

Towards a new policy mix in the euro area ?

P. Butzen
S. Cheliout
N. Cordemans
E. De Prest
W. Melyn
L. Van Meensel
S. Van Parys

Introduction

Aiming for stable, non-inflationary economic growth that promotes full employment, macroeconomic policy has a crucial stabilising role to play in market economies. The recent global economic and financial crisis has not fundamentally challenged the existing consensus, but merely brought into relief some of its weaknesses. Besides, in the current economic climate of moderate growth, subdued inflation and low interest rates, monetary and fiscal policies need revisiting in terms of both their purpose and their functioning. The euro area is subject to highly specific conditions, as it has also pulled through a very instructive sovereign debt crisis.

This is the setting for this article's incisive review of the macroeconomic policy mix in the euro area. Its first section discusses the pre-crisis macroeconomic consensus as well as lessons learned from the crisis. Section 2 summarises today's macroeconomic situation and the third section the Eurosystem's monetary policy framework. The fourth section investigates what would be the most appropriate fiscal policy in the current circumstances, both in individual countries and in the euro area as a whole. Section 5 looks more closely at Germany's specific role. The sixth section addresses the question of whether there is any need for a revised European policy framework, and the article ends on a number of conclusions.

1. The policy mix: fresh insights

1.1 The macroeconomic consensus prior to the financial crisis

Market economies are intrinsically prone to economic cycles, i.e. times of economic expansion and contraction, the length of which varies. The frequency and duration of such periods depend on random events of a varied nature, known as "shocks" in economic speak, including technological, financial or other innovations, geopolitical developments, weather conditions, public policy changes or even "animal spirits" (Keynes, 1936; Akerlof and Schiller, 2009). Such animal spirits are part and parcel of human nature and reflect upbeat or gloomy expectations influencing decisions made by economic agents.

The financial sector accelerates economic cycles (Bernanke *et al.*, 1996), as lending for consumption or capital spending is typically underpinned by collateral and/or security. The values of such collateral tend to rise at times of optimism and economic expansion, fostering credit allocation and supporting spending. Conversely, collateral loses value when gloom sets in and economic activity contracts. Then, credit becomes scarcer and consumption and capital spending are squeezed. Even ignoring the wealth effect, which reflects the wealth impact of changes in consumption and savings, this interaction between the financial and real spheres of the economy can prompt, as

the case may be, virtuous or vicious circles of economic expansion or contraction.

The variability of economic activity creates uncertainty and weighs on consumption and investment decisions, given that individuals are risk averse. What is more, economic activity typically also involves variable inflation and employment, entailing steep welfare costs. Unstable inflation depresses confidence and consumer purchasing power, while inflating risk premiums in the financial markets and causing interest rates to rise. As such, it makes it harder to take economic decisions and gets in the way of an optimal allocation of resources. Unpredictable price level variability eventually results in a random redistribution of wealth and income between debtors and creditors, with the extreme case of a deflationary spiral – in which lower prices push up debt and the reverse – being particularly pernicious (see Fisher, 1933). Growing unemployment when economic activity slows does not just cause income losses, it also spells a loss in human capital.

Against this background, macroeconomic policy focuses on preventing and keeping to a minimum the undesirable effects of economic vicissitudes: as the consensus that has emerged since the early 1980s would have it, macroeconomic policy should encourage stable, non-inflationary economic growth promoting full employment. Monetary and fiscal policies are two key instruments to help achieve this state of affairs.

Monetary policy ensures price stability

Monetary policy regulates a country's money supply and/or the price of money in the economy – with “money” defined as the total means of payment – and aims to ensure price stability in the medium term, its best possible contribution to economic prosperity and job creation. Working on the principle of “divine coincidence”, a country's central bank controls the output gap, i.e. the difference between real and potential production, by keeping

a close rein on inflation (Blanchard and Galí, 2007). This also promotes full employment.

The emphasis on the medium term is justified by the time lags in monetary policy transmission and the desire to keep to a minimum any output swings caused by excessively active central bank behaviour. To eliminate any inflation bias, it is advisable to entrust monetary policy to a central bank independent of a country's government, and to rule out any monetary financing of government debt.

Incidentally, price stability typically contributes to financial stability. By keeping at bay excessive inflation, it restricts the risks of contracts agreed in nominal terms, and, by warding off deflation, it prevents an increase in debt in real terms (Aucremanne and Ide, 2010). A central bank should keep an eye on trends in asset prices, but only in as much as price stability comes under threat. And it also acts as lender of last resort, stepping in with urgently needed cash when financial panic hits⁽¹⁾.

Key policy rates are the traditional monetary policy instrument of choice, used by central banks to steer money market rates and so influence financing conditions in the economy at large. Monetary authorities implicitly observe the Taylor rule (Taylor, 1993) by responding to deviations in inflation from its targets and to deviations in output growth relative to its potential levels. To make an impact on real interest rates, which are deemed relevant to consumption and investment decisions, the authorities adjust key policy rates more than proportionally so as to allow for variations in inflation.

Fiscal policy underpinned by automatic stabilisers

Fiscal policy regulates government revenue and expenditure in the economy and contributes to macroeconomic stabilisation chiefly through automatic stabilising mechanisms. Key stabilisers include taxes and social security benefits, as these of course smooth out fluctuations in economic activity.

In normal times – i.e. in a standard recession of relatively short length⁽²⁾ – discretionary fiscal policy is not really the best way to go. In the real world, institutional limits and implementation delays reduce its efficacy and can even turn it procyclical. Besides, doubts arise over its implications due to uncertainties over the fiscal multiplier and potential Ricardian equivalence effects⁽³⁾ (Blanchard *et al.*, 2010). A final argument against discretionary fiscal policy is the leading role monetary policy is assigned to achieve macroeconomic stabilisation, obviating any second instrument⁽⁴⁾. And so, fiscal policy should exclusively focus on keeping public finances sustainable without

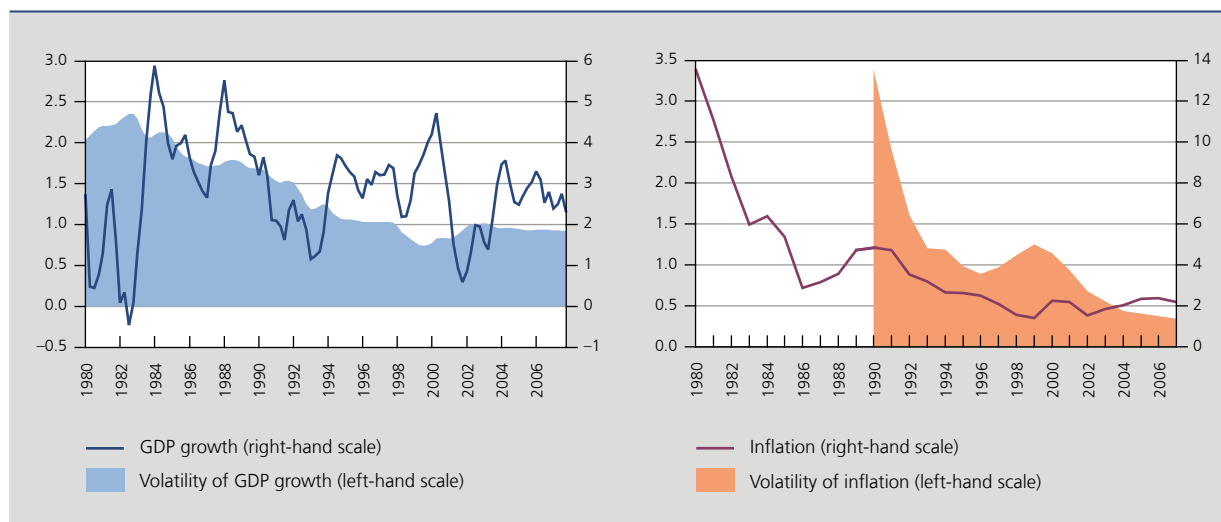
(1) This role was at the very heart of the inception of many central banks in the 19th and 20th centuries. In this capacity, they served both the banking industry and government, as both are closely linked and immediately exposed to default risks in the event of a crisis of confidence. Since these happen very rarely in the real world, central banks' role as lender of last resort had become a dim memory in the advanced economies on the eve of the great recession.

(2) There is no consensus about a precise definition of a recession. America's National Bureau of Economic Research (NBER) defines a recession as a significant decline in economic activity spread across the economy and lasting two or more quarters. Historically, recessions typically last about one year and involve a drop in production of less than 5%. If economic activity contracts more deeply and lasts longer, this may be referred to as a depression.

(3) This hypothesis suggests that the private sector will start saving more in response to fiscal expansion and higher government deficits, as firms and households assume that the government will raise taxes or cut benefits in the future. In its most extreme form, this theory implies that fiscal expansion does not boost the economy at all, just as fiscal contraction does not slow it down.

(4) This view has gained wide currency in academic circles and with central banks, but real-life discretionary measures are known to have been taken during “standard recessions” (Blanchard *et al.*, 2010).

CHART 1 DEVELOPMENTS AND VOLATILITY OF GDP GROWTH AND INFLATION IN ADVANCED ECONOMIES



Source: IMF.

disrupting monetary policy in its essential task of ensuring price stability.

Many – though not all – agree that discretionary fiscal policy may have a stabilising macroeconomic role to play in the event of a liquidity trap (Keynes, 1936). A liquidity trap emerges after a major shock and when monetary policy can no longer boost prices or economic activity, as economic agents no longer respond to more abundant liquidity or key policy rates have hit bottom. Under these conditions, the fiscal multiplier is particularly high as the crowding-out effect⁽¹⁾ evaporates. This type of recession, incidentally, tends to persist beyond the time required for political decision-making.

After the Great Depression of the 1930s, the liquidity trap was for a long time an intellectual oddity only found in school books. But Japan's experience from the mid-1990s and the recession in the United States in the early 2000s sparked renewed interest in the subject (see Auerbach and Obstfeld, 2003; Eggertsson and Woodford, 2004).

The great moderation

By the mid-2000s, the framework described above was generally believed to have contributed to greater macroeconomic stability in the advanced economies. More stable economic growth and inflation, coupled with more moderate trends, had started in the early 1980s, a phenomenon referred to as the great moderation (see Bernanke, 2004).

Euro area: a consensus-matching framework

Based on the 1992 Maastricht Treaty, the institutional framework of the Economic and Monetary Union (EMU) largely reflected the pre-crisis macroeconomic consensus.

The common monetary policy was entrusted to an independent authority, the Eurosystem, whose mandate focuses on price stability. The ECB Governing Council's monetary policy strategy specifies an inflation target for the euro area of "below, but close to, 2% over the medium term". In normal times, the Eurosystem will tighten or relax its monetary policy stance by adjusting key policy rates up or down.

Fiscal policy, by contrast, remained decentralised and the domain of national governments. That said, common rules apply, informed by the notion that governments should aim for fiscal equilibrium and give automatic stabilisers free rein to cushion any shocks. Agreed in 1997, the Stability and Growth Pact (SGP) builds on the provisions in the Maastricht Treaty to impose maximum reference values for budget deficits and government debt (respectively, 3% and 60% of GDP)⁽²⁾. Breaking down into a preventive and corrective arm, the pact is designed to ensure that countries in the EMU observe fiscal discipline, resulting in

(1) A drop in private spending caused by the upward pressure on interest rates resulting from expansive fiscal policies.

(2) The nominal public deficit must not exceed 3% of GDP, unless the deficit is declining considerably and continuously and is approaching the reference value, or unless the excess is exceptional and temporary and the deficit remains close to the reference value. The outstanding public debt must not exceed 60% of GDP, or if it does so, it must approach that reference value at a satisfactory pace.

improved coordination of policy measures, the soundness of public finances and prevention of spillover effects⁽¹⁾.

To ensure market discipline in addition to the fiscal-rules-based discipline, the Treaty on the Functioning of the European Union (TFEU) prohibits monetary financing of government debt (Article 123) and includes a “no-bail-out clause” (Article 125). The clause prohibits the European Union and its Member States from guaranteeing the commitments of governments of other Member States.

To give national governments an opportunity to respond more swiftly to idiosyncratic economic shocks despite a single monetary and currency policy, fiscal rules were relaxed slightly from 2005 on⁽²⁾. Supranationally, however, the European institutional framework did not include a stabilising instrument – e.g. a lender of last resort or budgetary power.

1.2 Lessons from the crisis

The 2007-10 global economic and financial crisis failed to produce a deep questioning of the prevailing general macroeconomic policy framework. There is no argument about its main planks of price stability and central bank independence. The sustainability of public finances has, for its part, received greater attention. That being said, the crisis did show up various weaknesses in the macroeconomic framework and, in the euro area, shone a stark light on the EMU's incomplete institutional architecture in terms of supervision and assistance, which went further than the flaws in the European budget framework (De Grauwe, 2013; Buti, 2016).

Macroeconomic framework: shortcomings

The first post-crisis finding is that price stability is a necessary, but not a sufficient precondition for financial stability. Greater macroeconomic stability during the “great moderation” years has not prevented the emergence of financial imbalances: financial bubbles and property bubbles, excessive debt of households and financial companies, etc. In fact, by putting downward pressure on interest rates, price stability may in fact have fuelled these developments as it created the conditions for riskier behaviour (Boeckx and Cordemans, 2017). The great recession also demonstrated the consequences of financial instability for monetary policy transmission and the real economy.

In fact, it became plain as day that macroprudential policy needed to take on board the stability of the financial system as a whole and prevent an accumulation of financial risks. Many countries have introduced institutional

arrangements and tools to address the issue (IMF, 2016). Back on the agenda was the question of whether monetary policy implementation should factor in risks to financial stability, although the debate has not yet been settled (see IMF, 2015).

Secondly, the financial crisis has also refocused minds on central banks' crucial role as lender of last resort when liquidity in the markets dries up. It made abundantly clear that fiscal authorities in sovereign economies enjoy an implicit warranty in the monetary arena, as it is generally agreed that the sovereign debt crisis was exacerbated by the Eurosystem's inability to take on the role of lender of last resort for euro area governments (Draghi, 2014).

In addition, the crisis threw into stark relief a third aspect: the limits to conventional monetary policies based on adjusting key policy rates. To ensure financial intermediation and solid monetary policy transmission, central banks have responded to the crisis by changing the make-up of their balance sheets through qualitative easing. What's more, central banks have relaxed their monetary policy even further by providing forward guidance on expected future developments in monetary policy. The crisis has also been instrumental in central banks mass-buying of low-risk assets, a policy known as quantitative easing (see Cordemans *et al.*, 2016).

