume effect dominates the price effect is called the Marshall-Lerner condition. For most countries, this condition is verified in the long run, but not in the short run, and this gives birth to the so-called "J-curve": the depreciation temporarily worsens the trade balance, before improving it permanently.

Figure 54. **Current accounts in the euro area**




*Source: Economic Outlook 99*, iAGS calculations.

Starting from 2009, deficits are brought down, to the point of almost disappearing in 2015, while overall surpluses tend to increase. The process of overall current account divergence has therefore been put to a halt but it has occurred in a one-sided way. At the same time, there is a clear break in the relation to the rest of the world: while the euro area as a whole had an almost balanced current account between 2001 and 2008, a surplus has started to build up since 2011, reaching a very high level in the last years. Meanwhile Germany's surpluses with the southern countries have come down substantially: the continued overall increase reflects trade outside the euro area.

To summarize, during the 2001-2008 period, the euro area deepened its internal imbalances while at the same time maintaining its external equilibrium. On the contrary, during the 2009-2015 period, it somewhat diminished its internal imbalances, but in a one-sided way and while building up an important external disequilibrium.

## b) The role of current account balances in the euro area crisis

Are the deficits of the South the cause of the crisis of the euro area? Let us first recall that a current account in deficit is not necessarily the symptom of disequi-

librium. In the case of a country with a strong growth potential, which is in a process of catching up with more advanced countries, an external deficit can correspond to a healthy situation: external financing helps accelerating the development of the country and its catching up of the technological frontier. Since future growth will provide the basis for reimbursing the liabilities accumulated today, the deficit is only transitory, and there is no reason to worry. This is precisely the type of reasoning that was mainstream before the financial crisis and was used to justify the deficits of southern countries (Blanchard and Giavazzi, 2002).

But in reality, the undergoing process in the euro area was different from this optimistic scenario and rather corresponded to an unsustainable divergence dynamics. Incoming private capital flows in southern countries were not directed at sectors with strong productivity gains, but rather fueled housing bubbles and financed low-innovation sectors and consumption credit. Consequently, the current account deficits were not sustainable. An adjustment had become inevitable, and the world financial crisis of 2007-2008 triggered it.

To some extent, the crisis undergone by southern European countries looked like the phenomenon experienced by emerging countries in the 1980s and 1990s and which is generally labeled as "sudden stops": the incoming capital flows that were sustaining the current account deficit suddenly disappeared. Almost overnight, the improvement of the trade balance had become an urgent necessity, and the latter could only be obtained through an increase of exports or a decrease of imports. Moreover, the past current account deficits had led to an important accumulation of foreign debt, both private and public, which had become hard to service.

In order to face this situation, emerging countries generally implemented two policies: first, a currency depreciation, in order to improve their trade balance; second, a negotiated foreign debt restructuring, or even an outright default in some cases (the most famous one being Argentina in 2002).

However, the comparison between southern Europe and emerging countries stops here. The "sudden stop" was less dramatic in southern Europe: some private capital continued to flow in during the crisis, though at a higher interest rate, while the cross-country central bank funding (the so-called TARGET2 balances) compensated for the fall of private financing. Moreover, since the integrity of the euro area has been secured, depreciations have been ruled out. Debt defaults have been considered as a last resort option, even though a partial default eventually happened on Greece's debt. Other adjustment mechanisms have therefore been implemented in the euro area, mainly relying on

austerity policies and wage deflation, which was a drag on economic activity. Alternative policies—like structural investment in export capacities or alternative energy production allowing pulling down energy imports (especially important for the oil-dependent southern periphery) and therefore current account deficits—were not part of the adjustment process. Although their positive current account effect would have been slower, it would have been more sustainable and less detrimental to economic activity.

At first glance, the depressing policies have succeeded in correcting current account deficits. As it is visible in Figure 54, southern Europe countries all posted a current account surplus in 2015 (except Greece, which ran a small deficit of only 0.1% of GDP). Nevertheless, the situation is less positive than what a superficial look at current accounts may suggest, especially due to unsustainable high current account surpluses in some countries. Much remains to be done to correct imbalances, as we shall see below.

If deficit countries have been the subject of a lot of attention, one should not forget that some other countries, outstandingly Germany, run very large surpluses. Of course, deficits are worrying, because they can trigger financing crises, but surpluses are also a problem. The rationale is simple: the surplus of someone is necessarily the deficit of someone else. Northern Europe countries therefore cannot claim that they have no responsibility in the deficits of the South. And even if it is true that a significant part of the German surplus is today realized against countries that are outside the euro area, this still has negative consequences: the appreciating pressure that it engenders on the euro will end up worsening the competitiveness of southern countries and depreciating the assets that Germany has accumulated over non-EA countries. Furthermore, high current account surplus can be seen as import deficits, restraining export possibilities of the trading partners—which are foremost other EA countries. An exhaustive analysis of the euro area crisis must therefore also include an assessment of the evolutions within surplus countries. Developments outside the EA also matter, since they have an impact on the exchange rate of the euro, thereby affecting every single EA member. And last but not least, one has to remind the economic debate that trade surpluses are a loss of available resources within the surplus area in exchange to sometimes very uncertain promises of future repayment. In contrast to an often held misbelieve, trade surpluses are nothing similar to profits of a private enterprise but rather deliveries against future payment.

### c) Nominal divergence and the role of wages

The debate on the causes of current account disequilibria in the euro area has been largely focused on wages: the mainstream view is that deficits in the South were caused by excessive wage increases there, which have harmed competitiveness and therefore trade balances. The austerity policies put a welcome end to these wrongdoings.

Even though there are some elements of truth in this explanation, it is far too simplistic, for at least four reasons: first, competitiveness is not the only factor explaining current accounts, and competitiveness itself is not reducible to wages; second, it neglects the fact that imports are as important as exports to explain the current account. Although wages are an important determinant of demand and therefore imports, attention has to be paid to profits and especially credit bubbles as well; third, the analysis must distinguish between nominal wages and real wages, which have evolved differently; fourth, one should also look at wages in northern countries, which can symmetrically be considered as not dynamic enough.

In order to explain the evolution of current accounts, the notion of competitiveness is generally put forward: it is defined as the capacity of a firm or a country to be more successful than its competitors in the battle for market shares. However, as Krugman already has shown in 1994 in his critique to the new competitiveness strategy raised by the European Commission at this time, it is not obvious that the concept of competitiveness can be used for countries as a whole, because they should cooperate among each other and are not competing on markets (but firms producing inside their borders).[2] Even if competitiveness is attributed to countries as a whole, it is not the only factor explaining current accounts: the other major determinant is internal demand. A country that is in bad cyclical conditions (*i.e.* with a negative output gap) imports less, and therefore sees its current account temporarily improved. The cyclical condition of trade partners also matters, because if they have a positive output gap, they will boost the exports of the domestic country, whose current account will therefore improve.

Notwithstanding, competitiveness remains a determinant of the dynamics of current account surpluses and deficits. But it is not reducible to wages. One generally distinguishes two dimensions of competitiveness: the price competitiveness, that is the price of domestic exports relatively to that of competitors;

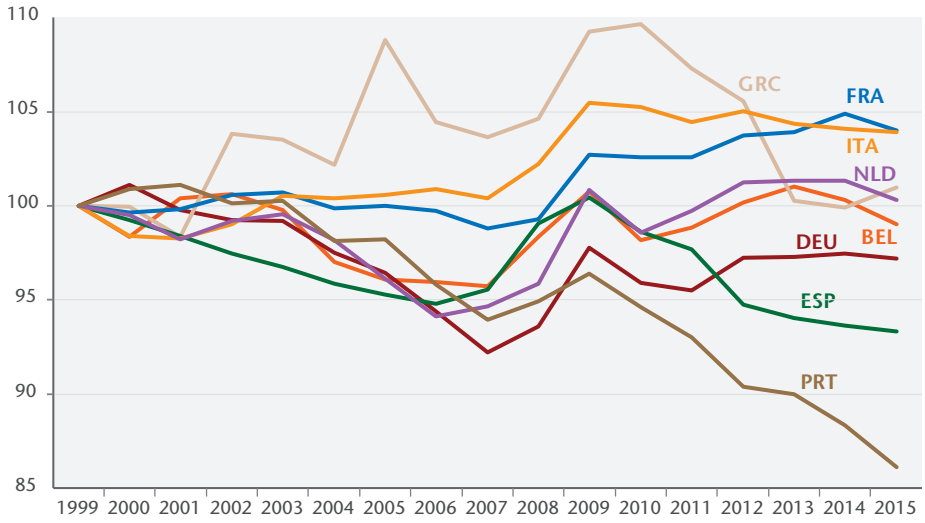
2. See Krugman (1994).

and the non-price competitiveness, which includes factors that are less easily quantified, such as the target market segment (high end or low end), or brand as well as reputation effects. Finally, price competitiveness itself is not only about wages, since it clearly also depends on productivity and profit margins. It is thus clear that wages are not the only factor that matters, even though they play a role.

Were wage increases in the South excessive? In order to determine it, unit labour costs (ULC) are the appropriate analytical tool.

If one looks at real ULC, that is the evolution of *real* wages relatively to productivity gains (see Figure 55), it appears that they have remained stable or have decreased in most countries between 1999 and 2007. They have substantially decreased in Portugal and Spain (as much as in Germany), while they have remained constant in Italy and increased slightly in Greece (3.6% cumulated over 8 years). Said otherwise, during the period preceding the crisis, the purchasing power of wage earners has increased less than productivity in most Southern countries, which means that the aggregate primary income distribution has evolved to the benefits of profits and to the detriment of wage earners. One can therefore hardly say that excessive real wage increases in the South are at the root of current account imbalances.

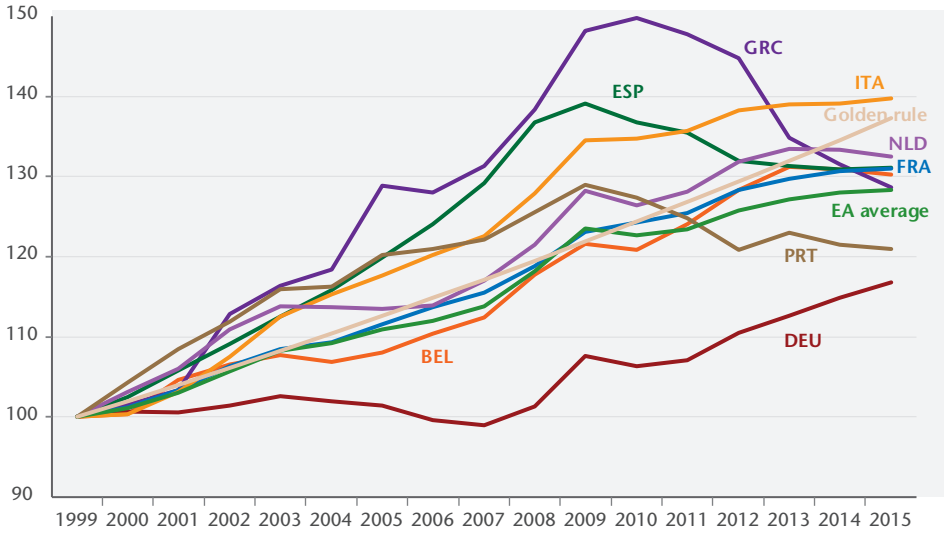
Figure 55. **Real unit labour costs in the euro area**




Source: European Commission.

On the other hand, the picture looks very different if one looks at nominal ULC, that is the evolution of *nominal* wages relatively to productivity gains (see Figure 56). From the beginning of the Monetary Union in 1999, to 2009, the divergence has been strong, between on one side Germany which has gone through a strong wage moderation, and on the other side Spain, Italy, Greece (and to a lesser extent Portugal) which displayed dynamic nominal wages. France, as often, stands in a middle ground. This divergence is essentially a nominal one since, as we have seen above, the divergence of real wages was rather limited (and did not follow a South/North pattern). In other words, the euro area divergence mainly comes from an inflation differential, which is a clear sign of a failure of the EU market doctrine. In contrast to the neoliberal concept of market integration, prices did not converge under the single currency—quite to the contrary, they diverged.

Figure 56. **Nominal unit labour costs in the euro area**




*Source:* European Commission.

On Figure 56 we have added a line corresponding to the "golden wage rule" within a monetary union: this rule corresponds to nominal ULC that increase of 2% per year, that is at the same rate as the European Central Bank (ECB) inflation target (*e.g.* Watt 2007). To the extent that nominal ULC strongly determine inflation, following this rule would imply on one hand that the target of the ECB is reached, and on the other hand that the relative price competitive-

ness of member states is not modified. For the EA as a whole, the evolution of the nominal ULC was in line with that rule until the crisis. Afterwards, due to the policy of internal devaluation within southern countries, wage developments fall behind, leading to a lack in aggregate demand and therefore deflation pressure and a high current account surplus.

At the country level, it is interesting to note that France, as well as Belgium and the Netherlands, have almost perfectly followed the golden wage rule, at least until 2012. On the other hand, both Germany and southern countries violated it, though in opposite directions.[3]

Starting from 2009, an uneven adjustment process can be observed. Italy slows downs its wages and fills part of its deviation from the 2% rule. Spain, Portugal and Greece go through a much more violent adjustment, with significant wage decreases and the entrance into a deflationary dynamics. Germany on the other hand makes little adjustment: far from filling the deviation from the golden rule that it built during the 2000-2007 years, it even dug it a little bit during the last years.

To which extent does the divergence of nominal wages explain the divergence of current accounts? In the end, this is an empirical question that can only be settled using econometric techniques. Ragot and Le Moigne (2015) thus estimate that almost half of the gap between the trade performances of France and Germany on the 1993-2012 period can be explained by the wage divergence, the remainder being mainly attributed to non-price competitiveness factors. In any case, even if wages do not explain everything, they are an important driver of current accounts, and they strongly contributed to the divergence of the first half of the 2000s and to the timid re-convergence of the last years.

### d) How large are the remaining nominal imbalances?

Looking at Figure 54, one could conclude that the problem of current account imbalances is now behind us: in 2015, all euro area countries either were in surplus, or had reduced their deficit to a very small size.

The reality is however much more nuanced and structural imbalances remain very large.

3. See Chagny and Husson (2004) for a more detailed analysis of the various wage regimes in Europe.

Indeed, a significant part of the current account improvement in southern countries comes not from an improvement of their export performance, but from a diminishing of their imports. This phenomenon can be explained by the squeeze of internal demand following the sovereign debt crisis and the austerity policies, which have reduced purchasing power and economic activity. When those countries recover from this cyclical downturn, and in particular when their unemployment rate comes back to more acceptable levels, their imports will rise again and their trade balance will worsen. Unless one considers that being perpetually in crisis is the fate of those countries, one cannot claim that the improvement of their trade balance corresponds to a structural and permanent adjustment. At most, there is a debate on the exact magnitude of the cyclical part of the adjustment, whose estimation depends on the output gap, which is itself hard to know precisely.

Moreover, the euro area as a whole is currently in external disequilibrium. In 2015, it posted an aggregate current account surplus of about 3.8% of GDP. In value, this corresponds to 394 € bn, which is much more than the surplus of China! In a system of flexible exchange rates—the parity of the euro against other currencies being market determined—it is illusory to hope to sustain such a surplus on the long term. Even if for the moment, the differential of monetary policies across both sides of the Atlantic Ocean help sustaining the *statu quo*, the inevitable normalization of the ECB policy will induce an appreciation of the euro. This will harm the price competitiveness of the euro area as a whole and consequently its trade surplus as well. If the hierarchy within the euro area remains what it is today, this will lead to a—reduced—surplus for northern countries and to a return into deficits for southern countries; that is, a similar situation as in 2008.

In order to provide a quantitative assessment of nominal imbalances within the euro area, we have applied a "fundamental equilibrium exchange rate" methodology. The idea is to focus the analysis on price adjustments: we compute the adjustment of the general price level in every euro area economy that would be compatible with both an internal equilibrium (that is the full utilization of production factors, both labour and capital) and an external equilibrium (that is a current account deficit small enough to limit foreign debt accumulation—or conversely a surplus that does not lead to an excessive accumulation of foreign assets). The computation also depends on the sensitivity of imports and exports to price movements of domestic and foreign exporters.[4] Table 13 shows the

4. See iAGS (2014) for a complete description of the methodology. The price elasticities have been updated for the four largest euro area countries.

nominal adjustments that we estimate were still necessary in 2015, computed relatively to the EA average, which is the relevant reference point to counter imbalances within the EA.[5]

Table 13. **Nominal adjustments needed**

| | |
|---|---|
| **EA** | 0% |
| **DEU** | +13% |
| **AUT** | +6% |
| **BEL** | -14% |
| **ESP** | -8% |
| **FIN** | -14% |
| **FRA** | -7% |
| **GRC** | -22% |
| **IRL** | -12% |
| **ITA** | -5% |
| **NLD** | +8% |
| **PRT** | -12% |

Since the adjustments reported here consider only the internal imbalances of the euro area, the adjustment needs of the EA as a whole relatively to the rest of the world are not analyzed. Yet, today, the euro is undervalued, given the large trade surplus of the area. A real appreciation is therefore needed to go back to equilibrium, and that can be obtained either through a nominal appreciation or through price increases within the euro area. The latter solution would be preferable, in order to avoid a deflationary spiral, and in that case price increases should be much more important in Germany than in Southern countries, as indicated in Table 1.
*Source:* iAGS model.

Several groups of countries can be identified. Germany, Austria and the Netherlands must appreciate relatively to the EA average, by up to 13% for Germany. At the other extreme, Greece must undergo a depreciation of about 22% relatively to the EA average, despite the sacrifices already made: even if today the Greek current account is close to equilibrium, its output gap is very negative, and the improvement is therefore largely cyclical. Between these two extremes there is a group of countries that must undergo a depreciation between 5 and 12% relatively to the EA average, which includes France, Spain, Portugal and Italy.

5. For an overall macroeconomic analysis, a better reference point would be the golden wage rule. As the focus here lies on the adjustment needs of countries within the EA to counter current account imbalances, we take the (weighted) average.

The size of the adjustments needs to rule out imbalances as they have been identified by this procedure can look significant. One should however keep in mind that our computations are based on the hypothesis that competitiveness adjustments only go through the price dimension, and that other dimensions remains unchanged. The needed nominal adjustments would be smaller if southern countries were able to improve their non-price competitiveness, through the implementation of other policies like investment in export capacity and lower energy dependency. In any case, our results show that internal imbalances within the euro area are far from being resolved, contrary to what a superficial analysis of the current accounts may suggest.

### e) Designing a cooperative convergence strategy

The strategy followed until now for unwinding the imbalances has therefore not delivered. It has essentially consisted in cutting ULC in the South, both indirectly by deflating demand through fiscal austerity and more directly using several instruments: decreases of minimum wages and of public servants' compensations, cuts in social security contributions and benefits, facilitation of layoffs, decentralization of wage negotiations, etc. But that strategy has failed for two reasons.

First, even if wage costs indeed explain part of the divergence, they are not the only determinant of competitiveness, as we have seen. The increase of margins, especially visible in Greece or Spain, has largely neutralized the decrease in wage costs, which means that export prices have not changed much.[6] And for the time being, nothing shows that the recovery of margins has fuelled an investment dynamics. Policies consisting of lowering social security contributions, like the "Responsibility Pact" and the CICE in France, follow the same logic and so far, did not produce very tangible effects; additionally, they are one-shot policies (it is not possible to indefinitely lowering social contributions), and are thus ill-suited for compensating persistent inflation differentials on the medium term.

Second, wage austerity had collateral effects that were worse than the ill they were supposed to cure. The collapse of internal demand that followed has pushed southern countries into a crisis from which they have not yet recovered. Admittedly, it has led to a resolution of the current account deficit, but which is only of a temporary and cyclical nature. Furthermore, the generalized down-

6. See for example Uxó *et al.* (2014).

ward adjustment of wages carries the risk of pushing the euro area into a dangerous deflationary spiral. The asymmetric nature of the macroeconomic surveillance is at the root of the problem: in practice, only deficit countries are forced to adjust, while surplus countries are not, and this creates a deflationary bias (see Appendix 3 for a discussion on the asymmetric nature of the macroeconomic surveillance). This is an implicit validation of the neo-mercantilist strategy, inherently non-cooperative, that threatens the cohesion of the euro area. Paradoxically, the purpose of the EMU was precisely to prevent such a non-cooperative behaviour, by depriving Member States from the possibility of performing competitive depreciations.

If a new crisis is to be avoided—and such a crisis could threaten the very existence of the euro—it is therefore necessary to put in place a different convergence strategy, that would be of a cooperative nature and would rely on two pillars: a nominal and a structural one.

To ensure that nominal convergence is achieved, *i.e.* that inflation rates are harmonized and that there is no distortion of relative price competitiveness, the most efficient instrument would be a coordinated wage policy. It would be built on the "golden wage rule" already described above: in each country, nominal wages would move in the medium term at the same rate as domestic productivity, augmented by the inflation target of 2%. In the short run, however, the rule should be amended to correct the imbalances identified in Table 13. More precisely, wages in the North would rise faster than the rule during a given period, while they would rise slower in the South. However, given that profit margins are at a historical high in most southern countries, the adjustment could also include a diminishing of margins, that would allow for a more dynamic wage growth.

For this objective to be reached, the macroeconomic surveillance instruments must be modified. In particular, the Macroeconomic Imbalance Procedure currently sanctions countries with too dynamic unit labour costs, but not those with too weak wages growth; the rule thus needs to be made symmetric. But, beyond that, new tools must be created for the implementation of a wage coordination policy: generalization of wage floors through minimum wages or collective agreements and cross-country coordination of their increases, recentralization of wage negotiations at the national and sectoral levels, generalizations of collective agreements…

However, even if nominal convergence is a necessary condition for the coherence of the Monetary Union, it shall not be sufficient. Policies aiming at the

convergence of productive capacities and standards of living must also be implemented.

A policy of massive investments is thus needed in the South, to recreate or consolidate industrial sectors that are either strategic or with a high productivity gains potential, that could in particular help with restoring non-price competitiveness. Given the state of the business cycle and of public finances in these countries, these investments must be partly financed, at least in the short term, by transfers coming from the North. The Juncker plan could have been the vector of this policy, but it is clearly undersized and is not targeted on countries and sectors that need it the most. Moreover, in the specific case of Greece, further measures to reduce the public debt burden are necessary.

The obstacles to changes proposed here are mainly of a political nature: northern countries hold the power to decide whether these changes will be put in place or not. Today, those countries could have the sentiment that they are in a favourable position and that there is no urgency in accepting a reorientation of the euro area. That would however be a short-sighted calculation: internal imbalances within the euro area are dangerous enough to put into question its very existence, in particular in the case of a new financial shock. And even if the breakup of the euro would be painful for southern countries, northern countries would also have a lot to lose, especially on the foreign assets that they have accumulated.

## 4.3. How to tackle internal and external imbalances

Reducing imbalances implies some medium-term trade-offs between growth, inflation, fiscal balance and current account balance. This part highlights these trade-offs against the backdrop that the euro area will be forced into an equilibrium of low growth and low inflation that will make it more painful to reduce external and public disequilibria. It establishes the difficulty of simultaneously reducing all imbalances, all the more that deflation and euro appreciation risks increasing the cost of the reduction of imbalances. Regarding the difficulty of reducing imbalances, and to make the adjustment easier, we then consider some new economic policies. First, given a better coordination of economic policies between MS, relaxing the inflation target beyond recommended symmetric adjustments in countries with high current account surplus would open new fiscal space for MS without impinging on ECB's price stability objective. Second, relaxing fiscal rules especially to finance public investment within the objective of fiscal stability would also give new fiscal space.

### a) Complying with the fiscal rule: is there a need for additional fiscal effort?

The current governance in the euro area mainly hinges on two pillars. On the one hand, countries are requested to comply with the Stability and Growth Pact, which is based on a "preventive" and a "corrective arm". In the "preventive arm", governments are expected to implement sound fiscal policies. To this end, they commit to an MTO (Medium-term objective) defined as a target for the structural deficit. In the "corrective arm", euro area members avoid excessive budget deficits and excessive public debt. Budget deficit is considered excessive when it is greater than 3% of GDP. Public debt is considered excessive if it exceeds 60% of GDP without diminishing at an adequate rate (defined as a decrease of the excess debt by 5% per year on average over three years). On the other hand, it has been emphasized that the scope of surveillance should go beyond public finance and should also focus on other macroeconomic indicators. The MIP (Macroeconomic imbalances procedure) has been introduced to this end as part of the "Six-pack". The MIP aims at "preventing and addressing the emergence of potentially harmful macroeconomic imbalances that could adversely affect economic stability in a particular Member State". In practice, the focus is mainly devoted to current account imbalances and competitiveness.

