4 FISCAL POLICY IN THE EURO AREA

Summary

The fragility of the economic recovery in the euro area and its dependency on the stimulus provided by the ECB's monetary policy measures have prompted a debate on the advisability of designing a more active euro area-wide fiscal policy. This debate takes place in a setting in which there are no signs of a sustained adjustment by inflation towards its medium-term objective, meaning that a reaction by the monetary authority to a fiscal expansion is not foreseen, and the costs of financing any budgetary stimulus with public debt are low. However, the high levels of public debt in many countries mean that the fiscal room for implementing expansionary fiscal policies is limited.

In a setting of limited fiscal space, the appropriate composition of fiscal policy measures is essential, in terms both of the instruments used and their distribution across the member countries. According to the estimates available, only a set of core euro area countries would have significant budgetary room for manoeuvre. In this respect, the evidence presented in this chapter on the relevance of these fiscal policy spillover effects suggests that increases in public investment in these countries might have a far-from-negligible effect on the economic growth of the remaining partners. For their part, the countries that should pursue consolidation efforts also have scope to design measures more conducive to growth, geared to raising the efficiency of the level of public spending and the synergies with the private sector, and to re-balancing the tax burden towards tax arrangements that distort private activity less.

From the aggregate euro area standpoint, the difficulties involved in implementing common fiscal policy actions, in a highly decentralised decision-making framework, suggest it would be advisable to design supranational instruments capable of withstanding adverse shocks. In particular, progress in creating some type of common cyclical insurance mechanism would be desirable. Ideally, this instrument would contribute to offsetting the absence of a centralised fiscal capacity, and complement the scant stabilising power of the risk-sharing public and private mechanisms currently in place. The evidence presented in this chapter suggests that a mechanism could be designed which, without committing major resources (below the current European budget), and without this entailing permanent cross-member country transfers, would enable a stabilising fiscal capacity similar to that attained with the US federal transfers system.

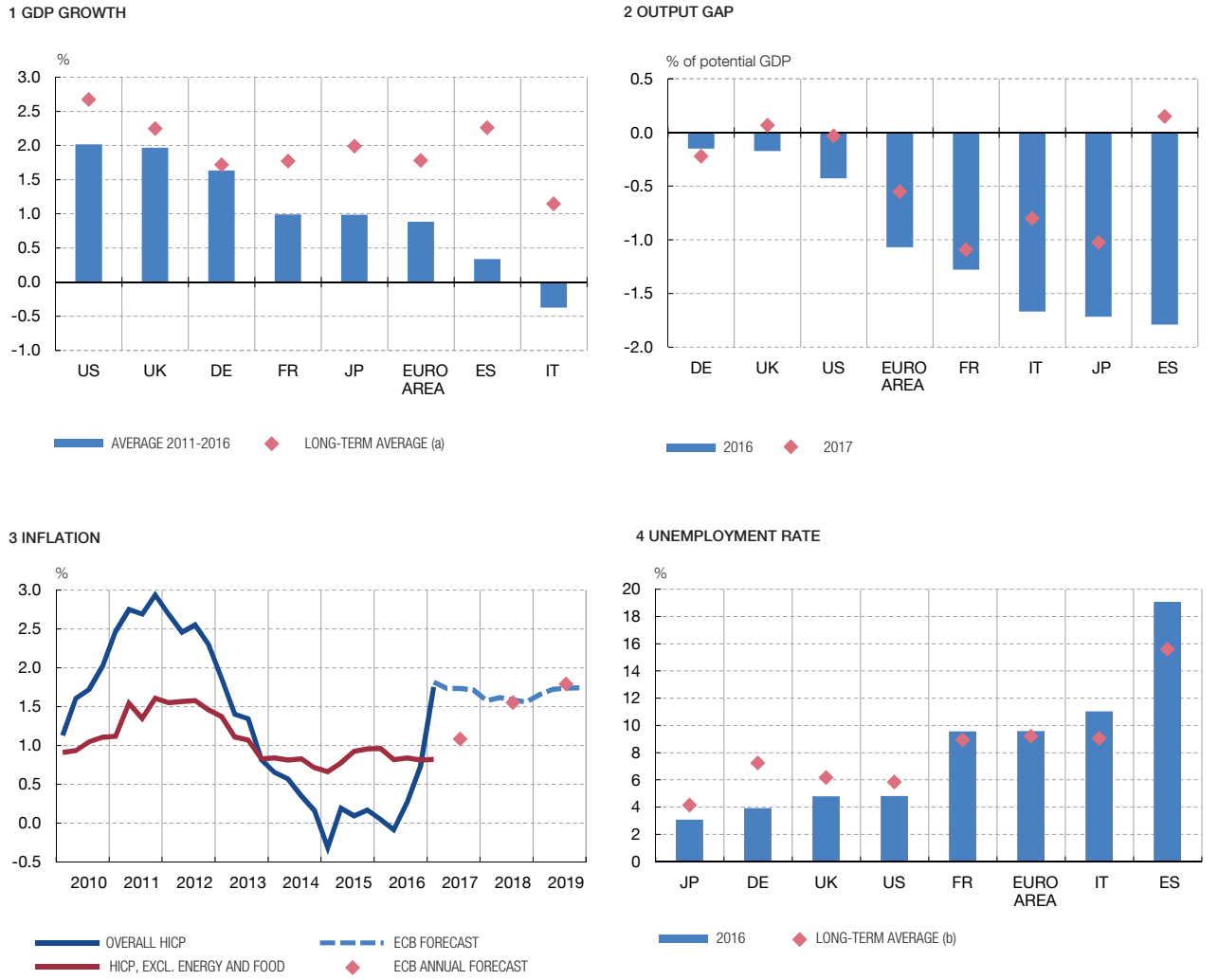
The current budgetary governance framework should encourage countries to generate room for manoeuvre during expansionary phases, so that the stabilising capacity of fiscal policy may increase in the euro area as a whole at times of crisis. In this respect, the European budgetary framework is complex and relatively opaque, which illustrates the need to simplify it. Recent proposals, which seek to give greater weight to public debt as a medium-term anchor and to the expenditure rule as an operational tool, are appropriate in this respect. In any event, reinforcing the oversight and control of fiscal rules is key to ensuring their fulfilment.

1 Introduction

The macroeconomic situation in the euro area continues to be one of a gradual and fragile recovery. Despite the recent improvements in the euro area economy (see Chapter 1 of this Report), the uncertainty surrounding US economic policies, and that arising from Brexit and from the elections in various European countries, in a setting in which high

GROWTH, UNEMPLOYMENT RATE AND INFLATION IN THE EURO AREA

CHART 4.1



SOURCES: European Commission, Eurostat, ECB and IMF.

a Average growth: 1980 to 2016.
b Average unemployment rate: 1995 to 2016.

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unemployment, low economic growth and weaknesses in certain financial institutions persist, poses significant risks (see Chart 4.1). Moreover, the expected rate of inflation in the euro area in the medium term is still some distance off the medium-term reference of 2%, despite the recent price rebound, associated with the temporary effects linked above all to energy prices.

Monetary policy measures in recent years have contributed decisively to normalising financial conditions in the euro area and, more broadly, to alleviating the macroeconomic risks. In addition to holding the deposit facility rate at slightly negative levels, the ECB increased the monetary impulse through the provision of long-term financing to the banking system and, in 2014, it took the step of introducing a large-scale asset purchase programme (APP)[1], which remains active at present. Meantime, during

1 For an analysis of the monetary policy measures adopted by the Eurosystem during the crisis and of their macroeconomic implications, see Banco de España (2016), "The effects of the ECB's monetary policies in the recent period", Chapter 3 of the *Annual Report, 2015*.

these years, the fiscal policy stance in the euro area as a whole was contractionary, given the needs of the fiscal consolidation processes in a large majority of countries, meaning that monetary policy has taken a central role in the stabilisation of the euro area economy during this period.

Against this background, there has recently been a debate on the role fiscal policy should play in strengthening the economic recovery in the euro area.[2] Arguments have been made from various quarters in favour of an expansionary fiscal policy stance in the euro area as a whole. On one hand, the financing costs of public debt are low in the current situation of low interest rates, which increases the budgetary room for manoeuvre. At the same time, the markedly expansionary monetary policy stance would be conducive to any future fiscal stimulus proving effective, in that it is less likely, in a moderate inflation scenario, that such a stimulus would be countered by a tightening of monetary policy.[3] Within a monetary union, this latter circumstance tends, in turn, to amplify the expansionary effects of fiscal policy not only in the country in which it is applied, but also in the other economies sharing the same monetary policy. These positive fiscal spillover effects into different euro area countries may pave the way for possible euro area-wide fiscal policy coordination strategies.

However, the euro area's current institutional architecture is not conducive to coordinated budgetary action by its member countries. While the single monetary policy is the ECB's responsibility, fiscal policies are within the remit of the national authorities, thereby marking a substantial difference with other major economies (such as the United States and Japan, where both policies are managed at the national level). In the euro area, the fiscal policy stance is the result of aggregating the member countries' fiscal policies which are designed, nevertheless, under the constraint of having to fulfil the EU's common budgetary rules framework, defined in the Stability and Growth Pact (SGP). In this respect, at present the budgetary space for a good number of countries is limited, given the still-high levels of public debt and the uncertainties surrounding the medium-term dynamics of this variable, together with the budgetary pressures stemming from the adverse demographic trends associated with progressive population ageing.

At the same time, the lack of centralised fiscal policy instruments restricts the possibilities of undertaking discretionary measures across the euro area as a whole. The institutional framework of fiscal policy in the euro area lacks a centralised fiscal capacity enabling an automatic response to economic shocks. Thus, joint fiscal policy responses have been based on ad hoc initiatives coordinated by the European Commission (EC). This is the case, for instance, of the November 2008 "European Economic Recovery Plan" (EERP); the European Investment Plan (the so-called "Juncker Plan"), which was approved in late 2014; and, more recently, the EC Communication on the need for a more expansionary fiscal policy stance in the euro area, formulated in November 2016.

Against this backdrop, this chapter first reviews the arguments raised recently regarding the role of fiscal policy in the euro area as a factor of support for the economic recovery in the current situation. Subsequently, from a medium-term perspective, the challenges to

2 See, for example, OECD (2016), "Using the fiscal levers to escape the low-growth trap", *Economic Outlook*, chapter 2, vol. 2016, 2, Paris.