A fourth lesson taught by the crisis is that fiscal policy acts as a stabilising factor in a liquidity trap⁽³⁾. This has been particularly visible in the United States and the United Kingdom, whereas euro area fiscal policy was more restricted by the sovereign debt crisis (see below). Despite their delayed implementation, expansionary discretionary policies were also pursued in various countries due to the seriousness of the recession, its length and the constraints on monetary policy. Besides, fiscal multipliers were agreed to be higher – and positive – whenever key policy rates hit bottom (Eggertsson, 2011), meaning that higher government spending translated into a higher than proportional increase in production in the economy. The financial crisis

(1) Specifically, any upward effects on euro area interest rates and inflation if caused by too expansive a fiscal policy. The temptation to pursue expansive fiscal policies is greater within a monetary union, as the central bank makes its monetary policy decisions based on average inflation. A country not pursuing sound fiscal policies could potentially benefit from lower real rates to boost its growth in the short term (Boeckx and Deroose, 2016).

(2) SGP requirements were generally eased. The emphasis was on strengthening the economic fundamentals and on the Pact's flexibility. The reform modified both the preventive and the corrective arms. The main change to the preventive arm concerned the definition of the medium-term objective namely of a budget close to balance or in surplus. That objective was now expressed in structural terms, i.e. excluding the effects of the business cycle and one-off factors. As for the Pact's corrective procedures, there was significant easing of the definition of the exceptional circumstances in which a public deficit of over 3 % of GDP is not considered excessive.

(3) Some (Feldstein, 2016) even prefer addressing serious crises through fiscal rather than monetary policies. Arguably, fiscal policies do not entail the same risks to financial stability that attend some ‘unconventional’ monetary policy measures. By depressing risk-free long rates, asset purchase programmes are said to encourage the search for yield and have a negative effect on bank profitability as they cause intermediation margins to shrink.

underlined how important it is to have fiscal room for manoeuvre to address negative shocks, implying that debts should be reduced when business cycles are favourable.

Lastly, the crisis has served to highlight potential interactions between the two macroeconomic policy pillars. At times of recession, central banks use the monetary policy instrument to support the sustainability of public finances by easing financing conditions in the economy and by deploying asset purchase plans that typically focus on government paper. Monetary policy, then, encourages fiscal recovery and the adoption of structural reforms. Fiscal policy, in its turn, underpins price stability by supporting aggregate demand. Together, public spending and structural reforms contribute to potential growth and improve the efficiency of monetary policy by supporting real equilibrium interest rates⁽¹⁾.

Euro area construction defects

Membership of a monetary union potentially requires greater fiscal activism to stabilise national economies in the event of idiosyncratic shocks. The sovereign debt crisis that shook the euro area between early 2010 and the end of 2012 showed up major restrictions on national fiscal policy's stabilising capability related to monetary union membership. Euro area Member States contract debt obligations in a currency they have no control over: the fact that the Eurosystem is prohibited from engaging in monetary financing, coupled with the no-bail-out clause, makes them completely dependent on the financial markets and on market rules for funding. However, markets can be volatile and irrational, at times veering sharply away from macroeconomic fundamentals. This makes euro area countries extremely vulnerable to liquidity crises, which can easily degenerate into solvency crises.

Pressured by the markets and in the absence of adequate institutional euro area structures, some hard-hit countries found themselves forced to adopt policies that were excessively restrictive and procyclical from a macroeconomic perspective (Orphanides, 2017). Their macroeconomic policy mix was dominated by the area's common monetary policy, which itself faced the lower bound of key policy rates (Cordemans *et al.*, 2016). This imbalance proved less than beneficial to both Member States and the euro area as a whole. De Grauwe (2013) argues that the monetary union as it was designed may well have exacerbated idiosyncratic shocks: countries hit the hardest plunged into a deflationary spiral.

The sovereign debt crisis also drew attention to the disastrous consequences of banking sector troubles, as it weighs in heavily in the funding of the euro area economy

and the close ties between the industry and the government sectors. The negative feedback loops between domestic sectors and government have caused financial markets to fracture along national lines and severely disrupted monetary policy transmission in the countries hardest hit. In the euro area, then, the crisis highlighted the implicit financial debt associated with the crucial role governments played in saving their countries' banks⁽²⁾.

Lastly, the crisis in the euro area also underlined the importance of closer supervision of macroeconomic and financial imbalances, such as the property and credit bubbles that fed the troubles in the banking sector in various countries.

Government response

A range of measures proved crucial in addressing euro area shortcomings and their detrimental macroeconomic effects. First off, macroeconomic supervision and coordination of economic and fiscal policies in the EU were enhanced: the rules of the Stability and Growth Pact (SGP)⁽³⁾ were reviewed and supervision of imbalances was expanded to other macroeconomic indicators than just public finances, along with the introduction of the European Semester⁽⁴⁾ and the Treaty on Stability, Coordination and Governance (TSCG)⁽⁵⁾, etc.

A second set of measures was the introduction of Europe's "firewalls": the European Financial Stability Facility (EFSF) and the European Financial Stabilisation Mechanism (EFSM), followed by the European Stability Mechanism (ESM). This latter mechanism replaced the previous two in 2012 and led to the creation of an international financial institution authorised to raise money in the financial markets, so that the total emergency funding capacity reached € 700 billion. These resources may, under strict conditions, be drawn on to aid countries in need and rescue banks. Countries receiving such assistance were

- (1) Real equilibrium rates pertain to interest rates that would apply in a normal output environment – i.e. when production matches its potential level – and that are in keeping with price stability. This theoretical rate is not constant over time and will change due to real factors that are a priori exogenous to monetary policy, e.g. an economy's productivity. Monetary policies are measured by the difference between real – i.e. adjusted for inflation – policy rates and real equilibrium rates (Boeckx *et al.*, 2013).
- (2) On the very eve of the crisis, various Member States subsequently most exposed to tensions had debt ratios that were not considered a problem. In 2008, Spain and Ireland, for instance, were looking at public debt as a percentage of GDP at around 40%. Setbacks in their banking sectors quickly deteriorated general government accounts.
- (3) During the period running from 2011 to 2013, several reforms that widened and tightened up the European fiscal framework (Six Pack, Two Pack, Fiscal Compact) were approved. In 2015, however, the fiscal framework was relaxed as account is taken of the economic circumstances in the Member States when defining the efforts to be made under the preventive arm. For a detailed description of these reforms, see Melyn *et al.* (2015).
- (4) Annual cycle for the follow-up of and supervision of the economic policies of the European Union and its Member States.
- (5) The TSCG – and the fiscal compact that is part of this Treaty – is an intergovernmental agreement between 25 EU Member States fostering convergence on the basis of strict rules. The Treaty strengthens the implementation of the SGP and enhances the supervision and coordination of economic policy.

required to accelerate budget adjustments, but these would have likely been even more painful without such aid (Bénassy-Quéré *et al.*, 2016).

Thirdly, the Eurosystem took on the role of lender of last resort for euro area governments. The Governing Council announced outright monetary transactions (OMTs) in the summer of 2012 and committed to buying, under certain conditions, unlimited amounts of government paper by way of these transactions, in response to the major and rapid deterioration of financing conditions in various Member States. These funding issues were not justified by the underlying macroeconomic and financial fundamentals, but they might have caused countries to crash out of the euro area and even threatened its very existence.

A fourth decision dating from 2012 was the creation of a banking union to break the negative spiral between national banking industries and their governments. As it stands, the banking union currently has two elements in place: a single supervisory mechanism (SSM) and a single resolution mechanism (SRM). The SSM provides uniform supervision of the euro area's largest banks and is directed at a European level. The SRM's objective is to resolve bankruptcies of troubled banks in an orderly manner, at the lowest possible cost to taxpayers⁽¹⁾ and the real economy. A third essential element of the new banking union, the European Deposit Insurance Scheme (EDIS), has yet to be created. Although the rules have been harmonised and despite the arguments in favour of a joint scheme (see Wolff, 2016), risk-sharing remains a very sensitive issue. For much the same reason, the resolution fund created to help banks in trouble is not backed by a supranational fiscal safety net.

Finally, the European Commission has proposed the establishment of a Capital Markets Union by 2019, with the general aim of bolstering the resilience of the European financial system. Integrating capital markets should encourage cross-border risk-sharing in the private sector and enhance funding and investment opportunities for both borrowers and savers.

Taken together, these elements have steadily helped bring an end to the sovereign debt crisis from the summer of 2012, have facilitated more gradual adjustment and encouraged the economic recovery that got underway in 2013. Although the crisis has now run its course, the key question today is whether these measures taken to

prevent crises and absorb future shocks are indeed adequate and sufficient.

Despite its increased flexibility, the Stability and Growth Pact still emphasises the sustainability of public finances and remains asymmetrical: countries exceeding their objectives are allowed to, but do not have to, boost their economies, with the pressure of adjustment invariably falling on deficit countries. What is more, the pact espouses a strictly national approach, and fiscal policy for the Economic and Monetary Union as a whole is basically the sum of national policy measures. Some (for instance, De Grauwe, 2013) argue that this causes a deflationary distortion for the entire euro area.

Many agree that the best possible macroeconomic stabilisation, both at national and aggregate level, would require common fiscal capacity. Ever closer political union and budget integration would appear to guarantee the stability and continued existence of the monetary union. However, a stronger union raises important questions about democratic legitimacy. Any significant transfer of fiscal powers to the European level remains illusory at this stage.

2. Macroeconomic situation today

Towards the end of 2012, the euro area embarked on an economic upturn on the back of a clear easing of the financial tensions caused by the sovereign debt crisis. GDP increased while the unemployment rate fell significantly, despite higher labour force participation. That being said, the unemployment rate has remained higher than it was before the crisis. The negative output gap has gradually narrowed and should fully close sometime in the course of 2018.

In 2017, economic growth generally accelerated and expanded across the various countries and sectors, and was primarily driven by domestic demand. Private consumption picked up momentum on growing employment and increased net household wealth. Favourable financing conditions and improved access to credit supported capital spending, which also benefited from higher profitability. Global recovery fuelled exports and made up for the adverse effects of a stronger euro.

At the same time, the deflation risk evaporated, and inflation gradually climbed. After touching record lows in mid-2014 in the wake of lower energy and commodities prices, inflation edged up closer to the Eurosystem target and stayed at around 1.5%. However, underlying inflation dynamics were still weak and ultimate inflation rates

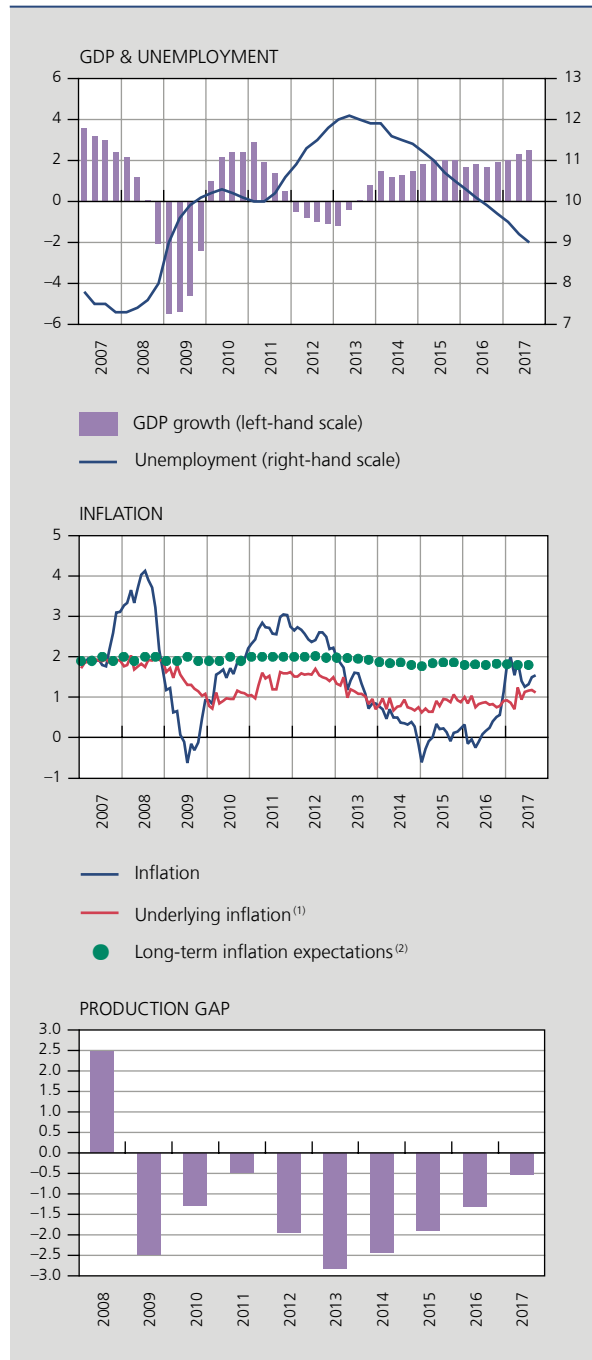
(1) The EU's new resolution procedures set great store by internal strengthening (bail-in), i.e. the financial involvement in a bank's rescue of its creditors and to a lesser degree also its debtors.

of below, but close to, 2 % in the medium term remained a distant dream. Wage growth is increasing but remains subdued.

Persistently low inflation levels would seem to point to unused capacity as well as reflecting modest wage rises

and higher intrinsic inflation persistence (ECB, 2017a). It would appear that inflation is converging to its target rate at a slower pace, as economic agents are more likely to factor in perceived inflation in their expectations. According to the September 2017 macroeconomic projections by Eurosystem staff, euro area inflation is likely to languish below target until at least the end of 2019.

CHART 2 MODERATE GROWTH ON SUBDUED INFLATION



Sources: EC, ECB
 (1) Inflation excluding food and energy.
 (2) 5-Year expectations from the ECB Survey of Professional Forecasters (SPF).