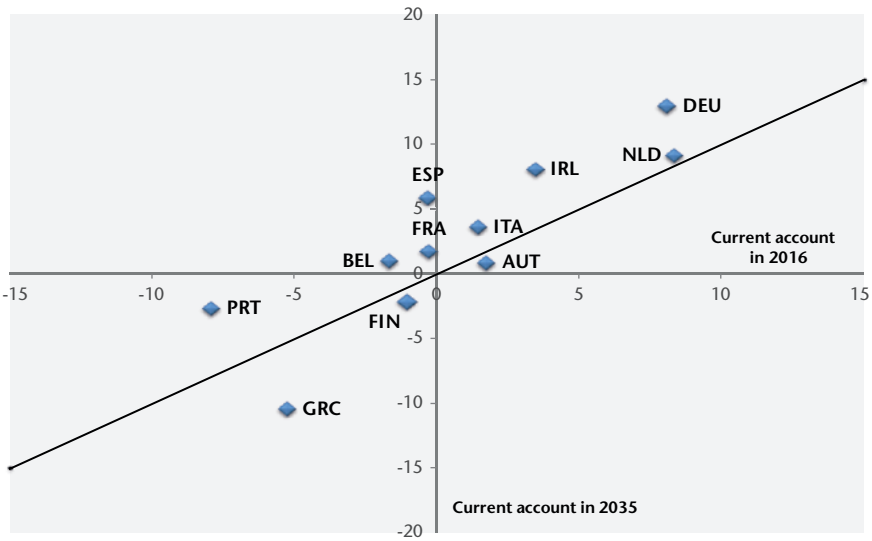
In Chapter 1, we assess whether countries would be able to achieve a 60% debt-to-GDP ratio by 2035 (see Table A1 and Table A2 in Appendix 4; see also Table A5 for main hypotheses). It notably suggests that France, Italy, Spain, Belgium, Portugal, Greece and Finland may be requested to implement additional fiscal consolidation beyond 2018 to avoid an excessive public debt (Figure 57). Germany, the Netherlands and Ireland would have fiscal space as their debt-to-GDP ratio would stand below 60% in 2035. For the euro area, debt would reach 71% of GDP. Consequently, the additional fiscal effort would be substantial for Greece, exceeding 9 points of GDP, but also for France, Spain and Italy (Figure 57). It is also suggested that complying with the debt rule would entail significant output costs. The average output gap would decrease notably in countries where additional fiscal consolidation is implemented. Though the output gap would improve for Germany, the Netherlands and Ireland, the average situation of the euro area would deteriorate, illustrating that fiscal expansion in countries with fiscal space would not compensate for output losses in countries where adjustment is needed to satisfy the debt criterion.

Figure 57. **Public debt in 2035, fiscal impulse and output gap**


*Source:* iAGS model.

Turning to current account imbalances, model simulations also illustrate the path for the current account dynamics for 11 euro area countries. In the baseline scenario, Germany, Italy, the Netherlands, Ireland and Austria would be in surplus in 2016. These surpluses would improve for all these countries except Austria (Figure 58). In 2035, the German current account surplus would amount to 13% of GDP while it would exceed 9% in the Netherlands. During all the period, it would stand above 6% for these two countries, which is the upper limit set in the scoreboard designed to capture the most relevant internal and external sources of macroeconomic imbalances. Countries with the highest current account deficit in 2016 would be Portugal and Greece. The current account deficit in these countries would exceed 4%, the threshold above which a macroeconomic imbalance would be signalled triggering an alert mechanism report. Moreover, the current account deficit would deteriorate in Greece from 2016 to 2035. The developments below will assess the consequences of adjusting current account imbalances. Furthermore, it must also be noticed that the current account surplus for the euro area would increase from 2.1% in 2016 to 5.2% in 2035, raising the risk of euro appreciation.

Figure 58. **Baseline – Current account in 2016 and in 2035**




*Source:* iAGS model.

### b) Complying with external imbalances: adjusting nominal discrepancies?

In the first section, it has been suggested that adjustment in current accounts are needed despite a significant reduction of deficits since the outbreak of the crises. As output gap is still negative for several countries, structural current account deficits are expected to persist. The required nominal adjustment to cope with financial imbalances is then computed by applying a "fundamental equilibrium exchange rate" methodology. In what follows, it is considered that the adjustment would be symmetric[7] as countries with a current account surplus would implement "reflation" policies and tolerate inflation rates above the 2%. The relative nominal price adjustment for each euro area country is computed such that the average inflation for the euro as a whole reaches the 2% target fixed by the ECB. The adjustment is supposed to be spread over a 20-year period. As in the iAGS 2016 report we assume that euro area countries are able to influence inflation and expected inflation in their own countries by implementing reforms such that the required nominal adjustment is realized. Moreover, while non-cost competitiveness matters for reducing imbalances, we assume that the reduction of structural current account imbalances is realized only through relative price adjustments. Non-cost competitiveness has multiple dimensions and cannot be captured with a single and simple indicator. Moreover, the way that economic policies can influence non-cost competitiveness remains uncertain. Consequently, the required nominal adjustment computed in the previous section and used in simulations below may be considered as an upper limit.

In case of a symmetric adjustment, the target for expected inflation is higher for Germany, the Netherlands, Ireland and Austria while it would be lower for France, Italy, Spain, Belgium, Greece, Portugal and Finland (Table 14). Considering that expected inflation is anchored on these targets would have an impact on the real interest rate in each euro area country and would then change the requested fiscal adjustment to achieve a 60% debt-to-GDP ratio. Fiscal impulses (FI) are then adjusted for this purpose. Simulations presented in Table A3 in appendix show output gaps, inflation and current accounts dynamics in this situation where countries try to address the debt constraint and avoid external imbalances. First, all countries but Greece would be able to reach a 60% debt-

7. iAGS 2016 report has dealt with the case of the asymmetric adjustment and showed that the cost of adjusting simultaneously public debt and current account imbalances would entail significant output costs.

to-GDP ratio. The Greek situation would be slightly deteriorated as public debt would increase if the country tried to cope with external imbalances and simultaneously tried to reduce public debt.

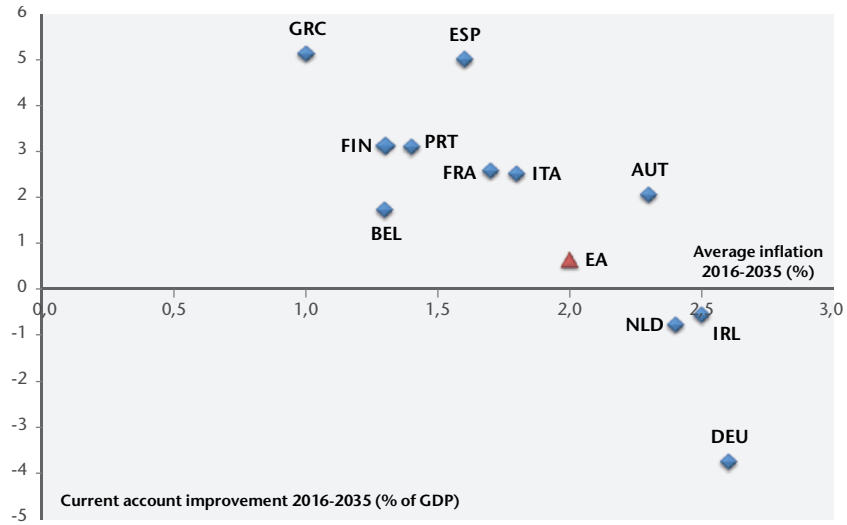
Table 14. **Symmetric price adjustments**

| | DEU | FRA | ITA | ESP | NLD | BEL | GRC | PRT | IRL | AUT | FIN | EA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Annual deviation from 2% target** | 0.6 | -0.3 | -0.2 | -0.4 | 0.4 | -0.7 | -1.0 | -0.6 | 0.5 | 0.3 | -0.7 | 0 |

*Source:* iAGS model.

Figure 59 and Figure 60 highlight the main consequences of this strategy in terms of current account dynamics and output gaps. The details of simulations for the 11 euro area countries are presented in Table A3 in the Appendix. It may first be noted that *ex post* nominal price adjustments relative to EA average price level from 2016 to 2035 are important: above 0.2% each year for Italy, France, Spain, Portugal, Finland, Belgium and Greece. Nominal price level relative to EA average would increase for Germany, Austria, the Netherlands and Ireland.

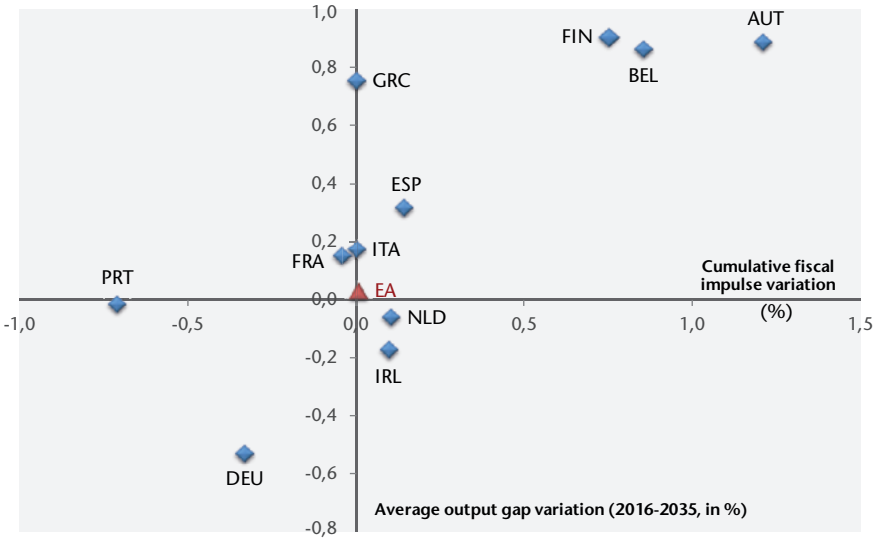
Figure 59. **Symmetric price adjustments – Average inflation and current account improvement**




*Note:* current account improvement is computed as the difference between current account adjustment in the symmetric price adjustment case and the current account adjustment with no price adjustment. In each case, FI are computed to achieve 60% of public debt-to-GDP ratio where it is possible.
*Source:* iAGS model.

Figure 59 and Figure 60 compare the situation in which the euro area simultaneously reduces public debt and current account imbalances with the situation where they only comply with the 60% target for public debt. The current account balance would improve for all countries except Germany, Ireland and the Netherlands even though the change in the current account balance would be inferior to 1 point in Ireland and in the Netherlands. For Spain and Greece, the internal devaluation would be associated with an improvement of the current account balance close to 5 points between 2016 and 2035. In France and in Italy the positive change would reach 2.5 and 2.6 points respectively. Finally, the current surplus of Germany would be reduced by 3.8 points.

Figure 60. **Symmetric price adjustments – Fiscal space and growth**




*Source:* iAGS model.

The impact of addressing current account imbalances on fiscal policy and output gap would depend on several forces. On the one hand, the decrease in relative prices would increase competitiveness and the output gap. This would also have a positive effect on the debt dynamic due the automatic stabilizers effect. On the other hand, the real interest rate would increase, reducing the output gap and increasing public debt. The global effect would notably depend on the sensitivity of external trade to the relative prices but also on the additional effort that may be required to achieve a 60% debt ratio. For Greece, there would be no increase in fiscal consolidation as it would already have

reached its maximum (0.5 point per year). Public debt would therefore increase but Greece would benefit from the internal devaluation so that the output gap effect would be positive. Portugal would be constrained to increase fiscal consolidation to be able to achieve a 60% debt-to-GDP ratio. This additional fiscal consolidation would offset the positive impact of competitiveness on the output gap. Finally, the average output gap would be reduced for countries where the relative price would increase: Germany, the Netherlands and Ireland. For the euro area, the change in the average output gap would be close to zero.

### c) Complying with external imbalances: which euro appreciation?

As recalled in the first part of this chapter, the aggregate current account of the EA was highly positive in 2015. On the medium run, once monetary policies have normalised, this may lead to an appreciation of the euro that would restore the external equilibrium of the EA. It is therefore necessary to study the macroeconomic consequences of that appreciation, and in particular how it interacts with the internal and external equilibrium of EA countries.

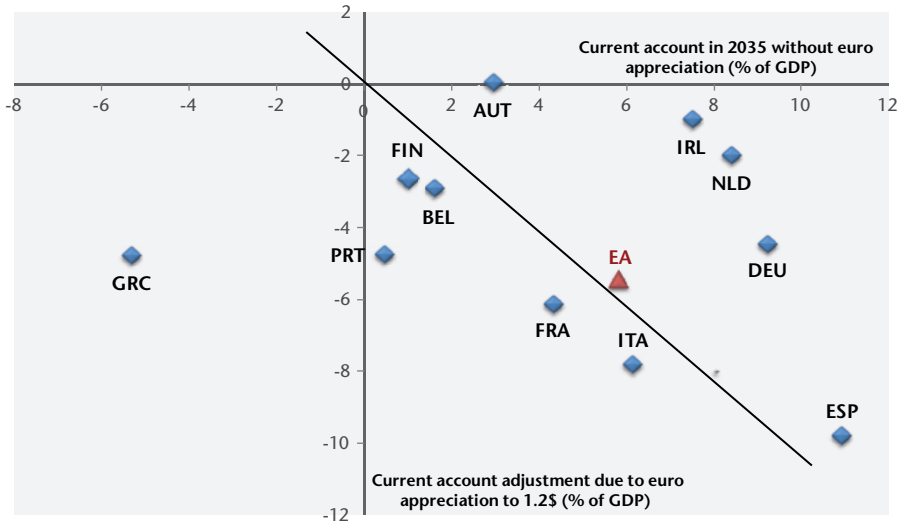
Using iAGS model, we compute the level of euro exchange rate compatible with EA current account equilibrium around 2035. Figure 61 pictures the outcome of a euro appreciation, following a normalization of the monetary policy in 2018, up to an exchange rate of 1.20$ (in our baseline scenario, the euro stabilizes at 1.05$). The horizontal axis corresponds to the current account in 2035 without the euro appreciation (as studied in the previous section). The vertical axis corresponds to the change in the 2035 current account caused by the euro appreciation, relative to the previous scenario. The black line therefore corresponds to an equilibrated current account in 2035 after the appreciation, which is the case for the EA current account.

The figure also illustrates that achieving EA external equilibrium would not be the result of a homogenous adjustment among EA countries.[8] Some countries would adjust too much (Portugal, and in a minor fashion Finland, Belgium, France, Italy), whereas others would only partialy adjust (Ireland, Netherlands, Germany) or even increase their current account imbalance (Greece). Of course, the euro area must be seen as an integrated economic area in which current account imbalances would not matter, not only a fixed exchange rate area in which current accounts should be balanced in the medium run for all countries. But it seems now that the EA is not enough integrated to fully disre-

8. See also Table A4 in Appendix 4.

gard external imbalances between EA countries. It is all the more the case as countries that overadjust are mainly countries that would have to restore competitiveness, as we have seen in Figure 59.

Figure 61. **Euro appreciation to 1.2$ – impact on current account**

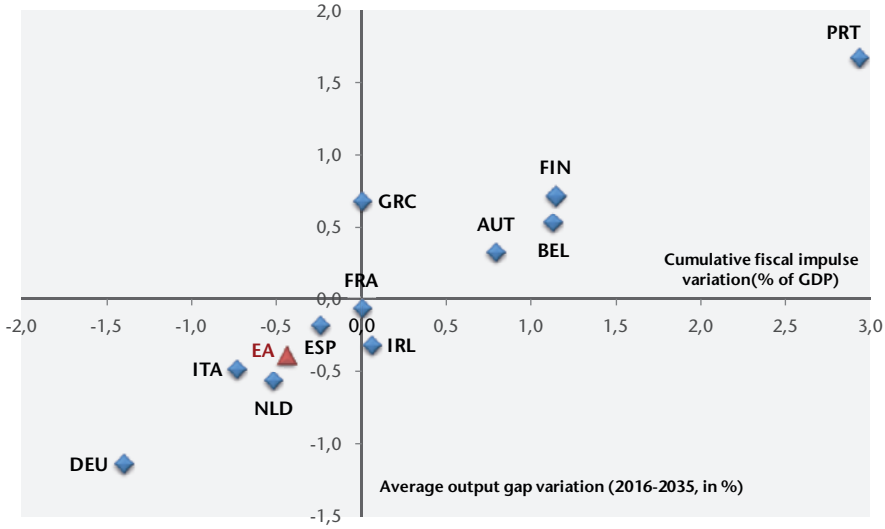



*Source:* iAGS model.

An appreciation of the euro may then contradict the correction of external imbalances. Figure 62 also demonstrates that it could impinge on correcting internal disequilibrium (high unemployment and public) for some countries. Euro appreciation would increase fiscal austerity to achieve the 60% to GDP public debt ratio for Italy and Spain, and reduce fiscal space for Germany and Netherlands, as it would weigh on growth for these countries. But other countries would benefit from the appreciation[9] (Portugal, Finland, Belgium and Austria) since the appreciation would impact in different ways price-competitiveness of exports and terms of trade among EA countries. These results imply that a rebalancing of the euro area current account may be detrimental to euro area convergence and integration.

9. See Box 5 for an explanation.

Figure 62. **Euro appreciation to 1.2$ – fiscal space and growth**




*Source:* iAGS model.

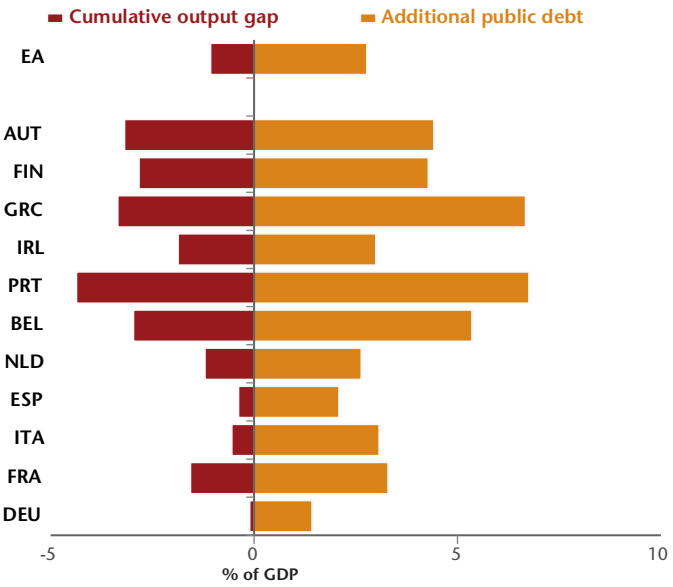
## d) Remaining risks & relaxing constraints to ease the adjustment

EA adjustments to stabilise debt, reduce current account imbalances and EA current account surplus seem quite huge. They could be even greater if some risks—low inflation, euro exchange rate appreciation—materialise in the future. Facing such risks, EA institutions need some leeway to avoid EA collapse. In this part, we stress these risks and we discuss some tools to cope with them.

### *Remaining risks increasing imbalances across EA countries*

As we have warned in past iAGS, low inflation would increase EA macroeconomic imbalances. If the ECB were to miss its 2% target on average by -0.1% a year from 2020 to 2035, public debt in EA would be about 2 points higher in 2035 (Figure 63). This would be due to higher real interest rates that would impinge growth: cumulative output gap would be 0.7 point lower. Low inflation would then increase fiscal adjustment needs for countries with a high public debt. Regarding additional debt and growth losses, countries would not be impacted in the same way as Greece, Portugal, Austria and Belgium would be the most impacted ones.

Figure 63. **Deflation risk – Impact of a lower inflation (-0.1% each year, 2020-2035) on debt and growth**




*Source:* iAGS model.

EA countries do not have the same trade openness, and their trade share with the rest of the world (*i.e.* all non EA member states) varies. Trade elasticities (for import and export volumes and prices) also differ from one country to another. These differences induce varying current account deviations following a lower inflation than targeted by the ECB. All countries gain price competitiveness compared to the rest of the world and improve their current account balance. On average, the EA current account would increase by 0.4 point of GDP, and increases would be the highest in Italy and Spain (Table 15). But some countries (Greece, Ireland, Finland and Austria) would suffer a deteriorating current account, since price competitiveness gains would not compensate for deteriorating terms of trade and lower imports coming from other EA countries due to lower growth.

Table 15. **Deflation risk – impact on current account in 2035**

**% of GDP, value**

| | DEU | FRA | ITA | ESP | NLD | BEL | GRC | PRT | IRL | AUT | FIN | EA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CA variation** | 0.3 | 0.5 | 0.8 | 0.9 | 0.0 | 0.0 | -0.2 | 0.0 | -0.3 | -0.5 | -0.2 | 0.4 |

*Source:* iAGS model.

These results demonstrate that inflation must be high enough in the EA: low inflation would increase current accounts disequilibrium in addition to raising fiscal efforts to stabilise public debt. But as low inflation would favour EA current account surplus, it would then also push for euro exchange rate appreciation.

### Box 2. **Describing risk scenarios**

The ability to reduce macroeconomic imbalances depends especially on inflation dynamics. As emphasized in a debt-deflation spiral, the real debt burden becomes higher when countries enter into deflation. Taking into account the constraints imposed by the TSCG may then force governments to further austerity measures reinforcing the deflation risk and increasing the debt burden. Moreover, deflation changes relative export and import prices in all EA countries. In that case, simple Marshall-Lerner conditions may not be sufficient to ensure a trade balance improvement following a gain in price-competitiveness of exports due to lower inflation: one EA country may gain competitiveness against the rest of the world but be less competitive towards its partners. Put another way, the fall in imports value does not compensate for the fall in exports value, once volume variations are accounted for.

To this end, we analyse the consequences of a decrease of the inflation rate under the following scenario. We consider a symmetric shock consisting in a drop in the ECB inflation target over the period 2016-2035. We consider a 0.1 point decrease.

Regarding current account surplus of the EA, EA countries face a risk of euro exchange rate appreciation. The appreciation would rebalance the aggregate trade balance of the EA and the current account too. But the loss of competitiveness towards the rest of the world would be detrimental to growth. And whereas the aggregate trade balance would rebalance, it may not be the case for all countries: in the same way as a low deflation shock, exchange rate appreciation would modify relative export and import prices in all EA countries, affecting current accounts in opposite ways from one country to another. The third point is that exchange rate appreciation would lead to imported disinflation, reinforcing the debt-deflation spiral and forcing governments to further austerity measures reinforcing the deflation risk and increasing the debt burden.

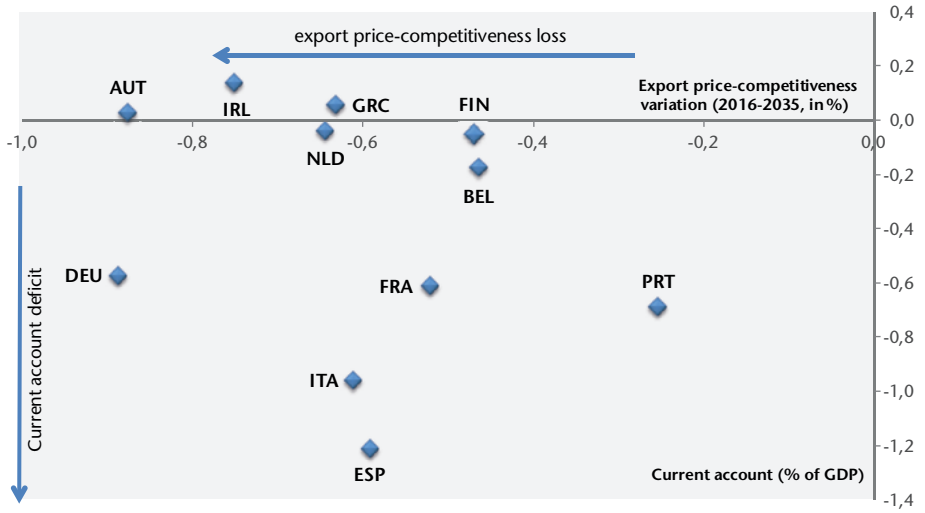
To this end, we analyse the consequences of a euro exchange rate appreciation under the following scenario. We consider a 2% appreciation of the euro in 2016 and maintained until 2035.