3 On the interaction of monetary and fiscal policies, see European Central Bank (2012), "Monetary and fiscal policy interactions in a monetary union", *Monthly Bulletin,* July, and E. Gerba (2017), *Monetary-fiscal policy interactions in the euro area*, mimeo, Banco de España.

the euro area's institutional framework in relation to budgetary policy coordination are analysed. In this connection, the main alternatives available for strengthening the stabilising capacity of fiscal policy through genuinely European instruments are discussed, and potential avenues for progress in respect of fiscal rules are assessed, in particular concerning their capacity to generate ex ante budgetary space that enables euro area economies to absorb adverse idiosyncratic and aggregate macroeconomic shocks alike.

2 The role of fiscal policy in the current economic situation

2.1 FACTORS CONDITIONING THE EFFECTS OF FISCAL POLICY IN THE EURO AREA

Under normal conditions, fiscal policy can act as an appropriate macroeconomic stabilisation tool, in particular through the automatic stabilisers.[4] Fiscal policy has two mechanisms for stabilising the economy. First, a substantial portion of public revenue and expenditure acts automatically as a stabiliser over the course of the business cycle. Faced, for example, with an economic slowdown, tax revenue – which depends on macroeconomic developments – falls, while certain expenditure items – such as unemployment spending – increase, acting as a stabilising mechanism for agents' income and, therefore, for aggregate demand. The operation of this mechanism is, moreover, granular, insofar as tax and transfer systems reflect the individual heterogeneity of the households that receive them, which enables the potentially adverse distributive effects derived from economic shocks to be cushioned.[5] Further, the automatic stabilisers operate symmetrically throughout the cycle, lessening overheating in periods of expansion and supporting economic activity during slowdowns, which limits their effects on the sustainability of public finances. For these reasons, the economic literature has traditionally been in favour of this channel of fiscal policy action.

The authorities also have the capacity to take discretionary decisions to alter public revenue and expenditure, with the aim of stabilising the economy. In this case the economic literature stresses that discretionary stimuli, when implemented, should be timely, temporary and targeted, in order to minimise the problems arising from potential delays in their implementation relative to the time at which the economy undergoes an adverse macroeconomic shock, to maximise the force of their impact and to reduce their negative effects on the sustainability of public finances.[6]

Various macroeconomic factors may influence the effectiveness of discretionary fiscal policy. The empirical literature has identified various factors that affect the size of the fiscal multipliers in the short term.[7] Fiscal stimuli tend to exert a greater effect the higher the proportion of households with financial constraints and which, therefore, base their consumption decisions on current income, when the measure is temporary and its reversal is credible, in the presence of greater nominal and real rigidities, when the automatic stabilisers of the budget are smaller, and in more closed economies. Further, the macroeconomic effects of fiscal policy tend to be asymmetrical, proving more powerful in

4 See European Commission (2016), "Towards a positive euro area fiscal stance", *EPSC Strategic Notes*.

5 See A. Mackay and R. Reis (2016), "The role of automatic stabilizers in the U.S. business cycle", *Econometrica*, 84, pp. 141-194.

6 See C. Bouthevillain, J. Caruana, C. Checherita, J. Cunha, E. Gordo, S. Haroutunian, G. Langenus, A. Hubic, B. Manzke, J.J. Pérez and P. Tommasino (2009), "Pros and cons of various fiscal measures to stimulate the economy", *Economic Bulletin,* July, Banco de España.

7 The fiscal multiplier measures the pass-through of a change in a budgetary policy instrument to economic activity, normally measured by GDP, over different time horizons. See the general conceptual discussion in European Commission (2012), "Report on public finances in EMU 2012", *European Economy*, no.4. For an analysis of the different channels discussed in the paragraph see, inter alia, T. Warmedinger, C. Checherita and P. Hernández de Cos (2015), *Fiscal multipliers and beyond,* Occasional Documents, ECB, no. 162; J. Galí, D. López Salido and J. Vallés (2007), "Understanding the Effects of Government Spending on Consumption", Journal of the European Economic Association, 5, pp. 227-270; and G. Corsetti, A. Meier and G. Müller (2012), "What Determines Government Spending Multipliers?", *Economic Policy*, 27, pp. 521-565.

situations of low growth than in upturns, and at times of low fiscal stress (i.e. in situations in which public debt is dynamically sustainable), as opposed to times at which public finances are highly vulnerable.[8] In particular, a fiscal policy stimulus, if occurring in a situation marked by uncertainty over the sustainability of public finances, associated, for example, with a high level of public debt, might entail significant increases in the financing costs of sovereign debt and, potentially, the attendant costs for all agents in the economy; as a result, its expansionary impact might be more limited.

The impact on activity also depends on the fiscal policy instrument used. The multipliers associated with discretionary increases in government consumption and in public investment are usually greater than tax multipliers, given the direct effect of the former on aggregate demand in the economy. As regards the different components of expenditure, the empirical evidence shows that the increase in public investment involves a higher multiplier than that of current expenditure (see Table 4.1). Moreover, it is to be expected that the greater effects of the increase in public investment last over time, insofar as spending is concentrated on the development of infrastructures in those areas where shortcomings are identified, in light of their impact on the accumulation of productive capital and on the economy's potential growth. However, the degree of efficiency of the projects and the delays in their implementation may have a bearing on the scope and effectiveness of these types of policies.[9] On the revenue side, there is generally estimated to be a greater impact associated with reductions in income tax, owing to the effects on labour supply, than with the case for changes in indirect tax. However, the heterogeneity of the estimates available in the literature on these effects is high.

In the current circumstances of the euro area, marked by very low public debt financing costs, the budgetary margin for manoeuvre is greater.[10] In circumstances such as the present, with low interest rates and, generally, strong investment demand for government fixed-income securities, the costs of financing a budgetary stimulus with public debt are low. Moreover, monetary policy has significantly reduced the interest burden for general government sectors in the euro area, affording greater space for fiscal policy. Indeed, the most immediate impact of the expansionary monetary measures on public finances is that which arises through the reduction in the cost of financing of public debt, which, in the case of the euro area as a whole, has fallen significantly since mid-2012, when the sovereign debt crisis was at its peak (see Table 4.2). One way of quantifying this impact would involve comparing the observed path of the interest burden with that which would have risen under a hypothetical scenario in which the interest rates on debt issues had held at the levels foreseen at the time prior to the announcement by the ECB of its asset purchase programme and the budgetary position had not changed with respect to the position then projected. The results of an exercise of these characteristics show that, from 2014 to 2016, the Spanish and Italian general government sectors would have saved around 1 pp of GDP, in cumulative terms, in interest payments on debt, as a result of the implementation of non-standard

8 For an analysis of the interactions between fiscal consolidation and private deleveraging processes, see J. Andrés, Ó. Arce and C. Thomas (2016), *When Fiscal Consolidation Meets Private Deleveraging,* Working Papers, no. 1622, Banco de España.

9 See J. De Jong, M. Ferdinandusse, J. Funda and I. Vetlov (2017), *The effect of public investment in Europe: a model-based assessment,* Working Paper 2021, ECB.

10 For a recent analysis of the presence of positive synergies between countercyclical fiscal policies and non-standard monetary policy measures in a context of very low interest rates, see Ó. Arce, S. Hurtado and C. Thomas, "Policy Spillovers and Synergies in a Monetary Union", *International Journal of Central Banking*, vol. 12, no. 3, pp. 219-277.

PUBLIC SPENDING MULTIPLIERS IN THE EURO AREA (a) TABLE 4.1

1 TOTAL MULTIPIER

	Empirical literature (b)			1985-2010 (c)						1980-2015 (c)					
	1985-2010			Blanchard-Perotti (d)			Local projection (e)			Blanchard-Perotti (d)			Local projection (e)		
	1 quarter	1 year	2 years	1 quarter	1 year	2 years	1 quarter	1 year	2 years	1 quarter	1 year	2 years	1 quarter	1 year	2 years
Germany	0.4	1.2	1.8	1.0	1.3	2.1	1.0	0.9	1.9	1.0	0.9	1.3	1.0	0.9	1.4
France	1.6	1.5	1.2	0.4	0.8	1.5	0.5	0.8	1.1	0.3	0.6	1.2	0.4	0.5	1.1
Italy	0.1	0.3	0.8	0.0	0.6	1.1	0.0	0.6	1.3	-0.1	0.6	1.1	-0.1	0.6	1.1
Spain	0.3	1.2	1.8	0.5	1.5	1.7	0.5	1.3	1.3	0.5	1.0	1.4	0.5	1.1	1.4
Euro area	0.6	1.4	1.7	0.4	1.3	1.7	0.5	1.5	2.3	0.3	1.0	1.3	0.3	1.0	1.1

2 MULTIPLIERS BY PUBLIC SPENDING COMPONENT

	Government consumption			Public investment		
	1 quarter	1 year	2 years	1 quarter	1 year	2 years
Germany	1.2	1.0	1.8	1.2	2.9	4.9
France	0.1	0.1	1.2	1.2	1.5	1.9
Italy	-0.1	0.9	1.4	0.0	0.7	1.8
Spain	0.6	0.8	0.0	0.3	1.1	2.3
Euro area	0.8	1.7	1.0	0.4	1.9	3.2

SOURCE: Banco de España.

a Impact on GDP derived from a €1 increase in public spending or in one of its components.
b See European Commission (2012), "Report on public finances in EMU 2012", European Economy, no. 4, and G. Cleaud, M. Lemoine and P.A. Pionnier (2014), *Which size and evolution of the government expenditure multiplier in France (1980-2010)?,* Working Paper, Banque de France (G2013/15).
c M. Alloza, P. Burriel and J.J. Pérez (2017), *Coordinated Fiscal Policies in the Euro Area: Revisiting the Size of Spillovers,* Working Paper, Banco de España, forthcoming.
d Following the methodology proposed by O. Blanchard and R. Perotti (2002), "An empirical characterization of the dynamic effects of changes in government spending and taxes on output", Quarterly Journal of Economics, 117, pp. 1329-1368.
e Following the methodology proposed by Ò. Jordà (2005), "Estimation and inference of impulse responses by local projections", American Economic Review, 95, pp. 161-182.

monetary policies (see Table 4.2).[11] In addition, the favourable impact of monetary policy on macroeconomic conditions[12], along with the subsequent improvement in public finances, should be added. This additional favourable impact on public finances in the euro area taken as a whole is estimated at around 0.7 pp of GDP over the 2014-2016 period (see Chart 4.2).[13]

However, given that public debt levels remain high in the euro area and in many countries, seeing through fiscal consolidation processes is vital for resuming sustainable public debt dynamics. If current economic growth dynamics are maintained and there is a pick-up in inflation rates to levels consistent with the ECB's objective, and under the assumption that the targets laid down by the SGP are met, public debt for the euro area as a whole should stand over the coming decade at levels below, but close to, 80% of GDP (see the left-hand panel of Chart 4.3).[14] However, debt dynamics and levels

11 In other countries, such as Germany and France, where the impact of these measures on sovereign rates has been less, this saving would have been significantly lower, standing between 0.1 and 0.3 pp of GDP.
12 See Chapter 3, "The effect of the ECB's monetary policies in the recent period", *Annual Report, 2015,* Banco de España.
13 Specifically, use is made of an extension of the model estimated in P. Burriel and A. Galesi (2016), *Uncovering the heterogeneous effects of ECB unconventional monetary policies across euro area countries*, Working Paper 1631, Banco de España.
14 See P. Hernández de Cos, D. López Rodríguez and J.J. Pérez (2017), *Los retos del desapalancamiento público, Documentos Ocasionales,* Banco de España, forthcoming.