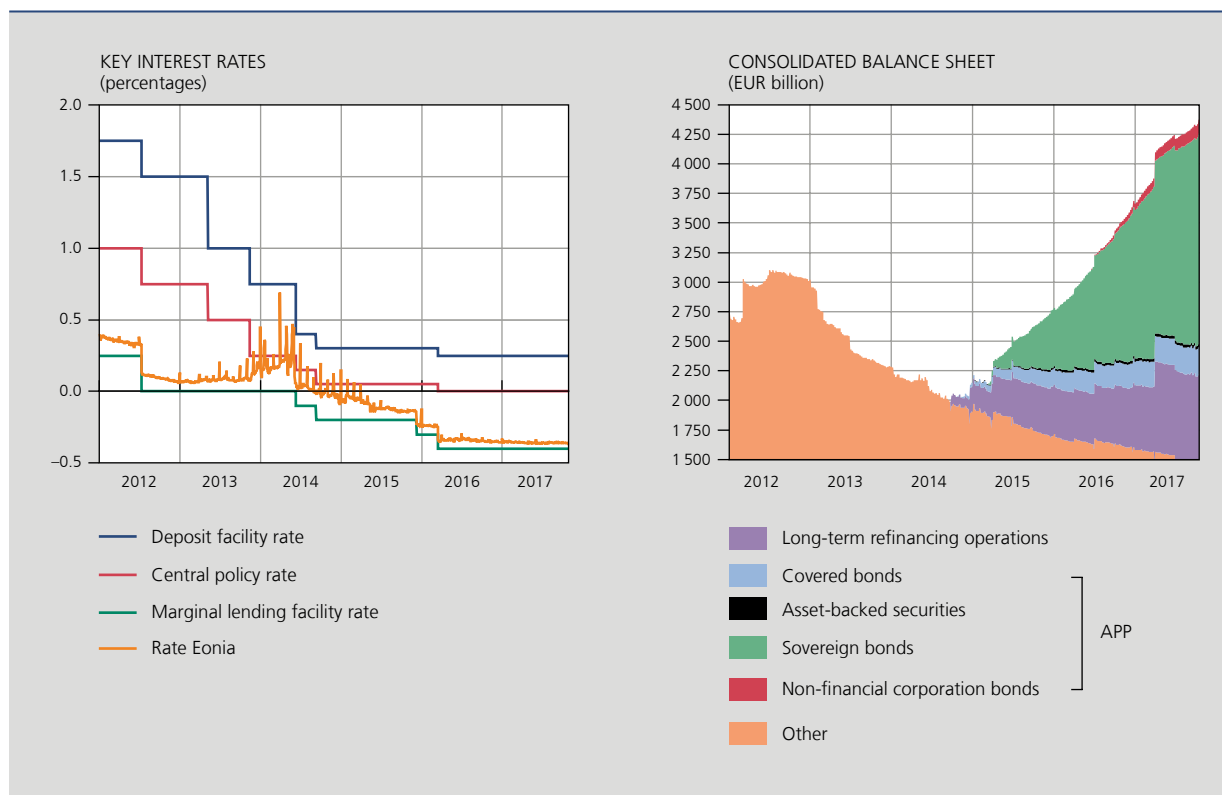
3. Eurosystem monetary policy

The Eurosystem pursues an accommodating monetary policy aimed at maintaining highly favourable financing conditions, with key policy rates at their lower bound and a major asset purchase programme underway. The Governing Council expected “key ECB interest rates to remain at their present levels for an extended period of time, and well past the horizon of the net asset purchases”. What is more, the ECB’s main refinancing operations and longer-term refinancing operations will continue right through to the end of 2019 (and possibly beyond) in the shape of fixed rate tenders with full allotment.

Against a backdrop of increasingly robust and generalised economic growth, and given the growing confidence in a progressive convergence of inflation towards its target, the Eurosystem’s monetary policy has been gradually adjusted over the last months.

Since June 2017, no Governing Council press release has mentioned any possibility of lower key policy rates. What is more, in October, the Council announced that the ECB’s monthly asset purchases would be scaled back to € 30 billion from January 2018, after having been reduced from € 80 billion to € 60 billion in April 2017. The purchases were intended to continue “until the end of September 2018, or beyond, if necessary, and in any case until the Governing Council sees a sustained adjustment in the path of inflation consistent with its inflation aim”. Incidentally, the Council also reserves the right to increase the size of the asset purchase programme and/or extend it if the economic outlook takes a turn for the worse or if financial conditions do not move in the direction of a lasting inflation adjustment.

CHART 3 EUROSISTEM MONETARY POLICY



Source: ECB.

Box 1 – What monetary policy to pursue in a low interest rate environment with low inflation? ⁽¹⁾

An environment marked by low interest rates and subdued inflation is a threat to financial stability, as it encourages risk-taking. Worse, it increases the chances of conventional monetary policy reaching its limits in the event of a negative shock. This is particularly the case when real equilibrium rates undergo a secular fall, reflecting lower productivity growth, higher savings, greater inequality and population ageing.

This begs the question as to what monetary policy adjustments are possible or even desirable to help overcome policy constraints and maintain its qualities as a stabilising force.

- One possibility in such an environment is to make more frequent use of certain non-conventional monetary policy instruments. Asset purchases, for instance, might help to improve monetary policy signals and to more carefully regulate the yield curve along targeted maturities. But asset purchases come with risks to financial stability. Most likely, forward guidance will be used more frequently in the future.

Generally speaking, central banks could afford to run bigger balance sheets than they have in the past, to provide banks with more lending flexibility and still maintain an extensive range of safe and liquid assets. Irrespective

(1) For more information, see De Backer and Wauters (2017).



of excess liquidity, they should still be able to steer money market rates by adjusting interest payments on deposits – or by using other liquidity-absorbing instruments when key rates are raised.

- A highly contentious option is for a central bank to raise its inflation target, from 2% to 4% for instance (Blanchard, 2010). Such an increase would give the monetary authorities more room for manoeuvre to push down real interest rates in the event of a negative shock, but would at the same time erode central banks' hard-won credibility. This approach also threatens to lead to socially excessive inflation rates in normal times.
- One final policy option would be to move from a strategy of inflation targeting to price level targeting or even nominal GDP targeting. If pursuing the former, monetary authorities would be obliged to catch up at times of too low inflation by allowing the target to be exceeded in compensation, in order to guarantee an average actual inflation trend of 2%. If credible, this strategy should, in theory at least, securely anchor inflation expectations. Much like raising inflation targets, however, this strategy would also jeopardise central bank credibility. More specifically, if inflation were to grow faster than its target, would the central bank permit lower inflation and run the danger of tipping the economy into a deflation trap? A strategy of pursuing a GDP growth objective looks very tough to actually be put into practice, also because of the inevitable time lag before national accounts data become available, not to mention the numerous revisions of such data.

4. Fiscal policies: what's the optimum?

4.1 Conceptualising optimal public finances

From a macroeconomic perspective, one of the objectives of fiscal policy is to help stabilise the business cycle, with the proviso that public finances remain sustainable in the long term. Both objectives – stabilisation and sustainability – will be discussed in some greater detail below, while the roles of interest expenditure and public investment are also touched upon.

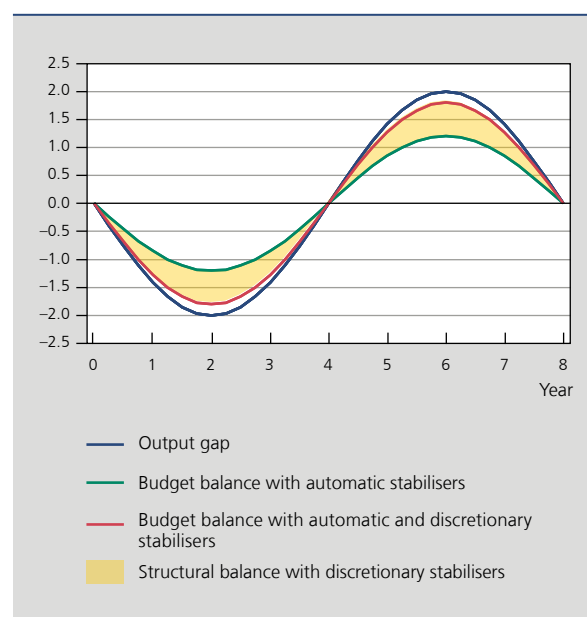
4.1.1 Countercyclical fiscal policy

Fiscal policies can help stabilise business cycles by allowing the budget balance to deteriorate, thus stimulating demand at times of slowing economic activity, and by slowing demand and improving the budget balance at times of improving economic activity.

The best available measure of the business cycle is the output gap, i.e. the difference between actual or expected GDP and potential GDP. Estimating potential GDP – and the output gap – is hedged with a great deal of uncertainty, as is apparent from sometimes significant ex-post revisions. Note that revisions of output gap changes are more limited than revisions to output gap levels.

Countercyclical fiscal policy mitigates the economic business cycle by pursuing restrictive fiscal policies when the output gap turns more positive – i.e. when GDP grows faster than its potential – and expansionary fiscal policies when the output gap turns more negative – i.e. when GDP growth dips below its potential.

CHART 4 COUNTERCYCLICAL FISCAL POLICY
(in % of GDP)



Automatic stabilisers are eminently suitable instruments to help stabilise business cycles, kicking into action without requiring discretionary government intervention. Examples include tax revenues falling and unemployment benefit rising when economic activity slows. Automatic stabilisers may be complemented by discretionary countercyclical policies, which do require policy decisions, e.g. raising public consumption and investment or other spending, or cutting taxes when economic demand weakens. In the European governance framework, stabilisation through automatic stabilisers has always been accepted.

A country's fiscal multiplier captures the extent to which its fiscal policy is able to stabilise its business cycle. This multiplier will be higher at times of recession and if monetary policy is constrained in its pursuit of accommodating policies, as in the case of a liquidity trap, as described above. In addition, it has been demonstrated that a major negative demand shock can permanently affect economic activity, because initially cyclical unemployment can turn partly structural, for example (the hysteresis effect). This can increase the need to introduce discretionary stabilising policy at times of a steep economic slowdown.

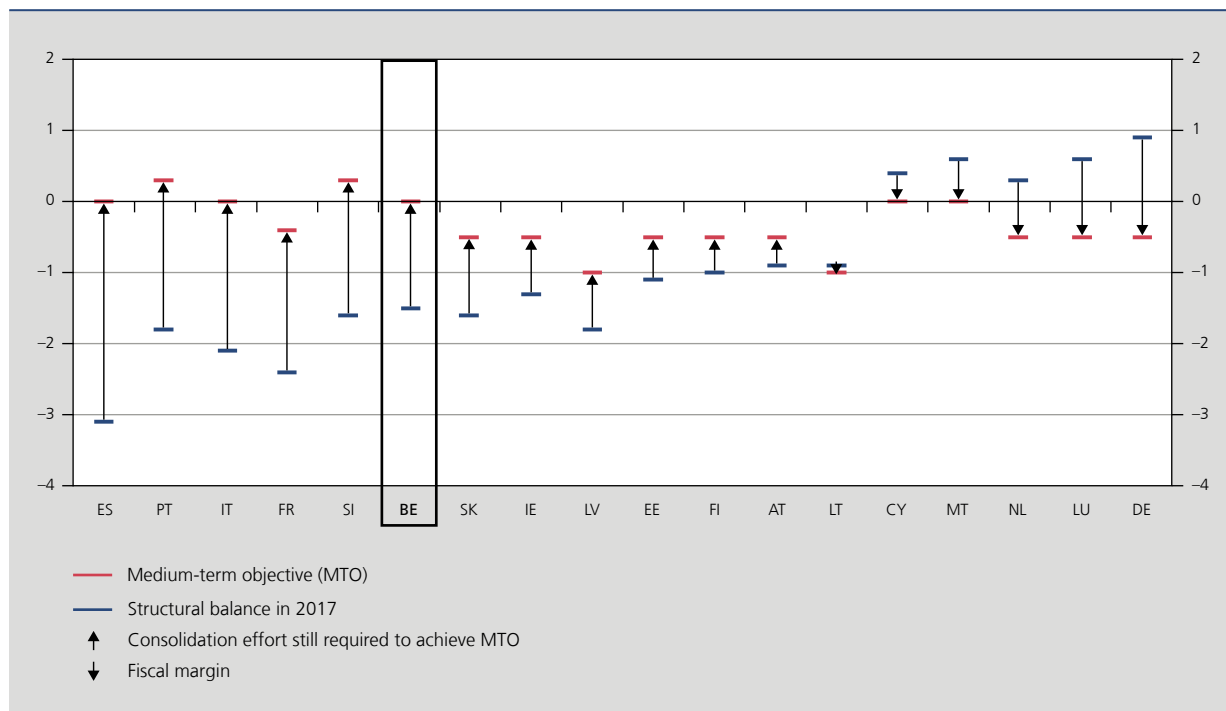
If it is to have a lasting effect, countercyclical fiscal policies require symmetry, meaning that buffers must be created at times of a positive output gap to fund the fiscal stimulus when the output gap turns negative.

4.1.2 Sustainable public finances

Optimal fiscal policy also means that public finances must remain sustainable. That is to say, the government needs to remain solvent and able to meet its current debt commitments. In formal terms, it must fulfil its intertemporal budget constraint, i.e. the value of government debt must equal the present value of future primary surpluses. The sustainability of public finances is determined by past financial commitments (the present debt ratio) and expected future liabilities (including the cost of population ageing) and economic growth.

Whereas stabilisation is a short-term objective, the sustainability of public finances is a longer-term concern. On average, then, the sustainability objective should be respected across a full business cycle, but cannot prevent public finances from temporarily deteriorating as the cycle worsens.

CHART 5 SUSTAINABLE PUBLIC FINANCES MEANS FURTHER FISCAL CONSOLIDATION FOR SOME COUNTRIES
(in % of GDP)



Sources: EC, NBB.

(1) For Greece, a new MTO has not yet been defined, since it is still subject to an assistance programme.

Unlike stabilisation, sustainability is not a symmetrical goal. A country will do well to consolidate if it drifts too far away from its sustainability objective, but there is no such thing as consolidating too far in terms of this objective.

The need for fiscal consolidation may on occasion be contrary to the stabilisation objective, particularly in the event of an economic slowdown.

For fiscal purposes, the European Commission calculates a minimum medium-term objective (minimum MTO) for each individual country, which should guarantee the sustainability of public finances if respected. This minimum MTO is expressed in terms of a target structural balance, allowing for budgetary balance fluctuations as a result of automatic stabilisers. When calculating the minimum MTO, the Commission will factor in the required budget effort to reduce a country's debt to 60 % of GDP if its debt ratio currently exceeds 60 %, the required budgetary balance to stabilise the debt ratio at 60 % of GDP, and a pre-financing by one-third of the expected costs of ageing by 2060. The Fiscal Compact subsequently stipulates that a euro area country's minimum MTO should not be below a structural balance of -1 % of GDP if its debt level is below 60 % of GDP or below -0.5 % of GDP if its debt level is above 60 % of GDP. Member States may always commit to a stricter MTO than the one suggested by the European Commission. Belgium's minimum MTO, for instance, has been set at -0.5 % of GDP, but its federal government has posited a structural balance in its stability programme.