For simulations, we use the iAGS model (technical appendix is available on request). For the baseline scenario from which we compute differences we assume that:

— fiscal policy entails achieving 60% public debt-to-GDP ratio in 2035;
— symmetric nominal adjustments to correct EA internal current accounts discrepancies;
— euro exchange rate appreciation to 1.2 dollar in 2020 and beyond.

A euro exchange rate appreciation would counteract the price-competitiveness gains due to lower inflation. For example, a 2% appreciation from 2020 onward would lead to a decrease of the EA current account (CA) deficit by 0.6 point of GDP in 2035 (Figure 64). Spain, Italy, Portugal, France and Germany would be the most impacted countries regarding current account deviations.

Figure 64. **Exchange rate risk – Impact of a 2% appreciation of euro on trade balance**




*Source:* iAGS model.

Wheras it would limit the EA current account increase, a euro appreciation would nevertheless increase other imbalances. Growth would be lower in EA (-2.1 cumulative output gap on 2020-2035, Table 16) and unemployment higher. Public debt would then increase on average (+1.9 point of GDP in 2035). Italy and Spain would have to do more effort to achieve 60% of GDP debt ratio, and fiscal space would be reduced in Germany and Netherlands.

Table 16. **Exchange rate risk – impact on current account in 2035**

**% of GDP**

| | DEU | FRA | ITA | ESP | NLD | BEL | GRC | PRT | IRL | AUT | FIN | EA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Public debt variation** | 4.3 | 0.2 | 3.5 | 2.9 | 2.3 | -3.0 | -3.5 | -6.5 | 1.0 | -1.5 | -2.3 | 1.9 |
| **Cumulative output gap variation** | -3.9 | -0.6 | -3.0 | -3.2 | -2.5 | 1.3 | 2.1 | 4.1 | -2.3 | 0.2 | 1.2 | -2.1 |
| **CA variation** | -0.6 | -0.6 | -1.0 | -1.2 | 0.0 | -0.2 | 0.1 | -0.7 | 0.1 | 0.0 | 0.0 | -0.6 |

*Source:* iAGS model.

### *Some ways to ease the adjustment*

In the previous sections, we have illustrated the adjustments which are needed for countries either to comply with debt objectives or to deal with current account imbalances, and the risks going with these adjustments. On the one hand, they would imply additional fiscal consolidation for some countries and, on the other hand, some countries would also need to adjust relative prices. It should be noticed that countries, which are supposed to implement further consolidation are generally those that will need to adjust relative prices. This is notably the case for: France, Italy, Spain, Belgium, Portugal and Greece. Yet, these objectives might not be compatible. Besides, the reduction of public debt to reach the 60% debt-to-GDP ratio would reduce growth and then curb recovery. The adjustment of prices would also slow down the reduction of public debt, forcing Member States to increase fiscal consolidation further, weighing down on growth. Euro area countries may then try to square the circle and be constrained to forsake one of the three objectives (economic growth, external and public balances).

A first possibility would be to frontload fiscal adjustment by using fiscal space in countries having some fiscal leeway and high current account surplus, mainly Germany, Austria and Netherlands. In these countries, higher public spending would sustain growth and inflation. It would also increase exports of EA partners, and produce an improvement in the convergence between EA countries, without endangering the sustainability of public finances. But such fiscal stimulus may not be enough to significantly sustain economic growth in other EA countries: spill-over-effects shall be small for two reasons. The first one is that the German economy seems to be at full employment. A fiscal stimulus would probably only produce small growth effects and exports for partners since fiscal multipliers are smaller when output gap is close to zero. The other reason is that Netherlands and Austria are not big enough economies to significantly stimulate partners' economy.

Using the iAGS Model, we illustrate this point by simulating a 1% of GDP increase in public spending of Germany, Netherlands and Austria from 2017.[10] The cumulative impact on German economy would be rather small (+1.1% of

10. For simulations, we use the iAGS model (technical appendix is available on request). For the baseline scenario from which we compute differences we assume that:
— fiscal policy entails achieving 60% public debt-to-GDP ratio in 2035;
— symmetric nominal adjustments to correct EA internal current accounts discrepancies;
— euro exchange rate appreciation to 1.2 dollar in 2020 and beyond.

cumulative output gap during the period 2017-2035, see Table 17). The effect on Austria and Netherlands would be higher (respectively +2.6% and +3.0% of cumulative output gap) since these countries start with a higher negative output gap. The results show quasi-null spill-over effects on the other EA countries.

Table 17. **Using fiscal space in Germany, Austria and Netherlands: +1%-of-GDP public spending expenditures from 2017**

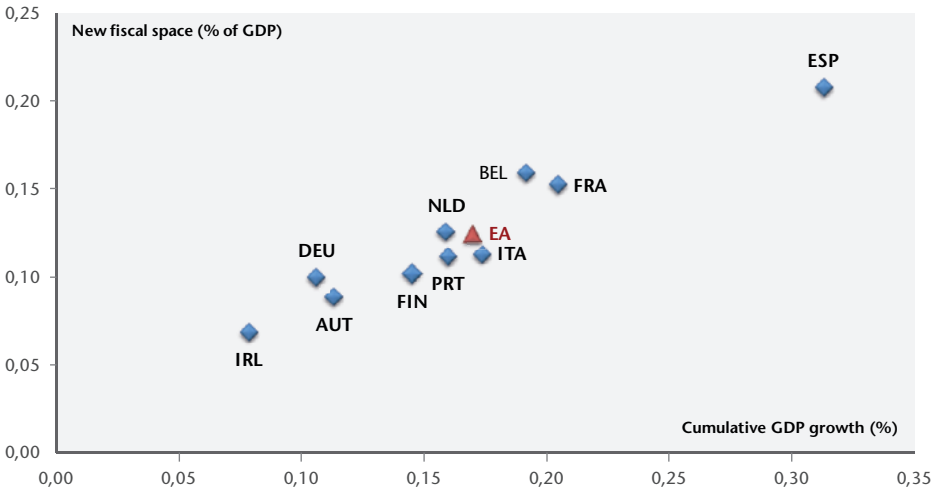
| | Public debt (% of GDP) | Structural balance % of GDP) | Cumulative fiscal impulse (%) | Cumulative output gap (%) |
|---|---|---|---|---|
| | (1) 2035 | (2) 2035 | (3) 2015-2035* | (4) 2016-2035 |
| **DEU** | 17 | -1.5 | 1.0 | 1.1 |
| **FRA** | 0 | 0.0 | 0.0 | 0.0 |
| **ITA** | 0 | 0.0 | 0.0 | 0.0 |
| **ESP** | 0 | 0.0 | 0.0 | 0.0 |
| **NLD** | 14 | -1.2 | 1.0 | 3.0 |
| **BEL** | 0 | 0.0 | 0.0 | 0.1 |
| **PRT** | 0 | 0.0 | 0.0 | 0.0 |
| **IRL** | 0 | 0.0 | 0.0 | 0.0 |
| **GRC** | 0 | 0.0 | 0.0 | 0.2 |
| **FIN** | 0 | 0.0 | 0.0 | 0.0 |
| **AUT** | 15 | -1.3 | 1.0 | 2.6 |
| **EA** | 7 | -0.6 | 0.4 | 0.6 |

*Source*: iAGS model.

To ease the adjustment, EA countries need some leeway that avoids the caveats of a fiscal stimulus restricted to a small group of countries. A more efficient policy consists in making a fiscal stimulus in all EA countries, to maximise spill-over effects and to deal with high unemployment in the EA. To finance the stimulus a golden rule for public investment would allow reconsidering the fiscal targets. When public investment is efficiently managed, then, one can expect a positive impact on potential growth. Academics agree on an elasticity of at least .1 between public capital stock and potential growth (see Bom and Lightart (2014) for a recent survey). That is true even with less materialistic categories of capital stock like human capital. That means that a permanent increase in public investment by .1% per year, with a 20 years lifespan of the investment (a higher life span multiplies the effect), would increase public capital by 2% and long term output by .2%/year. In the end net public assets would increase.

The following simulations[11] show that, when this effect is added to plain Keynesian effect (short term multipliers) and to wise back-loading (higher fiscal multiplier when unemployment is high, zero lower bound when deflation is a high probability risk), the increase in debt (full public financing of the investment) is small.

Figure 65. **Relaxing public debt target & public investment – impact on growth**




*Note:* We assume an elasticity of .1 between public capital stock and potential growth.
*Source:* iAGS model.

To illustrate this point, we compute the new fiscal space compatible with a 61% public debt-to-GDP ratio in 2035 in all countries but Greece. Countries would use this fiscal space in 2017 to increase public investment. Results show that most countries with a negative output gap (Netherlands, Spain, France, Italy, Belgium, Portugal) would have a higher fiscal space, about 0.15% of GDP (see Figure 65) and would gain about 0.2 to 0.3% of cumulative GDP growth. In 2035, public debt would only be increased by 1% of GDP. *In fine*, 1 additional percentage point of public debt would give way to a 0.6% increase of net public assets[12] in 2035 in the euro area, thanks to a public investment increase by 0.1% of GDP starting from 2017 (Table 18).

11. For simulations, we use the iAGS model (technical appendix is available on request). For the baseline scenario from which we compute differences we assume that:
    — fiscal policy entails achieving 60% public debt-to-GDP ratio in 2035;
    — symmetric nominal adjustments to correct EA internal current accounts discrepancies;
    — euro exchange rate appreciation to 1.2 dollar in 2020 and beyond.

Table 18. **Fiscal space and Public investment (2017-2035) – impact on public debt and assets**

**% of GDP**

| | DEU | FRA | ITA | ESP | NLD | BEL | GRC | PRT | IRL | AUT | FIN | EA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Add. public investment per year** | 0.11 | 0.15 | 0.11 | 0.21 | 0.13 | 0.16 | 0.0 | 0.11 | 0.07 | 0.09 | 0.10 | 0.12 |
| **Gross Public debt variation, 2035** | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | nc | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| **Gross Public assets variation, 2035** | 1.2 | 1.9 | 1.4 | 2.6 | 1.6 | 2.0 | nc | 1.4 | 0.9 | 1.1 | 1.3 | 1.6 |
| **Net public assets variation, 2035** | 0.2 | 0.9 | 0.4 | 1.6 | 0.6 | 1.0 | nc | 0.4 | -0.1 | 0.1 | 0.3 | 0.6 |

*Note:* Gross Public assets variation is computed with a 5% depreciation scheme hypothesys for public capital.
*Source:* iAGS model.

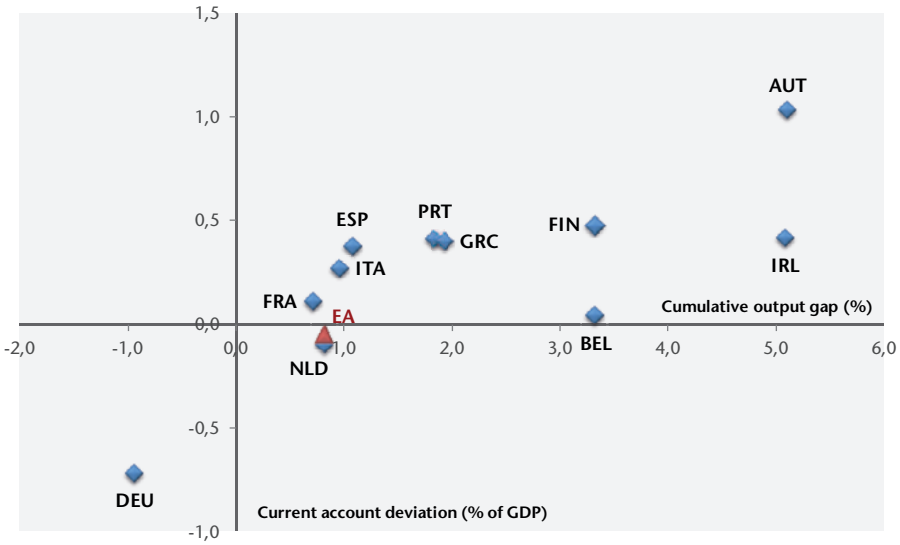
To facilitate the correction of EA imbalances, EA member states should encourage even higher inflation in high current account surplus countries (Germany, Austria and Netherlands). Indeed there is a room for more than 2% inflation on average in EA for the 20 next years, as average inflation has been lower than 2% on average since 2000. Higher inflation in these countries would induce competitiveness gains for the other EA members, which could improve their trade balance and current account.

As an illustration, we simulate[13] a positive shock of 0.2% each year on inflation in Germany, Netherlands and Austria from 2020 onward. Results show that all countries but Germany (CA would diminish by -0.7 point of GDP, see Figure 66) and Netherlands (-0.1 point) would improve their current account by 2035 (from +0.1 for France to +1.0 for Austria[14]). Results also make evident that all countries but Germany would gain economic activity (+0.2% to +0.5% of cumulative output gap for France, Italy, Spain, Portugal, Greece, Finland and

12. This effect depends a lot on the link between public investment and output. For an elasticity of 0.05, the increase in net assets in 2035 is nearly 0. This shows the importance of management and allocation of public investment. Bom and Lightart (2014) retain a range from .08 to .17, leaving room for more optimistic perspectives.
13. For simulations, we use the iAGS model (technical appendix is available on request). For the baseline scenario from which we compute differences we assume that:
    — fiscal policy entails achieving 60% public debt-to-GDP ratio in 2035;
    — symmetric nominal adjustments to correct EA internal current accounts discrepancies;
    — euro exchange rate appreciation to 1.2 dollar in 2020 and beyond.
14. This result comes from a strong improvement of the terms of trade for that country due to a lower elasticity of export prices to export prices of competitors compared to the other countries (elasticity of 0.18).

Ireland). The average inflation rate would only increase by 0.06 point each year on 2016-2035 (see Table 19), which would be compatible with ECB target in the long run. Slightly higher inflation would also ease the burden of debt by 1.8 point of GDP in 2035, giving fiscal space to sustain growth and fight unemployment in the EA.

Figure 66. **Relaxing inflation in high CA surplus countries – impact on trade balance**




*Source:* iAGS model.

Table 19. **Relaxing inflation in high CA surplus countries – impact on current account in 2035**

**% of GDP**

| | DEU | FRA | ITA | ESP | NLD | BEL | GRC | PRT | IRL | AUT | FIN | EA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Public debt variation** | -1.2 | -0.9 | -1.4 | -1.2 | -3.1 | -4.1 | -2.3 | -2.1 | -4.3 | -7.1 | -3.5 | -1.8 |
| **Cumulative inflation 2016-2035** | 2.9 | 0.1 | 0.1 | 0.1 | 2.9 | 0.2 | 0.1 | 0.1 | 0.3 | 3.1 | 0.2 | 1.2 |

*Source:* iAGS model.

Cooperation would indeed make the adjustment softer, increase growth in the euro area and reduce the risk of deflation. It requires that countries fully take advantage of their fiscal rooms of manoeuvre when they have some fiscal space. It also requires surplus countries to accept more inflation and to revise their national inflation target upward. Yet, it remains to stress that a cooperative solution would only be a second-best: as we showed, trade-offs between interdependent objectives (debt, current account and growth) will still arise.

## 4.4. Policy recommendations

The recovery that started in 2014 in the euro area is faltering whereas output gap has not yet closed and the unemployment rate remains above its pre-crisis level. Divergence among European countries will widen if economic policy is not changed. It is still time to change and implement policies aiming at enhancing growth and convergence of living standards. The current institutional design may provide rooms of manoeuvre that need to be explored. In the longer term, changing the Treaties should also be considered as an option.

### *Use fiscal space*

**Fiscal space in countries where fiscal rules are not binding should be used to implement more expansionary fiscal policies**. It would not only boost growth in those countries but would have positive spill-over effects on other EA countries.

### *Relax fiscal constraints*

However, we should not expect too much from expansionary fiscal policies only in some countries. European growth cannot rely only on German expenditures. Expansionary fiscal policy in Germany would first benefit Germany, increasing the growth and living standard divergence among European countries. **More fiscal leeway is necessary** (for details, see Chapter 3.2). A positive fiscal impulse is needed in countries where the output gap is negative. EA countries need some leeway that avoids the caveats of a fiscal stimulus restricted to a small group of countries. **To that end, escape clauses might be extended**. The investment clause may already be used for countries with deficit below 3% of GDP. A generalization of such an escape clause should be considered. **In the future, it may call for a change in the Treaties to promote fiscal rules from which investment expenditures are excluded**. Relaxing the public debt target

and delaying the adjustment of structural public balances would also contribute to provide additional room of manoeuvre for EA countries.

### *Promote investment to raise future growth, future standards of living and reduce structural divergence*

**Productivity-enhancing investments must be favoured**, notably in external deficit countries. The correction of current account imbalances cannot only be addressed through cost-competitiveness. Favouring public and private investment is necessary to reduce structural divergence and promote the convergence of the standards of living among EU countries.

### *Make the MIP more symmetric*

External imbalances have persisted in the euro area despite the reduction of current account deficits. The adjustment has remained asymmetric, weighing mainly on deficit countries. **The MIP should be made more symmetric and encourage reflation policies in countries with high current account surplus**. It would for example imply higher increase in the minimum wage. **The indicators included in the scoreboard should be made more symmetric**. Actually, if a positive threshold has been identified for the current account to signal macroeconomic imbalances, its absolute value is inferior to the threshold for deficit countries: +6% against -4% of GDP. Moreover, indicators related to nominal wage cost only and real effective exchange rate only point to an upper value. A low wage growth may signal a weak demand. A bottom value should be introduced for nominal unit labour cost.

### *Promote a golden wage rule and more wage coordination*

**Wage growth in EA countries should stay close to the sum of the rate of productivity and the inflation target of the ECB** (2%). Following this rule would imply that the target of the ECB is more easily reached by creating a nominal anchor through the wage dynamic. Moreover, wage coordination policy should be reinforced by the **generalization of wage floors through minimum wages or collective agreements and cross-country coordination of their increases**. To that end recentralization of wage negotiations at the national and sectoral levels would be desirable as well as the generalizations of collective agreements.

### *Improve EU institutional design*

Lasting convergence with balanced, non-inflationary growth would require changes to both the policy content and institutional design of the euro area. Cornerstones of a reform agenda, that as far as possible makes use of existing procedures or elements that have already been envisaged (for instance in the Five presidents' Report) could involve the following elements (for details see Koll/Watt, forthcoming). The starting point is a **revitalisation of the procedure of economic policy co-ordination** as laid down in Article 121 TFEU, **with the Broad Economic Policy Guidelines as its central element**. In terms of policy content the BEPGs are appropriate to the needs of macroeconomic management in Europe but they have essentially been forced to the sidelines by the inappropriate fixation with fiscal rules focused narrowly on deficit reduction and the asymmetrical MIP. This change would enable the policy mix between aggregate-level monetary policy and predominantly national fiscal policies and incomes policies to be evaluated within a common and consistent framework, under the overarching treaty-based recognition of the necessity to regard economic policies as a matter of "common interest".

Member states commit to using a mix, appropriate to the country in question, of fiscal and incomes policies, in order to ensure demand and nominal wage and price developments consistent with overall policy goals such as laid down in Art. 3 TFE and Art. 119 TFEU. **Persistent non-compliance with agreed trajectories would need to be sanctioned**, as envisaged for instance in the Five Presidents' Report (*e.g.* with a denial of access to common "public goods" –structural funds, common fiscal measures, etc.).

**The recommendations under the BPEG should be quantified** where possible, in particular providing alternative macroeconomic development scenarios under different policy assumptions. To this end, **the recently established European Fiscal Council should be expanded in terms of personnel and resources** and broadened in scope to refer to the overall policy mix. As a starting-point **its work should serve a revised, symmetrical set of indicators along the lines of the MIP**. In parallel the **expert-advisory productivity boards at national level should be established** also with a remit to analyse the overall macroeconomic policy mix of the Member State concerned. These bodies serve to develop non-binding technical analyses and consistent scenarios. They might usefully be renamed "National Convergence Boards".

In order to ensure the linkage between expert analysis and effective policy-making an option that builds on an existing institution would be to substantially **strengthen the existing Macroeconomic Dialogue**–which brings together the

social partners, the central banks and representatives of the Commission and national fiscal policy at EU level (see *e.g.* Koll 2005). To this end **an MED should be established at the level of the Euro Area** (EUROMED). It would be strengthened vis-a-vis the existing MED at EU level by intensifying the links to the Eurogroup. Specifically we propose **incorporating representatives of the social partners** into some of the Eurogroup's deliberations (Extended Eurogroup format). At the same time, **MEDs should be established in all Member States**. The precise institutionalisation may vary depending on national structures, but the key issue is to bring together representatives of national fiscal policy, the national central bank and the social partners **to debate policy issues in the light of the expert analyses provided by the European and national-level boards**.

# Appendix 3. MIP: the asymmetric nature of the macroeconomic surveillance

### *A new exercise in numerology?*

A first stage of the MIP resorts to pinpointing the position of countries regarding thresholds, an approach close to the one already used for identifying excessive deficits in the Stability and growth pact (SGP). A first remark is that an over-interpretation of a numerical target should be avoided. Otherwise we may fear the risk of a new exercise in numerology that will create new rules of conduct without a clear and stable meaning as regards the numbers to be targeted. Within the SGP, the rule of conduct has long focussed on a public deficit at 3% of GDP, though this threshold lacks a theoretical and empirical basis. The proposed thresholds of the MIP are not based on sound theoretical or empirical conclusions which may show that breaching the thresholds echoes an unsustainable macroeconomic situation. A second remark relates to the identification of imbalances: it should not only rely on figures but it has to be based on in-depth economic analysis. The financial crisis has made clear that countries like Spain and Ireland which fulfilled the 3%-of-GDP limit on public deficit have also undergone a deep crisis.

Eventually, the general surveillance of a Member state's macro imbalances must go beyond a few targeted numbers which are without clear economic rationale and it should rely on an in-depth economic analysis. Yet, we must recognise that the MIP makes it clear that a thorough "economic" reading will complement the surveillance. In that view, the list of indicators will only serve as an early-warning signal. The scoreboard is an alert system but main decisions and major recommendations will result from "economic reading" and "in-depth analysis". Considering the distinction between "rough indicators" of the scoreboard and "in-depth analysis", questions about the hierarchy can emerge. On the one hand, if surveillance of macro imbalances relies mainly on the scoreboard, it will be difficult to avoid an excessive number of false alarms: a so-called "excessive" current account deficit may finally reflect a catching-up process. On the other hand, if surveillance relies mainly on "in-depth analysis", recommendations by the Commission will be discretionary. In case of discrepancy between recommendations and the scoreboard, the MIP will not deliver a clear and transparent message to the misleading country.

### Not all imbalances should be treated equally

Second, not all imbalances are alike and the aim of the scoreboard (and of the surveillance) should be to identify (or correct) only those which may threaten the sustainability of growth and debts all over the euro area. Current account deficit as such is only a symptom, not the cause of the disease. One has thus to answer two questions: where do imbalances come from? How are they financed? Imbalances may indeed proceed from unfavourable developments in competitiveness or from internal demand, hence requiring different medicine. Both causes are also highly dependent on favourable developments in competitiveness or on the lack of internal demand in partner countries. Thus, in-depth analysis of macro imbalances requires taking into consideration international linkages.

Have current account deficits (surpluses) been caused by higher (lower) domestic consumption or by higher (lower) domestic investment? Higher consumption may fuel credit and a bubble. Investment, provided it remains productive, may enhance productivity and generate future economic growth. While the former may end up with ever-growing debts and a financial crisis, the latter may be self-financed over the long-run. The growth of total factor productivity (TFP) would help to assess the sustainability of current account deficits. By the same token, for catching up countries the dynamics of relative GDP per capita would also be a relevant indicator.

Have current account deficits (surpluses) been financed by net inflows (outflows) of foreign direct investment, higher (lower) retained earnings or net inflows (outflows) of portfolio investment? The latter can be volatile, hence introducing counter-productive uncertainty in the economy. The former can create positive backward spillover effects in the host countries (see Havranek and Irsova, 2011). It is thus important to know about the structure of capital flows. Once again, this issue has been left to the "economic reading" or in-depth analysis without any further indication on the way it would be implemented.