PUBLIC DEBT INTEREST SPENDING DYNAMICS (2014-2016) AND ESTIMATED DIRECT IMPACT OF THE ECB PURCHASE PROGRAMME

TABLE 4.2

	Interest spending (% of GDP)		Implicit interest rates (%)		Average life of public debt (years)		Change in interest spending (% of GDP)			Estimated direct effect of the asset purchase programme			
								Due to change in		Change in 5-year rate		Counterfactual exercise (a)	
	2014	2016	2014	2016	2014	2016	Actual 2014-2016	Debt	Rates	Actual (bp)	% due to programme (b) (bp) (%)	Expected change in the 5-year rate in May 2014	Savings on interest spending, % of GDP
Euro area	2.7	2.2	2.9	2.5	7.3	7.9	-0.46	-0.07	-0.39	-117	67		
Germany	1.8	1.4	2.4	2.0	6.2	6.5	-0.39	-0.12	-0.27	-107	18	81	0.1
France	2.2	1.9	2.3	2.0	7.0	8.0	-0.29	0.02	-0.31	-110	51	94	0.3
Italy	4.6	4.0	3.5	3.0	6.8	7.3	-0.62	0.03	-0.65	-110	128	118	1.3
Spain	3.5	2.8	3.5	2.8	6.0	7.0	-0.66	-0.01	-0.65	-147	83	127	0.9
Netherlands	1.4	1.1	2.1	1.7	6.8	7.0	-0.34	-0.08	-0.26	-104	39	80	0.1
Belgium	3.3	2.9	3.1	2.7	7.5	8.5	-0.41	0.00	-0.41	-121	28	92	0.2

SOURCES: Eurostat and Banco de España.

a Differences with respect to a counterfactual exercise in which, in the absence of the programme, interest rates would have trended in line with what was projected in May 2014 (market forward rates).

b Study of events considering the change with a two-day window around 36 dates on which the ECB Governing Council announced measures, on which an account of its meeting was published or on which speeches were given by key members of the Council announcing the possibility of measures shortly being adopted. The TLTRO section includes the ECB Governing Councils of 8 May and of 5 June 2014.

are highly heterogeneous from one country to another. In some cases, convergence to levels below 100% of GDP would be much more gradual (see the blue line in the left-hand panel of Chart 4.3), and under scenarios of non-compliance with SGP objectives, of lower potential growth or of a swifter normalisation of financial conditions than that assumed under this scenario, public debt levels could only stabilise around their current high values (see the right-hand panel of Chart 4.3). With a longer-dated perspective, the estimated probability of euro area debt standing below the reference of 60% of GDP over a 10-year horizon is very low.[15]

The current expansionary euro area monetary policy stance would enhance the effectiveness of an expansionary fiscal policy applied by countries with fiscal space and the extension of its effects to the rest of the area. In the current situation, insofar as a tightening of the monetary stance is not expected in response to budgetary stimuli, provided that the latter do not compromise the medium-term price stability objectives, a fiscal impulse might have more expansionary effects. Chart 4.4 illustrates the role monetary policy plays in the transmission of the stimulus, in the context of a theoretical macroeconomic model of a monetary union with two differentiated regions or groups of countries, which seek to approximate the heterogeneity of the current euro area economies.[16] The first region is characterised by its low levels of private debt and public finances with sufficient fiscal space to undertake a budgetary expansion, like the current situation of core euro area countries, such as Germany and the Netherlands. The second

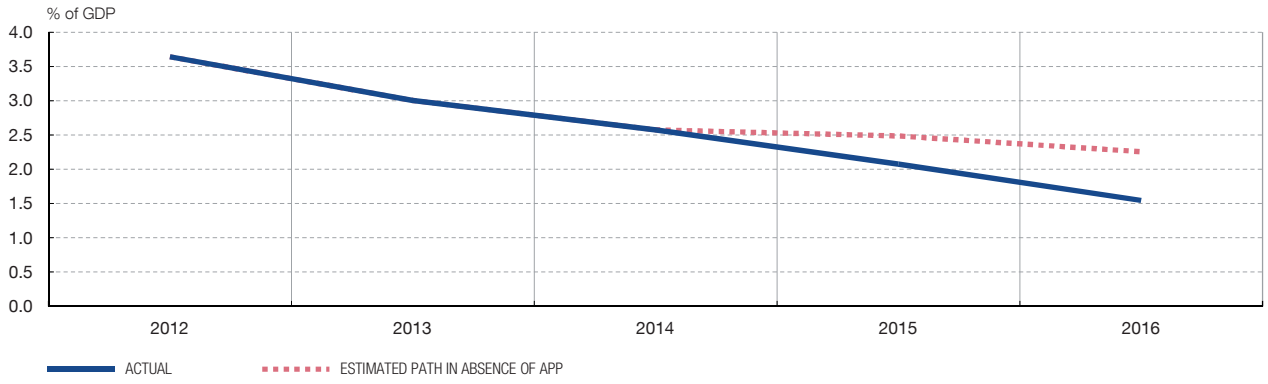
15 According to the simulations made with the model formulated by J. Andrés, J.J. Pérez and J.A. Rojas (2017), *Implicit Public debt thresholds: an empirical exercise for the case of Spain*, Working Paper 1701, Banco de España.

16 See Ó. Arce, S. Hurtado and C. Thomas (2016), "Synergies between monetary policy and national policies in a Monetary Union", *Economic Bulletin*, October, Banco de España.

IMPACT OF THE ECB ASSET PURCHASE PROGRAMME (APP) ON THE EURO AREA PUBLIC DEFICIT (a)

CHART 4.2

PUBLIC DEFICIT IN BOTH SCENARIOS



SOURCES: ECB and Banco de España.

a Estimation made using a global structural vector autoregressive (GSVAR) econometric model estimated with monthly data since 2008, in which the ECB's monetary policy impulses are identified on the basis of the behaviour of the central bank's balance sheet. See P. Burriel and A.Galesi (2016), *Uncovering the heterogeneous effects of ECB unconventional monetary policy,* Working Paper 1631, Banco de España.

b The counterfactual scenario "in absence of the APP" is constructed by subtracting the Programme's regular purchases from the central bank's balance sheet, in keeping with the December 2015 decision (€60 billion per month until March 2017) and the March 2016 decision to increase the volume of purchases to €80 billion from April 2016. The exercise does not therefore include the effects or interactions with other measures, such as the cut to the deposit facility rate, and it does not take into account relevant elements of the Programme such as the class of assets acquired.

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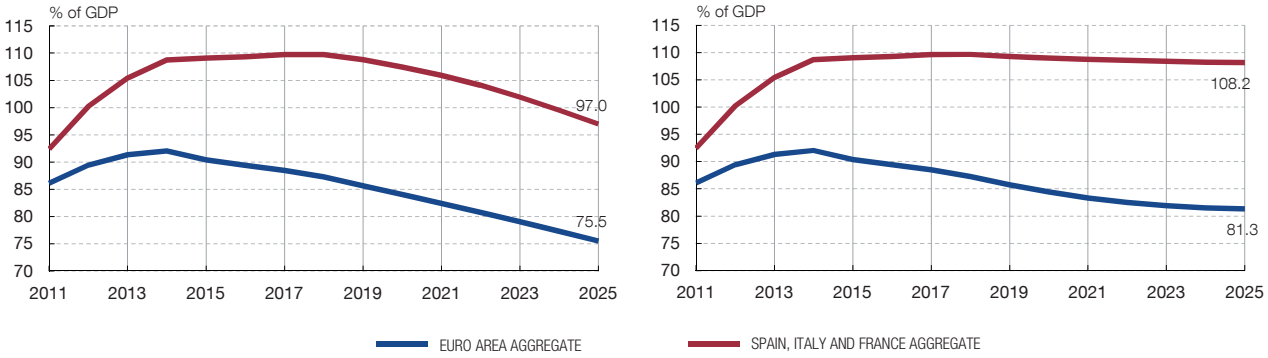
EURO AREA PUBLIC DEBT DEVELOPMENTS UNDER ALTERNATIVE SCENARIOS (a)

CHART 4.3

1 BASELINE SCENARIO

2 SCENARIO WITHOUT FISCAL POLICY CHANGES



SOURCE: Banco de España.

a Alternative simulations are presented of the paths of the public debt/GDP ratio for the euro area and the aggregate for Spain, France and Italy up to 2025, under different fiscal policy assumptions. In the left-hand panel the assumption behind the baseline scenario is that the euro area countries comply over the course of the simulation horizon with their budgetary objectives as set in the European Stability and Growth Pact. In the right-hand panel it is assumed that the fiscal policy stance holds in line with the fiscal policy observed in 2016. The simulations are conducted using data up to 2016, the medium-term macroeconomic projections of the European Commission and the price stability objectives set by the ECB. The details of the simulation tool are described in P. Hernández de Cos, D. López Rodríguez and J. J. Pérez (2017), "Los retos del desapalancamiento público", Documentos Ocasionales, Banco de Espana, forthcoming, and in O. Bouabdallah and C. Checerita (2017), *Debt sustainability analysis for euro area sovereigns: a methodological framework,* ECB Occasional Paper 185.