Sustainability conditions vary greatly for the euro area countries, with some needing to massively improve their budgetary balance, e.g. Spain, France, Portugal, Italy, Slovenia and Belgium. Other countries – Germany, Luxembourg, Malta and the Netherlands – have already achieved or exceeded their MTOs and are looking at a measure of fiscal margin.

4.1.3 The role of interest expenditure

What role does interest expenditure on government debt play relative to a fiscal policy's macroeconomic objectives? Is the optimum fiscal policy best defined in terms of the primary budgetary balance, ignoring interest expenditure developments and seeing interest expenditure changes as a bonus or a penalty? Or should an optimum fiscal policy be defined in terms of the budgetary balance that takes interest expenditure into account? Deciding the best course of action requires a closer look at the various possible factors informing interest expenditure developments.

Developments in interest expenditure on government debt depend on developments in implicit interest rates

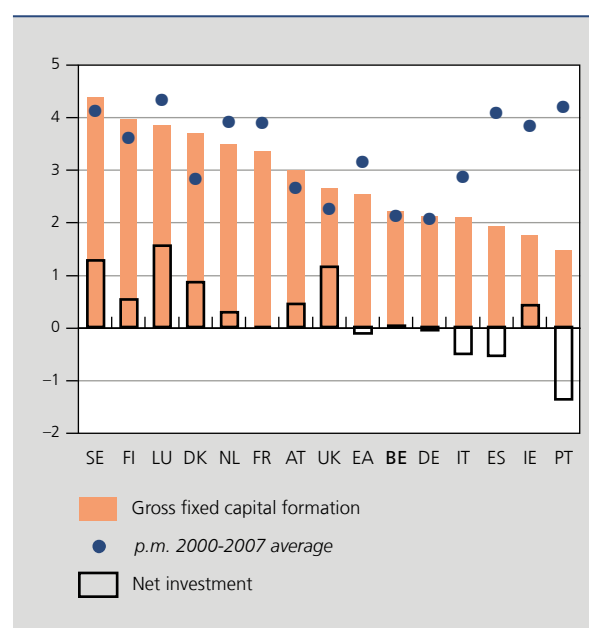
and the debt ratio. For a given debt structure, changes in implicit interest rates break down into three components. The first is a cyclical component tied in with a country's monetary policy, reflecting inflation targets and the business cycle, with accommodating monetary policies typically causing rates to fall. Second, a structural component reflects fundamental factors such as demographic trends and productivity growth, with lower potential growth making for lower interest rates, for example. The third component is a risk premium reflecting default risk, with a lower default risk causing rates to fall.

Different causes of falling (or rising) interest rates justify fiscal policy easing (or tightening) from a macroeconomic perspective. Accommodating monetary policy had better not be thwarted by restrictive fiscal policy, lower potential growth necessitates productive government spending, while a lower debt ratio or lower default risk creates margins that can be used. It is appropriate, then, to define optimum fiscal policy in terms of budgetary balance (including interest expenditure). Under the current circumstances, this implies that interest income may be used and does not need to be saved up.

4.1.4 Public investment

Public investment and other public spending can strongly boost economic activity and an economy's production

CHART 6 PUBLIC INVESTMENT IS CURRENTLY VERY LOW IN SOME EUROPEAN COUNTRIES (FIXED CAPITAL INVESTMENT, 2016)



Source: EC.

potential, and a country would be well advised to encourage such capital spending, particularly in current conditions of low interest rates and low potential growth. However, in numerous euro area countries public investment is currently at low levels, for instance in Belgium and Germany. And Ireland, Portugal and the Mediterranean countries, hit hard by the financial and economic crisis, have also made deep cuts in their public investment.

Public investment in as much as it expands a country's capital stock – i.e. if it exceeds depreciation – will contribute to higher gross government debt, but not to net government debt. More productive investment does not necessarily mean that public finances become less sustainable, and any evaluation of the sustainability objective may therefore consider the level of net public investment.

Box 2 – Optimal fiscal policy rule

Based on the concept of an optimal fiscal policy from a macroeconomic perspective, we can postulate a rule for optimum fiscal policy, pulling together both stabilisation and sustainability objectives – which do not result in unanimous budget advice in all circumstances. For reasons set out above, this rule is defined in terms of the budgetary balance, which includes interest expenditure.

In terms of the sustainability objective, our rule postulates that the budgetary balance should at least be at a sustainable level (*SUST*) when the business cycle is neutral. This equals the outcome of the basic formula the European Commission uses to calculate a country's minimum MTO, but without any limits and rounding subsequently applied by the Commission⁽¹⁾. For Belgium, this sustainability level works out at a budget deficit of 0.4 % of GDP. This level should basically be maintained across a full business cycle.

To stabilise the business cycle, the rule indicates that the budgetary balance may fluctuate around its sustainable level as a function of the output gap (*OG*). A negative output gap requires a lower and a positive output gap a higher balance. The degree of stabilisation is expressed by stabilisation parameter α . The value of α depends on the degree to which discretionary stabilisation is imposed in addition to automatic stabilisation, and therefore equals the sum of the automatic stabilisation parameter σ and discretionary stabilisation parameter δ . The value of σ typically varies by country, taking account of the semi-elasticity of the budget balance with respect to the output gap, as calculated by the EC. To some extent, the choice of the level of stabilisation parameter α is arbitrary, and in the proposed rule it is put at one. The value of α is the same for all euro area countries, which implies that countries with relatively major automatic stabilisation (such as Belgium with σ at 0.61) require less discretionary stabilisation than those with less automatic stabilisation.

In sum, the optimum budgetary balance equals the total of the sustainability level plus the product of stabilisation parameter α and the output gap. The rule may be expressed in terms of nominal budgetary balance (*BB*) and structural balance (*SB*). As the structural balance neutralises the impact of the business cycle through automatic stabilisers, the stabilisation parameter for it reduces to the parameter for discretionary stabilisation ($\delta = \alpha - \sigma$):

$$BB_t^{opt} = SUST + \alpha OG_t$$

$$SB_t^{opt} = SUST + \delta OG_t$$

(1) Meaning that we only consider MTO 3 – which factors in the required fiscal effort to reduce a country's debt to 60% of GDP, the fiscal balance needed to stabilise the debt ratio at 60% of GDP and a pre-financing of one-third of the expected costs of ageing by 2060 – and not MTO 1, which incorporates a safety margin relative to the 3% deficit limit, nor MTO 2, which imposes an absolute minimum of -0.5% and -1% of GDP respectively when the debt is lower or higher than 60% of GDP.



If the budgetary balance dips below the optimum balance, a sustainability problem arises. In this case the budgetary balance will need to change towards the optimum level, factoring in the change in the output gap which the optimum level is tied in with:

$$\Delta BB_t = \max[0.5; 1/4 (BB_{t-1}^{opt} - BB_{t-1})] + \alpha \Delta OG_t$$

$$\Delta SB_t = \max[0.5; 1/4 (SB_{t-1}^{opt} - SB_{t-1})] + \delta \Delta OG_t$$

The speed of the return to the optimum level is an arbitrary choice. But the rule here posited proposes narrowing the differential between actual and optimum budgetary balance by one-quarter every year, or by 0.5 % of GDP if this one-quarter is below 0.5 % of GDP, until such time as the optimum level is achieved.

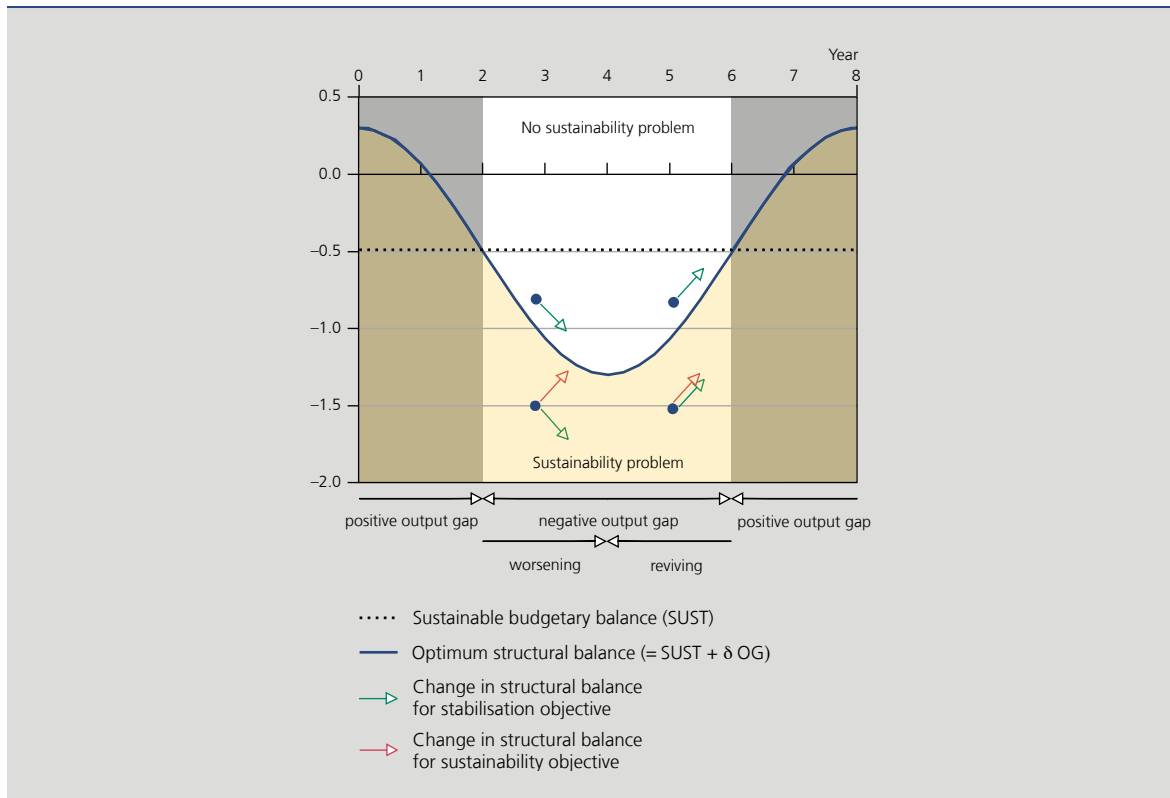
When the budgetary balance exceeds the optimum level, no sustainability problem exists. The proposed optimum budget rule does not prescribe a return to the optimum budgetary balance in such a case; only changes in the business cycle need factoring in:

$$\Delta BB_t = \alpha \Delta OG_t$$

$$\Delta SB_t = \delta \Delta OG_t$$

RULE FOR OPTIMUM FISCAL POLICY, SHOWN FOR NEGATIVE OUTPUT GAP

(in % of GDP)



Countries that enjoy a fiscal margin on their sustainability objective are thus not encouraged to use it up: after all, the stabilisation objective is symmetrical, the sustainability objective is not.

The chart shows the proposed rule for an optimum fiscal policy in the event of a negative output gap and is expressed in terms of the structural balance. The structural balance's optimum level goes down as the business cycle deteriorates and moves back up when economic activity revives. At times when the output gap is closed (in years 2 and 6 in the chart) the optimum structural balance typically equals the sustainable level (*SUST*), pegged at -0.5% of GDP in the graph.

If the structural balance dips below the optimum level and the business cycle deteriorates (point bottom left), the stabilisation objective prescribes the adoption of a discretionary expansionary policy (green arrow) whereas the sustainability objective points to a discretionary restrictive policy (red arrow). Recommended policy is the sum of both and is either expansionary or restrictive depending on the extent of the consolidation problem. If the structural balance is below the optimum level and economic activity is on the up (point bottom right), both stabilisation and sustainability objectives prescribe a restrictive policy. Here too, recommended policy is the sum of both. If the structural balance is above optimum level (points above the blue line) there is no sustainability problem and only the stabilisation objective applies (see green arrows).

Finally, it is worth noting that the proposed fiscal rule is predicated on a number of key principles underpinning optimum fiscal policy, which have been translated into a simple formula. To some extent the choice of the values of the parameters and variables is arbitrary within these formulas, and might possibly be refined. Stabilisation parameter α , for one, could itself serve as a function of the output gap to allow for the increased effectiveness of stabilisation policies when economies slump. Sustainability level *SUST* could be adjusted in proportion to a country's net public investment level, given its minor effect on sustainability. In terms of the business cycle measure, i.e. the output gap, the – frequently significant – *ex-post* revisions are a major issue. However, our rule-based fiscal recommendations primarily rely on changes in the output gap, which are less subject to revision.

4.2 Optimum fiscal policies for individual countries

4.2.1 Applying proposed rule

Determining individual countries' optimum fiscal policy requires an adequate indicator that serves as a point of reference for the actual or expected budgetary outcomes.

Based on the proposed rule in box 2, individual euro area countries' optimal fiscal policies are compared with actual or forecast budget outcomes, as the chart below does for the euro area's six biggest economies. The optimum fiscal policy is expressed in terms of a change in the structural balance, with calculations based on output gap data as currently estimated – and therefore not on output gap projections at the time these budgets were drawn up. Exercise outcomes should be read on a year-to-year basis, and are not cumulative.