### An asymmetric assessment of imbalances

Currently, most indicators are asymmetric. For instance, the current account threshold is set between a surplus of 6% of GDP and a deficit of 4% of GDP. There is no economic rationale for that numbers in particular; and there is no economic rationale as well for introducing an asymmetry in the current account threshold. What makes a deficit above 4% more dangerous to the stability of the euro area than a surplus above 4% (but below 6%)? It seems difficult to argue that German current account surpluses, above 4%, are more innocuous to the euro area than a deficit above 4% in a small country like Greece. The reverse is certainly more correct.

To make things clear, let us switch from ratios to levels. The level of external debt that a German surplus of 4% of its GDP entails is far higher than the level of external debt that a small-country deficit of 4% of its GDP entails. Hence, the disequilibrium forces, and thus the systemic risk, of a large country surplus are stronger than a small country deficit's. An indicator of trade imbalances which manages to monitor their impact on growth, price and financial stability should rely on levels rather than percentage points of GDP. The trade surplus of a large country will fuel credit by domestic banks to smaller countries; if it is huge, the availability of credit in the latter countries will produce easy money and a boom-bust situation. Portugal, Greece, Cyprus and even Spain are certainly good examples in this respect. Their external deficits were largely financed by capital flows from Northern countries and notably Germany and France (Chen *et al.*, 2013). To illustrate this point further, one can compare the respective amounts of (current) euros that a current account surplus of 6% of 2013 GDP in Germany and current account deficits of 4% of 2013 GDP in Greece, Portugal and Spain mean. The German surplus will amount to more than 160 € bn (109 € bn if the surplus achieves only 4% of the German GDP), whereas the deficits will amount to 7, 6 and 40 € bn in Greece, Portugal and Spain respectively. It is straightforward that the impacts on the euro area are not comparable! Then, if the German surpluses mirrored weak investment opportunities and weak internal demand, the deflationary forces would have been very powerful in the Eurozone if they had not been partially absorbed by deficits in other euro area countries.

In comparison with the indicator referring to the current account position, others relating to competitiveness and market shares are even more asymmetric: the burden of responsibility is exclusively borne by deficit/debtor countries. This is notably the case for the net international investment position which is, by construction, the accumulation of past current account balances. Because of this bias in signalling only a certain type of imbalances, it is possible to miss the fact that a market share loss by a given euro area country may have as counterpart a market share gain by another one. Therefore, there is a risk that recommendations will be geared toward deficit countries urging them to adjust wage costs downward or to implement restrictive policies. Conversely it will fail to signal that surplus countries have run competitive disinflation policies, as confirmed recently. The European Commission decided not to put Germany into surveillance for macroeconomic imbalances despite its current account surplus exceeding 6% for two consecutive years. As stressed by De Grauwe (2012), the current governance of macroeconomic imbalances in the euro area endorses the tyranny of creditor countries. The result will be that the euro area as a whole will continue to implement a global deflationary policy. By only signalling competitiveness losses, the MIP will actually miss to signal a coordination problem among euro area countries.

The same remarks hold for indicators of internal imbalances. By considering only the increases in private sector credit flows, the scoreboard will only signal member states facing overheating although weaknesses in internal demand may also be a source of disequilibrium. For macro surveillance to be consistent with article 2 of the Consolidated EU Treaty (stipulating that the general objectives of the EU are to promote a high level of employment and social protection, the raising of standard of living and quality of life, and economic and social cohesion and solidarity among Member states), it should not only point out the risks of an excess development in credit and asset prices. For instance, a growth slowdown in credit flows may signal a situation of credit crunch or weakness in internal demand. It would then be useful to consider a lower limit to the credit flows to the private sector.

## Appendix 4. iAGS model hypotheses and simulations

Table A1. **Public finance and output performances under the baseline scenario**

**(no risk premium, no fiscal impulse beyond 2018, time-varying fiscal multiplier, hysteresis effects)**

| | Public debt (% of GDP) | | Structural balance (% of GDP) | | Cumulative fiscal impulse | GDP growth rate (%) | | Average output gap | Inflation rate (%) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) 2020 | (2) 2035 | (3) 2020 | (4) 2035 | (5) 2015-2035* | (6) 2016-2020 | (7) 2021-2035 | (8) 2016-2035 | (9) 2016-2020 | (10) 2021-2035 |
| **DEU** | 60 | 33 | 0.0 | 0.6 | 1.0 | 1.3 | 1.0 | 0.5 | 1.6 | 2.0 |
| **FRA** | 95 | 91 | -2.3 | -3.1 | -0.7 | 1.6 | 1.4 | -0.3 | 1.5 | 2.0 |
| **ITA** | 129 | 101 | -0.8 | -0.5 | 0.2 | 0.7 | 0.3 | -0.3 | 1.3 | 2.0 |
| **ESP** | 102 | 101 | -3.1 | -3.6 | 0.0 | 2.3 | 1.4 | -0.1 | 0.7 | 2.0 |
| **NLD** | 61 | 41 | -0.3 | -0.3 | -0.7 | 1.6 | 1.3 | -0.1 | 1.0 | 2.0 |
| **BEL** | 99 | 65 | -0.2 | -0.3 | -2.1 | 1.3 | 1.6 | -0.6 | 1.8 | 2.1 |
| **PRT** | 121 | 87 | -0.4 | -0.5 | -1.5 | 1.4 | 1.1 | -1.4 | 1.4 | 2.1 |
| **IRL** | 82 | 51 | -0.9 | -0.1 | -0.7 | 2.2 | 1.9 | 0.9 | 0.7 | 1.9 |
| **GRC** | 178 | 182 | -4.8 | -6.4 | 0.3 | 1.8 | 1.2 | -2.5 | 0.9 | 2.2 |
| **FIN** | 66 | 79 | -2.1 | -3.8 | -0.4 | 1.6 | 1.7 | -1.0 | 1.3 | 2.1 |
| **AUT** | 77 | 61 | -0.6 | -1.2 | 0.4 | 1.4 | 1.5 | -0.8 | 1.5 | 2.1 |
| **EA** | 89 | 71 | -1.1 | -1.3 | 0.0 | 1.4 | 1.1 | -0.1 | 1.3 | 2.0 |

* In the baseline scenario, fiscal impulses are equal to 0 from 2019 to 2035.
*Source:* iAGS model.

## Table A2. Is it possible to reach a 60% debt-to-GDP ratio?

**(baseline scenario except +/- 0.5 fiscal impulses depending on public debt gap *vis-à-vis* 60% target)**

| | Public debt (% of GDP) | | Structural balance (% of GDP) | | Cumulative fiscal impulse | GDP growth rate (%) | | Average output gap | Inflation rate (%) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) 2020 | (2) 2035 | (3) 2020 | (4) 2035 | (5) 2015-2035 | (6) 2016-2020 | (7) 2021-2035 | (8) 2016-2035 | (9) 2016-2020 | (10) 2021-2035 |
| **DEU** | 62 | 60 | -1.5 | -1.8 | 2.8 | 1.4 | 1.0 | 0.7 | 1.6 | 1.9 |
| **FRA** | 93 | 60 | -0.8 | -0.1 | -3.0 | 1.4 | 1.5 | -0.5 | 1.4 | 2.0 |
| **ITA** | 128 | 60 | 1.0 | 3.2 | -2.6 | 0.5 | 0.3 | -0.6 | 1.2 | 2.0 |
| **ESP** | 101 | 60 | -1.4 | 0.5 | -3.1 | 2.0 | 1.5 | -0.4 | 0.6 | 2.0 |
| **NLD** | 62 | 60 | -1.6 | -2.1 | 0.8 | 1.9 | 1.3 | 0.2 | 1.1 | 2.0 |
| **BEL** | 98 | 60 | -0.3 | 0.4 | -2.4 | 1.5 | 1.5 | -0.5 | 1.9 | 2.0 |
| **PRT** | 123 | 60 | 0.8 | 2.2 | -3.8 | 1.0 | 1.2 | -1.8 | 1.3 | 2.1 |
| **IRL** | 84 | 60 | -1.5 | -1.0 | 0.0 | 2.2 | 1.9 | 0.9 | 0.7 | 1.9 |
| **GRC** | 185 | 114 | -2.7 | 3.7 | -9.4 | 0.9 | 1.1 | -4.1 | 0.6 | 2.2 |
| **FIN** | 63 | 60 | -0.9 | -2.1 | -1.7 | 1.5 | 1.7 | -1.1 | 1.2 | 2.1 |
| **AUT** | 75 | 60 | -0.6 | -1.2 | 0.5 | 1.5 | 1.5 | -0.7 | 1.6 | 2.1 |
| **EA** | 88 | 61 | -0.8 | -0.2 | -0.8 | 1.4 | 1.1 | -0.2 | 1.3 | 2.0 |

*Source:* iAGS model.

## Table A3. Correction of fiscal and external imbalances in symmetric price adjustment case

| | Public debt (% of GDP) | | Structural balance (% of GDP) | | Cumulative fiscal impulse | Average output gap | Inflation rate (%) | | Current account adjustment |
|---|---|---|---|---|---|---|---|---|---|
| | (1) 2020 | (2) 2035 | (3) 2020 | (4) 2035 | (5) 2016-2035 | (6) 2016-2035 | (7) 2016-2020 | (8) 2021-2035 | (9) 2035-2016 |
| **DEU** | 62 | 60 | -1.3 | -2.0 | 2.5 | 0.1 | 1.7 | 2.5 | 1.2 |
| **FRA** | 93 | 60 | -0.9 | 0.1 | -3.0 | -0.3 | 1.4 | 1.7 | 4.6 |
| **ITA** | 128 | 60 | 1.0 | 3.4 | -2.6 | -0.4 | 1.2 | 1.8 | 4.7 |
| **ESP** | 101 | 60 | -1.4 | 0.6 | -3.0 | -0.1 | 0.6 | 1.7 | 11.2 |
| **NLD** | 62 | 60 | -1.7 | -2.2 | 0.9 | 0.1 | 1.2 | 2.3 | 0.0 |
| **BEL** | 99 | 60 | -0.4 | 0.4 | -1.6 | 0.4 | 1.7 | 1.4 | 3.3 |
| **PRT** | 124 | 60 | 0.7 | 2.9 | -4.5 | -1.8 | 1.2 | 1.6 | 8.4 |
| **IRL** | 84 | 60 | -1.6 | -1.2 | 0.1 | 0.8 | 0.8 | 2.4 | 4.0 |
| **GRC** | 186 | 121 | -2.7 | 4.0 | -9.4 | -3.4 | 0.4 | 1.3 | 0.1 |
| **FIN** | 63 | 60 | -1.6 | -2.0 | -0.9 | -0.2 | 1.2 | 1.5 | 2.1 |
| **AUT** | 76 | 60 | -1.7 | -1.5 | 1.7 | 0.2 | 1.7 | 2.3 | 1.2 |
| **EA** | 89 | 61 | -0.9 | -0.3 | -0.8 | -0.2 | 1.3 | 2.0 | 3.7 |

*The adjustment of current account is computed as the change in the current account between 2016 and 2035.*
*Source:* iAGS model.

Table A4. **Correction of fiscal and external imbalances, with appreciation of the euro up to 1.2**

| | Public debt (% of GDP) | | Structural balance (% of GDP) | | Cumulative fiscal impulse | Average output gap | Inflation rate (%) | | Current account adjustment |
|---|---|---|---|---|---|---|---|---|---|
| | (1) 2020 | (2) 2035 | (3) 2020 | (4) 2035 | (5) 2015-2035 | (6) 2016-2035 | (7) 2016-2020 | (8) 2021-2035 | (9) 2035 |
| **DEU** | 62 | 60 | -0.1 | -1.7 | 1.0 | -1.01 | 1.7 | 2.6 | 4.8 |
| **FRA** | 94 | 60 | -0.9 | 0.1 | -3.0 | -0.4 | 1.4 | 1.8 | -1.8 |
| **ITA** | 130 | 60 | 0.9 | 3.7 | -3.3 | -0.9 | 1.1 | 1.9 | -1.6 |
| **ESP** | 102 | 60 | -1.5 | 0.8 | -3.2 | -0.3 | 0.5 | 1.8 | 1.1 |
| **NLD** | 60 | 60 | -1.1 | -2.2 | 0.3 | -0.5 | 1.2 | 2.4 | 6.4 |
| **BEL** | 94 | 60 | -1.1 | 0.0 | -0.5 | 0.9 | 2.0 | 1.5 | -1.3 |
| **PRT** | 113 | 60 | 0.0 | 1.7 | -1.6 | -0.1 | 1.5 | 1.6 | -4.3 |
| **IRL** | 79 | 60 | -1.5 | -1.4 | 0.1 | 0.4 | 1.0 | 2.5 | 6.5 |
| **GRC** | 181 | 101 | -2.5 | 5.4 | -9.4 | -2.7 | 0.5 | 1.4 | -10.1 |
| **FIN** | 61 | 60 | -2.3 | -2.3 | 0.2 | 0.5 | 1.4 | 1.5 | -1.6 |
| **AUT** | 71 | 60 | -1.8 | -1.8 | 2.5 | 0.5 | 1.9 | 2.3 | 3.0 |
| **EA** | 88 | 61 | -0.5 | -0.1 | -1.3 | -0.6 | 1.3 | 2.1 | 0.4 |

*Source:* iAGS model.

Table A5. **Main hypotheses for 2016**

**In %**

| | Public debt (2015) | Fiscal balance | Structural balance | Primary structural balance | output gap (2015) | Long-term growth |
|---|---|---|---|---|---|---|
| **DEU** | 71.2 | 0.5 | 0.2 | 1.7 | 0.2 | 1.0 |
| **FRA** | 95.8 | -3.3 | -2.4 | -0.4 | -1.8 | 1.4 |
| **ITA** | 132.7 | -2.6 | -0.8 | 3.0 | -3.7 | 0.2 |
| **ESP** | 99.2 | -4.3 | --3.0 | -0.4 | -5.0 | 1.4 |
| **NLD** | 65.1 | -1.3 | -0.7 | 0.2 | -2.5 | 1.3 |
| **BEL** | 106.0 | -2.8 | -2.2 | 0.2 | -1.2 | 1.5 |
| **PRT** | 129.0 | -3.0 | -0.8 | 3.0 | -5.5 | 1.0 |
| **IRL** | 93.8 | -0.6 | -1.9 | 0.7 | 0.6 | 1.8 |
| **GRC** | 176.9 | -3.2 | -2.5 | 1.7 | -12.0 | 1.0 |
| **FIN** | 63.1 | -2.3 | -1.1 | -0.7 | -3.7 | 1.6 |
| **AUT** | 86.2 | -1.2 | 0.0 | 1.8 | -2.8 | 1.4 |

*Source:* iAGS model.

# STABLE FINANCE IN AN UNSTABLE WORLD

Previous chapters have addressed the need for a a different policy mix in Europe, with a greater emphasis on fiscal policy and for policies to address imbalances within, in particular, the Euro Area. There is a third economic policy area in which reform is under way, but in Europe needs to intensify its efforts and make careful, evidence-based choices: finance. The specific features and dysfunctionalities of economic governance in Europe have exacerbated the crisis but this, it should not be forgotten, was originally triggered by problems in the financial sector. Since then national governments, not only in Europe but across the world, have been struggling to establish a sensible regulatory framework for the financial sector, one that permits, even promotes, low-cost lending for real investment and maintains an efficient payments system, while avoiding the pathologies that have caused instability and rising inequalities. Because of the transnational nature of the financial sector, the EU-level has also been heavily involved in developing the regulatory framework. The two main "building sites" are Banking Union, on which considerable progress has already been made, and the incipient Capital Markets Union.

In this concluding chapter we first consider the problem of non-performing loans and discuss the policy options availbe for addressing the problem. We then turn to Capital markets Union, describing the initiatives under discussion, with a focus on proposals to reactivate the securitization market in Europe.

## 5.1. How to address the issue of non-performing loans in the EU

The issue of non-performing loans is gaining momentum in some EU countries, due to their restrictive impact on economic activity, especially for countries which rely mainly on bank financing (Mesnard *et al.*, 2016). Our contribution consists in documenting the magnitude of the issue and discussing the different ways to tackle non-performing loans (NPLs hereafter). We describe first the phenomenon of non-performing loans (NPLs) in the European Union, distin-

guishing both across countries and by types of private borrowers. These distinctions are important since only some EU countries are currently members of the European Banking Union (EBU), namely the euro area members. This raises the question of the appropriate level to solve the issue of NPLs, especially in a context of cross-border banking activities. Distinguishing across different types of private borrowers is also crucial as the economic consequences arising from NPLs may be quite different depending on whether households or firms are over-indebted or not. Second, following Mesnard *et al.* (2016), we present and discuss the different measures—which can be complementary—to address the issue of NPL, i.e.:

- transferring NPLs to dedicated asset management companies (or "bad banks");
- developing a secondary market for NPLs (more precisely, a securitization market for NPLs);
- strengthening insolvency frameworks;
- enhancing supervision;
- amending tax rules.

We mainly focus on two measures, namely bad bank schemes and a securitization market for NPLs. One reason behind this focus is that, to date, bad banks have been predominantly used to solve the issue of NPLs in Europe. Even if we have not yet sufficient hindsight to evaluate the merits of bad banks (ten to fifteen years would be required to draw any definitive conclusion on their merits due to their life span), a preliminary assessment would tend to suggest a rather positive outcome regarding bad banks. Besides, our focus on a securitization market for NPLs is explained by two recent developments at the EU scale. The first one is the possibility, experimented with in Italy, to get a State guarantee on (the senior tranches of) securitized NPLs. The second one relies on the proposal of a "Securitization Directive" in the context of the Capital markets union. (Separately the second part of this chapter examines CMU and models securitization more generally.)

However, our focus on bad banks or a securitization market to tackle NPLs does not mean that other measures are useless, quite the opposite. For instance, reforming insolvency frameworks to enhance recovery rates on NPLs is a prerequisite for either bad banks or a securitization market to be efficient measures.

### a) Depicting the NPLs problem in the EU

Based on World Bank data, the weighted average NPL ratio in the EU (Box 3) stood at 5.6% in 2015 (5.7% for the euro area) compared to 2.8% in 2008 (13).

Table 20. **Non-performing loans to total gross loans**

In %

| Country | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | % point increase since 2008 |
|---|---|---|---|---|---|---|---|---|---|
| AUT | 1.9 | 2.3 | 2.8 | 2.7 | 2.8 | 2.9 | 3.5 | 3.5 | 1.6 |
| BEL | 1.7 | 3.1 | 2.8 | 3.3 | 3.7 | 4.2 | 4.2 | 3.7 | 2.1 |
| BGR | 2.4 | 6.4 | 11.9 | 15.0 | 16.6 | 16.9 | 16.7 | — | 14.3 |
| CYP | 3.6 | 4.5 | 5.8 | 10.0 | 18.4 | 38.6 | 44.9 | 45.6 | 42.0 |
| CZE | 2.8 | 4.6 | 5.4 | 5.2 | 5.2 | 5.2 | 5.6 | 5.6 | 2.8 |
| DEU | 2.9 | 3.3 | 3.2 | 3.0 | 2.9 | 2.7 | 2.3 | — | — |
| DNK | 1.2 | 3.3 | 4.1 | 3.7 | 6.0 | 4.6 | 4.4 | 3.6 | 2.4 |
| ESP | 2.8 | 4.1 | 4.7 | 6.0 | 7.5 | 9.4 | 8.5 | 6.3 | 3.5 |
| EST | 1.9 | 5.2 | 5.4 | 4.0 | 2.6 | 1.5 | 1.4 | 1.0 | -1.0 |
| FIN | 0.4 | 0.6 | 0.6 | 0.5 | 0.5 | — | — | — | — |
| FRA | 2.8 | 4.0 | 3.8 | 4.3 | 4.3 | 4.5 | 4.2 | 4.0 | 1.2 |
| GBR | 1.6 | 3.5 | 4.0 | 4.0 | 3.6 | 3.1 | 1.8 | 1.4 | -0.1 |
| GRC | 4.7 | 7.0 | 9.1 | 14.4 | 23.3 | 31.9 | 33.8 | 34.7 | 30.0 |
| HRV | 4.9 | 7.7 | 11.1 | 12.3 | 13.8 | 15.4 | 16.7 | 16.3 | 11.5 |
| HUN | 3.0 | 8.2 | 10.0 | 13.7 | 16.0 | 16.8 | 15.6 | 11.7 | 8.7 |
| IRL | 1.9 | 9.8 | 13.0 | 16.1 | 25.0 | 25.7 | 20.6 | 14.9 | 13.0 |
| ITA | 6.3 | 9.4 | 10.0 | 11.7 | 13.7 | 16.5 | 18.0 | 18.0 | 11.7 |
| LTU | 6.1 | 24.0 | 23.3 | 18.8 | 14.8 | 11.6 | 8.2 | 5.7 | -0.4 |
| LUX | 0.6 | 0.7 | 0.2 | 0.4 | 0.1 | 0.2 | — | — | — |
| LVA | 2.1 | 14.3 | 15.9 | 14.1 | 8.7 | 6.4 | 4.6 | 4.6 | 2.5 |
| MLT | 5.5 | 5.8 | 7.0 | 7.1 | 7.8 | 8.9 | 9.0 | 9.4 | 3.9 |
| NLD | 1.7 | 3.2 | 2.8 | 2.7 | 3.1 | 3.2 | 3.0 | 2.7 | 1.0 |
| POL | 2.8 | 4.3 | 4.9 | 4.7 | 5.2 | 5.0 | 4.8 | 4.3 | 1.5 |
| PRT | 3.6 | 4.8 | 5.2 | 7.5 | 9.8 | 10.6 | 11.9 | 12.8 | 9.2 |
| ROU | 2.7 | 7.9 | 11.9 | 14.3 | 18.2 | 21.9 | 13.9 | 12.3 | 9.6 |
| SVK | 2.5 | 5.3 | 5.8 | 5.6 | 5.2 | 5.1 | 5.3 | 4.9 | 2.4 |
| SVN | 4.2 | 5.8 | 8.2 | 11.8 | 15.2 | 13.3 | 11.7 | 10.0 | 5.7 |
| SWE | 0.5 | 0.8 | 0.8 | 0.7 | 0.7 | 0.6 | 1.2 | 1.2 | 0.7 |
| **EA** | **2.8** | **4.8** | **5.4** | **6.0** | **7.5** | **7.9** | **6.8** | **5.7** | **2.9** |
| **EU** | **2.8** | **4.7** | **5.4** | **5.8** | **6.7** | **6.4** | **5.6** | **5.6** | **2.9** |

*Source*: World Bank.

Perhaps more note-worthy is the uneven distribution among EU countries, with some of them suffering impressive increases in their NPLs ratios (in particular, Cyprus and Greece). Important increases of NPLs ratio were also recorded in some Central and Eastern European countries (Bulgaria, Croatia, Hungary, Romania and Slovenia) or Western countries (in particular, Ireland). However, while the trend is reversing in some of them (Ireland, Slovenia, Romania, Latvia, Lithuania and Hungary), NPL ratios have increased rapidly in Italy and Portugal over the last four years to reach respectively 18% and 14% in 2015.

### Box 3. Definition and data on NPLs

In order to document the NPLs, we use several sources of data: the European Banking Authority (EBA), the European Central Bank (ECB) as well as the International Monetary Fund (IMF) and the World Bank (WB).

In general and in conformity with EBA' recommendations, an NPL is defined as a loan with at least 90 days overdue debt servicing. All data of NPLs reported by ECB are fully in line with this definition as a homogenous basis for classifying loans is required in the context of EBU, especially for supervisory purposes. As the EBA covers a larger set of European countries (EU countries not in the euro area as well as Norway), there exists some discrepancies in the definition of NPLs. Moreover, forborne loans (or loans whose terms have been changed following or in expectation of financial difficulties of the borrower) are often included in the EBA's data. A similar remark holds for the IMF's or WB's data concerning discrepancies in definition of NPLs. Note that, as a rule of thumb, the ECB reports lower ratios of NPLs than EBA or IMF or WB.

We use alternatively data of ECB, EBA, IMF and WB depending on availability for the question we focus on (EU *versus* EBU countries, time series…).

Table 21 published in EBA (2016) is a useful complement of table 20. It shows how banks' strategic decisions about the geographical diversification of their business contribute to NPLs ratios. On average and in nominal terms, in the euro area, the domestic exposure accounts for 52% of banks' exposures and the EU exposure (excluding domestic exposure) for 24%. However, for banks located in Austria, Belgium, Sweden, and even more in Luxembourg, the EU exposure can reach much higher levels than the average. When we look at NPL-weighted exposures, Germany and France have also EU exposures far above the average.