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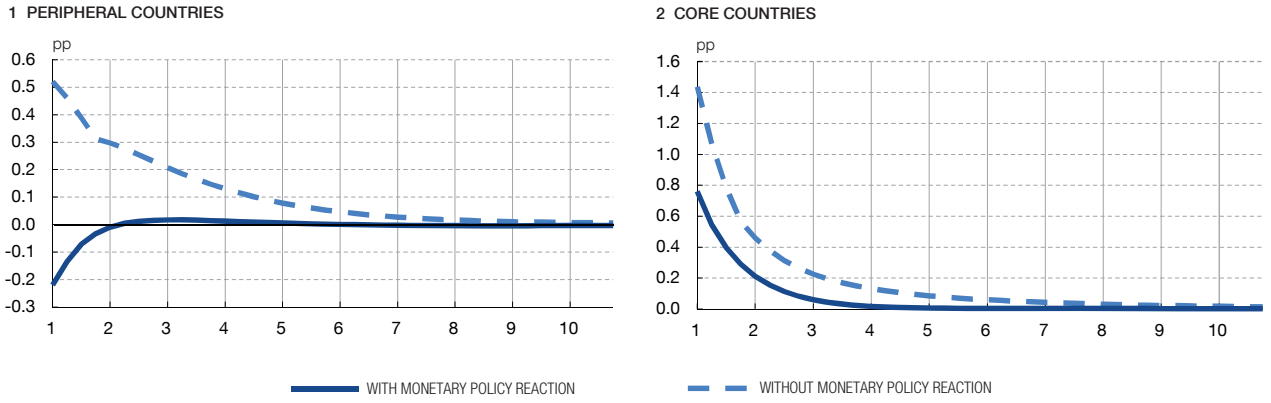
SYNERGIES BETWEEN FISCAL POLICY AND MONETARY POLICY IN THE EURO AREA (a) CHART 4.4

MARGINAL EFFECT OF A FISCAL EXPANSION IN THE CORE EURO AREA COUNTRIES ON GDP



SOURCE: Banco de España.

a Deviations from the baseline scenario. Simulations of a fiscal expansion of 1% of GDP performed with the model devised by Ó. Arce, S. Hurtado and C. Thomas (2016), "Synergies between monetary policy and national policies in a monetary union", Economic Bulletin, October, Banco de España.

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group of countries needs to reduce its high levels of private debt and lacks fiscal space, a situation similar, therefore, to that of the area's peripheral economies. In normal circumstances for monetary policy, in which it responds by adjusting its interest rates symmetrically to increases and declines in inflation, the model suggests that a fiscal expansion by the countries with leeway to do so would have a positive impact on their own economic activity and would exert upward pressure on inflation for the area as a whole. The monetary policy reaction caused by the rise in prices would cushion the impact on these countries' economic activity and would exert a negative impact on the region without fiscal space. Conversely, in a situation such as the present, in which the inflation rate is below its medium-term objective and interest rates are constrained by the existence of an effective lower bound, it does not seem likely that the monetary authority would have to apply restrictive measures in the face of a moderate increase in domestic demand. Consequently, the positive impact of the fiscal expansion would not only be higher in the set of countries undertaking it, but it would also spread to the other partners, thereby giving rise to positive spillover effects.

The estimates made using econometric models suggests that a discretionary expansion in public spending in the major euro area economies prompts, on average, a significant quantitative impact on the GDP of their neighbouring countries (see Box 4.1).[17] Looking at the components of public spending, it can be seen that increases in investment show greater spillover effects than those of current public spending[18], of a similar amount for the euro area as a whole and the countries considered. These results suggest that public investment, duly targeted on projects with the ability to enhance the economy's efficiency and growth capacity, might be the instrument around which to

17 For a broad perspective, see M.G. Attinasi, M. Lalik and I. Vetlov (2017), *Fiscal spillovers in the euro area: a model-based analysis,* Working Paper 2040, European Central Bank.

18 Defined as government consumption.

structure a coordinated budgetary stimulus policy, on the basis of its expansion in those countries with sufficient budgetary room for manoeuvre.

The countries that have no fiscal space should design a consolidation strategy more conducive to economic growth. Given that the combination of instruments on the public revenue and expenditure side influences their macroeconomic impact in the short and medium term, the countries that have to continue addressing a budgetary consolidation in the coming years should design their fiscal policies so that they take on a composition more conducive to economic growth. On the revenue side, there is room to restructure the tax basket in a way more conducive to potential growth, resting on tax arrangements that distort economic agents' behaviour less.[19] On the expenditure side, according to the detailed analyses conducted in certain economies such as Spain, Portugal and Italy[20], there appears to be headroom in these countries to increase the efficiency of public spending and to redirect its composition towards those items having a greater bearing on the accumulation of physical, technological and human capital, and, consequently, on total factor productivity and long-term economic growth.

2.2 THE PROBLEMS BEHIND THE PRACTICAL IMPLEMENTATION OF A COORDINATED FISCAL POLICY IN THE EURO AREA

In the euro area, the fiscal policy stance is the result of the aggregation of national fiscal policies. Beyond the EU budget, which is confined to and focused on agricultural policy and structural convergence measures, there are no instruments providing for a stabilising function at the aggregate level, were the conjunctural situation of the area as a whole to require this. Such stabilisation might be needed either owing to an extreme downturn in economic activity, as occurred in 2008, or to complement monetary policy measures, as would be the case at present. The lack of centralised fiscal policy instruments in the euro area restricts the possibilities of discretionary action in this field; such action must take the form of ad hoc multilateral agreements resting, moreover, on the room for manoeuvre available at the national level.

The preventive arm of the SGP is aimed at generating headroom that can be used in the face of adverse shocks. The preventive arm of the SGP is broadly applied to countries that post a deficit below 3% of GDP and its main purpose is that these countries maintain a structural budgetary balance close to zero or run a surplus in the medium term, this being known as the "medium-term objective". Fulfilment of this objective should enable countries to generate sufficient room for manoeuvre so that, in downturns, the automatic stabilisers may operate fully without compromising the sustainability of public finances in the medium and long term. However, this room for manoeuvre at the national level may not suffice for facing certain shocks. Moreover, as occurred during the last crisis, bouts of mistrust may be triggered that increase the risk premia of some countries, which detracts from the effectiveness of national stabilisation policies.[21]

The European plan for economic recovery (EPER) was an example of a coordinated response by the European countries to the international financial crisis. The EPER channelled a set of measures aimed at stimulating demand, for an estimated amount of 1.5% of EU GDP, in 2009-2010. In the absence of a significant central budget, it was agreed that 85% of this impulse would be funded by national budgets, with the rest

19 See P. Hernández de Cos and D. López Rodríguez (2014), *Tax structure and revenue-raising capacity in Spain: a comparative analysis with the EU,* Occasional Paper 1406, Banco de España.

20 See, inter alia, C. Vandierendonck (2014), *Public Spending Reviews: design, conduct, implementation,* European Economy, Economic Papers, no. 525. For the Spanish case, see OECD (2015), *Spain: from administrative reform to continuous improvement*, OECD Public Governance Reviews, Paris.

21 See P. de Grauwe (2012), "The governance of a fragile Eurozone", *Revista de Economía Institucional,* 13, pp. 33-41.

charged to the Community budget.[22] As a result, euro area governments introduced greatly varied stimulus measures which, overall, amounted to 1.1% and 0.8% of GDP in 2009 and 2010, respectively, according to EC estimates. The simulations available suggest that the EPER had a positive impact on GDP of around 0.5 pp in cumulative terms in 2009-2010.[23] Several international organisations suggested the advisability of launching a bigger fiscal stimulus when it was realised how serious the economic crisis was.[24] But the difficulties in mobilising additional resources soon became apparent, given the adverse public debt dynamics that certain European countries began to experience along with the increase in their sovereign risk premia and the difficulties in gaining access to financial markets, which left little room for manoeuvre for further measures within the framework of SGP budgetary rules.

Another more recent coordinated initiative was the Investment Plan for Europe (known as the "Juncker Plan"), set in train in April 2015 and still under way. This plan is an initiative under which the common European budget is used as collateral to mobilise private investment of the order of €500 billion from 2015 to 2020 (following the extension agreed in 2016). It also contains measures geared to identifying and lifting the regulatory obstacles to investment in the EU. Through private/public partnership collaboration, the plan aimed to mobilise investment projects with high added value potential, projects which, given their level of risk, had not been receiving financing. Despite the complexity of European governance, this plan has been widely accepted by the EU member countries.[25] Nonetheless, following two years' action, not enough information is available to evaluate its effectiveness, in particular regarding its potential capacity to encourage new investment projects, rather than funding projects that would have been undertaken in any event.[26]

More recently, in late 2016, the EC released a communication on the need for a more expansionary fiscal policy stance in the euro area in 2017.[27] According to the Commission, the current economic circumstances in the euro area are appropriate for pursuing a fiscal policy that stimulates aggregate demand, in particular given the persistently low growth and low interest rates prevailing. The reasoning for this EC proposal is that fiscal policy in the euro area has adopted a more neutral stance in recent years than that experienced during the crisis, against a background in which the public debt/GDP ratio of the euro area in its entirety is on a marginally declining trajectory (see Chart 4.5). Indeed, for the euro area as a whole, the Commission estimates that fiscal policy will be slightly expansionary in 2017-2018, showing a slight deterioration in the primary public structural balance, in line with the developments in the preceding two years, and in contrast to the substantial adjustment implemented in response to the sovereign debt crisis. Specifically, the EC considers that there would be

22 See Bouthevillain et al. (2009), op. cit.

23 See G. Coenen, R. Straub and M. Trabandt (2012), *Gauging the effects of fiscal stimulus packages in the euro area,* Board of Governors of the Federal Reserve System, International Finance Discussion Papers 1061, and T. Cwik and V. Wieland (2011), "Keynesian Government Spending Multipliers and Spillovers in the Euro Area", *Economic Policy,* 26, pp. 495-549.

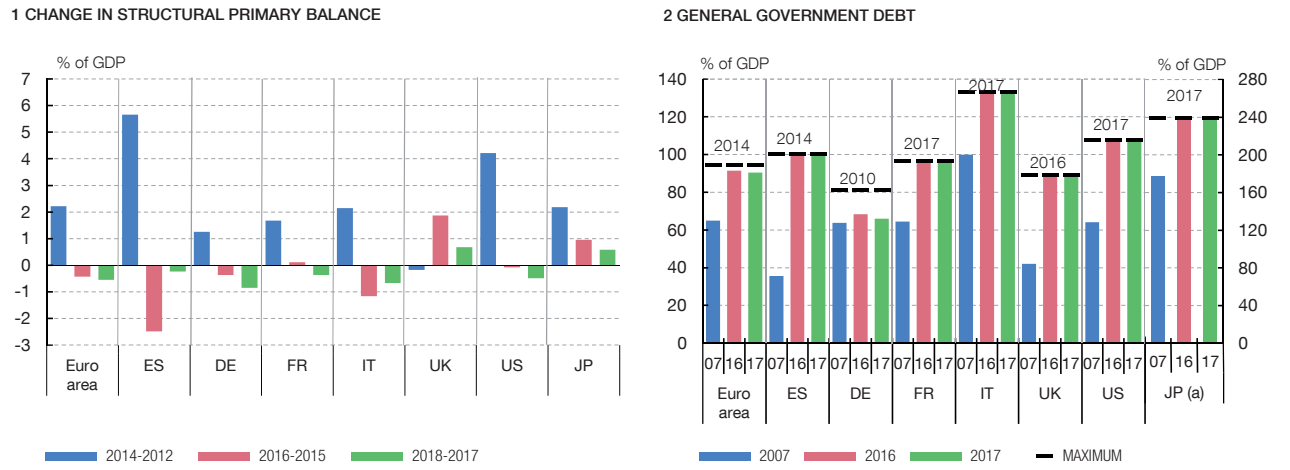
24 See, for example, C. Freedman, M. Kumhof, D. Laxton and J. Lee (2009), *The case for global fiscal stimulus,* IMF Staff Position Note SPN/09/03.