In 2007, before the onset of the crisis, Belgium, the Netherlands and France pursued expansionary fiscal

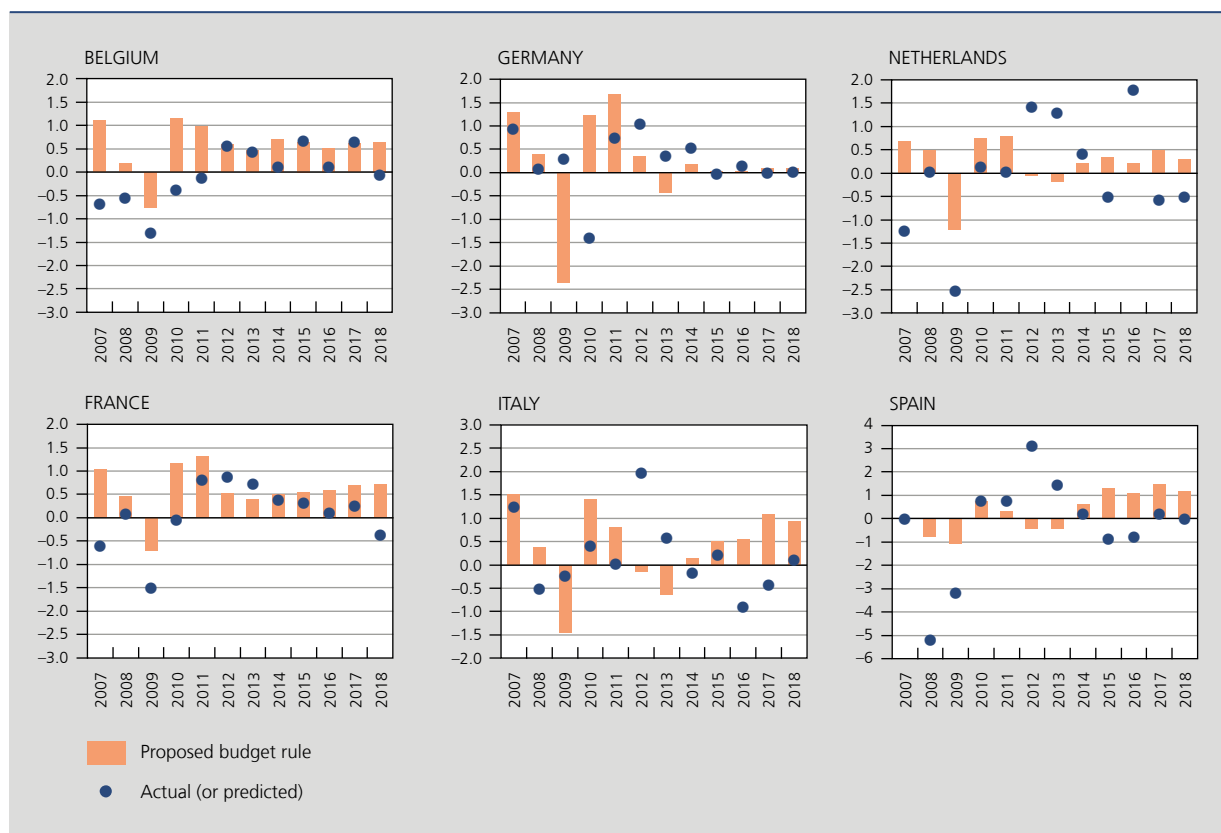
policies, whereas the proposed rule flags a need for significant consolidation efforts to ensure the sustainability of their public finances. At the time, Germany, Italy and Spain, by contrast, did stick to fiscal policies that matched their sustainability objective.

At the time of the financial and economic crisis (2008-10) there was actually scope for discretionary expansionary fiscal policies, but Belgium, France, the Netherlands and Spain allowed their budgetary balances to deteriorate further than the rule proposed. By contrast, Italy made only limited use of discretionary stimuli.

In the 2012-13 period, Germany, the Netherlands, Italy and Spain pursued very restrictive fiscal policies, whereas a deteriorating business cycle justified neutral to expansionary policies. It is worth noting here, with the benefit of hindsight, that the business cycle in Italy and Spain deteriorated much more sharply than was forecast when their budgets were drawn up. After all, if these countries had used the output gap projections at the time, the proposed rule would have advised restrictive fiscal policies for Spain and Italy.

CHART 7 OPTIMUM FISCAL POLICIES IN INDIVIDUAL COUNTRIES

(change in structural balance, in % of GDP)



Sources: EC, ESCB, NBB.

Looking at 2017-18, Belgium, France, Italy and Spain should be pursuing much more of a consolidation effort than is expected to emerge on the basis of the European Commission's most recent outlook (2017 autumn projections), given the current uptick in the business cycle combined with a sustainability problem.

4.2.2 European budgetary framework recommendations compared with proposed rule

An interesting exercise is to compare 2017 and 2018 recommendations flowing from our proposed rule with country-specific recommendations emerging from the European budgetary framework.

In terms of their levels, recommendations for France and Belgium broadly fall in line with the proposed rule's. However, the rule points to a more significant consolidation for Spain and Italy, as the output gap in both countries is closing rapidly and they are also facing significant sustainability issues. All things considered, European

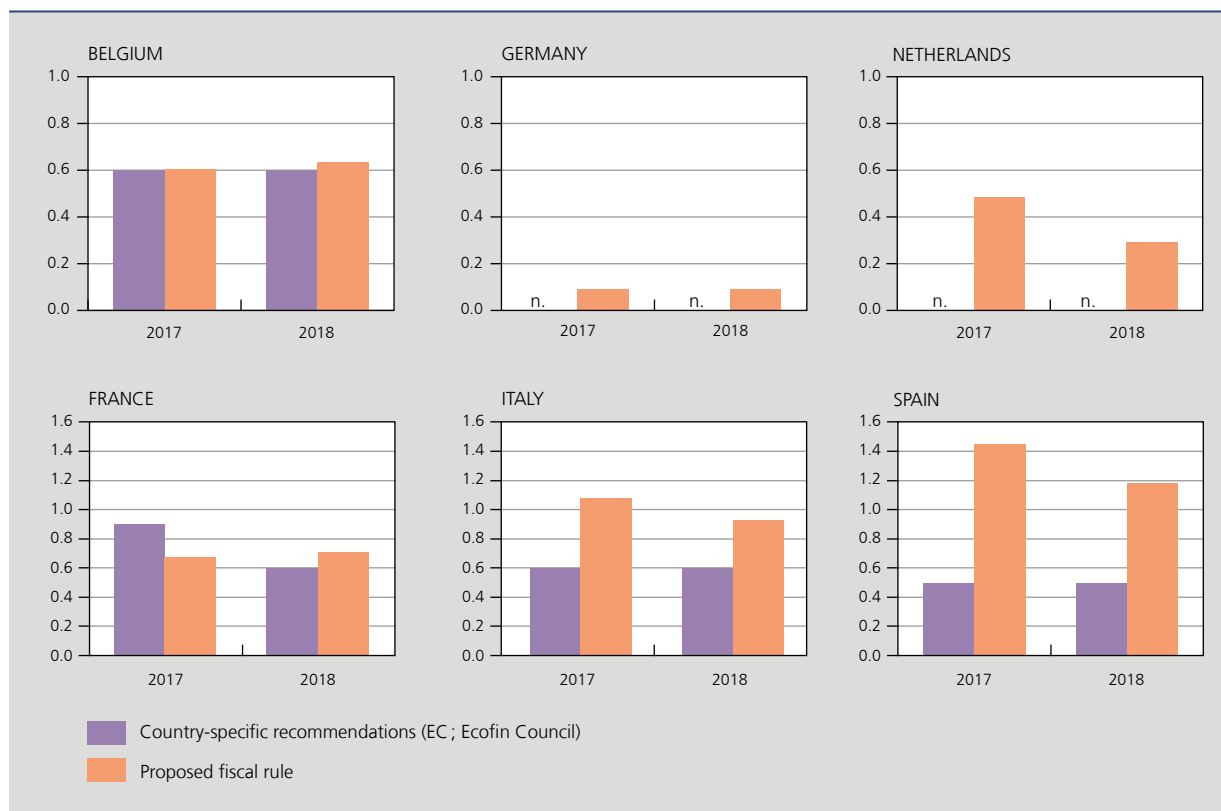
budgetary framework recommendations make a lot of sense right now and should be observed.

Germany and the Netherlands have no sustainability problems and the Commission has not issued any recommendations for these countries. The proposed fiscal rule suggests that a slightly restrictive fiscal policy is the way to go for the Netherlands in 2017 and 2018, and for Germany in 2018, simply because their economic activity has been on the way up. After all, according to the fiscal rule, neither country is asked to use their margins towards the sustainability objective.

Although the recommendations under the Stability and Growth Pact currently make sense, there are key differences with the proposed rule for optimum fiscal policy. In terms of the optimum level of the budgetary balance, the rule also allows discretionary stabilisation on top of the automatic stabilisers; the proposed rule is more relaxed in times of worsening business cycles and stricter when cycles are on the up. If a structural balance drops to below the optimum level, the SGP

CHART 8 RECOMMENDATIONS FROM EUROPEAN BUDGETARY FRAMEWORK CURRENTLY USEFUL

(change in structural balance, in % of GDP)



Sources: EC, NBB.

only permits no improvement in the structural balance in very exceptional circumstances, i.e. when the output gap falls below -4% of GDP or when growth turns negative. In all other circumstances, countries are obliged to improve their structural balances or at least stay on an even keel. By contrast, the proposed rule does permit a deteriorating structural balance when business cycles turn down, even in the case of a sustainability problem. That said, any improvement in the business cycle would impose a larger structural balance improvement on countries.

4.3 Optimum fiscal policy for the euro area as a whole

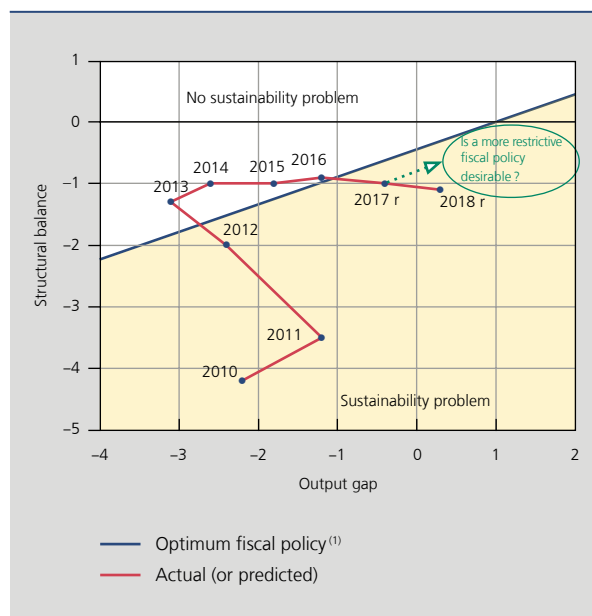
4.3.1 Fiscal policy stance

Calculating the fiscal position of the euro area as a whole is a purely mechanical exercise, aggregating Member States' fiscal positions and not determining it directly. So, fiscal policy at euro area level is the result of discretionary policies at national level. The euro area fiscal position

is shown here in the shape of the structural balance, as released by the European Commission.

Fiscal policy for the euro area as a whole between 2010 and 2018 can be broken down into a number of sub-periods. In the period 2008-2010, the financial crisis and its subsequent economic recession caused steep deficits and rising debts in the wake of the countercyclical policies of the time, severely damaging the state of the euro area's public finances. From 2011, the euro area countries started to reduce their deficits to improve the sustainability of public finances. The procyclical fiscal approach at the time of the 2012-13 double dip was informed by an updated and tightened Stability and Growth Pact. With the benefit of hindsight, this period's fiscal policy may be judged to have been too restrictive, with the fiscal consolidation carried out too soon, partly as a result of pressure from financial markets on some countries. The fiscal position of the euro area as a whole was largely neutral from 2014, in line with the cyclical state of affairs. Recent economic data is encouraging, revealing strengthening growth and a closing output gap. This strongly improved business situation would suggest a rather more restrictive fiscal policy.

CHART 9 FISCAL POLICY FOR THE EURO AREA AS A WHOLE
(in % of GDP)



Sources: EC, NBB.

(1) According to the proposed rule for optimal fiscal policy in box 2. This works out as follows: a change in the output gap by 1 % of GDP will prompt a change in the structural balance by 0.44 % of GDP and a change in the nominal budgetary balance by 1 % of GDP through the automatic stabilisers (0.56 % of GDP) and a discretionary policy impulse (0.44 % of GDP); the proposed budget deficit for the medium term amounts to 0.5 % of GDP.

In the past year, key international institutions made recommendations on optimum fiscal policy for the euro area as a whole in 2017 and 2018⁽¹⁾. For 2017, the Ecofin Council and the IMF counselled the euro area as a whole to steer a neutral policy course, taking into account cyclical considerations and the sustainability of public finances in the long term. Note, however, that as late as an end-2016 publication, the European Commission still espoused an expansionary fiscal policy⁽²⁾. For 2018, first-half publications by the European Commission, the European Fiscal Council and the IMF continued to argue for a largely neutral fiscal policy. In a speech at the end of September, the director of the IMF's European Department, Poul Thomsen, noted that the advice had been changed to a gradually restrictive policy: "With growth recovering quite strongly and output gaps narrowing fast, now is the time to rebuild fiscal space and place public debt on a firm downward trajectory. Gradual fiscal consolidation would help ensure that, when the next adverse shock hits, the euro zone is on a stronger footing and has the necessary buffers⁽³⁾."

(1) Note that recommendations by the European Commission, the Ecofin Council and the European Fiscal Board all refer to the structural primary balance, whereas the IMF bases its recommendations on the structural budgetary balance.

(2) EC (2016b).
(3) IMF (2017b).

This recap shows that the past year has seen the views of international institutions evolve on the issue of the appropriate fiscal policy, from a rather expansionary to a largely neutral fiscal policy, and more recently to a gradually restrictive one. The shift is attributable to an improved economic situation and outlook, allowing the output gap to close in 2018 and even become slightly positive. The recommendation to gradually adopt restrictive policies matches the findings set out previously.