As the EBU can constitute a good level for solving the NPL issue (though perhaps not the optimal level), we have calculated the level of NPLs and provisions for the euro area as well as their distribution across countries.[1] Using IMF

data (completed by EBA/ECB when needed), we estimate NPLs in the euro area at 1 132 €bn, with some 325 €bn concentrated in Italy (Table 22). In other words, while Italy accounts for "only" 10.1% of gross loans, it concentrates 28.7% of NPLs and 26.3% of provisions, the latter figure signaling a lower coverage rate (45.1%) than the euro area average (49.3%). Finally, according to our estimates, provisions would amount to € 558 billion for the euro area. Assuming (in a first approximation) a recovery rate of 20% on NPLs, it means that € 460 billion of losses need to be absorbed sooner or later to cleanse balances sheets.[2]

Investigating NPLs by types of private owners, the corporate sector concentrates a predominant part of the NPL problem in most EU countries (Table 23). Notable exceptions are Latvia, Hungary and Greece where the household sector accounts for more (or an equal share of) non-performing exposure (NPE) than the corporate sector. Distinguishing across the type of private borrowers is important as the bulk of loans to households is related to real estate purposes and, consequently, is asset-backed (or "secured"). By contrast, loans to corporates are often unsecured. Consequently, the economic consequences and spillovers arising from NPLs will differ, depending on whether households or firms are over-indebted or not. On the one hand, large NPL problems in the household sector will have spillovers on real estate market, probably "adding difficulty to difficulty" by exerting downward pressures on the assets that back the price. On the other hand, NPLs problems in some corporates can have a spillover effect on other corporates through their customer-supplier links, thus giving rise to a more generalized crisis.

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1. EBU includes all 19 euro-area members by default. For remaining EU members, joining EBU is on a volunteer basis.
2. A 20% recovery rate is based on average observations related to defaulted loans. In particular, in the Italian case, the average recovery rate for all NPL procedures was 41% during 2011-2014 according to a survey by the central bank of Italy based on the 25 largest Italian banks. But, according to Moody's (2016) which analysed more than 10 000 loans to small and medium enterprises that defaulted since 2012 in Italian securitizations, the recovery rate is below 10% for more than 55% of defaulted loans. That does not mean *per se* that servicing in the case of securitization is inefficient (see section 2.2) but rather that very bad loans went into securitization market. It is worth noting that the recovery rate is endogenous and will depend on how the different parties involved are able to digest solutions and reforms aiming at tackling NPLs. All in all, a 20% recovery rate is rather conservative.

Table 21. **NPLs exposures of EU countries by region (in March 2016)**

In %

| | AUT | BEL | BGR | CZE | DEU | ESP | EST | FIN | FRA | GBR | GRC | HRV | IRL | ITA | LTU | LUX | LVA | MLT | NLD | PRT | SVN | SWE | EA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Nominal Exposure** | | | | | | | | | | | | | | | | | | | | | | | |
| **Domestic** | 38 | 48 | 83 | 92 | 56 | 31 | 95 | 68 | 58 | 45 | 81 | 85 | 55 | 62 | 93 | 19 | 93 | 77 | 55 | 74 | 70 | 51 | 52 |
| **Other EU and Norway** | 45 | 43 | 12 | 6 | 22 | 34 | 4 | 28 | 21 | 12 | 12 | 5 | 37 | 29 | 6 | 70 | 4 | 21 | 24 | 15 | 11 | 43 | 24 |
| **Selected Non EU Countries** | 12 | 6 | 1 | 1 | 12 | 27 | 0 | 1 | 10 | 19 | 0 | 0 | 5 | 5 | 0 | 3 | 1 | 1 | 11 | 1 | 0 | 2 | 12 |
| **Rest of World** | 6 | 3 | 3 | 1 | 10 | 8 | 0 | 3 | 12 | 24 | 8 | 10 | 3 | 3 | 0 | 8 | 3 | 1 | 10 | 10 | 19 | 4 | 12 |
| **NPL-weighted exposure*** | | | | | | | | | | | | | | | | | | | | | | | |
| **Domestic** | 23 | 34 | 96 | 93 | 43 | 63 | 97 | 93 | 52 | 47 | 86 | 92 | 83 | 87 | 99 | 24 | 89 | 95 | 64 | 80 | 59 | 14 | 65 |
| **Other EU and Norway** | 54 | 55 | 1 | 4 | 36 | 17 | 1 | 7 | 34 | 16 | 9 | 0 | 15 | 10 | 0 | 57 | 6 | 5 | 23 | 9 | 16 | 79 | 22 |
| **Selected Non EU** | 11 | 4 | 0 | 1 | 8 | 15 | 0 | 0 | 4 | 15 | 0 | 0 | 1 | 1 | 1 | 4 | 2 | 0 | 5 | 1 | 0 | 1 | 5 |
| **Rest of World** | 12 | 7 | 3 | 2 | 13 | 5 | 2 | 1 | 10 | 23 | 5 | 8 | 1 | 2 | 0 | 14 | 3 | 0 | 7 | 10 | 25 | 6 | 8 |

* The NPL-weighted exposures are computed as exposures times NPL ratio by region. That is a measure of risk contribution per each region (with region being "Domestic", "Other EU and Norway", etc.).

*Source*: EBA (2016).

Table 22. **NPLs and provisions in the euro area (at end-2015)**

| | AUT | BEL | CYP | DEU* | EST | ESP | FIN* | FRA | GRC | IRL | ITA | LVA | LUX* | MLT | NLD | PRT | SVK | SVN | EA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **In € (billion)** | | | | | | | | | | | | | | | | | | | |
| **Gross loans** | 642 | 644 | 58 | 5 249 | 16 | 2 585 | 306 | 3 739 | 238 | 385 | 1 800 | 19 | 60 | 10 | 1694 | 270 | 47 | 30 | 17 793 |
| **NPL** | 22 | 24 | 28 | 184 | 0 | 159 | 9 | 149 | 87 | 58 | 325 | 1 | 1 | 1 | 46 | 34 | 2 | 3 | 1 134 |
| **Provisions** | 13 | 10 | 10 | 92 | 0 | 70 | 5 | 76 | 59 | 30 | 147 | 1 | 1 | 0 | 17 | 24 | 1 | 2 | 559 |
| **In % of total EA** | | | | | | | | | | | | | | | | | | | |
| **Gross loans** | 3,6 | 3,6 | 0,3 | 29,5 | 0,1 | 14,5 | 1,7 | 21,0 | 1,3 | 2,2 | 10,1 | 0,1 | 0,2 | 0,1 | 9,5 | 1,6 | 0,3 | 0,2 | 100 |
| **NPL** | 1,9 | 2,2 | 2,5 | 16,2 | 0,0 | 14,1 | 0,8 | 13,2 | 7,7 | 5,1 | 28,7 | 0,1 | 0,1 | 0,1 | 4,1 | 3,0 | 0,2 | 0,3 | 100 |
| **Provisions** | 2,4 | 1,8 | 1,9 | 16,6 | 0,0 | 12,6 | 0,9 | 13,7 | 10,6 | 5,3 | 26,3 | 0,1 | 0,1 | 0,0 | 3,1 | 4,1 | 0,2 | 0,4 | 100 |
| **NPL net of provisions** | 1,5 | 2,5 | 3,0 | 15,9 | 0,0 | 15,6 | 0,7 | 12,7 | 4,9 | 4,8 | 31,1 | 0,0 | 0,1 | 0,1 | 5,0 | 1,8 | 0,2 | 0,2 | 100 |
| **In % of gross loans** | | | | | | | | | | | | | | | | | | | |
| **NPL rate** | 3,4 | 3,8 | 47,7 | 3,5 | 1,0 | 6,2 | 3,0 | 4,0 | 36,6 | 14,9 | 18,1 | 4,6 | 1,7 | 9,4 | 2,7 | 11,9 | 4,9 | 10,0 | 6,4 |
| **Provision rate** | 61,1 | 42,2 | 37,2 | 50,3 | 29,2 | 44,0 | 55,4 | 51,2 | 67,8 | 51,8 | 45,1 | 77,8 | 40,0 | 23,9 | 37,3 | 69,0 | 54,1 | 66,8 | 49,3 |
| **In % of GDP** | | | | | | | | | | | | | | | | | | | |
| **Gross loans** | 188,9 | 157,4 | 329,6 | 173,1 | 81,2 | 240,3 | 146,4 | 171,4 | 135,2 | 150,7 | 109,6 | 78,2 | 114,2 | 111,7 | 250,4 | 150,1 | 59,1 | 78,9 | 170,8 |
| **NPL net of provisions** | 2,5 | 3,4 | 98,8 | 3,0 | 0,6 | 8,3 | 2,0 | 3,3 | 16,0 | 10,8 | 10,9 | 0,8 | 1,2 | 8,0 | 4,3 | 5,7 | 1,3 | 2,6 | 5,5 |

(*) Own computations.
*Source:* IMF (main), ECB and national central banks.

Table 23. **Non Performing Exposure (NPE) Ratios by Sector**

**Asset-weighted average; in percent of total assets, 2014**

| | Total | Corporate | Retail | Total (in % of GDP) |
|---|---|---|---|---|
| **AUT** | 4.6 | 5.0 | 4.0 | 2.0 |
| **BEL** | 3.4 | 5.1 | 2.4 | 2.3 |
| **BGR** | 16.7 | 19.2 | 17.7 | 11.9 |
| **CYP** | 39.4 | 46.3 | 29.6 | 48.0 |
| **DEU** | 2.5 | 2.3 | 2.6 | 1.4 |
| **DNK** | 4.0 | 5.5 | 1.9 | 1.6 |
| **EST** | 12.2 | 18.8 | 6.8 | 9.1 |
| **FIN** | 1.7 | 1.8 | 1.6 | 0.9 |
| **FRA** | 3.2 | 2.9 | 3.4 | 2.7 |
| **GRC** | 25.3 | 23.2 | 26.9 | 25.4 |
| **HRV** | 16.7 | 30.5 | 12.0 | 8.1 |
| **HUN** | 15.6 | 13.8 | 18.9 | 8.7 |
| **IRL** | 32.2 | 50.2 | 21.7 | 40.9 |
| **ITA** | 17.6 | 21.0 | 13.7 | 12.0 |
| **LTU** | 8.9 | 9.7 | 8.1 | 3.2 |
| **LUX** | 5.0 | 5.3 | 3.1 | 7.0 |
| **LVA** | 9.7 | 7.3 | 12.1 | 3.7 |
| **MLT** | 6.3 | 8.8 | 4.7 | 3.0 |
| **NLD** | 3.7 | 7.7 | 1.8 | 5.5 |
| **PRT** | 7.9 | 11.1 | 5.7 | 7.3 |
| **ROU** | 13.9 | 18.7 | 7.8 | 4.3 |
| **SVK** | 5.0 | 6.0 | 4.3 | 4.4 |
| **SVN** | 20.2 | 29.9 | 11.1 | 14.6 |

*Source:* Aiyar *et al.* (2015).

## b) Policy options available to address the issues of NPLs

In this section, following Mesnard *et al.* (2016), we present and discuss the different measures to address directly the issues of NPLs. We mainly focus on bad banks schemes and a securitization market for NPLs. For both measures, we consider in turn its basic functioning, advantages and drawbacks, conditions for success as well as its current use in the EU. The other ways to tackle directly with NPLs related to insolvency frameworks, supervision and tax rules are presented and discussed.

### *Transferring NPLs to dedicated asset management companies (or "bad banks") or to the ECB*

Basic functioning: an asset management company (AMC) acquires, manages, and disposes of distressed assets, such as non-performing loans. The AMC is used to separate distressed assets, that are weighing down a bank's balance sheet, from performing assets that would otherwise form the basis of a financially solvent "good" bank (Gandrud and Hallerberg, 2014).

Advantages/drawbacks: By separating bad assets from good assets, the bank prevents the bad assets from contaminating the good ones. Indeed, so long as the two types of assets are mixed, investors and counterparties are uncertain about the bank's financial health and performance thus impairing its ability to borrow, lend and raise capital (Brenna *et al.*, 2009).

This separation allows banks to concentrate on running the healthy parts of their business while the distressed assets are managed by independent specialists (ECB, 2013).[3] However, the participating banks typically record losses stemming from a transfer of assets at below book value. Thus, from a financial stability perspective, an AMC scheme should be only implemented when there is a high probability of a continued impairment of asset values.

This argument in favor of an AMC is reinforced when it becomes important to avoid a forced workout of problematic assets (including real estate property held as collateral), which could further drive down market prices and set off a race to the bottom.

Design: AMCs can differ according to their ownership and their funding structures. Ownership can range from entirely publicly owned to entirely privately owned. In turn, this will affect: (*i*) when the costs are realized, (*ii*) who pays for their losses and (*iii*) who benefits from their gains. Ultimately, this will affect the bank's liquidity, balance sheet, and profits (Brenna *et al.*, 2009).

It is worth noting that the choice of design has been strongly influenced by the new Eurostat rules (Gandrud and Hallerberg, 2014). Indeed, in July 2009, Eurostat ruled that AMCs with less than 51% private ownership would not be classified as contingent liabilities, but would be counted against the public debt. In September 2009, additional requirements were set up by Eurostat: an

3. We do not consider here the business model of *internal* bad bank (or a restructuring unit within the troubled bank), which is often a prerequisite for a fully separated restructuring unit (see Brenna *et al.*, 2009). We consider only the case of *external* bad bank where the bank shifts the assets off the balance sheet and into a legally separate banking entity (a "bad-bank spinoff").

AMC would be treated as being outside the public sector and as a contingent liability for debt calculations if (*i*) the AMC is a temporary institution (*ii*) there exists a reasonable business plan that would ensure no or minimal losses and (*iii*) a large haircut was applied to the purchase price of acquired assets and the haircut required public recapitalization of the impaired bank (with recapitalization counted against the public budget). This ruling affected the design of ACMs in terms of ownership structure and favored "slim private majority ownership". Yet, Eurostat has subsequently continued to tighten the rules: major changes were published in 2013 and implemented from mid-2014: the hard 51% ownership rule was expanded to focus not just on nominal equity ownership but also on who is effectively in control of the assets and who bears most of the risks from the AMC entity.[4] In summary, due to changes in Eurostat rules, there is a general trend towards the creation of AMCs with private majority ownership.

Conditions for success: The success of bad bank schemes depends on critical factors. First at all, clear objectives are important for its success and, in this respect, conflicting objectives should not be underestimated (ECB, 2013). The consensus view is (*i*) that maintaining financial stability and restoring a healthy flow of credit to the economy are key priorities (especially for central banks) while (*ii*) containing the impact of asset support measures on public finances and safeguarding a level playing field may be also critical considerations (especially for governments).

Second, some reflections have to be conducted about institutions and assets to include in the ACM as well as concerning the pricing of NPLs (ECB, 2013; Brenna *et al.*, 2009). In this respect, "one solution does not fit all".

As regards the right assets which should be taken by the bad bank, the important point is that a bank can only segregate bad assets once without losing its credibility (Brenna *et al.*, 2009). In particular, banks need to address two broad categories of assets: assets with a high risk of default (including NPLs) and nonstrategic assets (including anything the bank wants to dispose of, either to deleverage or otherwise resize its business model). Note that from the point of view of the participating bank, it may be effective to transfer the entire loan

4. Concretely, that means that an AMC which is entirely privately owned, but largely backed by State guarantees, such as the State is shouldering most of the risks, is now considered as a public AMC and is no longer treated as a contingent liability. This kind of structure minimizes its impact on the public budget and potentially imposes a considerable proportion of the total costs of restructuring on the private sector owners of the failed bank.

segment (rather than just NPLs), to divest nonstrategic business or low-risk portfolio for which an adequate price can still be achieved (ECB, 2013). In this respect, pricing will be an important factor in shaping the assets included in the ACM (see below).

As regards institutions, in order to maintain a level playing field, an ACM should remain open to all institutions with a large share of eligible assets. However, from a public finance perspective, carefully chosen criteria may be applied to limit participation to certain institutions, such as those with large concentrations of impaired assets or with systemic relevance (ECB, 2013).

Regarding pricing, third-party expert valuations should be used in order to define reasonable haircuts and therefore yield the best estimate of the long-run value of NPLs (ECB, 2013). The larger the haircuts on NPLs, the more profitable the AMC, thus reducing the creation of zombie banks including zombie bad banks (Gandrud and Hallerberg, 2014).

Third and last, the challenges involved in ACMs require that national or supranational authorities play a key role, especially in creating a common legal and regulatory framework and in supporting bad banks through funding or loss guarantees (Brenna *et al.* 2009).

Use in the EU since 2008: ACMs have been widely used in the EU as part of the response to the financial crisis. According to Gandrud and Hallerberg (2014), 15 AMCs have been created in 12 EU countries over 2008-2014 to assist at least 37 failing banks. The entities were all publicly created AMCs even if they subsequently evolved into slim private majority ownership due to changes in Eurostat rules. Gandrud and Hallerberg (2014, Table 1) provide some details on countries and failed banks involved in ACM. It is worth noting that none of these ACMs was designed as a European "bad bank" (even if foreign investors were allowed in some cases). Public funding (or State guarantees) remains a national feature (except in the particular case of Dexia which was a Belgium/France/Luxembourg joint venture).

Interestingly enough, privately owned AMCs act differently from publicly owned AMCs. In particular, private AMCs have imposed larger haircuts on the price they paid for the assets they acquired (Gandrud and Hallerberg, 2014, Table 3), thus helping in avoiding the creation of zombie banks.

### *Developing a secondary market for NPLs (i.e. a securization market for NPLs)*

Basic functioning: a bank sells its NPLs on a secondary market typically at a lower price than their face value. Buyers of such assets will, very often, sell them to investors as structured credit tranches, after securitizing them (EBA, 2016).

"Originators", i.e. those who sell NPLs, can be banks, leasing companies or manufacturers while investors involved in buying securitized products are predominantly banks, insurers and alternative investment funds.

Securitization can be "traditional", meaning there is an effective legal transfer of NPLs to the issuer of securitized products which becomes entitled to the cash flows generated by NPLs (case of "true sale"). Otherwise, securitization will be "synthetic", with the exposures remaining on the balance sheet of the originator and the credit risk being transferred with the use of credit derivatives or financial guarantees (Delivorias, 2016). This distinction between the two types of securitization is notably important in the case of NPLs as the probability of reimbursement of the original loans is not very high.

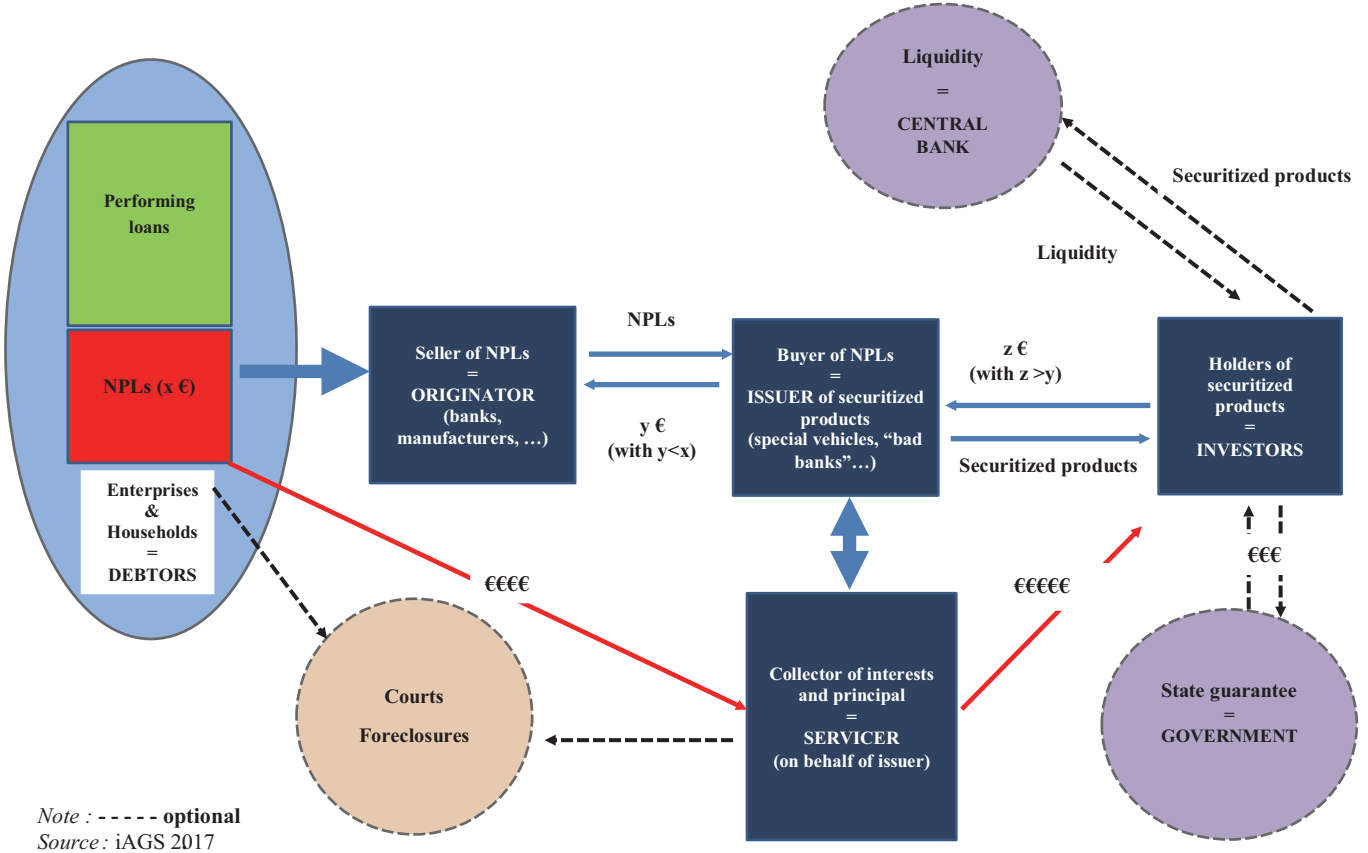
Figure 67 provides a schematic view of the different actors involved in traditional securitization, which constitutes the only form of securitization that could be reasonably developed in the European context.

Advantages/drawbacks: When NPLs are securitized to be sold to investors as structured credit tranches, the marketability of such securitized portfolios is increased (EBA, 2016; Bank of England & ECB, 2014). Securitization helps banks to free up capital that can then be used to grant new credit (European Commission, 2015b). However, the subprime crisis has also shown how, if not properly structured, securitization can magnify financial instability and inflict serious damage to the wider economy.

Securitization of NPLs, compared to securitization of performing loans, poses an additional problem: due to the dispersion in property rights and potential agency frictions brought about by securitization, servicing can inhibit renegotiation of loans (Piskorski *et al.*, 2010). In the case of real estate mortgages, this would come at risk of foreclosure, thus precipitating further a fall in housing prices.

Conditions for success: As noted by Pal *et al.* (2016), NPLs securitizations are dependent for their ultimate success on three variables: (*i*) the quality of the NPLs; (*ii*) the quality of the servicer, and (*iii*) the quality of the servicing environment.

Figure 67. **Traditional securitization ("true sale") of NPLs servicer with another should be facilitated**




*Note :* **- - - - - optional**
*Source :* iAGS 2017

*i*) The quality of NPLs refers to some form of security arising from collateral. The most common form of secured NPL is a mortgage loan, where the loan is secured over a residential or commercial real estate asset, which ultimately can be foreclosed to generate a cash flow. By contrast, in the case of unsecured NPL, the loans are purely payment obligations of the debtors, with the most common form of unsecured NPL being a personal or corporate loan. In the former case, the quality of the NPL depends on the value of the secured asset and the robustness of the legal rights the NPL's holder has in respect of the secured asset. In the latter case, the quality of the NPL depends on the payment ability of the debtor and the robustness of the legal rights that the NPL's holder has against the debtor. In practice, however, neither the value of a secured asset nor the payment ability of a debtor are static; rather they can fluctuate over time quite rapidly (Pal *et al.*, 2016). Consequently, the speed at which resolution is achieved will be important and, in this respect, the quality of servicing environment will play a major role (see *iii*).