25 See E. Rubio, D. Rinaldi and T. Pellerin-Carlin (2016), "Investment in Europe: making the best of the Juncker Plan (with case studies on digital infrastructure and energy efficiency)", *Notre Europe*, Jacques Delors Institute Studies and Reports 109.

26 See the assessments made by the Bruegel think tank in May and June 2016. Specifically, G. Claeys and A. Leandro (2016), "Assessing the Juncker plan after one year", May 2016, and "The Juncker plan needs to be turned on its head", June 2016.

27 Available at: http://data.consilium.europa.eu/doc/document/ST-14630-2016-INIT/en/pdf.

FISCAL POLICY STANCE AND PUBLIC DEBT IN THE EURO AREA CHART 4.5



SOURCES: European Commission and IMF.

a Right-hand scale.

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room for a limited additional expansion, of approximately 0.5 pp of euro area GDP in 2017, and that this impulse would provide a boost to output leading to a reduction in productive capacity slack (measured by the closing of the output gap), with a likewise positive impact on inflation.[28] The EC also proposes that this impulse be pursued by those countries with fiscal space, i.e. sufficient budgetary room for manoeuvre so as not to jeopardise the sustainability of their public finances and to fulfil the SGP requirements.

The practical implementation of a euro area discretionary fiscal policy measure such as that proposed by the EC faces various institutional difficulties. Firstly, in the absence of a sufficiently strong common EU budget, an action of this type entails the need to allocate the budgetary impulse country by country. Secondly, the budgetary impulse should be compatible with fulfilment of the SGP by the countries implementing such impulse. In other words, under this criterion, only those countries complying with the SGP requirements – identifiable as those posing no risks to the sustainability of their public finances – would have budgetary headroom. In the current economic circumstances, for example, the countries subject to the corrective arm of the SGP – namely France, Spain and Portugal – continued to evidence an "excessive deficit" position which obliges them to maintain a restrictive fiscal policy stance (see Table 4.3). As regards the countries subject to the preventive arm, only Germany, the Netherlands and Luxembourg are expected to have met their medium-term objective, and thus have leeway of between 0.5 pp and 1 pp of GDP relative to that objective. In accordance with these margins, attaining a fiscal impulse such as that intended by the European Commission could only come about through highly significant budgetary easing, of around 2 pp of GDP, in the latter countries, which hampers its political approval. At its meeting in January 2017, the Council of the European Union noted the EC's recommendation, but did not translate it into specific recommendations for the member countries.[29]

28 On the estimates made by the EC using the QUEST model. See http://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/economic-research/macroeconomic-models_en.

29 See http://www.consilium.europa.eu/en/press/press-releases/2017/01/27-conclusions-annual-growth-survey/.

SITUATION OF PUBLIC FINANCES AND COMMITMENTS ACQUIRED UNDER THE STABILITY AND GROWTH PACT IN THE EURO AREA COUNTRIES (2017) TABLE 4.3

	Public debt (% of GDP) (reference: 60%)	General government balance (% of GDP) (reference: -3%)	Structural balance (% of GDP) [1]	Distance to medium-term objective [1] – [2]	Change in structural balance (% of GDP)	Fiscal sustainability indicator (S1) (a)	Commitment acquired		
							Medium-term objective (MTO) [2]	Objective for change in structural balance	
								Corrective arm	Preventive arm
Greece	178.8	-1.2	2.5	4.2	-3.0	4.5	-1.8	…	
Portugal	128.5	-1.8	-2.2	-2.5	-0.2	4.7	0.3	0.6	
Spain	99.2	-3.2	-3.4	-3.4	0.1	2.5	0.0	0.5	
France	96.4	-3.0	-2.4	-2.0	0.2	4.4	-0.4	0.9	
Belgium	105.6	-1.9	-1.6	-1.6	0.6	3.8	0.0		0.6
Germany	65.8	0.5	0.6	1.1	-0.3	-0.8	-0.5		0.0
Estonia	9.5	-0.3	-0.3	-0.3	-0.6	-4.0	0.0		0.0
Ireland	73.5	-0.5	-1.1	-0.6	0.6	2.7	-0.5		0.6
Italy	133.1	-2.2	-2.0	-2.0	-0.2	4.2	0.0		0.3
Cyprus	103.4	0.2	-0.2	-0.2	-1.1	…	0.0		-0.4
Latvia	38.5	-0.8	-1.4	-0.4	-0.7	-2.1	-1.0		-0.2
Lithuania	42.4	-0.4	-0.9	0.1	-0.7	0.5	-1.0		-0.2
Luxembourg	22.0	0.2	0.4	0.9	-1.6	-4.4	-0.5		0.0
Malta	55.8	0.5	0.4	0.4	0.0	-0.2	0.0		0.6
Netherlands	59.8	0.5	0.2	0.7	-0.4	0.6	-0.5		0.0
Austria	82.8	-1.3	-1.1	-0.6	0.0	1.3	-0.5		-0.1
Slovenia	77.8	-1.4	-1.8	-2.1	-0.2	3.0	0.3		0.6
Slovakia	51.5	-1.3	-1.4	-0.9	0.1	-0.7	-0.5		0.5
Finland	65.5	-2.2	-1.3	-0.8	-0.5	2.6	-0.5		0.6

SOURCES: Banco de España and European Commission.

a The S1 indicator devised by the EC measures the change in the structural primary balance that should be recorded between 2017 and 2031 in order to attain a debt ratio of 60% in 2031. In addition to the value of the indicator, the column includes a colour code representing the overall assessment by the EC of each country's sustainability risks, namely: red, high risk; yellow, medium risk; green, low risk.

3 The challenges of the euro area budgetary framework

Moves are needed to improve the fiscal policy governance framework and to create supranational insurance mechanisms. The constraints of the current budgetary framework, highlighted in the previous section, underscore the need to move towards the creation of a common cyclical insurance mechanism that will contribute to compensating for the absence of centralised fiscal capacity within the euro area. At the same time, headway must continue to be made in simplifying the fiscal rules framework and making it more effective.

3.1 TOWARDS THE CREATION OF MUTUAL INSURANCE MECHANISMS

The introduction of supranational mechanisms might increase the scope and effectiveness of fiscal policy within the euro area. In particular, these mechanisms might increase the capacity of budgetary policy to automatically absorb adverse (symmetrical) shocks at the aggregate level or the idiosyncratic (asymmetrical) shocks of certain countries, with the dual aim of softening the effects on individual countries and of safeguarding stability in the euro area as a whole in extreme cases. The risk-sharing or mutual insurance mechanisms help soften the decline in output in a specific State or region in the face of an adverse shock, so that this shock ultimately affects residents' income and consumption in that State to the least extent possible.

Risk diversification in monetary unions may be achieved through a centralised budgetary capacity and also through private channels. On one hand, the impact of an

adverse shock in a member country of a monetary union may be softened if the country's resident agents obtain income (whether financial or labour) from other countries (regions) not affected by the shock (income channel). On the other, the households and firms in the economy concerned may ease their consumption by resorting to their saving or to the credit market (credit channel). Logically, the greater cross-regional financial integration or labour mobility are, the greater the strength of these two channels will be. Finally, the effects of the shock may be questioned through fiscal transfers drawn from the central or federal budget, as in the case of the United States (budgetary channel).

Currently, however, the risk-sharing channels in the euro area are limited, not only in respect of the public budget but also as regards private channels. Chart 4.6 offers estimates showing that the strength of the risk-sharing mechanisms in place for euro area countries is limited, compared with two fuller monetary unions such as the United States and Canada (which are federal States).[30] With regard to the income channel, the degree of insurance derived therefrom is comparatively low in the European case and, although it moved on a rising trend in the pre-crisis years as a result of the increase in financial integration, it subsequently fell, remaining some distance off the levels discernible in the United States. The justification for this may be due to the greater national bias still prevailing in the euro area relative to the United States and Canada[31], and to the greater concentration of cross-border investment (within the euro area itself) in a small number of Member States in the European case. The budgetary channel is practically non-existent in the euro area, while in the United States it is estimated that it helps soften between 10% and 20% of adverse shocks (see panel 4 of Chart 4.6), with this proportion rising to over 20% in the case of Canada.[32] The credit channel is thus the sole means for cushioning shocks across the euro area countries. However, the proportion of risk shared through this channel is also very low in relation to what is observed in other countries. That means that, on average, between 40% and 60% of an adverse shock a euro area country undergoes translates into a decline in that country's consumption, depending on the period in question, compared with the 20%-30% observed in the United States.

Moreover, the strength of private channels declined during the crisis, making it advisable that progress be made in the integration of euro area capital markets. As can be seen in panel 2 of Chart 4.6, the strength of the two private channels considered declined during the crisis. Among other factors, that might reflect financial fragmentation processes stemming from the loss of investor confidence in some of the area's countries and in their banking systems, which ultimately prompted a renationalisation of financial flows. In this connection, the development of a full Banking Union and the Capital Markets Union initiative should contribute decisively to reinforcing private risk-sharing channels, complementing the pan-European public mutual insurance mechanisms.[33]

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30 See E. Gordo (2017), *Mecanismos de risk-sharing en la UEM,* Documentos Ocasionales, Banco de España, forthcoming, which makes estimates for both the euro area and the United States following the methodology proposed by P. Asdrubali, B.E. Sorensen and O. Yosha (1996), "Channels of interstate risk sharing: United States 1963-1990", *The Quarterly Journal of Economics,* no. 111, pp. 1081-1110. The results presented are robust to the different estimation procedures used, and the conclusions are similar to those obtained recently in other papers, such as P. Poncela, F. Pericoli, A. Manca and M. Nardo (2016), "Risk sharing in Europe", *Joint Research Centre,* European Commission.

31 See D. Valiante, A. Wambach, E. L. von Thadden, S. Steffen and P. Hartmann (2016), *Europe's untapped capital market: rethinking integration after the great financial crisis*, Centre for European Economic Research, Policy Report.