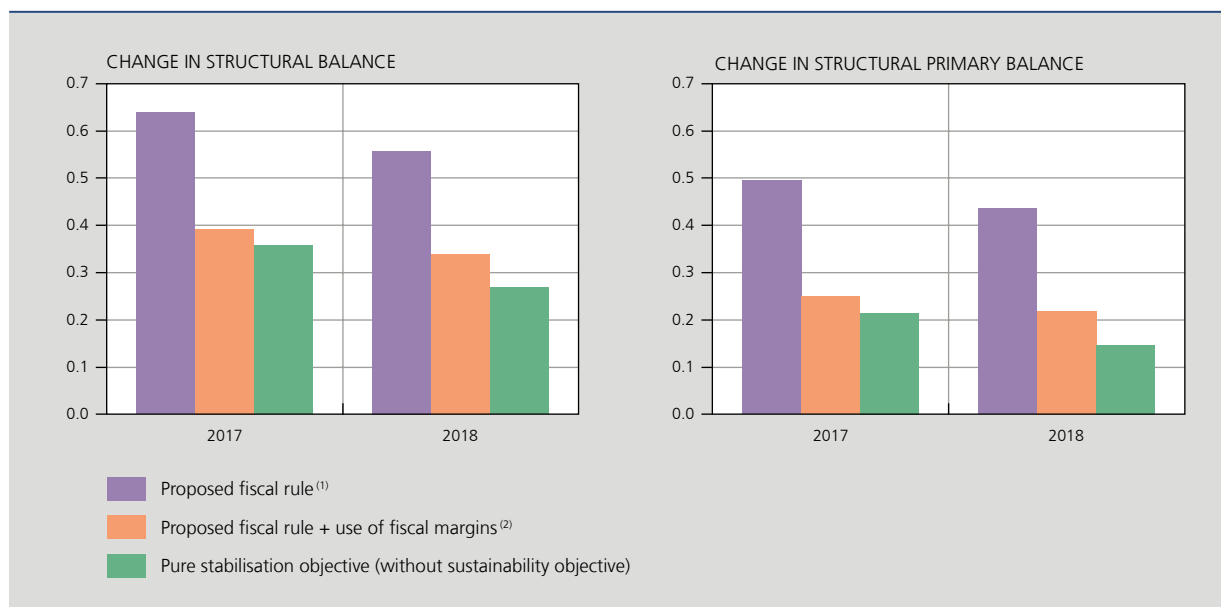
4.3.2 Optimum fiscal policy for the euro area in current conditions

The optimum fiscal policy for the euro area as a whole does not necessarily equal the sum of optimum fiscal policies for the individual countries, for a number of reasons. For one thing, only cyclical considerations come into play at the euro area level, not the sustainability of public finances, as the euro area itself does not have any public debt. Besides, the fiscal policy impact differs: fiscal multipliers, which reflect the impact of a budgetary stimulus on economic activity, are typically higher for the euro area as a whole than for individual countries, as a budgetary stimulus in the relatively more open individual economies in part "leaches away" in the shape of spillovers. This essentially means that, at the level of the euro area, achieving the stabilisation objective requires a relatively smaller effort than the sum of the individual countries' required efforts – from a stabilisation perspective, that is.

Having weighed up all these considerations, we propose calculating the optimum fiscal policy for the euro area as a whole by three pathways:

1. A GDP-weighted sum of the optimum change in the structural balance of the individual euro area countries, based on the proposed fiscal rule factoring in both stabilisation and sustainability objectives. The outcome reflects the overall state of play at euro area level if all individual countries pursued their optimum fiscal policies. For the euro area as a whole, this fiscal rule notes a structural balance improvement of 0.5-0.6 % of GDP.
2. A variation of the previous sum total, in which individual countries enjoying fiscal margins – under the proposed rule and in terms of their sustainability objective – (partially) avail themselves of these margins, implying a symmetrical application of the individual countries' sustainability objective. If countries without sustainability problems, such as Germany and the Netherlands, actually used their fiscal margins, the sum for the euro area as a whole would be lower by around 0.2 percentage points of GDP.

CHART 10 OPTIMUM FISCAL POLICY FOR THE EURO AREA
(in % of GDP)



Sources: EC, NBB.

(1) Calculated as the GDP-weighted average of the euro area countries' objectives, taking into account stabilisation and sustainability objectives.

(2) As in 1 but with countries that enjoy fiscal margins – i.e. countries without sustainability issues – putting their margins (partly) towards expansionary fiscal policies (by applying symmetrically the proposed fiscal rule on sustainability).

3. A third pathway is calculated as the GDP-weighted sum of the optimum change in the euro area countries' structural balance, taking into account the stabilisation objective only (and ignoring the sustainability objective). This throws up a slightly restrictive fiscal policy for the euro area as a whole, as explained by an improving business cycle. The recommended improvement in the structural balance is slightly lower than in the second pathway.

All three sets of calculations arrive at an optimum fiscal policy which is restrictive for the euro area as a whole in both 2017 and 2018, but differ in the extent to which the structural balance should improve. This illustrates our earlier assertion of a difference between an optimum fiscal policy for the euro area as a whole (pathway 3 – pure stabilisation objective) and the sum of the optimum fiscal policies for the individual countries (pathway 1 – proposed fiscal rule). The Five Presidents' Report envisaged a European stabilisation mechanism to help bolster this central level to bridge these differences. This suggestion is discussed in section 6 of this article.

Finally, it is worth pointing out that our findings for the optimum fiscal policy in the euro area as a whole in 2017 and 2018 – which should be restrictive, on our

calculations – differ from policies as currently in place, which are still slightly expansionary.

5. Germany: the engine powering the euro area?

Section 4 has shown that, if Germany used its budgetary margin, fiscal policy would be less restrictive in the euro area as a whole. There have been frequent calls for a more stimulating fiscal policy in Germany. In this context, over the past few years, Germany's current account surplus has claimed centre stage in the debate over euro area economic policies and rebalancing. It was assumed that, by winding down its surplus by investing more, Germany would support activity in the other euro area countries, particularly those facing a demand shortfall – countries that had yet to close the output gap – that did not have any scope for more supportive fiscal policies.

Under the EU's macroeconomic imbalance procedure (MIP), Germany has been considered a Member State displaying macroeconomic imbalances since 2014, in view of its significant and persistent current account surplus. In its July 2017 country-specific recommendations, the EU Council stated that Germany's persistently high current account surplus is

relevant beyond its own borders and that addressing the issue may influence the rebalancing perspectives of the rest of the euro area and the European Union because more dynamic domestic demand in Germany may help ease the deleveraging needs in heavily-indebted Member States.

5.1 Germany's high and persistent current account surplus reflects German economy's savings surplus

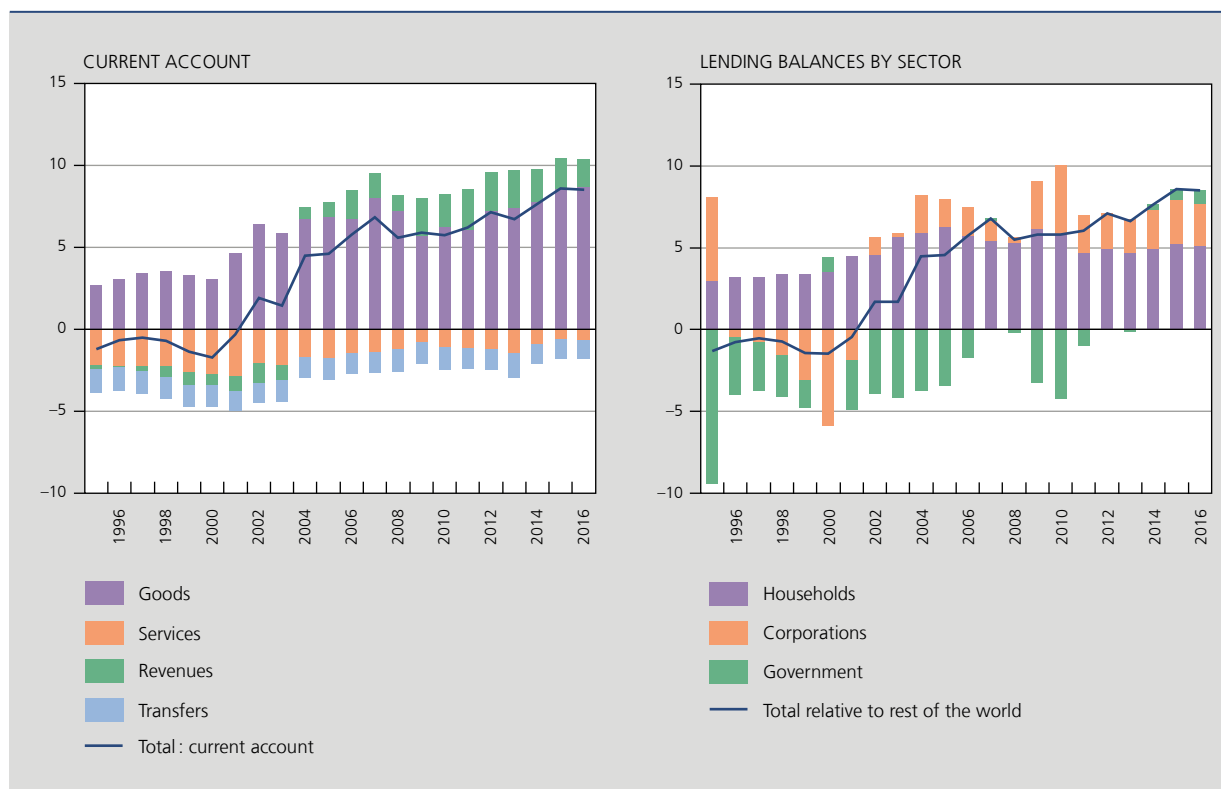
There is no doubt: Germany has a very high current account surplus. In 2016, the surplus nudged 8.5% of GDP, well in excess of the MIP-defined critical threshold of 6% of GDP and the highest level currently recorded in the major advanced economies. Over the past few years, this increase has mostly been fed by a growing trade surplus (goods) – which stood at 8.7% of GDP in 2016 – mostly with countries outside the euro area. There has been a shift in the geographic breakdown of Germany's trade surplus from euro area countries to countries outside the euro area. Germany likewise booked a revenue surplus, and IMF (2017d) calculations put the implicit return on

Germany's foreign assets at about 0.5 of a percentage point ahead of that on its foreign liabilities.

In addition to its competitive export-oriented manufacturing industry, Germany's external surplus also reflects the economy's significant domestic savings surplus. In the past couple of years, households and firms have been recording a net lending surplus, while the government's borrowing requirement was cleared in the aftermath of the financial crisis.

Households' financing surplus is the biggest component in Germany's savings surplus. It has shrunk slightly since 2010, as private consumption and spending on residential buildings has picked up. German households' savings ratio is high (one of the highest among OECD countries) and reflects demographic factors. Concerns over the population's ageing, which is happening more rapidly in Germany than in most other major economies, persuaded German households to save to keep their standard of living in retirement. The uptick in the savings ratio after the turn of the century coincided with a time in which major reforms of the country's public pension system were decided and in which average pension replacement rates fell. Moreover, additional private pension

CHART 11 CURRENT ACCOUNT AND LENDING BALANCES IN GERMANY
(in % of GDP)



Source: EC.

schemes had become more attractive for tax purposes with the so-called Riester scheme starting up in 2002.

Furthermore, non-financial corporations have been recording a steep upturn in their funding surplus after 2000, which may well be down to a confluence of country-specific factors. Wage restraint and labour market reforms (Hartz) tempered wage bills, and Germany's corporations would not appear to be committing all of these extra funds to raising their domestic capital stock but to have also put some of that money towards reducing their reliance on external funding. As a result, German corporations, which had already boasted low debt ratios compared with the rest of the euro area, have reduced their debt further still.

Germany's current account surplus in general and the savings surplus of its non-financial corporations in particular are also linked to direct foreign investment by German corporations in the shape of offshoring (parts of) their production to Eastern Europe and other emerging countries. Adding to Germany's competitiveness, this move has productivity-enhancing effects, especially by substituting domestic manufactured goods with cheaper intermediate imports, while the threat of relocation abroad may well have reined in wage trends in export-oriented manufacturing.

Germany's integration in global value chains is increasingly considered a fundamental feature of the German economy, and the country's stock of gross foreign direct investment (FDI) has advanced fairly rapidly. Within the euro area, a large proportion of its FDI has ended up in Luxembourg and increasingly also in the Netherlands, as well as in Belgium, France, Austria, Italy and Spain, while German FDI was limited in Greece and Portugal. Outside the euro area, the United Kingdom, Switzerland and Eastern European nations such as Poland, the Czech Republic and Hungary are important host countries. Expressed as a percentage of the host countries' GDP, Germany's FDI presence is strongest in most of its neighbouring countries in the euro area (Luxembourg, the Netherlands, Austria and Belgium) and in Eastern Europe (Hungary, Czech Republic, Slovakia and Poland). In relation to the size of these economies, its presence is less important in France, Italy and the euro area countries hardest hit by the crisis (Spain, Portugal, Greece). The country's strong representation in its Eastern European neighbours reflects its expansion into the global value chains in those countries.

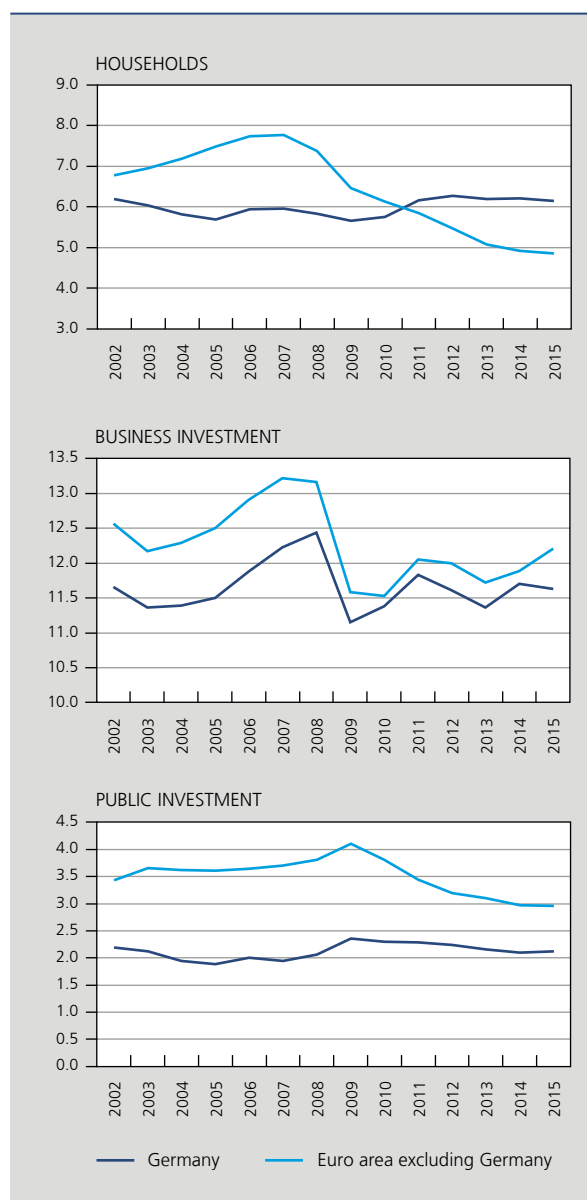
Research has shown that FDI typically complements domestic investment: FDI is reported to have positive effects on domestic investment activity. However, in the case of Germany findings are mixed and there is some evidence that German FDI serves as a substitute for domestic investment in the long term (Herzer D. and M. Schrooten,

2007). The proximity of lower-wage countries in Central and Eastern Europe is reported to have played an important role in this.