*ii)* The quality of the servicer refers to its ultimate capacity to generate cash flow in a context where it can be difficult to collect interests and principal on NPLs. The servicer can take two main approaches in relation to NPLs. The first is a consensual resolution with the debtor, leading to the debtor making a discounted payment in respect of the debt it owes. The second is formal enforcement action, where the servicer exercises the rights it has to extract value from either the secured asset or the debtor itself. In the latter case, a lengthy process could come at risk of deteriorating the value of the secured asset or the payment ability of the debtor. Consequently, providing to the servicer both the capacity and incentives to stabilize the cash flows would be an attractive feature especially in the context of secured NPLs as it would avoid negative spillover effects on market assets. In particular, a higher possibility to oversight and control exercised by investors should be encouraged and the possibility to replace one servicer with another should be facilitated. A better (legal and judicial) environment should also give the possibility for servicers to increase recovery rate.

*iii*) The quality of the servicing environment refers to all administrative, legal and judicial elements which ultimately impact the recovery rate. This will be of particular importance when a consensual resolution with a debtor cannot be achieved such as the servicer will have to consider a formal enforcement action which is often a complicated process. The degree of complexity will dependent on the legal environment in which the servicer is operating, especially in terms of how easily creditors can exercise rights. High costs,

lengthy procedures and low predictability of formal enforcement action will weigh on the ultimate recoveries.

Note that the quality of the servicer and of the servicing environment is also important in the case of a bad-bank spinoff. However, it may become an even more acute issue for a SPE: a poor servicer and a poor servicing environment would put considerable pressure on the discount rates applied to book value of NPLs.

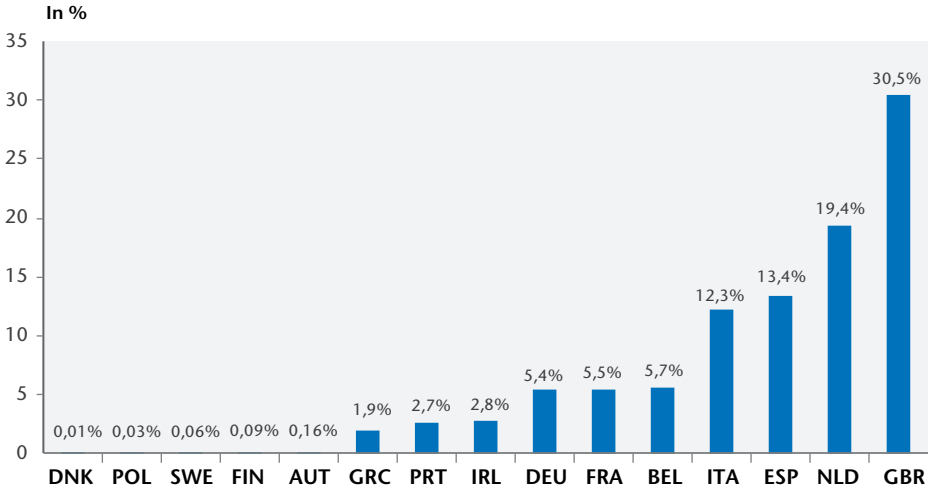
Current situation in the EU: *Due to scarcity of data on NPLs securitization, we first begin by presenting the situation of securitization as a whole.* Since the beginning of the financial crisis, issuance of securitized products in the EU has plummeted. In 2015, European issuance stood at 213.7 €bn, compared with an average of 374 €bn for the eight years leading up to the financial crisis (European Commission, 2015b). Unlike the US market, the European market for securitization has not rebounded. A combination of three factors explains the absence of rebound (Rützel, 2016, European Commission, 2015a): *(i)* the stigma attached to securitization because the financial crisis originated from a sub-segment of the securitization market, *(ii)* the post-crisis tightening of the treatment of securitized products and *(iii)* cheaper funding alternatives for banks (especially through central bank liquidity).

Currently, outstanding amounts of securitized products account for around 1 400 €bn in the EU (or 10% of GDP). The United Kingdom and the Netherlands are the largest markets, accounting together for half of the outstanding securitizations (Figure 68). Spain and Italy follow, accounting together for 25% of the outstanding securitizations. Germany, France and Belgium are comparatively small markets, with a share between 5 and 6% each. Finally, all remaining EU countries are negligible markets in terms of outstanding securitizations.

As a share of GDP, the story is a bit different (Figure 69). The Netherlands ranks first (with outstanding amounts of securitized products accounting for 41% of its GDP) followed by a group of five EU countries with a share between 18% and 22% each (UK, Spain, Belgium, Ireland and Portugal). For Greece and Italy, outstanding securitizations as a share of GDP stand respectively around 15% and 11%. This share is small in remaining large countries (namely France and Germany) and negligible in other EU countries.

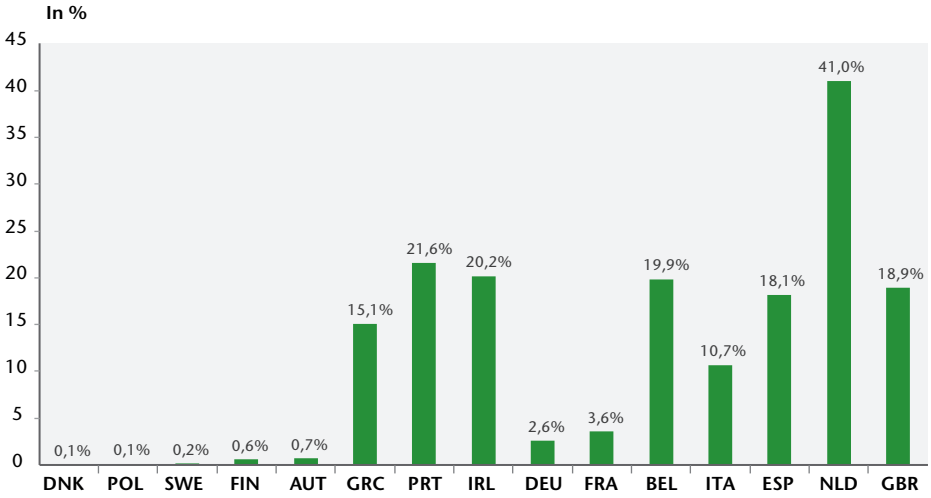
Mainly loans originating from the household sector are securitized, accounting for 80% of total securitization in the euro area (Table 24). The existence of secured loans (especially by real estate mortgages) explains the high share of the household sector in securitization. However, in countries where there exists

Figure 68. **Outstanding amounts of EU securitized products by country in % of the EU total**




*Note:* Data refer to outstanding balances by countries of collateral, which is used as a proxy for country of issuance. Consequently, those data can differ from those reported by the ECB for euro area countries.
*Source:* EBA (2016).

Figure 69. **Outstanding amounts of securitized products in EU countries as a share of GDP**




*Note:* Data refer to outstanding balances by countries of collateral, which is used as a proxy for country of issuance. Consequently, those data can differ from those reported by the ECB for euro area countries.
*Source:* EBA (2016), own computations.

a specialized industry in securitization (as in Luxembourg or Ireland), securitization of loans originating in the corporate sector can reach an important level. With a share of 34%, Italy is also quite engaged in securitization of loans originating in the corporate sector.

If we restrict our analysis to NPL securitization, only few data are available. EBA (2016) provides the following features:

- Within the last 24 months, NPL transactions including securitization at the local banks were recorded in 13 out of 27 EU-countries.
- The share of these transactions in the total amount of NPLs was very low.
- Wherever information on prices is available, the discount to the gross amount of such portfolios is mostly ranging between 50% and 90%.

EBA (2016) concludes that, given these pricing levels, it comes as no surprise that banks in the EU have been reluctant to sell large amounts of distressed assets on the secondary market.

Table 24. **Securitization of loans in the euro area by type of agents**

**In % of total**

| | Loans to corporates | Loans to households |
|---|---|---|
| **EA** | 20 | 80 |
| **BEL** | 25 | 75 |
| **DEU** | 5 | 95 |
| **IRL** | 45 | 55 |
| **ESP** | 14 | 86 |
| **FRA** | 11 | 89 |
| **ITA** | 34 | 66 |
| **LUX** | 69 | 31 |
| **NLD** | 4 | 96 |
| **PRT** | 20 | 80 |

*Source:* ECB, own computations.

The existence and/or efficiency of a distressed debt market across EU countries can be illustrated by the results of the EBA's survey carried out in EU countries (Table 25). In a majority of EU countries, the (local) distressed asset market is either non-existent or ineffective (60% of EU countries) while in only 3 countries (the United-Kingdom, Ireland and Poland), does there seem to be an effective market for distressed assets.

Table 25. **Distressed asset markets and loan securitization in EU countries**

| | Effectiveness of distressed asset markets* | | Efficiency of loan securization** |
|---|---|---|---|
| **Effective** | 3 | **Efficient** | 2 |
| **Somewhat effective** | 8 | **Somewhat efficient** | 7 |
| **Not effective** | 11 | **Not efficient** | 4 |
| **Non-existent** | 5 | **Non-existent** | 14 |

* The term "effective market for distressed assets" relates to the banks' ability to dispose of distressed assets in a timely manner on a sufficiently active and liquid market to not be priced as a forced seller.
** The term "efficient loan securitization" is used to describe an easy and effective way for banks to build securitization structures around portfolios of non-performing and performing debt.
*Source:* EBA (2016, p. 41).

Turning to the efficiency of loan securitization, the ability for banks to securitize loans is either not efficient or non-existent in a majority of cases (Table 6). Only in Belgium and the United Kingdom is loan securitization regarded as efficient, while in Ireland, Germany, Greece, Italy, Spain, Netherlands and Slovakia, asset (local) securitization is somewhat efficient.

### Box 4. Qualifying securitizations: the EBA's criteria and the European Commission proposal's for STS securitization

The creation of a market for high-quality securitization is one of the key objectives of the European Commission's initiative to build a Capital Markets Union.

In July 2015, as a response to the European commission's call for advice, the European Banking Authority (EBA) laid out its criteria for what should constitute a qualifying securitization. Specifically, the EBA outlined that issuances should be simple, standard and transparent (STS). Then, on 30 September 2015, the European Commission proposed a new regulation creating a European framework for STS securitization, based on EBA' criteria.

In particular, "simple securitization" means that:

— Assets packaged in securitization must be homogeneous loans or receivables (e.g. car loans with car loans, residential mortgages with residential mortgages).

— No securitization of securitizations is allowed.

— Loans must have a credit history long enough to allow reliable estimates of default risk. The ownership of a loan must have been transferred to the securitization issuer (i.e. they must be sold by the originator of loans to the entity that will issue the securitization), meaning that "synthetic securitization" is not allowed (see EC, 2015, p.60).

"Transparent and standardized securitization" means that:

— Loans packaged in securitization must have been created using the same lending standards as any other loan, meaning that all borrowers have been subjected to similar scrutiny at time of initial lending;

— At least 5% of the loans portfolio must be retained by the originator. Documents must provide details of the structure used and the payment cascade (i.e. the sequence and amount of payments to each tranche).

— Data on packaged loans must be published on an ongoing basis. The contractual obligations, duties and responsibilities of all key parties to the securitization must be clearly defined.

— To ensure that an STS securitization meets the qualifying criteria, the issuer of the securitization will need to confirm the instrument's compliance with all STS.

In November 2015, the European Council presented to Parliament its suggested regulation laying down common rules on securitization, together with a proposed amendment to the Capital Requirements Regulation (CRR).

The Committee on economic and Monetary Affairs (ECON) is expected to issue its vote in November 2016 with a plenary session of the European Parliament on the subject to be held before the end of the year.

### Box 5. **Dealing with NPLs by offering a State guarantee to NPLs securitization: the case of Italy**

Beginning in 2015, several actions have been undertaken in Italy in order to tackle NPLs.

New features have been introduced to speed up the judicial enforcement procedures and to reform the insolvency regime. In particular, special tax provisions have been implemented to incentivize significantly a pro-active participation of investors in public judicial auctions and the consequent realization of enforced claims (Svetina *et al.*, 2016).

A private fund 'Atlante', whose shareholders are mainly banks and insurers, has been created to support upcoming increases in banks' capital and purchase NPLs. Note however that the total size of the fund will not exceed €6 billion which is clearly low compared to the magnitude of Italians NPLs (see Table 22).

However, the more innovative feature is perhaps the GACS (*Garanzia Cartolarizzazione Sofferenze*) which consists in offering a State guarantee to securing the NPLs entering in a securitization process. We provide more details on GACS *infra*..

Starting in February 2016, for a 18 month period possibly extended for an additional 18 month period, a State guarantee can be granted for securing the senior tranche of asset backed securities issued in the context of securitizations carried out by Italian banks and backed by portfolios of non performing receivables (including leasing receivables).

Both principal and interest payments are secured under the senior tranche for the benefits of senior tranches' holders and for the life of transaction.

The guarantee would secure the senior tranche on condition that the bank selling NPL only holds the minority of the junior tranches and, in any case, an amount of junior tranches which would enable the bank to achieve a balance-sheet deconsolidation of the securitized NPL. The issue of the guarantee will be subject to the payment of a fee which will increase in time.

Note that in Italy, since the securitization law was passed in 1999, there has been a long standing use of securitization as a vehicle for NPL sales. The market was active from 2000-2005 and then, like the rest of the securitization market, died (apart from retained deals) in the post-crisis period. Recently, large US investors have been active in buying Italian securitizations (Perraudin, 2015).

## c) Other policy actions for improving NPLs resolution

In order to remove or ease the impediments to NPLs resolution, additional policy actions have to be implemented as a complement of either ACM schemes and/or securitization of NPLs.

### *Strengthening insolvency frameworks*

As explained by Mesnard *et al.* (2016), insolvency frameworks are key for an efficient resolution of NPLs, as they provide positive/negative incentives for all stakeholders. In particular, inefficient frameworks will make it difficult for debtors and creditors to agree on a timely restructuring of bad debts. The creation of out-of-court procedures and the acceleration of judicial procedures, by reducing the timeline for debt restructuring, also improve the value of NPLs and reduce creditors' losses (Perraudin, 2015).

Mesnard *et al.* (2016) provide a review of European countries where reforms of personal insolvency laws were enacted: Ireland (in 2012 and 2016), Spain (in 2014 and 2015), Greece (in 2015), Italy (in 2015). In a nutshell, reforms aimed at providing advice to indebted agents, to accelerate and address the excessive backlog of pending cases and to create a regulated profession of insolvency administrators. Despite the reforms, the average duration of corporate insolvency proceedings across EU countries remains quite high: in 6 EU countries, the duration is higher than 3 years often due to the lack of judges (EBA, 2016).

### *Amending tax rules*

The tax treatment can affect banks' provisioning policies and this, in turn, has an impact on NPL management (EBA, 2016). In particular, allowing for some sort of deductibility would create incentives for building adequate provisions.

The Italian case is illustrative of how tax treatment of loan loss provisions has prevented adequate provisioning policies within banks. Before the amendment to the law was passed in 2015, new credit losses were deductible in 5 years (and even in 18 years until 2013). The new regime, by allowing immediate full deductibility, is expected to increase banks' incentives to provision in a timely fashion. Empirically however, a strong connection between coverage ratios and tax-deductibility of provisions has not been observed: countries with limited tax-deductibility (Portugal, Poland, Sweden, Malta and Norway) do not report systematically lower coverage ratios than countries where immediate full deductibility is allowed (EBA, 2016). Other complementary factors clearly play a role in provisioning policies, in particular the insolvency framework.

### *Reinforcing supervision*

Further supervision, in particular through a comprehensive asset quality review (AQR), is an important prerequisite for repairing banks' balance sheets. It gives more transparency on bank exposures, sounder provisioning policy and, on average, a gradual reduction in the stock on NPLs.

In this respect, the EBU has been a positive step forward as it allows:

- harmonization in the definition of NPLs (since 2014);
- centralization and exchange of information on individual (large) banks;
- a common stress test exercise to all (large) banks.

However, further areas for improvement remain. First, while a common and harmonized definition of NPL since 2014 has been an important prerequisite for identifying and then repairing banks' balance sheets, a more harmonized application in the definition of default is a necessary complement (EBA, 2016). More generally, issues of harmonization are of particular interest for banks operating on a global scale as the non-harmonization for NPLs exposures outside the EU makes comparisons of the largest EU banks (with large assets abroad) less reliable.

Second, reform in the supervisory framework has to push for improved provisioning and arrears management (see section on amending tax rules). More generally, this means taking more actions to force banks to increase write-offs or disposals.

Third, in order to facilitate the resolution of NPLs, an enhanced transparency regarding real estate collateral valuation would contribute to a better understanding and pricing of the risks. Ultimately, that would facilitate the sale process and would lead to lower discounts in secondary market transactions. A similar remark holds in the case of an ACM as there is also a need for price discovery.

### d) Dealing with NPL

After reviewing the different ways to deal with NPLs, our chief conclusion is that none of the policy options should be neglected in order to tackle NPLs. Rather, a complementary approach is called for.

- Bad bank schemes appear particularly well-suited to deal with large portfolio of NPLs. While it is still premature to give a definitive assessment on bad banks which were set up in the context of the financial crisis (as they operate over a time span of 10-15 years), first feedbacks are generally positive.[5] For the current situation, the main point is whether bad banks should be created at the European level rather than at the national level. In particular, the EBU offers an opportunity for building bad banks at supranational level, due to ongoing harmonization both in terms of regulation and supervision. Another related question is whether a European Fund (either existent or to be created) should provide guarantees to European bad bank(s) instead of States. It is worth noting that legally speaking, there are not really obstacles to the creation of bad banks at the European level: it is just a matter of political will. We can even imagine that non-European investors hold large capital shares of European bad banks, with application of bail-in principles in case of losses. The main point for the success of a bad bank is the right pricing of loans taken over to avoid zombie banks and opportunistic behaviour. The question of level, either national or European, is more secondary. It should be noted however that the European level would offer the possibility of diversifying the portfolio of bad banks.

5. Note that the positive Swedish bad bank experience in the 90's cannot be replicated in the current situation due to its particularities. First at all, in Sweden, the troubled bad banks were state-owned, meaning that the Sweden's government assumed bad banks debts. Pricing for the NPLs taken over were above market prices which was an indirect way of capitalizing good banks (Englund, 2015). Creating a bad bank based on NPLs from privately owned banks would have been a very different and more complicated operation, since the price paid in that case would have meant a direct transfer from tax payers to private owners. In the current situation, any solution to tackle with NPLs has to minimize the public cost and (majoritary) private ownership of bad banks has to be favored.

- The revival of the EU market for securitization may be a way of widening the range of options that banks could consider for dealing with their NPLs. At the same time, it highlights the need for supervisory guidance in tackling NPLs, particularly in collateral valuation and arrears management. In this respect, the EU Directive aiming at proposing a simple, transparent and standardized (STS) definition for securitization is an important initiative: it will set a "brand mark", signaling that a bundle of assets has complied with predetermined eligibility criteria, thereby satisfying regulatory requirements. However, reactivating securitization more generally raises a large number of issues, which we address in the next section. It is important to note that such a Directive will accompany a development in progress in some European countries to tackle NPLs (Italy and Greece to quote a few). One question to be discussed is whether such securitized products could be eligible for banks' operations with their respective central bank. In our opinion, as long as both pricing and servicing are properly framed, the central bank could accept "STS securitized products" in the context of its liquidity providing operations.

## 5.2. Capital Market Union: a discussion

A number of policy packages have been put together since the onset of the Great Recession and the euro area crisis in an attempt to wrestle with both the perceived causes and the consequences of these crises. A particular weakness is inadequate investment. In response, alongside the European Fund for Strategic Investment (Juncker Plan), discussed in the two previous and in the current iAGS report), the European Commission called in 2014 for steps towards a European Capital Markets Union (CMU).

On 30 September 2015 legislative proposal (Action Plan) was published that sought to put flesh on the bones of CMU (European Commission 2015). According to the Commission (e.g. European Commission 2016 a and b) the two main goals of CMU are to create a genuine single market for capital, raising capital mobility and thus contributing to higher growth and employment, while at the same time rendering financial markets more stable by diversifying sources of finance.

A number of deficiencies in—and challenges to reforms of—European capital markets were also identified. Investment in Europe remains heavily dependent on bank lending. Firms located in different member states face substantial differences in access to and cost of finance, fragmenting the European market.

In many countries access by small and medium-sized enterprises to finance remains difficult. Financial institutions issuing securitized instruments face different regulatory frameworks in different countries, and partly as a result investors exhibit "home bias", disproportionately holding the stocks and bonds of domestic companies. As a consequence, it was argued, Europe does not take sufficient advantage of the ability of large, integrated financial markets to absorb regionally-specific stocks. In a frequently cited study, Asdrubali *et al.* 1996 argued that a substantial part of inter-regional smoothing of consumption to income shocks in the United States came, not only thanks to public federal institutions, but also through private-sector "risk-sharing" channels, including both cross-(state)-border lending and borrowing and cross-ownership of capital.[6] The European CMU can be summed up as an attempt to emulate the (claimed) risk-sharing and stabilizing properties of the US.

While the basic diagnosis that the capital market in Europe is fragmented (or more so than in a country such as the US), and bank-centred (e.g. Valiante 2016, p. 20) there is no broad agreement as to the seriousness of the issues or its relevance to explaining (and thus resolving) the economic problems Europe faces. It is not clear whether the identified features can be rectified, at what cost, and whether any changes to existing structures might not bring with them other disadvantages. What is clear is that the various financial systems in Europe have evolved over decades and are integrated with other policy areas, such as the preference in most EU countries for pension systems centred on pay-as-you-go models. Particularly given that progress has been achieved in regulating the banking sector, with the introduction of Banking Union (see section 3a in this chapter and Lindner *et al.* 2014) and under the Basle III framework, it is far from clear that a greater reliance on capital markets, and thus direct interaction between companies seeking finance and financial investors—is more efficient.

There is already, in principle, the freedom of movement of capital within the EU, which is one of the 'four freedoms'. If corporate lending and investment are weak because of constraints on the financing side, one would already expect to see this being circumvented in the form of greater cross-border lending and borrowing, even given the undoubted legal and other restrictions in practice. Yet private sector flows have remained limited relative to the pre-crisis activity (Darvas *et al.* 2015, p. 44ff.). Put the other way around, removing restrictions via CMU will only be expected to boost desirable lending to the real economy,

6. For a critique see Melitz and Zumer 1999.

investment and growth if the problem is indeed on the financing, the supply side. At least currently, however, survey evidence (see below, and also figure 69 in part 1 of this chapter) suggests that credit growth is so sluggish because of a lack of demand for loans on the part of companies facing fundamental uncertainty about the future and, in many cases, still substantial excess capacity.

Regarding risk diversification an important distinction needs to be made. It is correct that the risk of a single portfolio can be reduced by intelligent diversification of the assets. This logic cannot simply be transferred to the systemic level, however. It is far from clear that merely increasing the number of sources of finance will improve systemic stability. Recent research (e.g. Tasco and Battison 2014) suggests that a deepening of financial interrelationships, which inevitably occurs when the degree of diversification increases, can lead to higher systemic risks which can unleash a domino effect.

Against this background this section discusses some of the specific measures proposed under CMU (1); we then focus on the proposal to activate standardized securitization markets, presenting a model of such markets that points to the need for considerable caution with such securitization in below (b); some implications are drawn out in (c).

### a) CMU state of play and individual measures

The Commission's proposal for CMU encompasses 33 building blocks that are rather disparate in nature. Some—such as the proposal for an EU legal framework for simple, transparent and standardized securitisation, into which we go into more detail below—can be relatively reliably assessed ex ante. Others remain rather vague, including measures for simple and competitive products for private provision for old-age or a financing strategy for investment in green technology.