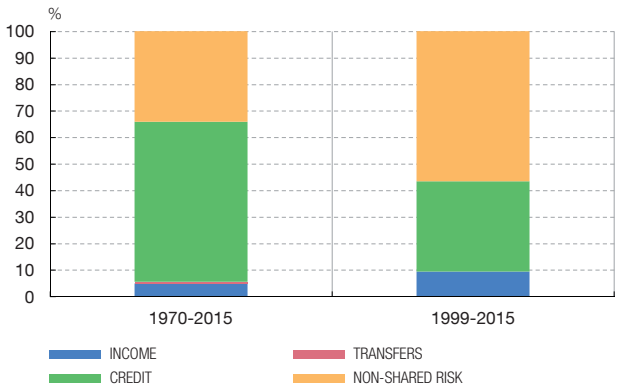
32 According to the estimates by F. Balli, S.A. Basher and J.L. Rosmi (2012), "Channels of risk-sharing among Canadian provinces: 1961-2006", *Empirical Economics,* pp.1-25.

33 E. Fahri and I. Werning (2012), *Fiscal Unions,* NBER Working Paper no. 18280, show that even if capital markets were fully integrated, a system based solely on private mechanisms would not be optimal, since agents do not internalise the advantages of macroeconomic stability. A fiscal insurance mechanism would lead to a more efficient system.

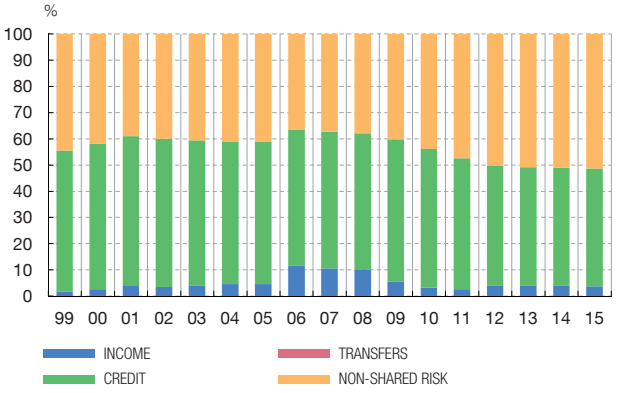
RISK-SHARING MECHANISMS (a)

CHART 4.6

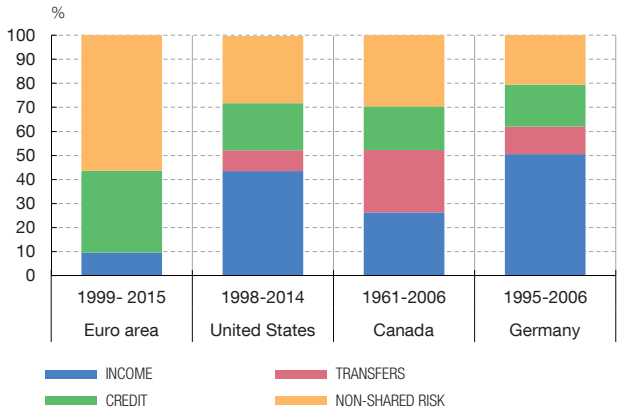
1 STRENGTH OF RISK-SHARING CHANNELS IN THE EURO AREA



2 CHANGES IN THE STRENGTH OF RISK-SHARING CHANNELS IN THE EURO AREA



3 STRENGTH OF RISK-SHARING CHANNELS (a)



4 STRENGTH OF FISCAL RISK-SHARING CHANNELS. UNITED STATES AND CANADA (b)

%

	United States	Canada
Von Hagen (1992)	10	—
Goodhart and Smith (1993)	11	17
Bayoumi and Mason (1995)	17	31
Melitz and Zummer (2002)	20	15
Obstfeld and Peri (1998)	10	13
Asdrubali, Sørensen and Yosha (1996)	13	—
Asdrubali and Kim (2004)	15	—
Poghosyan, Senhadji and Cotarelli (2016)	11	4
Gordo (2017)		
Methodology of Asdrubali *et al.* (1996)	9	—
Methodology of Poghosyan *et al.* (201	17	—

SOURCE: Banco de España.

a Estimated following the methodology of Asdrubali et al. (1996), approximating the fact that the percentage of shocks recorded in an economy's GDP passes through to the income and to the consumption decisions of the residents in that economy. The strength of each channel is estimated using the following equations:

$$1\ \Delta GDP_t - \Delta GNP_t = V_{1t} + \beta_1 \Delta GDP_t + \varepsilon_{1t}$$
$$2\ \Delta GNP_t - \Delta NNP_t = V_{2t} + \beta_2 \Delta GDP_t + \varepsilon_{2t}$$
$$3\ \Delta NNP_t - \Delta NNI_t = V_{3t} + \beta_3 \Delta GDP_t + \varepsilon_{3t}$$
$$4\ \Delta NNI_t - \Delta C_t = V_{4t} + \beta_4 \Delta GDP_t + \varepsilon_{4t}$$
$$5\ \Delta C_t = V_{5t} + \beta_5 \Delta GDP_t + \varepsilon_{5t},$$

where GDP is gross domestic product, GNP gross national product, NNP net national product, NNI net national income and C total consumption. All the variables are expressed in logarithms and in deviations from the euro area or, where appropriate, the United States average. The coefficients β_1, β_2, β_3, β_4 approximate shared risk through capital markets, depreciation (added in the chart with the percentage of non-shared risk), fiscal transfers and the credit markets, respectively. The coefficient β_5 measures the percentage of non-shared risk.

b The table shows the strength of the risk-sharing budgetary channel (see footnote a). The articles cited in the panel are the following: P. Asdrubali, B.E. Sorensen and O. Yosha (1996, "Channels of Interstate Risk Sharing: United States 1963-1990", *Quarterly Journal of Economics,* 111, pp. 1081-1110; P. Asdrubali and S. Kim (2004), "Dynamic Risk Sharing in the United States and Europe", *Journal of Monetary Economics,* 51, pp. 809-836; T. Bayoumi and P. Masson (1995), "Fiscal Flows in the United States and Canada: Lessons from Monetary Union in Europe", *European Economic Review,* 39, pp. 253-274; C. Goodhart and S. Smith (1993), "Stabilization", in *The Economics of Community Public Finance,* European Economy Reports and Studies, 5, pp. 417, 455, Brussels, European Commission; J. Melitz and F. Zumer (2002), "Regional Redistribution and Stabilization by the Centre in Canada, France, the UK and the US: a Reassessment and New Tests", *Journal of Public Economics,* 86, pp. 263-284; M. Obstfeld and G. Peri (1998), "Regional Non-Adjustment and Fiscal Policy", Economic Policy, 26, pp. 205-269; J. von Hagen (1992), "Fiscal Arrangements in a Monetary Union: Evidence from the US", in *Fiscal Policy, Taxes, and the Financial System in an Increasingly Integrated Europe,* ed. Don Fair and Christian de Boisseux (Kluwer, London); T. Poghosyan, A. Senhadji and C. Cottarelli (2016), *The Role of Fiscal Transfers in Smoothing Regional Shocks: Evidence from Existing Federations,* IMF Working Paper No. 16/141.

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Several alternatives exist for constructing inter-State public insurance mechanisms within a monetary union, requiring very different degrees of political ambition.[34] On one hand, maximum proposals have been formulated, involving the creation of an economic government for the euro area, with its own extensive budget, and responsibility for a European debt agency entrusted with issuing joint debt instruments. On the other, the introduction of insurance tools (such as unemployment insurance) in the face of cyclical shocks has been considered, in the form of contingency funds (along the lines of the US "rainy day funds"), or through shared-responsibility debt issues (Eurobonds[35]). These latter arrangements, which may be designed without entailing major changes in the institutional structure of the euro area or permanent income transfers between member countries, would help alleviate the national effects of transitory shocks.

One alternative, whose implementation might be feasible, would be the creation of a stabilisation facility or fund that could be automatically, readily and transparently activated when specific conditions were met. The literature highlights some of the features a mechanism of this nature should have. In particular, in keeping with the empirical evidence on the effectiveness of fiscal stimuli, any stabilising action proves all the more effective the more timely, temporary and targeted it is, as discussed in section 2.1. And automatic instruments display these characteristics better than discretionary ones do. Furthermore, this tool should be designed in such a way as to minimise moral hazard problems, so as to retain the incentives for implementing disciplined economic policies. Accordingly, a system should be sought which is neutral in terms of its budgetary implications over an extensive time horizon, i.e. which does not entail permanent inter-State transfers, unlike the current European budget, where there are net contributors and recipients. However, this does not mean that the mechanism should not perform intertemporal as well as spatial stabilisation functions, in the sense of funds being built up in cyclical upturns to be used in adverse circumstances.

In particular, the literature has proposed mechanisms that take cyclical slack in the economy as the criterion to make contributions and refunds of funds of this type. In this respect, the left-hand panel of Table 4.4 illustrates what would have happened had some of these mechanisms been in place since the creation of the euro area. Specifically, it is calculated under different assumptions what the funds contributed and received by the different euro area countries in their current composition would have been in cumulative terms over the 1999-2015 period. In the first of the schemes simulated (see Scheme 1, in Table 4.4), the countries contribute to a common fund with a fixed contribution, of 1% of their GNP (on a similar scale to that of the current European budget), and receive a transfer if their cyclical position, proxied by the output gap, is negative. This transfer will depend on the size of the country, on the magnitude of the output gap and on the amount of funds accumulated. In the rest of the schemes simulated, both the contributions and transfers received by the countries depend on their output gap, meaning that these transfers are calculated with the aim of reducing the size of that gap by 25%.[36]

Such a mechanism, with a relatively moderate size, would enable the euro area to achieve stabilising power similar to that of the federal budget transfers in the United States. Indeed, as earlier mentioned, in this case the budgetary channel enables 10%-20%

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34 See the so-called "Five Presidents' Report", *Completing Europe's Economic and Monetary Union*, published in 2015 and available at http://www.consilium.europa.eu/es/european-council/president/pdf/5-presidents-report-es_pdf/.

35 In this connection see, for example, S. Claessens, A. Mody and S. Vallee (2012), "Making sense of Eurobond proposals", available at http://voxeu.org/articles/making-sense-eurobond-proposals.

36 In no circumstances is the fund allowed to show a negative balance: in that situation the transfers received by countries with a negative output gap would be adjusted downwards proportionately.

of the adverse shocks the country receives to be absorbed, while Schemes 2 and 3 of Table 4.4 (left-hand panel) simulated for the euro area evidence a stabilisation capacity of 15% and 18%, respectively, with budgetary contributions which, on average, would have stood below 0.5 pp of GDP in the time period considered. These two outlines maintain a balance between the aggregate amount of contributions made by all the countries and that of the refunds, as well as an approximate proportion between countries' individual contributions and refunds, so that there are no permanent transfers between countries over time. Scheme 1 is more ambitious as regards the contributions countries must make, although it does not maintain symmetry between contributions and refunds, although the stabilisation capacity of this scheme would be greater (close to 40%).