5.2 Is investment too low in Germany?

Aside from the export-oriented manufacturing industry, a reduced public sector borrowing requirement, high household savings ratios and corporate Germany's competitiveness, the country's current account surplus – reflected in its economy's savings surplus – is often also

CHART 12 INVESTMENT BY SECTOR IN GERMANY
(in % of GDP)



Source: EC.

ascribed to (domestic) investment spending, which is considered to be merely moderate.

When we break down this investment spending by sector (households, corporations and government), we find that German household spending on residential property as a percentage of GDP has been higher on average than in the other euro area countries in the past few years. Granted, the German construction industry languished in the doldrums for years (until about 2009), having overheated after German unification, but since then investment in residential buildings has really taken off. Some sources (Dahl J. and M. Góralczyk, 2017) claim there is still a shortage of housing and housebuilding is expected to stay robust.

Germany's business investment ratio, by contrast, still lags a little behind the rest of the euro area. That said, it is worth remembering that – as noted above – FDI by German corporations may to some extent prove a substitute for domestic investment in the long term. German non-financial corporations using a proportion of their resources to strengthen their positions in global value chains could consequently partly explain their lacklustre domestic investment activity shown up by certain measures.

Finally, Germany's public investment ratio turns out to fall short of government investment in other euro area countries. Coupled with the finding that post-crisis investment picked up rather slowly in the German sector for other buildings and structures (including infrastructure), this tallies with the conclusions of the in-depth review (IDR) by the European Commission in its 2017 MIP that investment in transport, energy and telecoms infrastructure has run into delays and that recent efforts to facilitate and encourage public investment have so far had limited effects. In addition, the perceived quality of German railways, waterways and aviation infrastructure would also seem to have suffered.

Some sources suggest that Germany's subdued public investment is due not so much to a lack of political will or funding, but that other detracting factors come into play, such as capacity shortages and the complexity of procedures, rules governing major infrastructure works and financial relations in the public sector⁽¹⁾. Country-specific

conditions also hamper international comparisons. German authorities have argued that German public investment is underestimated, as the statistical perimeter for Germany's public sector is different from that in other countries. Factoring in investment projects currently funded by the government as well as public procurement and measures taken to address capacity issues, public investment may be expected to rise in the years ahead.

All told, a range of fundamental factors may have conspired to create Germany's considerable balance of payments surplus, but international institutions such as the IMF and the European Commission reckon that these factors are not enough to fully explain the current account surplus – a not insignificant proportion remains unexplained. This unexplained component is likely due to other country-specific factors, such as Germany's integration in global value chains, which encourages the competitiveness of the German economy⁽²⁾, but is hard to capture in the usual economic models. Research suggests that Germany using its available fiscal policy margin would only have a modest impact in getting its current account surplus down⁽³⁾.

5.3 Who benefits from budgetary stimulus in Germany?

In the debate about a possible role for greater German investment dynamics in economically reviving and rebalancing the euro area, the question arises as to what the extent and geographical breakdown would be of such a policy's impact on the other euro area countries.

Recent years have seen a growing interest in the spillover effects of budgetary policies, after the crisis, its subsequent recovery programmes and budgetary consolidation had demonstrated their importance. However, the outcomes of economic research into this phenomenon vary greatly⁽⁴⁾, depending on the type of transmission mechanism studied (trade, financial markets, confidence effects), the characteristics of the countries facing budgetary shocks, the monetary policy response (and its effects on the exchange rate), the fiscal policy breakdown (higher multiplier deriving from public investment than from tax cuts), possible changes in multipliers across the cycle (higher for strongly negative output gap), separate or coordinated shock, how the shock is funded, budgetary stimulus coupled with austerity in the medium term, fixed or floating exchange rates – the list goes on.

For the euro area, too, research has produced a variety of outcomes. The importance of the monetary policy response is often highlighted: the effects recorded under unchanged monetary policy that has reached the zero lower bound (ZLB) for key policy rates drop off sharply (or

(1) Council of the European Union (2017), "Council Recommendation of 11 July 2017 on the 2017 National Reform Programme of Germany and delivering a Council opinion on the 2017 Stability Programme of Germany" (2017/C 261/05), *Official Journal of the European Union*, C261/18, 9/8/2017, consideration 8; IMF (2017d), "Germany 2017 Article IV consultation – Staff report", *IMF Country Report 17/192*, July 2017; Deutsche Bank (2017), *Focus Germany*, 6 April.

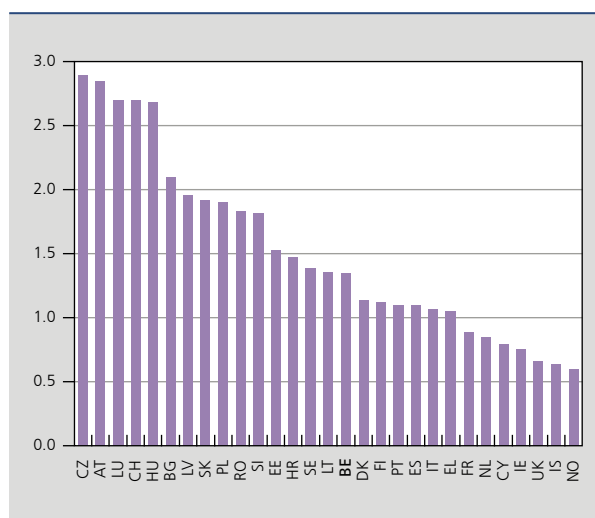
(2) ECB (2017), "The impact of global value chain participation on current account imbalances," *Economic Bulletin Issue 2*, p.68 and p.81.

(3) See IMF (2017d), "Germany 2017 Article IV consultation – Staff report", *IMF Country Report 17/192*, July, Box 1.; Kollmann R., M. Ratto, W. Roeger, J. in 't Veld and L. Vogel. (2014), "What drives the German current account? And how does it affect other EU member states?", *European Economy, Economic Papers 516*, April, p. 25.

(4) For a literature review, see Attinasi M-G., M. Lalik and I.Vetlov (2017), *Fiscal spillovers in the euro area, a model-based analysis*, ECB Working Paper Series 2040, March.

CHART 13 VALUE ADDED CONTENT OF GERMANY'S GROSS FIXED CAPITAL FORMATION⁽¹⁾ ORIGINATING FROM EUROPEAN TRADING PARTNERS

(by country of origin, all sectors, in % of total value added of country of origin, averages for 2007-2011)



Source: OECD.

(1) No distinction in gross fixed capital formation by government and private sector.

even turn negative) if monetary policy responds to higher growth and inflation.

A number of studies have pointed up the unequal distribution of spillover effects across the different euro area countries, with the differences typically explained by the intensity of trade links. Researchers often conclude that the bulk of the effect of additional public investment in Germany may be expected to be felt in its neighbouring countries – and particularly the small and medium-sized ones – while its impact should be muted on countries further afield and not directly on Germany's borders⁽¹⁾.

By extension, important information can be gleaned from an overview of added value derived from trading partners and incorporated in German investment, shedding light on the potential geographical distribution of direct trading effects of an expansion in investment spending in Germany. Data are available in the OECD's trade in value-added indicators. The value added content generated by the respective trading partners is expressed in proportion to their total value added.

As the chart reveals, the direct trading effects of investment in Germany on its European trading partners' economic activity would indeed be highest for a number of small to medium-sized countries in the proximity of Germany, both inside and outside the euro area, specifically the Czech Republic, Austria, Luxembourg, Switzerland and Hungary. Broadly speaking, value added

creation in German investment would appear relatively important to those countries with which Germany has forged global value chains. The impact looks smaller on euro area countries whose economic activity might benefit most from additional support.

All-in all, a German budgetary expansion would not currently appear appropriate in terms of the business cycle. In fact, an expansionary fiscal policy would contribute relatively little to a reduction in the country's current account surplus. Even so, focused public investment in infrastructure might still be favourable for potential growth in Germany.

6. Does the European policy framework require adjusting?

6.1 A more active role for fiscal policy in the policy mix

The foundations of the European budgetary framework were laid with the Maastricht Treaty and the Stability and Growth Pact (SGP), which implements the requirements of the Treaty regarding budgetary surveillance. The budgetary framework supports and coordinates Member States' fiscal policies. As noted in section 1 of this article, the framework chiefly focuses on the sustainability of public finances and assigns only a limited role to fiscal policy in stabilising the business cycle through the operation of automatic stabilisers. The framework breaks down into a preventive arm, which aims to prevent unsustainable budgetary situations, and a corrective arm, which imposes corrective measures for Member States struggling with major problems in their public finances⁽²⁾.

The current set-up begs the question of how fiscal policy could play a more active role in the policy mix, in particular at times of deep recession and monetary policy limitations. A number of adjustments have already been made, while others have been proposed.

A first such adjustment to have euro area countries' fiscal policies take greater account of cyclical factors came at the beginning of 2015, when a new matrix was launched to determine required structural balance improvements in the SGP's preventive arm. When identifying improvement

(1) See Deutsche Bundesbank (2016), The international spillover effects of an expansion of public investment in Germany, *Monthly Report*, August; Cwik, T. and V. Wieland (2010), *Keynesian government spending multipliers and spillovers in the euro area*, ECB Working Paper 1267, November; Beetsma R., M. Giuliodori and F. Klaassen (2005), *Trade spillovers of fiscal policy in the European Union: a panel analysis*, DNB Working Paper 52, August.

(2) For an extensive overview of the European budgetary framework, see Melyn W., L. Van Meensel and S. Van Parys (2015).

requirements, the new matrix now does (more) factor in economic conditions, with a greater effort imposed in favourable business cycles than when economic times are bad. Another adjustment already in place was the creation of the European Fiscal Board and its role. Set up in October 2015, the Board is to ensure improved compliance with fiscal rules and a more robust coordination of national fiscal policies. In this latter capacity, the European Fiscal Board has been tasked with assessing the appropriate fiscal policy course, at both national level and in the euro area. In October 2016, the European Commission appointed its chair and four members, and the Council released its first report on 20 June 2017, which chiefly consisted of an assessment of appropriate future fiscal policy for the euro area.

One further adjustment of SGP rules might be to change the approach to public investment and encourage a more favourable treatment of such expenditure. The current framework already has some clauses stimulating public investment, but any SGP reforms should be the right time to urge a change to considering depreciation on investment instead of gross investment expenditure when determining the budgetary balance in the preventive arm. Such a shift would imply that the government's overall balance is adjusted for net investment, and in this way, an investment boost would not be hindered⁽¹⁾. In the current environment, this would appear an obvious way to stimulate public investment – low in quite a few countries. The basic rules of the European budgetary framework, such as the deficit limit of 3% of GDP and the debt rule included in the corrective arm of the SGP, would not be changed, however. In this way, the budgetary responsibility and the sustainability of public finances in the long term would still be guaranteed. It would also seem advisable to seriously consider the creation of a European stabilisation mechanism, in keeping with the proposals in the Five Presidents' Report.

6.2 Is there a need for a European stabilisation mechanism?

In view of past shocks, it appears essential that the euro area would now have access to adequately robust instruments to absorb such shocks and enhance its resilience without endangering the sustainability of public finances.

(1) Melyn W., R. Schoonackers, P. Stinglhamber and L. Van Meensel (2016).

(2) More generally, such mechanism of solidarity should necessarily go hand in hand with the reduction of risks, more particularly an established fiscal discipline and a convergence of national policies towards the best practices. Moreover, there are other channels, but these are either not yet fully developed – e.g. the Capital Markets Union – or likely to be largely affected by crises, as evidenced by bank lending drying up in some countries and the fragmentation that has hindered monetary policy transmission in the past.

(3) See EC (2017a), amongst others.

Even already resilient economies boasting sufficiently flexible labour markets and healthy public finances have no guarantees that all risks could be eliminated and that all shocks could be smoothly reduced. Some economic shocks may simply cut too deep to be handled solely on the interface of national automatic stabilisers and a centralised monetary policy.

A European stabilisation mechanism⁽²⁾ might be considered to complement the stabilising role of national budgets and monetary policy, especially insofar as the Stability and Growth Pact is focused on the objective of sustainability, as markets may sometimes behave irrationally and given the dilemma of implementing at a national level an adequate fiscal policy set up for the broader euro area. Such a mechanism might be defined as a policy aiming at smoothing national economic cycles by means of "automatic" and "certain" – that is, known beforehand – transfers between Member States, which would also improve the countercyclical fiscal stance of the euro area.

Quite a bit of thinking has already gone into the creation of such a mechanism, envisaging common insurance mechanisms, or even resources funded by Member States' contributions. Such funds would factor in where countries are in their economic cycles and would be set up in such a way that transfers are automatically activated at times of recession. A vital precondition for any such mechanism would be that it does not fuel moral hazard or create permanent transfers, does not throw up any obstacles to necessary adjustments and does not prevent structural measures meant to address the deeper causes of the macroeconomic imbalances that still exist in some countries.

Overall, three options come on the fore⁽³⁾:

- i) A *European Investment Protection Scheme* could kick in during an economic downturn – as evidenced by a negative output gap – by providing support for specific investment priorities already planned up front, such as infrastructure development, investment in education and skills, or in specific types of public investment (frequently the first item in national budgets to be cut).
- ii) A *European Unemployment Reinsurance Scheme*, which, unlike funds using the output gap as reference variable, would be based on unemployment levels (immediately observable). Given widely different national labour market institutions and initial unemployment levels, these mechanisms would have to complement national unemployment benefits.

iii) A “rainy day fund” could collect regular contributions, with disbursements made on a discretionary basis in the event of shocks. Such payments would nevertheless stay limited to the accumulated contributions. The fund’s capacity might therefore be too small in case of a major shock.

Conclusions

A key lesson from the financial and economic crisis is that the various policy instruments – and particularly monetary and fiscal policies – should be complementary to achieve the desired results. An active fiscal policy, for one, might prove useful in the event of a very deep recession or when monetary policy runs into limitations.

These observations have led us to investigate what would be an optimum fiscal policy. Clearly, fiscal policies pursued in some euro area countries and in the euro area as a whole in the 2012-13 crisis were too restrictive.