An important legal step envisioned under CMU is to amend the Solvability II directive in order to facilitate investment by insurance companies in financial instruments to finance infrastructure investment. As discussed elsewhere in this report there is an urgent need to boost public investment in infrastructure, both the demand-side and supply-aide (including environmental) reasons, but there are barriers to higher public investment in most EU Member States (Germany being a notable exception) in the form of the fiscal rules. Facilitating public-private partnerships, which is what the proposed Solvability II amendment is ultimately seeking, is, though, a decidedly second-best way to increase public investment by bringing in private finance. Member State governments can

finance their investment at historically low interest rates, satisfying an urgent need on the part of financial investors for safe assets yielding low but predictable rates of return. Bringing in the private sector would undoubtedly raise the cost of financing projects because private agents face higher interest rates.[7]

A second legal proposal is to revise the prospectus directive with the aim of reducing the compliance costs of SMEs when accessing share and bond markets, while maintaining protection of investors. To the extent that an appropriate balance can be drawn between these, at least partially conflicting, goals, this approach appears sensible. It should not be forgotten, though, that the vast majority of SMEs in Europe are unincorporated firms (partnerships); some smaller corporations may benefit. The Commission is currently consulting on plans to draw up harmonized restructuring and insolvency rules. While there may well be scope for countries copying best (or at least less damaging) practice from other member states, it must be questioned whether there are substantial spillovers between countries in this area that would suggest substantial added value from an EU-wide harmonised approach. Similar considerations apply in the case of the envisaged harmonisation of covered bonds markets. By contrast efforts to bring some European coherence to overcome the national fragmentation of the various crowdfunding platforms would appear valuable, even if the quantitative importance of this niche mode of financing is still small. Hard to evaluate is the intention—on which the Commission has been running a public consultation—to stimulate the nascent European venture capital market in various ways. A legislative proposal is planned to upgrade rules on European Venture Capital Funds (EuVECA) and European Social Entrepreneurship Funds (EuSEF) to open up the market to a wider set of investors and increase the range of companies that can be invested in. While little harm is likely to come from such initiatives, the general note of caution mentioned above is relevant here: venture capital funds are a notable feature of the business environment in the US. It is not clear whether, in a more bank-centred system such an approach can work in a lasting way and on a quantitatively relevant scale.

It should be noted that the Commission is also running a public consultation on the EU regulatory framework for financial services with the aim of identifying regulations introduced in the wake of the crisis that have had inadvertently negative impacts on growth and employment. While there is nothing wrong in principle in subjecting measures that have been introduced—especially during a

7. This is true unless serious efficiency gains are obtained by private involvement.

crisis—to evaluation, unfortunately a "public consultation" is also an exercise in political lobbying.[8] Great care must be taken that this window of opportunity is not seized on by those in the financial sector that, now that the sector has been (partly) stabilized at great public expense, wish to roll back regulations that were introduced very consciously in the wake of the crisis as a quid pro quo for the support provided.

Of all the measures and plans discussed, the most advanced are the revision of the Solvability II Directive and the modernisation of the Prospectus directive which were adopted by the European Parliament in April and June 2016 respectively. The proposal for simple, transparent and standardized securitization is currently still before the European Parliament, and many of the other measures are still at the consultation phase. There is still a need—and an opportunity—for scholarly analysis and political discussion and intervention in these cases. In the next section we focus on the most important of these: the plan to reactivate the securitisation market in Europe.

### b) Model-based evaluation of proposals to reactivate EU securitization markets

A substantial number of studies point to the pernicious role played by a hypertrophic market for credit securitization in the financial market crisis of 2007-2008. Acharya *et al.* (2013) show that regulatory arbitrage—less politely: avoiding costly regulation—was one of the main motives for the development of the securitization market. While securitization seemingly reduced pressures on banks' balance sheets by shifting part of the risk to capital market investors, the authors show that, fundamentally, very little risk was actually transferred. Ultimately the securitized tranches that remained on the bank's book, so as to maintain a high rating, took most of the hit when the market collapsed. Gorton and Metrick (2012) point to the close correlation during the course of the crisis between the spreads on securitized loans and repo rates, on the one hand, and the solvency of the banking sector on the other. Both studies therefore emphasize the systemic risks associated with an excessively large securitization market.[9]

8. Concern with ubiquitous and unchallenged financial sector lobbying on the part of a cross-party group of MEPs was such that Finance Watch was set up as a sort of counter lobby, representing ordinary citizens in debates on the highly technical issues of financial market legislation and now in receipt of EU funding: http://www.finance-watch.org/about-us/why-finance-watch

The rapporteur for the deliberations in the European Parliament on the Commission's proposed regulation (European Parliament 2016) sees one of the greatest dangers of an excessive market for securitized products in the risk that it enables loans to be given to borrowers that are not able to service them over the medium term, especially if interest rates rise. The proposal from the European Commission (European Commission 2015) seeks to counter this argument by setting out clear rules that the securitization market must follow. Supposedly only simple, transparent and standardized products are to be permitted. However, there is concern that in reality other derivatives such as credit default swaps (CDS) and interest rate swaps (IRS) will have to be incorporated into the scheme in order to enable securitized credit and market-risk positions to be hedged, which will increase complexity.[10] Moreover, the experience of attempts within the G20 framework to regulate OTC (over-the-counter) derivative contracts in the wake of the financial crisis suggest that it is very hard in practice to bring such products under the umbrella of a standardized market (Theobald *et al.* 2015). The left-hand panel of Fig. 1 shows, using data from the Bank for International Settlements that the trading volume of standardized derivative contracts remains, despite all the efforts policymakers have made, far below those of non-standardised OTC transactions.

### *CMU and the risks of securitization*

In order to illustrate the potential risk propagation mechanisms of a securitization market, Lojak and Theobald 2016) have developed a model (see Appendix 5) that draws on the so-called stock-flow consistent (SFC) approach that builds on the work by Godley and Lavoie (2006). In this approach output is determined by effective demand and money is endogenous in the sense that credit creation by the commercial banks generates deposits. This is appropriate to analyzing the current situation in Europe as it is widely agreed that it is restrictions on the demand side that prevent faster growth (right-hand panel of Figure 70). Figure 71 illustrates the causal mechanisms of the model.

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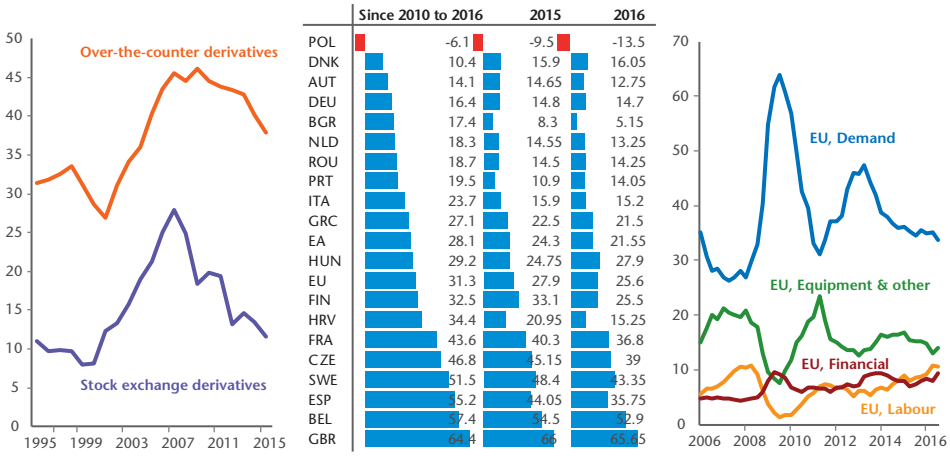
9. Chernenko *et al.* (2014: Figure 1) show the dramatic rise and fall of issuance of US securitisations before and after the financial crisis. According to their analysis issuance of nontraditional securitisations almost quadrupled from 98 $bn in 2002Q4 to 420 $bn at the peak in 2006Q4. By comparison, issuance of traditional securitisations roughly doubled from 103 $bn in 2002Q4 to 200 $bn at its peak in 2007Q2. The idea of an excessively large securitization volume is hard to pin down but the pre-crisis issuance volume serves as a guide.
10. The tranches placed on the capital market by the securitisation company can, for instance, reflect the average maturity of the underlying credit portfolio, but not the exact structure of the individual maturities. Interest rate derivatives are then used to hedge the resulting interest rate risk.

Figure 70. **Derivative trading volumes and limiting factors for extending industrial production**

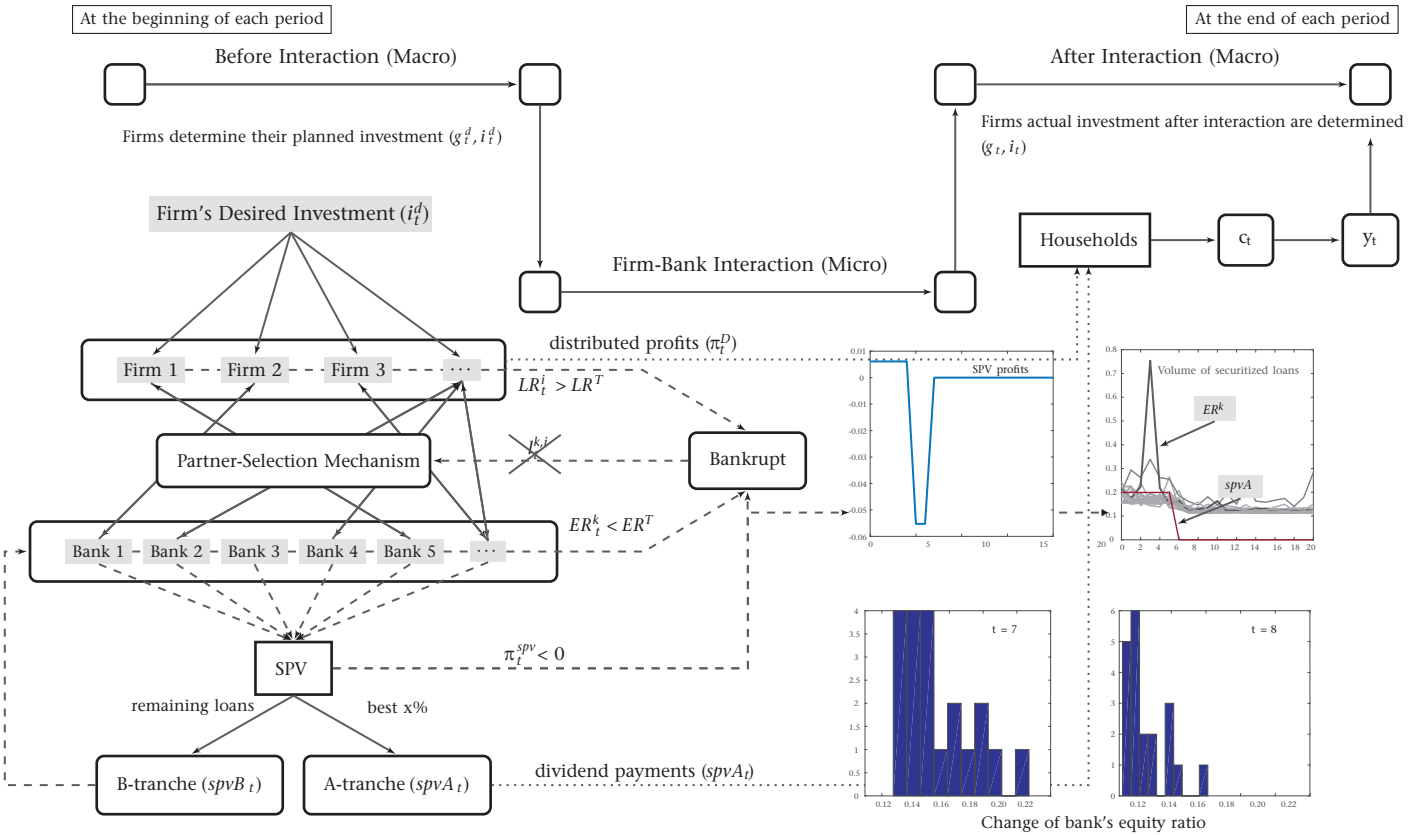



*Left-hand panel:* Trading volumes of standardised and non standardised derivatives from derivatives statisics of the BIS as a multiple of global GDP. Right-hand panel: Survey answers from the joint harmonised EU programme of business and consumer surveys. The corresponding question is ‚What main factors are currently limiting your production?' Middle-hand panel: Country-specific gaps between demand-side and financial restrictions from the same survey.
*Sources:* Bank for International Settlements; EU Commission / DG ECFIN.

Here we present a simulation of the consequences for the real economy of securitizing 20% of the initial credit volume. This is compared to a baseline in which just 1% of loans is securitized. On the one hand, the difference in values may overestimate the size of a re-activated securitization market (*cf.* footnote 4). On the other hand in our model a bank securitises only once during a simulation run, which compared to reality may underestimate securitization activity. However, at the current stage, we are more interested in unveiling the transmissions at work than in estimating the exact effects. The right-hand boxes in Figure 71 and top panel of Figure 72 show a significant deterioration in the equity capital ratios of some of the banks as the SPV starts to make losses and needs to be wound up, reducing the equity ratio of the banks which have securitized loans. The effect is, unsurprisingly, the greater the higher the proportion of loans that are securitized. This is the crucial impulse and the mechanism is as follows.

Initially the profits of the SPV are positive, irrespective of the degree of securitisation, because the yield to investors on the A tranche of the SPV lies below the average interest rate of the underlying portfolio of corporate loans (while at the same time, as noted, being higher than the deposit rate and thus offering household an incentive to purchase). The B tranche constitutes the riskier part

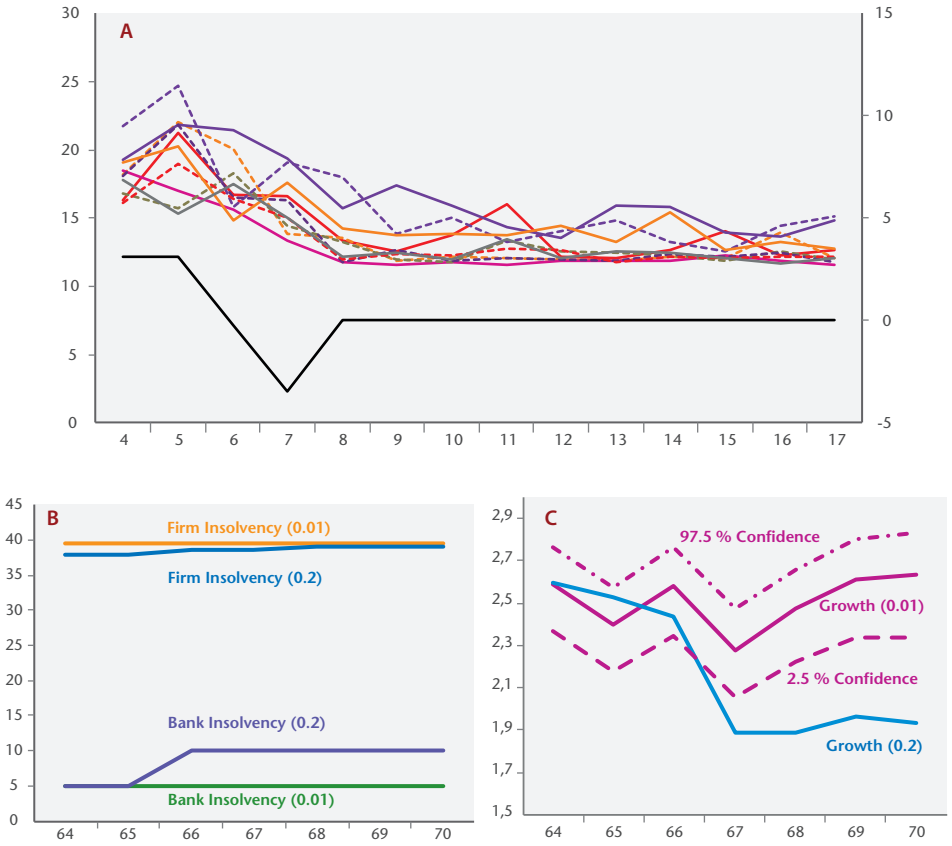
Figure 71. **The stock-flow consistent approach**




*Source:* iAGS 2017

of the SPV credit portfolio, as indicated by the (higher) leverage ratio of the firms taking out the underlying loans. This riskier part of the credit portfolio stays on the banks' books.

Figure 72. **Model Results**




*Top:* Evolution of equity capital ratios for individual banks (left axis) and profits of the securitization company (right axis).
*Bottom left:* Bank and firm insolvencics for different securitization intensities. *Bottom right:* Annualized growth rate of the economy. All time information refers to quarterly frequency.
*Sources:* Lojak and Theobald (2016).

Depending on the starting distribution of the leverage ratio and the subsequent higher debt service cost for higher leveraged firms during the bank selection process, some firms suffer shocks to their ability to service their loans. If the repayment ability of a sufficiently large number of firms is impaired—this is illustrated indirectly in the bottom left panel of Figure 72—and these loans have

been securitized in the first year of the simulation, the SPV continues to make interest payments on the A tranche although its income from companies' debt service payments has been reduced. Its profits turn negative. This represents a loss to the owner-banks of the SPV: they are forced to wind up the SPV at a cost to their own equity capital. As the bottom panels of Figure 72 show, the collapse of an SPV can make the banking sector vulnerable, even if it does not immediately result in additional bank insolvencies. Such an event does not occur until—in the simulation after almost five years—the structurally weakened equity ratio of a bank after the SPV collapse is hit by a further company insolvency.[11] Here it is worth emphasizing that the aggregate share of insolvent firms is the same between the baseline and the scenario with substantial loan securitization.[12] This means that there is no other fundamental difference in the main dynamics of the economy between the first and fifth years apart from the size of the securitization market. In the baseline, a bank can only go bankrupt, when its own credit portfolio is hit hard (several times). In the securitization scenario, it takes fewer defaults in the individual bank's credit portfolio to render the bank insolvent because it already faced losses on the credit portfolio of the securitization company, which is systemically linked to the bank. It is precisely the higher equity capital ratio that enables the banking sector to absorb shocks better in the baseline than the securitization scenario. In contrast, in the securitization scenario additional banking insolvency has knock on effects on lending and thus on investment and economic growth.

Overall the results show that corporate insolvencies (inability to service debts) lead in the longer term, to threats to the solvency of other banks which originally have not provided credit to the affected firm, if a significant proportion of loans are securitized and securitization companies represent an additional source of financial market interconnection. It might be objected that in real world experience to date each SPV is uniquely owned by a single bank, so such contagion cannot occur in the same way as in the model. This is incorrect however as the financial crisis has revealed at least three real-world channels through which banks can be affected by developments in an SPV that they do not directly own: First they can be holders of the A tranche of the securitized loans. Second they can be involved in derivative transactions that are needed in order to hedge the market and credit risk positions of the SPV. And third they can be affected as owners of other SPVs that come under pressure when the securitization market as a whole experiences a liquidity squeeze and pricing problems.

11. Note that we only consider solvency-related mechanisms in the model. In reality, as we saw in the crisis liquidity can be a key issue and can accelerate a downturn dramatically.
12. We assume that no recapitalization takes place.

Figure 72 lower panel, finally, shows that economic growth in the scenario with 20% securitization—and this is the main difference between the two scenarios[13]—is appreciably and lastingly negatively affected by the nexus between financial vulnerability, lending and investment.

All in all the simulation results suggest that reactivating the securitization market in Europe is associated with substantial systemic risks for the European financial system. In the medium and longer run this could well be counterproductive for economic performance. In addition, the inherent complexity of the interrelationships, even within such a stylised model, cast doubt on the claim and intention of the Commission's proposal that the new securitization markets can be kept simple, transparent and standardised.

### c) Implications for policy

The aim of the capital market union is to diversify Europe's financial system, supplementing bank financing with a sophisticated array of capital markets, overcoming fragmentation, with the ultimate goals of "freeing up" inactive capital and stimulating the real economy. Both savers (financial investors) and firms (real-economy investors) are supposed to benefit from more attractive, diverse opportunities. Meanwhile the resilience to asymmetric shocks is supposed to be increased and financial stability more generally ensured if not actually enhanced.

There are two key assumptions underpinning this approach. The first is that anaemic investment in Europe is primarily due to restrictions on the supply (lending) side holding back an expansion of investment in Europe. And the second is that any gain in the allocative efficiency of capital in Europe is not offset by increased risks and instability through increased reliance on capital markets, especially securitized loan markets.

As we have seen above EU surveys of industrial firms clearly show that the majority of firms reporting that they were unable to expand production saw a lack of product demand as by far the most important factor. Way behind lay lack of supplies or capacity limits. Only then, roughly equal in importance, come labour market and financial constraints, each affecting some 10% of firms. Survey data for the service sector do not paint a very different picture. At

13. The confidence bands in the figure illustrate the stochastic influence in the baseline which arises from the starting distribution and random drawing of house-bank relations given an identical share of firm insolvencies.

the country-level, too, it could only be argued maybe for Poland and Bulgaria that financial concerns currently rank in importance with demand-side issues as a barrier to expansion.

It therefore seems likely that, contrary to claims that increased regulatory demands on banks have been reducing the willingness to lend (Demary 2016), investment is being held back by ongoing uncertainty about demand prospects and more generally by political uncertainty regarding the future of the Euro Area and the EU as a whole (IMF 2016, Horn *et al.* 2016). While a time might come in which supply side restrictions gain in relative importance, it is vitally important not to exaggerate the likely impact of the measures planned under CMU in helping the European economy recover. In particular, there is a risk that such proposals distract policymakers' attention from the urgent task of reforming the economic governance architecture so as to enable a speedy recovery of actual output towards its potential and a reduction of unemployment (see chapter 3).

It must be added that experiences with the financial crisis have taught us the immense damage that can be wrought by ill-advised reliance on the efficiency and stability of financial markets. Small efficiency gains are easily dwarfed by the costs of a crash, not to speak of the distributional impacts. The model-based analysis of the proposed revival of securitization in Europe, while provisional and indicative, suggests that, notwithstanding the worthy goal of making securitization simple, transparent and standardized, great caution is called for. A system that diversifies risks in good times may generalize risk in bad times, when it is most needed. Securitization inevitably creates a degree of intransparency about where risks are located. For better or worse Europe's financial model is bank-centered. It is vital that Banking Union is developed to ensure adequate regulation at the appropriate level of Europe's banks and, for instance, succeed in containing non-performing loans as discussed above. Experience suggests that if and when companies see favourable prospects for their sales they will invest, either out of retained profits or by approaching the banks. And if the banks themselves are sound and if they share the non-financial sector's optimism about the path of the economy, they will lend what is needed to finance the required investment.

## 5.3. Conclusion

Alongside economic governance reforms it is vital that Europe take steps to stabilise its financial sector. Alongside national efforts, this also implies EU-level initiatives, the most notable of which are Banking and Capital Markets Union.

The analysis in this chapter points to the importance of addressing the issue of non-performing loans. Bad bank schemes appear particularly well-suited to deal with large portfolios of NPL, even if some implementation details should be discussed (whether the bad bank should be at the European or national level; whether a European Fund should guarantee the new institution). Insolvency frameworks should also be improved and the tax system should incentivize banks for building adequate provisions. Developing a secondary market for NPL—through securitization of those assets—is appealing. However, the subprime crisis has also shown that, if not properly structured, securitization can magnify financial instability and inflict serious damage to the wider economy.

Moreover, our research suggests that a deepening of financial interrelationships implicit in securitization, as proposed under the Capital Market Union, can lead to higher systemic risks. In the medium and longer run this could well turn out to be counterproductive for economic performance. In addition, the inherent complexity of the interrelationships cast doubt on the claim and intention of the Commission's proposal that the new securitization markets can be kept simple, transparent and standardized.

More generally, while the basic diagnosis of fragmented and bank-centered capital markets is widely shared, there is no agreement about the relevance of CMU. The main objective of the CMU is to diversify Europe's financial system, to supplement bank financing with a sophisticated array of capital markets, and to overcome fragmentation, with the ultimate goals of “freeing up” inactive capital and stimulating the real economy. Yet, credit sluggishness is mainly explained by the lack of demand for loans on the part of companies, which face fundamental uncertainty and substantial excess capacity.

## Appendix 5. Modelling a securitization market

The model is of a closed economy without a government sector. The private sector is divided into firms and households, and output consists of consumption and investment. Distinctive characteristics of the model are that both the corporate and the banking sector are microfounded and the latter incorporates a Special Purpose Vehicle (SPV) for the securitization of bank loans.

The non-financial corporate sector consists of 200 firms and the banking sector of 20 banks. These "agents" differ primarily from one another with respect to their leverage ratio, i.e. the ratio between equity and external (borrowed) capital which is drawn from a skewed and heavy tail distribution. First firms select a target for their desired investment volume as a function of capacity utilization, the profit share and the profit rate; this is a neo-Kaleckian specification, on which see for instance Palley (2016). Firms request loans from banks to finance the part of their desired investment that cannot be financed by retained earnings. As long as banks are solvent, they will grant the credit request, but the interest rate they charge in each case depends on the individual debt ratio of a firm relative to the average. Moreover the current version of the model presumes equally distributed investment demand among the firms for each period. Hence, there is a reinforcing process for some firms, namely the one with higher initial debt ratio, to go bankrupt as a higher debt service makes the leverage ratio deteriorate even further. At the same time, the remaining firms are growing faster, which stabilises the aggregated growth rate of the economy. In total, there results a process of interaction between credit-seeking firms and loan-providing banks as is standard in the agent-based modelling literature; specifically similar to the partner selection mechanism in Delligatti *et al.* (2010) and Caiani *et al.* (2016). In addition, in this procedure the relationship between each company and its "house bank" is drawn at random.