Some papers in the literature have proposed the creation of a common unemployment insurance mechanism. As opposed to the funds that take the output gap as a reference variable, this type of schema has the advantage of being based on the unemployment level, which is a directly observable variable. The main challenge posed in the context of the euro area is to prevent such mechanisms from giving rise to cross-country redistributive effects, given the heterogeneity in place in labour market institutions and in starting unemployment levels. Accordingly, it is proposed that these mechanisms be designed as a complement to national unemployment insurance that is activated in adverse circumstances, as is the case in the United States, where the unemployment insurance system is the competence of the States, although central government supplements them through loans or direct transfers when there are notable increases in unemployment (see Box 4.2). Arrangements have also been proposed that ensure budgetary neutrality across countries through variable contributions that are adjusted subsequently. Table 4.4 (right-hand panel) has simulated how two funds with these characteristics would have functioned during the period since the start-up of the euro area. The capacity of these types of mechanisms to stabilise aggregate income in the economy is less than that of the previously discussed funds. However, as regards their potential impact on economic activity, it should be stressed that, in this case, transfers would be directly received by agents who, in principle, have a high propensity to spend, as is the case of the unemployed or individuals subject to credit or liquidity constraints, meaning that their economic impact might prove significant.

The multilateral insurance mechanisms discussed nevertheless share some common problems. The mechanisms whose workings are based on the output gap pose difficulties derived from the real-time estimates of this variable, which is not directly observable and which is subject to substantial revisions.[37] These difficulties may lead to fund management problems, in particular regarding the calculation of contributions and of the amounts to be received. In this respect, some lessons may be drawn from the experience with the State rainy day funds in the United States.[38] Firstly, fund withdrawal regulations should be very strict and precisely defined in the applicable legislation. Secondly, the question as to who should regulate and control the use of the funds is also relevant. In the case of the EU, should an option of this type be considered, clarification will be needed as to the fund's legal entity and the role of supranational institutions, such as the EC, in authorising fund withdrawal requests and the rules governing specific contributions. The implementation of a mechanism based on the level of unemployment is more complex, against the background

37 See P. Hernández de Cos, A. Lacuesta and E. Moral-Benito (2016), *An exploration of real-time revisions of output gap estimates across European countries,* Occasional Paper 1605, Banco de España.

38 See P. Hernández de Cos and J.J. Pérez (2015), "Reglas fiscales, disciplina presupuestaria y corresponsabilidad fiscal", *Papeles de Economía Española*, no. 143, pp. 174-184.

CHARACTERISTICS OF CERTAIN CYCLICAL INSURANCE AND COMMON UNEMPLOYMENT INSURANCE SCHEMES IN THE 1999-2015 PERIOD (% OF GNP) TABLE 4.4

	Cyclical insurance schemes (based on the output gap) (a)						Common unemployment subsidy schemata (b)			
	Scheme 1		Scheme 2		Scheme 3		Scheme 1		Scheme 2	
	Contribution	Receipt	Contribution	Receipt	Contribution	Receipt	Contribution based on total compensation of employees (c)	Receipt: based on short-term unemployment rate	Contribution based on total compensation of employees (d)	Receipt: based on short-term unemployment rate
Euro area	1.0	1.0	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
Belgium	1.0	0.3	0.2	0.1	0.2	0.0	0.5	0.4	0.4	0.4
Germany	1.0	0.7	0.1	0.2	0.1	0.2	0.5	0.3	0.4	0.3
Estonia	0.9	1.3	0.8	0.3	0.8	0.3	0.4	0.5	0.5	0.5
Ireland	0.9	1.0	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.4
Greece	1.0	2.5	0.3	0.5	0.3	0.6	0.4	0.6	0.5	0.6
Spain	1.0	2.1	0.3	0.4	0.4	0.5	0.5	1.1	1.0	1.1
France	1.0	0.5	0.3	0.1	0.4	0.0	0.5	0.6	0.6	0.6
Italy	1.0	1.1	0.2	0.2	0.1	0.3	0.5	0.4	0.4	0.4
Cyprus	1.0	0.9	0.4	0.1	0.3	0.2	0.4	0.6	0.5	0.6
Letonia	0.9	2.1	0.5	0.6	0.5	0.5	0.4	0.6	0.6	0.6
Lithuania	0.9	2.3	0.4	0.6	0.5	0.5	0.4	0.6	0.6	0.6
Luxembourg	1.0	1.6	0.3	0.3	0.3	0.4	0.3	0.2	0.1	0.2
Malta	0.9	0.5	0.1	0.1	0.2	0.1	0.4	0.3	0.3	0.3
Netherlands	1.0	1.2	0.1	0.3	0.2	0.2	0.6	0.4	0.4	0.4
Austria	1.0	0.5	0.1	0.1	0.2	0.1	0.4	0.3	0.3	0.3
Portugal	1.0	1.3	0.2	0.3	0.2	0.3	0.5	0.5	0.4	0.5
Slovenia	1.0	1.0	0.3	0.2	0.4	0.2	0.5	0.4	0.3	0.4
Slovakia	0.9	1.0	0.3	0.3	0.4	0.2	0.4	0.5	0.5	0.5
Finland	1.0	0.9	0.2	0.2	0.3	0.2	0.4	0.6	0.6	0.6
Memorandum item:										
Stabilisation capacity (e)	0.37		0.15		0.18		0.08		0.02	

SOURCE: Banco de España. For the methodological details of the calculations shown, see Gordo (2017).

a In Scheme 1, the countries make a fixed contribution of 1% of GNP and receive a transfer when their output gap is negative.The amount of the benefit is determined on the basis of the country's size, on the output gap and on the size of the fund. In Scheme 2 [see M. Carnot, P.Evans, S. Fatica and G. Mourre (2015), "Income insurance: a theoretical exercise with empirical application for the euro area", European Economy, 546, European Commission], the countries make contributions to the fund if they have a positive output gap, while they receive a transfer if the gap is negative. The amount of the transfer and of the contribution of each country is 25% of the size of the output gap. Scheme 3 is similar, except that in this case the deviations are calculated in relative terms, i.e. the countries with an output gap exceeding the euro area average contribute to the fund, and those countries with an output gap lower than the euro area average receive transfers. The amount of the contribution or transfer is 25% of the difference between both output gaps.
b In both cases, the transfers each country receives are determined on the basis of its short-term unemployment level and the average wage in the economy, with a correction factor of 0.8, under the assumption that the unemployed have wages below the average. A coverage rate for the system of 0.4% and a replacement rate (level of the benefit relative to the previous wage) of 0.5% are also assumed.
c The contribution is the same for all countries and changes over time to bring the outstanding balance of the fund into equilibrium over five years on average.
d The contribution differs for the countries, with the aim of bringing the country's outstanding balance in the fund into equilibrium over five years on average.
e See the footnotes to Chart 4.6. Stabilisation capacity refers to the percentage of the adverse shock which is smoothed with each scheme, where 1 represents the maximum possible (100%).

of the heterogeneity of labour market legislation, since persistent net contributions of the same sign for specific countries must be avoided, while it would also be advisable to include factors of conditionality tied to improvements in the attendant legislation.[39]

The foregoing mechanisms may not be sufficient to withstand crises on a large-scale or with ramifications in the financial sector, as was the case with the crisis that broke in 2008. From this standpoint, the euro area has equipped itself with a

39 See T. Boeri and J.F. Jimeno (2016), "Learning from the Great Divergence in Unemployment in Europe during the Crisis", *Labour Economics*, 41, pp. 32-46.

crisis-management mechanism, the European Stability Mechanism (ESM), which also increases the euro area's capacity to withstand very serious asymmetrical shocks. The ESM is a permanent financial crisis-resolution instrument for the euro area countries that has been fully operational since July 2013, and whose key mission is to channel financial assistance to the countries in the area that require it, subject to conditionality. Further, the financial supervision framework in the European Union has been reformed, so that the actions of the financial sector should not result in systemic risks. Finally, to curtail the perverse dynamics of the feedback loop between banking and sovereign risks and the systemic consequences of institutions with strong cross-border links, headway has been made in plans for a banking union. At present, this union already has a single supervisory mechanism and a management and resolution mechanism for institutions in crisis, and it has also to avail itself of a common deposit guarantee scheme.

3.2 THE FISCAL RULES FRAMEWORK: SIMPLIFICATION AND TRANSPARENCY

The fiscal rules framework proved insufficient to generate room for manoeuvre on a sufficient scale in the pre-crisis period. The framework prevailing at that time led, given the absence of additional instruments, to the application of procyclical fiscal policies during the most recessionary phases of the crisis (see Chart 4.7). Although these policies were largely necessary to ensure the sustainability of public finances in the euro area and the very credibility of the common European project, they may have contributed to amplifying the effects of the recession. Compounding design problems were the shortcomings of the implementation of rules, derived from an excessively discretionary application.

In recent years there has been a far-reaching review of budgetary governance, whose changes include most notably the introduction of a spending rule in the preventive arm of the SGP and the specific definition of the public debt criterion.[40] The reinforced weight accorded to the monitoring of public spending is warranted by the fact that much of the slippage in the budget outturn of most countries is concentrated in this variable.[41] Further, an element of greater precision has been introduced into the criterion for correcting the levels of public debt when these deviate from the medium-term reference (60% of GDP), consisting of setting a gradual convergence path towards this reference (in particular, through an annual reduction of one-twentieth of the distance remaining). These new rules are added to the requirement that a structural balance close to zero in the medium term be maintained, this being a core element of the oversight procedure, and to the traditional reference criteria of maintaining a deficit below 3% of GDP and public debt of less than 60% of GDP. In addition to the rules described, recent SGP reforms have included a set of highly detailed procedures to determine whether a country is compliant, and whether the flexibility criteria envisaged are applicable to such country.

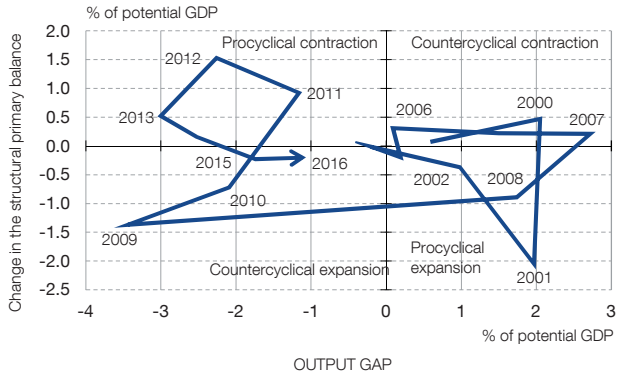
There is broad consensus on the need to simplify the current fiscal rules framework. The adopted strategy of incremental reform has resulted in a framework of rules and procedures which in practice is very complex and which hampers transparency, automaticity and objectivity in the application of the rules and, therefore, their credibility. Indeed, the studies that have analysed this framework relative to that in place in federal

40 See P. García-Perea and E. Gordo (2016), "Los mecanismos de supervisión presupuestaria en la UEM", *Boletín Económico,* March, Banco de España.