In the period after that and to date, the euro area as a whole has been on a more neutral policy course, which has proven appropriate. It would appear, though, that most euro area countries should pursue rather more restrictive fiscal policies in 2018, as economic activity gains momentum, output gaps are closing and the sustainability of public finances needs to be guaranteed.

Germany enjoys some fiscal margin, but a budgetary expansion would not currently appear desirable for business cycle reasons and its impact on euro area countries where economic activity would benefit the most from additional support would be small anyway. By contrast, focused public investment in infrastructure, would be a sensible way to bolster growth potential.

Lastly, a European stabilisation mechanism should be considered under certain circumstances to make sure that optimum fiscal policy in the euro area as a whole, where only the stabilisation function comes into play, matches optimum policies in the individual countries.

Bibliography

Ademmer E., C. Boeing-Reicher, J. Boysen-Hogrefe, K.-J. Gern, U. Stolzenburg (2016), *Euro-area fiscal stance: definition, implementation and democratic legitimacy*, provided at the request of the Economic and Monetary Affairs Committee of the European Parliament, July.

Akerlof G. and R. Shiller (2009), *Animal Spirits. How Human Psychology Drives the Economy, and Why It Matters For Global Capitalism*, Princeton University Press, Princeton.

Attinasi M-G., M. Lalik and I. Vetlov (2017), *Fiscal spillovers in the euro area, a model-based analysis*, ECB, Working Paper Series 2040, March.

Aucremanne L. and S. Ide (2010), "Lessons from the crisis: monetary policy and financial stability", NBB, *Economic Review*, September, 7-20.

Auerbach A. and M. Obstfeld (2003), *The case for open-market purchases in a liquidity trap*, NBER, Working Paper 9814, July.

Auerbach A., Y. Gorodnichenko (2012), "Fiscal multipliers in recession and expansion", in Alesina A. and F. Giavazzi (eds.), *Fiscal policy after the financial crisis*, Chicago, University of Chicago Press, 63-98.

Banco de España (2017), "Spillover effects of national fiscal policy in the euro area", Box 4.1 in Annual Report 2016.

Bankowski K. and M. Ferdinandusse (2017), *Euro area fiscal stance*, ECB, Occasional Paper 182, January.

Beetsma R., M. Giuliodori and F. Klaassen (2005), *Trade spillovers of fiscal policy in the European Union: a panel analysis*, DNB Working Paper 52, August.

Belke A. and T. Osowski (2016), *Measuring fiscal spillovers in EMU and beyond: A Global VAR approach*, CEPS Working Document 428, December.

Bénassy-Quéré A. and Cimadomo J. (2006), *Changing patterns of domestic and cross-border fiscal policy multipliers in Europe and the US*, CEPII Working Papers, 2006-24, December.

Bénassy-Quéré A. (2016), *Euro-area fiscal stance: definition, implementation and democratic legitimacy*, provided at the request of the Economic and Monetary Affairs Committee of the European Parliament, July.

Bénassy-Quéré A., X. Ragot and G. Wolff (2016), *Which fiscal union for the euro area?*, Bruegel Policy Contribution 2016/05, February.

Bernanke, B., M. Gertler and S. Gilchrist (1996), "The Financial Accelerator and the Flight to Quality", *Review of Economics and Statistics*, Symposium on Developments in Business Cycles Research, 78:1, February, 1-15.

Bernanke, B. (2004), *The Great Moderation, Remarks at the meetings of the Eastern Economic Association*, Washington, DC, 20 February.

Blanchard O. and J. Gali (2007), "Real Rigidities and the New Keynesian Model", *Journal of Money, Credit and Banking*, Proceedings of the Conference on Quantitative Evidence on Price Determination, February, 35-66.

Blanchard O., G. Dell'Ariccia and P. Mauro (2010), "Rethinking macroeconomic policy", *Journal of Money, Credit and Banking*, 42, 199-215.

Blanchard O., C.J. Erceg and J. Lindé (2015), *Jump starting the euro area recovery: would a rise in core fiscal spending help the periphery?*, NBER, Working Paper 21426, July.

- BNP Paribas (2017), "Allemagne, les infrastructures menacées", *Eco Week*, 24 February.
- Boeckx J., N. Cordemans and M. Dossche (2013), "Causes and implications of the low level of the risk-free interest rate", NBB, *Economic Review*, September, 63-88.
- Boeckx J. and M. Deroose (2016), Monetary and fiscal policy in the euro area: independent but connected, NBB, *Economic Review*, September, 7-26.
- Boeckx, J. and N. Cordemans (2017), "Monetary Policy in the wake of the Great Recession", *Reflets et perspectives de la vie économique*, 56, De Boeck Supérieur.
- Botev J., J. Fournier and A. Mourougane (2016), *A Re-assessment of Fiscal Space in OECD Countries*, OECD, Economics Department Working Paper 1352, November.
- Buti, M. (2016), "What future for rules-based fiscal policy?", in *Progress and Confusion – The State of Macroeconomic Policy*, ed. Blanchard O., R. Raghuram, K. Rogoff, and L.H. Summers, MIT Press, Cambridge, Massachusetts, 183-195.
- Capital Economics (2017), "German investment set for strong growth", *European Economics Update*, 20 September.
- Council of the European Union (2017), "Council Recommendation of 11 July 2017 on the 2017 National Reform Programme of Germany and delivering a Council Opinion on the 2017 Stability Programme of Germany", *Official Journal of the European Union*, 9 August.
- Cordemans N., M. Deroose, M. Kasongo Kashama and A. Stevens (2016), "The ABC of quantitative easing or the basics of central bank asset purchases", NBB, *Economic Review*, June, 29-41.
- Cwik T. and V. Wieland (2010), *Keynesian government spending multipliers and spillovers in the Euro area*, ECB, Working Paper Series 1267, November.
- Dahl J. and M. Góralczyk (2017), "Recent supply and demand developments in the German housing market", *European Economy Economic Brief* 025, May.
- De Jong J., M. Ferdinandusse, J. Funda, I. Vetlov (2017), *The effect of public investment in Europe: a model-based assessment*, ECB, Working Paper Series 2021, February.
- De Backer B., J. Wauters (2017), "The cyclical and structural determinants of the low interest rate environment", NBB, *Economic Review*, September.
- De Grauwe P. (2013), *Design Failures in the Eurozone: Can they be fixed?*, LEQS Paper 57, February.
- Deutsche Bank (2017), *Focus Germany*, 6 April.
- Deutsche Bundesbank (2011), "Germany's external position against the background of increasing economic policy surveillance", *Monthly Report*, October.
- Deutsche Bundesbank (2016), "The international spillover effects of an expansion of public investment in Germany", *Monthly Report*, August.
- Draghi M. (2014), *Unemployment in the Euro Area*, Address at the Federal Reserve Bank of Kansas City Jackson Hole Symposium, 22 August.
- Dullien, S. (2012), *A European unemployment insurance as a stabilization device – Selected issues*, paper prepared for EU-level economic stabilisers seminar, European Commission, Directorate-General Employment, Social Affairs & Inclusion.

- EC (2014a), "Cross-border spillovers in the euro area", *Quarterly Report on the Euro Area*, 13(4), 7-22.
- EC (2014b), *Macroeconomic imbalances Germany 2014*, European Economy – Occasional Papers 174, March.
- EC (2015), *Report on Public Finances in EMU 2015*, Institutional Paper 14, December.
- EC (2016a), *The 2016 Stability and Convergence Programmes, An Overview and Implications for the Euro Area Fiscal Stance*, Institutional Paper 34, September.
- EC (2016b), *Towards a positive fiscal stance for the euro area*, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, 16 November.
- EC (2016c), "The policy mix, when monetary policy is constrained at the zero lower bound", *Quarterly Report on the Euro Area*, 15(3), 19-28.
- EC (2016d), *Report on Public Finances in EMU 2016*, Institutional Paper 45, December.
- EC (2016e), *Specifications on the implementation of the Stability and Growth Pact and guidelines on the format and content of Stability and Convergence Programmes*, 5 July.
- EC (2017a), *Reflection paper on the deepening of the Economic and Monetary Union*, COM(2017) 291, 31 May.
- EC (2017b), *Vade Mecum on the Stability and Growth Pact*, 2017 Edition, Institutional Paper 052, March.
- EC (2017c), *The euro area fiscal stance and the policy mix: challenges and trade-offs*, presentation at EIU, 2 March.
- EC (2017d), *An Overview of the 2017 Stability and Convergence Programmes and an Assessment of the Euro Area Fiscal Stance for 2018*, Institutional Paper 059, July.
- EC (2017e), *Country Report Germany 2017 including an In-Depth Review on the prevention and correction of macro-economic imbalances*, staff working document, 22 February.
- ECB (2012), "The role of fiscal multipliers in the current consolidation debate", *Monthly Bulletin*, December, 82-85.
- ECB (2016a), "Public investment in Europe", *Economic Bulletin*, Issue 2, 75-88.
- ECB (2016b), "The euro area fiscal stance", *Economic Bulletin*, Issue 4, 68-87.
- ECB (2017), "The impact of global value chain participation on current account balances", *Economic Bulletin*, Issue 2, 68-82.
- Eggertsson G. and M. Woodford. (2004), *Optimal Monetary and Fiscal Policy in a Liquidity Trap*, NBER, Working Paper 10840.
- EU (2017), « Council Recommendation of 21 March 2017 on the economic policy of the euro area », Official Journal of the European Union, 24 March.
- European Fiscal Board (2017), *Assessment of the prospective fiscal stance appropriate for the euro area*, 20 June.
- European Parliament (2017), *The euro area fiscal stance*, briefing, 23 January.
- European Council (2017), *Council recommendation on the economic policy of the euro area*, 21 March.

- Eyraud L., V. Gaspar and T. Poghosyan (2017), *Fiscal Politics in the Euro Area*, IMF Working Paper 17/18, January.
- Fatas A. and L.H. Summers (2016), *The permanent effects of fiscal consolidations*, NBER, Working Paper 22374.
- Feldstein M. (2016), "The future of fiscal policy, in progress and confusion", in *The State of Macroeconomic Policy*, ed. O. Blanchard, Rajan R., Rogoff K., and Summers L.H., MIT Press, Cambridge, Massachusetts, pp. 177-181.
- Fisher, I. (1933), "The Debt-Deflation Theory of Great Depressions", *Econometrica*, 4, 337-357.
- Giavazzi F. (2016), *Euro-area fiscal stance: definition, implementation and democratic legitimacy*, Provided at the request of the Economic and Monetary Affairs Committee of the European Parliament, September.
- Hebous S. and T. Zimmerman (2013), "Estimating the effects of coordinated fiscal actions in the euro area", *European Economic Review*, 58, 110-121.
- Herzer D. and M. Schrooten (2007), "Outward FDI and domestic investment in two industrialized countries", *Economics Letters*, 99, 139-143.
- IMF (2013), "Multi-country report, German-Central European supply chain-cluster report", *IMF Country Report 13/263*, August.
- IMF (2015), *Monetary Policy and financial stability* Financial Stability, Staff Policy Report, August.
- IMF (2016), *Euro Area Policies, Staff Report for the 2016 Article IV Consultation with Member Countries*, July.
- IMF (2017a), *Euro Area Policies, Staff Report for the 2017 Article IV Consultation with Member Countries*, July.
- IMF (2017b), *The Euro Zone: What's Next*, speech by Poul Thomsen, Director of the European Department, 28 September.
- IMF (2017c), *2017 External Sector Report*, Policy Paper, July.
- IMF (2017d), "Germany 2017 Article IV Consultation—Staff Report", *IMF Country Report 17/192*, July.
- IMF (2017e), "Germany, Selected issues", *IMF Country Report 17/193*, July.
- IMF (2017f), *World Economic Outlook*, October.
- In 't Veld J. (2013), *Fiscal consolidations and spillovers in the Euro area periphery and core*, *European Economy – Economic Papers* 506, October.
- In 't Veld J. (2016), "Public Investment Stimulus in Surplus Countries and their Euro Area Spillovers", *European Commission Economic Brief* 016, August.
- Juncker, J.-C. (2017), *Speech on the state of the Union 2017*, given to the European Parliament, Strasbourg, 13 September.
- Keynes J.-M. (1936), *The General Theory of Employment, Interest and Money*, Macmillan, London.
- Kolerus C., I Koske and F. Hüfner (2012), *Selected aspects of household savings in Germany, evidence from micro-data*, OECD Economics Department Working Papers 999, November.
- Kollmann R., M. Ratto, W. Roeger, J. In 't Veld and L. Vogel (2014), *What drives the German current account? And how does it affect other EU member states?*, *European Economy – Economic Papers* 516, April.

Melyn W., L. Van Meensel and S. Van Parys (2015), "European governance framework for public finances: presentation and evaluation", NBB, *Economic Review*, September, 73-99.

Melyn W., R. Schoonackers, P. Stinglhamber, L. Van Meensel (2016), "Should government investment be promoted?" NBB, *Economic Review*, September, 99-113.

Melyn W., L. Van Meensel, S. Van Parys (2016), "The sustainability of public finances in the context of population ageing", NBB, *Economic Review*, December, 87-103.

Mourre G., C. Astarita, S. Prince (2014), *Adjusting the budget balance for the business cycle: the EU methodology*, European Commission, Economic Papers 536, November.

National Institute of Economic Research (NIER) (2008), *The NIER's Conceptual Framework for Fiscal Policy*, Occasional Studies 16, March.

OECD (2016), "Making public finances more growth and equity-friendly", *OECD Economic Surveys: Euro Area*, June.

OECD (2017a), *Economic Outlook*, May.

OECD (2017b), *Germany – Economic forecast summary*, June.

Orphanides, A. (2017), *The Fiscal-Monetary Policy Mix in the Euro Area: Challenges at the Zero Lower Bound*, European Commission, Discussion Paper 060, July.

Poghosyan T. (2017), *Cross-country spillovers of fiscal consolidations in the Euro area*, IMF Working Paper 17-140.

Taylor J. (1993), "Discretion Versus Policy Rules in Practice", *Carnegie-Rochester Conference Series on Public Policy*, 39, 195–214.

Turrini, A. (2008), *Fiscal policy and the cycle in the Euro Area: The role of government revenue and expenditure*, European Commission, Economic Papers 323, May.

Viñals, J. (2016), "Monetary policy in the future – Introduction to the monetary policy section", in *Progress and Confusion: The State of Macroeconomic Policy*, ed. Blanchard O., R. Rajan, K. Rogoff, and L.H. Summers, MIT Press, Cambridge, Massachusetts, 121-127.