The question is when and whether loans demands are not met since this can introduce a supply-side restriction which reduces the accumulation rate of the economy. And the answer depends on the solvency of both the firm and even more the bank. Firms and banks are considered insolvent when their leverage ratio exceeds a certain threshold value. In the case of banks this threshold is set, in accordance with Basle III, at an equity capital requirement of 10.5%. For firms a slightly higher value is assumed. The calibration is preliminary, but plausible in terms of illustrating the orders of magnitude of insolvency risk. In addition, the approach adopted permits

simulations using alternative threshold settings, including the size of the securitized market. When firms become insolvent they cease to engage in additional net investment. When banks become insolvent they cease to lend. If solvent firms are initially matched with an insolvent bank they face additional search costs. Because only a limited number of draws is available with which to establish a relationship with a commercial bank, bank insolvencies constitute a restriction from the supply side. In the case that a firm only draws insolvent banks net investment is reduced by the equivalent of the size of the credit demand. By aggregating the credit decisions at the micro level the aggregate volume of actually realized investment is determined. All corporate balance sheets are closed at the micro level by adjusting individual share prices.

The model does not have an explicit portrayal of the labour market. The wage share is set at 0.7. Just under 50% of the profits of non-financial firms are distributed as dividends. In principle, firms with higher debt ratio could reduce their dividends paid out, but in the current version of the model a constant payout ratio is used. The banks earn profits from the spread between the interest rate on loans and deposits; these are distributed in full to a representative household sector owning the banks. Disposable household income consists of wage and capital income. Under the calibration selected here savings equal investment, firms' assets and liabilities are in balance and, where there are few bank insolvencies, especially in the baseline with a small-sized securitization market, the economy grows at a constant rate.

We now introduce securitization to the model. At the start of the simulation period banks may choose to securitise part of their loans to the corporate sector, selling them to a common special purpose vehicle. Households invest in the A tranche of the SPV because its bonds pay a higher rate of interest than deposits. Banks keep the B tranche which in case of a high default rate of the securitised portfolio has to bear the loss. Such an allocation guarantees a better rating for the A tranche. In this way the model can be used to study the macrofinancial effects of lending with varying degrees of securitization.

# References


Acharya, V. V., Schnabl, P. and Suarez, G. (2013), "Securitization without risk transfer", *Journal of Financial Economics 107*, 515–536.

Aiginger K. (2014), *The Europe 2020 strategy at midterm: Disappointing assessment calls for an urgent change driven by long run priorities*. Response of the Austrian Institute of Economic Research (WIFO) to the public consultation on the Europe 2020 strategy: European Commission IP/14/50405/05/2014, Wien.

Aiyar S., W. Bergthaler, J. M. Garrido, A. Ilyina, A. Jobst, K. Kang, D. Kovtun, Y. Liu, D. Monaghan, and M. Moretti (2015), "A Strategy for Resolving Europe's Problem Loans", *IMF Staff Discussion Note*, SDN 15/19.

Asdrubati, P. B. Sorrenson, O. Yosha (1996), "Channels of interstate risk sharing: United States 1963-1990"*, The Quarterly Journal of Economics*, November, pp. 1081-1110

Auerbach, A. J., Gorodnichenko, Y. (2012), "Fiscal Multipliers in Recession and Expansion". in: Alesina, A., Giavazzi, F. (eds), *Fiscal Policy after the Financial Crisis*, Chicago: University of Chicago Press.

Balassone F. and D. Franco (2000), "Public Investment, the Stability Pact and the 'Golden Rule'", *Fiscal Studies*, 21(2). F. Barbiero, Z. Darvas (2014): In Sickness and in Health: Protecting and Supporting Public Investment in Europe, *Bruegel Policy Contribution* 02/2014.

Banca d'Italia (2016), *Financial Stability Report*, 1/2016, April.

Bank of England & European Central bank (2014), "The case for a better functioning securitization market in the European Union", *Joint Discussion Paper of Bank of England & European Central bank*, 29 May 2014.

Banking Union, *IMK Policy Brief* 5-2014, Macroeconomic Policy Institute.

Bauernschuster S., M. Schlotter (2015), "Public child care and mothers' labor supply—Evidence from two quasi-experiments", *Journal of Public Economics* 123 (1): 1-16.

Blanchard, O. F. Giavazzi (2004), "Improving the SGP through a proper accounting of public investment", *CEPR Discussion Papers* 4220.

Blanchard, O., Giavazzi, F. (2002), "Current Account Deficits in the Euro Area: The End of the Feldstein-Horioka Puzzle?, *Brookings Papers on Economic Activity*, 33(2).

Bloom N. (2009), "The impact of uncertainty shocks", *Econometrica*, 77(3), p.623-685.

Bloom N. (2016), "Fluctuations in uncertainty", *Journal of Economic Perspectives*, 28(2): 153-176.

Blot C. and P. Hubert (2016), "Causes et conséquences des taux d'intérêt négatifs", *Revue de l'OFCE*, 150.

Blot C., M. Cochard, J. Creel, B. Ducoudré and X. Timbeau (2014), "Fiscal consolidation, public debt and output dynamics in the euro area: lessons from a simple model with time-varying fiscal multiplier », *Revue d'Économie Politique*, 124(6): 953-989.

Blot, Christophe, Paul Hubert and Fabien Labondance (2016), "Does Monetary Policy generate Asset Price Booms and Busts?", *mimeo* OFCE.

BMF [Bundesministerium der Finanzen] (2012), "Finanz- und Wirtschaftspolitik im Jahreswirtschaftsbericht 2012", *Monatsbericht des BMF*, February.

BMF [Bundesministerium der Finanzen] (2015), "Einhaltung der Schuldenbremse 2014 durch die schwarze Null abgesichert. Endgültige Abrechnung des Haushaltsjahres 2014 auf dem Kontrollkonto", *Monatsbericht des BMF*, September.

Bom P., J. Ligthart (2014), "What Have We Learned From Three Decades of Research on the Productivity of Public Capital?", *Journal of Economic Surveys*, 28(5): 889-

Bom Pedro R. D. et Jenny E. Ligthart, (2014), "What have we learned from three decades of research on the productivity of public capital?", *Journal of Economic Surveys*, 28( 5): 889916.

Bordo M.D and D.C. Wheelock (2007), "Stock market booms and the monetary policy in the twentieth century", *Federal Reserve Bank of St. Louis Review*, March-April, 91-122.

Bordo, Michael, and Olivier Jeanne (2002), "Monetary policy and asset prices: does 'Benign Neglect' make sense?", *International Finance*, 5(2),139-164.

Borio, Claudio and Anna Zabai (2016), "Unconventional monetary policies: a re-appraisal", *BIS Working Papers*, nº570

Boudghene Y. and S. Maes (2012), "Relieving Banks from Toxic or Impaired Assets: The EU State Aid Policy Framework", *Journal of European Competition Law and Practice*, 2012.

Brenna G., T. Poppensieker, and S. Schneider (2009), *Understanding the bad bank, Mac Kinsey Company*, http://www.mckinsey.com/industries/financial-services/our-insights/understanding-the-bad-bank

Bruchez P.-A. (2003), A Modification of the HP Filter Aiming at Reducing the End-Point Bias, *Working Paper der EFV*, Doc. No.: ÖT/2003/3, August.

Caiani, A., Godin, A., Caverzasi, E., Gallegati, M., Kinsella, S. and Stiglitz, J. E. (2016), "Agent based stock flow consistent macroeconomics: Towards a benchmark model", *Columbia Business School Research Paper,* 15-87. http://dx.doi.org/10.2139/SSRN.2664125.

Card D. (2001), "Estimating the Return to Schooling: Progress on Some Persistent Econometric Problems", *Econometrica*, 69(5): 1127-1160.

Chagny, O., Husson, M. (2015), "Quel régime salarial optimal pour la zone euro?", *La Revue de l'Ires*, 81.

Chernenko, Sergey, Sam Hanson, and Adi Sunderam, 2013), *The rise and fall of securitization*. Working Paper, Harvard University.

Creel J., P. Hubert, F. Saraceno (2013), "An assessment of the Stability and Growth Pact reform in a small-scale macro-framework", *Journal of Economic Dynamics and Control*, 37, Issue 8, August 2013, 1567-1580Z.

Creel J., P. Monperrus-Veroni, F. Saraceno (2009), "On the long-term effects of fiscal policy in the United Kingdom: the case for a golden rule", *Scottish Journal of Political Economy*, 56(5): 580-607.

Creel, J. (2003), "Ranking Fiscal Policy Rules: the Golden Rule of Public Finance vs. the Stability and Growth Pact", *OFCE Working Paper*, July, n°2003-04.

Darvas, P. Huettl, C. de Sousa, A. Terzi, O. Tschekassin (2014), *Austerity and Poverty in the European Union*, Study for the Committee on Employment and Social Affairs of the European Parliament, Brussels.

Darvas, Z., P. Hüttl, S. Merler and T. Walsh (2015), "Analysis of developments in EU capital flows in the global context", *Bruegel Study*, 3 November 2015

Delivorias A. (2016), *Synthetic securitisation A closer look, Briefing*, European Parliamentary Research Service, June 2016.

DelliGatti, D., Gallegati, M., Greenwald, B., Russo, A. and Stiglitz, J. E. (2010), "The financial accelerator in an evolving credit network", *Journal of Economic Dynamics and Control*, 34, 1627-1650.

Demary, M. (2016), "The Case of Reviving Securitization", *IW Kurzberichte 63*, Institut der deutschen Wirtschaft, Köln.

Dervis K., F. Saraceno (2014), *An Investment New Deal for Europe, Brookings up front*, 3 September, http://www.brookings.edu/blogs/up-front/posts/2014/09/03-european-central-bank-dervis.

EBA (2016), *EBA report on the dynamics and drivers of non-performing exposures in the EU banking sector*, 22 July 2016.

ECB (2013), "Asset support schemes in the Euro Area", *Financial Stability Review*, May.

European Commission (2008), *Communication from the Commission from to the European Council: A European Economic Recovery Plan, Brussels*, 26.11.2008 COM(2008) 800 final.

European Commission (2015), *Laying down common rules on securitisation and creating a European framework for simple, transparent and standardised securitisation*, Proposal for a Regulation of the European Parliament and of the Council COM (2015) 472 final. 30th of Sep.

European Commission (2015), *Regulation of the European Parliament and of the Council laying down common rules on securitisation and creating a European framework for simple and transparent securitization*, Commission Staff Working Document Impact assessment, 30 September 2015.

European Commission (2015b), *A European framework for Simple and Transparent Securitisation*, Fact Sheet, 30 september.

European Commission (2015c), Communication from the Commission to the European Parliament, the Council, the European Central Bank, the Economic and Social Committee, the Committee of the Regions and the European Investment Bank; *Making the best use of the flexibility within the existing rules of the Stability and Growth Pact*, Strasbourg, 13.1.2015 COM(2015) 12 final.

European Commission (2016), *Annual macro-economic database (Ameco),* Spring 2016.

European Commission (2016a), "Capital Markets Union: First Status Report", *Commission Staff Working Document SWD(2016) 147 final*, 25th of April.

European Commission (2016b), "Stability and Integration Review—A focus on Capital Markets Union", *Commission Staff Working Document SWD* (2016) 146 final. 25th of April.

European Parliament (2016), Working Document on Common rules on securitisation and creating a European framework for simple, transparent and standardised securitisation, Committee on economic and monetary affairs. Rapporteur: Paul Tang, 19th of May.

Fitoussi J.P., J. Creel (2002), *How to reform the European Central Bank?,* London: Centre for European Reform.

FMI (2016), « Global Disinflation in an Era of Constrained Monetary Policy », *World Economic Outlook,* October 2016.

Gandrud G., and M. Hallerberg (2014), "Bad banks in the EU: the Impact of Eurostat rules", *Bruegel Working Paper*, 2014/15.

GCEE [German Council of Economic Experts] (2007), *Staatsverschuldung wirksam begrenzen*, Expertise im Auftrag des Bundesministers für Wirtschaft und Technologie, Wiesbaden.

GCEE [German Council of Economic Experts] (2016), *Execitive Summary of the annual report 2016/17*, Wiebaden: Statistisches Bundesamt.
http://www.sachverstaendigenrat-wirtschaft.de/fileadmin/dateiablage/gutachten/jg201617/kurzfass_eng_2016_17.pdf

Gechert S. (2015), "What fiscal policy is most effective? A meta-regression analysis", *Oxford Economic Papers* 67 (3): 553-580.

Gechert S., A. Rannenberg (2014), "Are Fiscal Multipliers Regime-Dependent? A Meta Regression Analysis", *IMK Working Paper*, 139, September, Düsseldorf: IMK in der Hans-Böckler-Stiftung.

Godley, W. and Lavoie, M. (2006), *Monetary Economics—An Integrated Approach to Credit, Money, Income, Production and Wealth*, Palgrave Macmillan, New York.

Gorton, G. and Metrick, A. (2012), "Securitized banking and the run on repo", *Journal of Financial Economics*, 104, 425- 451.

Heimberger, Ph. (2014), "Das strukturelle Defizit: Methodische Probleme und politische Implikationen", *Momentum Quarterly*, 3(3): 125-187.

Hein E., A. Truger (2007), *Fiscal policy and macroeconomic performance in the Euro area: lessons for the* future, in: J. Bibow, A. Terzi, A. (eds.), Euroland and the World Economy. Global Player or Global Drag?, Basingstoke (Palgrave Macmillan) 2007: 154-183

Horn G.A., W. Scheremet, (1999): Successful Consolidation of the American Budget—an Example for Europe?, *DIW Economic Bulletin,* 36 (4): 11-16.

Horn, G. A., Behringer, J., Herzog-Stein, A., Hohlfeld, P., Rietzler, K., Stephan, S., Theobald, T. and Tober, S. (2016), Aufschwung mit Schwächen, *IMK Report 118*, Macroeconomic Policy Institute.

iAGS (2012), The independent Annual Growth Survey 2013: *Failed Austerity The Way Out*, www.iags-project.org

iAGS (2013), The independent Annual Growth Survey 2014: *From austerity to stagnation: How to avoid the deflation trap*, www.iags-project.org

iAGS (2014), The independent Annual Growth Survey 2015: *A Diverging Europe on the Edge*, www.iags-project.org

iAGS (2015). The independent Annual Growth Survey 2016: *Give Recovery a Chance*, www.iags-project.org

IMF (2014), *World Economic Outlook,* October 2014. Washington D.C.: International Monetary Fund.

IMF (2016), "Subdued Demand: Symptoms and Remedies", *World Economic Outlook,* October, International Monetary Fund.

Jarocinski M. and M. Lenza (2016), "An inflation-predicting measure of the output gap in the euro area", *ECB Working Paper*, 1966, September.

Jordà Ò., Schularick M. and Taylor A., 2011. "Financial crises, credit booms, and external imbalances: 140 years of lessons", *IMF Economic Review*.

Jordà, Òscar (2005), "Estimation and inference of impulse responses by local projections", *American Economic Review*, 95(1), 161-182.

Jordà, Òscar, M. Schularick, and A.M. Taylor (2015), "Leveraged Bubbles", *Journal of Monetary Economics* 76, 1-20.

Kierzenkowski R., N. Pain, E. Rusticelli and S. Zwart (2016), "The economic consequences of Brexit: a taxing decision", *OECD Economic Policy Paper,* 16.

Klär E. (2013), "Potential Economic Variables and Actual Economic Policies in Europe", *Intereconomics*, 48 (1-2): 33-40.

Krugman P.R., Dominquez K.M. and Rogoff K., (1998), "It's Baaack: Japan's Slump and the Return of the Liquidity Trap", *Brookings Papers on Economic Activity*, 1998(2), 137-205.

Krugman, P. (1994), "Competitiveness: A Dangerous Obsession", *Foreign Affairs*, 73(2): 28-44.

Larch M., A. Turrini (2010), "The Cyclically Adjusted Budget Balance in EU Fiscal Policymaking", *Intereconomics 45* (1-2): 48-60.

Lindner, F., Soemer, N. and Theobald, T. (2014), *Opportunities and Risks of the European.*

Lojak, B. and Theobald, T. (2016), *Modeling credit markets with securitization*, Mimeo. Macroeconomic Policy Institute.

Lucas R. (1988), "On the mechanics of economic development", *Journal of Monetary Economics*, 22(1): 3-42.

Martini L., M. Heuser, M. Fest, U. Stegemann, S. Schneider, G. Brenna, E. Windhagen and T. Poppensieker (2009), Bad banks: finding the right exit from the financial crisis, *Mac Kinsey Working Papers on Risk*, n°12, July.

Melitz J and F. Zumer (1999), "Interregional and International Risk Sharing and Lessons for EMU", *CEPR Discussion Paper* , 2154 May 1999

Melo P., D. Graham, R. Brage-Ardao (2013), "The productivity of transport infrastructure investment: A meta-analysis of empirical evidence", *Regional Science and Urban Economics*, 43: 695-706.

Mesnard B., A.Margerit, C.Power and M.Magnus (2016), "Non-performing loans in the Banking Union: stocktaking and challenges", *Briefing EU Commission*.

Moody's (2016), "SME ABS–Italy: Legislation Will Speed Up NPL Recoveries and Reduce Their Variability", *Report*, June.

Musgrave R.A. (1939), "The nature of budgetary balance and the case for a capital-budget", *American Economic Review*, 29, 260-71.

Musgrave R.A. (1959), "The Theory of Public Finance." *A Study in Public Economy*, New York *et al.:* McGraw-Hill.

Paetz C., K. Rietzler, A. Truger (2016), "The federal budget debt brake since 2011. The real test is yet to come", *IMK Report*, No. 117e, September, Düsseldorf: IMK in der Hans-Böckler-Stiftung.

Pal P., M. Cox, P. Bahari, R. Hanson (2016), *Non-Performing Loans and Securitisation in Europe*, Ropes & Gray Alert, April 2016.

Palley, T. I. (2016)," Inequality and Growth in Neo-Kaleckian and Camebridge Growth Theory", *IMK Working Paper* 167, Macroeconomic Policy Institute.

Perraudin W. (2015), *NPL, Debt Restructuring and Structured Finance*, Presentation to the EBA Board of Supervisors Away Day July 10th 2015.

Pesaran H. and R.P. Smith, (2016), "Counterfactual Analysis in Macroeconometrics: An Empirical Investigation into the Effects of Quantitative Easing", *Research in Economics*, 70(2), June, 262–280.

Piskorski T., A. Seru and V. Vig (2010), "Securitization and Distressed Loan Renegotiation: Evidence from the Subprime Mortgage Crisis", Copy available at: http://ssrn.com/abstract=1321646.

Psacharopoulos G. and H.A. Patrinos (2004), Returns to Investment in Education. A Further Update, *Education Economics,* 12 (2): 111-134.

Ragot, X., Le Moigne, M. (2015), France et Allemagne : une histoire du désajustement européen, *Revue de l'OFCE*, 142.

Reinhart C. and Rogoff K., (2008), "This time is different: a panoramic view of eight centuries of financial crises", *NBER Working Paper*, 13882.

Romer, Christina, and David Romer (2004), "A New Measure of Monetary Shocks: Derivation and Implications", *American Economic Review*, 94(4), 1055-1084.

Romp W., F. De Haan (2005): "Public Capital and Economic Growth: A Critical Survey", *EIB Papers*, 10: 40-71.

Rützel M. (2016), *European securitization: Making a comeback?,* White & Case.

Scherbina A. (2013), "Asset price bubble: a selective survey", *IMF Working paper*, 13/45.

Stiglitz Joseph, 2016, *Euro and its Threat to the Future of Europe*, Allen Lane.

Svetina T., C. Gali and G.M. Guli (2016), "Public State guarantee to secure securisations of non-performing loan receivables: the Italien "bad bank" solution?", *Briefing note*, Clifford Chance, February 2016.

Tasco, P. and Battiston, S. (2014)," Diversification and Financial Stability", *SRC Discussion Paper 10*, London School of Economics and Political Sciences.

Taylor J. B. (2009), "The financial crisis and the policy responses: an empirical analysis of what went wrong", *NBER Working*, 14631.

Theobald, T., Tober, S. and List, E. (2015)," Financial market stability in times of unconventional monetary policy", *SE IMK Research Essays 8*, Social Europe.

Truger A. (2016a), *Austeritätspolitik und Bildungskürzungen: Zur Diagnose und Therapie einer europäischen Krankheit,* in: Bellmann, L., Grözinger, G. (Hrsg.): Streitfragen der Bildungspolitk, Jahrbuch Ökonomie und Gesellschaft 2016, Marburg: Metropolis; forthcoming.

Truger A. (2016b), "The Golden Rule of Public Investment–a necessary and sufficient reform of the EU fiscal framework?", *IMK Working Paper*, 168, May, Düsseldorf: IMK in der Hans-Böckler-Stiftung.

Truger A., H. Will (2013), "The German 'debt brake': A shining example for European fiscal policy?", *Revue de l'OFCE*, *The Euro Area in Crisis*, 127: 155-188.

Truger, A. (2015a), Implementing the Golden Rule for Public Investment in Europe–Safeguarding Public Investment and Supporting the Recovery, *Working Paper*-Reihe der AK Wien/Materialien zu Wirtschaft und Gesellschaft 138.

Truger, A. (2015b), "The Fiscal Compact, Cyclical Adjustment and the Remaining Leeway for Expansionary Fiscal Policies in the Euro Area", Panoeconomicus 62 (2) 2015: 157-175.

Truger, A. (2015c), "Austerity, cyclical adjustment and the remaining leeway for expansionary fiscal policies within the current European fiscal framework", *Journal for a Progressive Economy*, 6 July: 32-37.

Turrini A. (2004), "Public investment and the EU fiscal framework", European Economy, *Economic Papers 202*, Directorate General Economic and Monetary Affairs, European Commission

Uxó J., Paúl J. and Febrero E. (2014), *Internal devaluation in the European periphery: the story of a failure*, http://www.uclm.es/dep/daef/DOCUMENTOS%20DE%20TRABAJO/DT-2014/2014-2%20DT-DAEF.pdf

Valiante, D. (2016), *Europe's Untapped Capital Market–Rethinking finanicial integration after the crisis*, Centre for European Policy Studies Paperback, Lo

Välilä T., and A. Mehrotra (2005), "Evolution and Determinants of Public Investment in Europe", *EIB Papers*, 10: 18-39.

Vermeulen P. (2016), "The recovery of investment in the euro area in the aftermath of the great recession: how does it compare historically?", *ECB Research Bulletin*, 28 October.

Wu J. C. and F. D. Xia, (2016), "Measuring the macroeconomic impact of monetary policy at the Zero lower bound", *Journal of Money Credit and Banking*, 48(2-3), 253-291.

## Figure

## Table

## Box



## Appendix

## Abbreviations Country names

**Euro area** **EA**

| | |
|---|---|
| Austria | **AUT** |
| Belgium | **BEL** |
| Bulgaria | **BGR** |
| Cyprus | **CYP** |
| Czech Republic | **HRV** |
| Denmark | **DNK** |
| Estonia | **EST** |
| Finland | **FIN** |
| France | **FRA** |
| Germany | **DEU** |
| Greece | **GRC** |
| Hungary | **HUN** |
| Ireland | **IRL** |
| Italy | **ITA** |
| Latvia | **LVA** |
| Lithuania | **LTU** |
| Luxembourg | **LUX** |
| Malta | **MLT** |
| Netherlands | **NLD** |
| Poland | **POL** |
| Portugal | **PRT** |
| Romania | **ROU** |
| Slovakia | **SVK** |
| Slovenia | **SVN** |
| Spain | **ESP** |
| Sweden | **SWE** |
| United Kingdom | **GBR** |

Achevé de rédiger en France, novembre 2016.
Imprimé par les Éditions du Net SAS 93400 Saint-Ouen.

Réalisation, composition : Najette Moummi (OFCE)