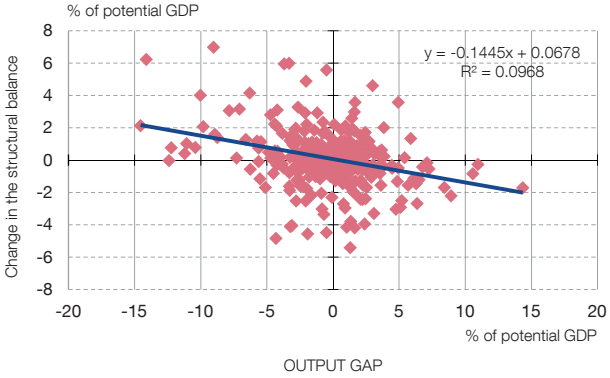
41 See S. Hauptemeier, J. Sánchez Fuentes and L. Schuknecht (2011), "Towards expenditure rules and fiscal sanity in the euro area", *Journal of Policy Modelling,* 33, pp. 597-617.

FISCAL POLICY IN THE EURO AREA AND THE BUSINESS CYCLE CHART 4.7

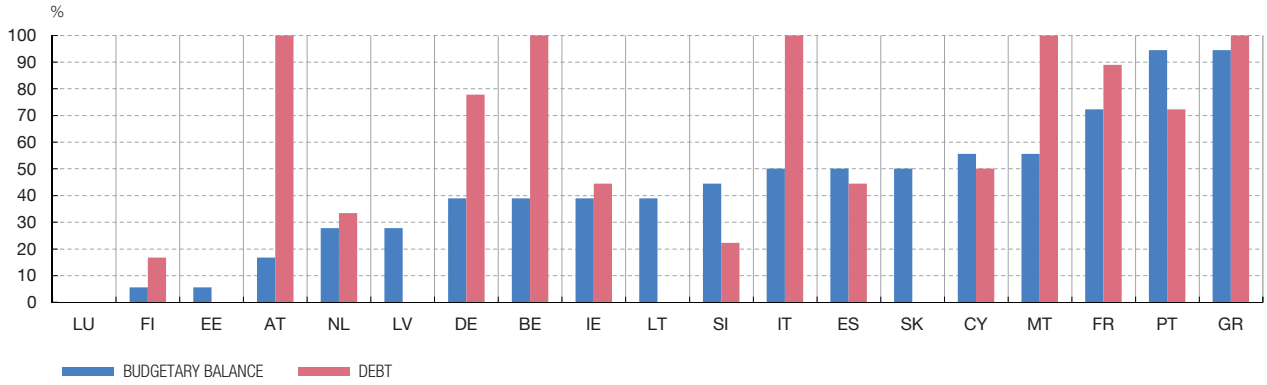
1 FISCAL POSITION AND OUTPUT GAP OF THE EURO AREA



2 FISCAL POSITION AND OUTPUT GAP OF THE EURO AREA



3 PERCENTAGE OF FAILURES TO FULFIL THE BUDGET DEFICIT AND PUBLIC DEBT CRITERIA (a)



SOURCE: AMECO.

a Percentage of years between 1999 and 2016 in which the budget deficit was higher than 3% of GDP and the debt ratio was higher than 60% of GDP.

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States show how the European fiscal framework includes a much higher number of fundamental rules.[42]

There have recently been proposals from various quarters for a system with a single anchor (public debt) and an operational rule (the expenditure rule).[43] The habitual design of this type of rule establishes that the growth of public spending, once specific items such as those under investment or those relating to unemployment are fully or partly excluded, cannot exceed a reference ceiling, calculated on the basis of the economy's potential or medium-term growth.[44] Furthermore, these rules may include a correction

42 For example, L. Euraud and R. Gómez (2014), "Constraints on subnational fiscal policy", in C. Cotarelli and M. Guerguil (eds.), *Designing a European Fiscal Union: Lessons from the Experience of Fiscal Federations,* Routledge, London, show that, in general, federal States have two fiscal rules, while in the European framework, according to these authors, there are six [deficit level, debt ratio, medium-term objective (MTO), path of adjustment towards the MTO, debt reduction requirement and expenditure rule].

43 See, inter alia, L. Odor (2014), *The good, the bad and the ugly: lessons from the first phase of implementation of the new European fiscal framework,* Slovak Council for Budget Responsibility.

44 See P. Hernández de Cos (2011), "The reform of the fiscal framework in Spain: constitutional limits and the new public spending growth rule", *Economic Bulletin*, September, Banco de España, and G. Claeys, Z. Darvas and A. Leandro (2016), *A proposal to revive the European fiscal framework,* Bruegel Policy Contribution, no. 3.

CYCLICALLY ADJUSTED PRIMARY PUBLIC SPENDING
Synthetic analysis methodology

CHART 4.8

SOURCE: C. Fernández, P. García Perea and E. Gordo (2017), *Do expenditure rules boost fiscal consolidation?* Occasional Paper, Banco de España, forthcoming.

a The analysis or synthetic control method has been developed in the area of the assessment of policies that affect aggregate units – cities, regions and countries – and is based on the comparison of the trend of the selected variables in the unit affected by public intervention (in this case, the implementation of a spending rule) with a synthetic unit, which is constructed on the basis of a control group of units which were not affected by the intervention in question and which for the period prior to the intervention reasonably reproduces the behaviour of the selected variables of the unit affected by the intervention (in this case, cyclically adjusted primary public spending). In this case, the synthetic indicator for each of the countries addressed (the Netherlands, Denmark, France and Sweden) has been constructed taking into consideration in the control group the countries which in 1992 signed the Maastricht Treaty, but which did not introduce the spending rule in the 1990s (Belgium, Ireland, Spain, Austria, Germany, Greece, Italy, Portugal and United Kingdom). The weights the different units receive within the synthetic indicator are obtained by minimising – during the period prior to the intervention (1979-1991) – the distance between the country concerned and the synthetic indicator in the target variable, and the determinants that are considered in the analysis.

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factor which imposes a more restrictive limit on spending growth for countries with a debt ratio higher than the reference value, or further limits for specific budgetary items. Their main advantage is that they contribute to curbing the procyclical bias of expansionary phases by preventing extraordinary income from being earmarked for increasing public spending. In this respect, the empirical literature suggests that fiscal frameworks that include spending rules usually show better results in terms of long-term sustainability of public finances, while bringing about less volatility in economic activity.[45]

Nonetheless, an expenditure rule might not per se suffice to ensure significant improvements in the functioning of the European fiscal oversight framework. Chart 4.8 presents evidence based on the "synthetic control" methodology[46] to assess the

45 See T. Cordes, M.T. Kinda, M.P. Muthoora and A. Weber (2015), *Expenditure rules: effective tools for sound fiscal policy?,* International Monetary Fund, Working Paper no. 15/29.

46 See the explanation of this method provided in Chart 4.8.

impact of the introduction of a spending rule on public spending in specific countries. The estimate is made with data for the EU countries as a whole and the analysis focuses on the behaviour of public spending following the signing of the Maastricht treaty in 1992, when a group of countries (the Netherlands, Sweden, Denmark, France and Finland) decided to introduce a spending rule, to smooth their fiscal consolidation processes and thereby meet the convergence criteria. The results help identify how in only two of these countries — the Netherlands and Sweden — did the adoption of the "spending rule" appear to contribute to maintaining a permanent adjustment of this variable, in respect of the performance of the control or synthetic group. By contrast, in France and in Denmark the introduction of the spending rule did not entail a more favourable performance of this variable in respect of the control group, either because the coverage of the expenditure items affected by the rule was limited, or because there was less political commitment to implement it.

The specialist literature reveals the advisability of strengthening the fiscal rules with additional elements that ensure their fulfilment. In this respect, the introduction in recent years of independent fiscal councils, at both the national and European levels, including the reinforcement of the EC's powers in the oversight of the Member States, helps strengthen the institutional framework. The evidence available indicates that the national authorities, insofar as they can provide for better access to and knowledge of the data, the budgetary processes and national legislation, are usually less subject to the biases that are habitually detected in analyses, provided that both their formal and operational independence is ensured.[47] Box 4.3 reviews some of the arguments recently aired in the academic literature with a view to ensuring greater effectiveness in oversight tasks and control over the design and use of specific fiscal instruments

47 See E. Gordo, P. Hernández de Cos and J.J. Pérez (2015), "Instituciones fiscales independientes en España y en la UEM", *Boletín Económico*, February, Banco de España; J. Von Haguen (2010), "Sticking to fiscal plans: the role of institutions", *Public Choice*, 144, pp. 487-503, and R. Merola and J.J. Pérez (2013), "Fiscal forecast errors: governments versus independent agencies?", European Journal of Political Economy, 23, pp. 285-299.

The sign and size of the spillover effects of domestic fiscal policy depends, among other factors, on the impact this should have on the growth of the country applying it, its degree of openness and its size, the capacity to substitute national goods for foreign ones, and the cyclical position of each economy and the reaction of the other economic policies available, in particular monetary policy. The theoretical models suggest that the impact of spillover effects will be low, except in periods in which monetary policy is constrained.[1] The empirical evidence, for its part, finds positive cross-border effects.[2]

The analysis in this box[3] uses a recently created quarterly database, covering the period 1980-2016, with detailed information on general government variables that is comparable for the four biggest euro area economies. The aim is to analyse the macroeconomic impact that an expansion in public spending (defined as the sum of government consumption and public investment) in a country may have on the economic activity of the other countries. In this connection, an econometric model is estimated that relates the GDP of the country receiving the impact to the exogenous change in public spending originated in each of the other countries considered, taking into account the economic situation of the recipient country.[4] This detailed information on

1 See O. Blanchard, C. J. Erceg and J. Lindé, (2015), *Jump-starting the euro area recovery: would a rise in core fiscal spending help the periphery?,* NBER WP 21426; Ó. Arce, S. Hurtado and C. Thomas, "Policy Spillovers and Synergies in a Monetary Union", *International Journal of Central Banking*, vol. 12, no.3, pp. 219-277; J. in't Veld (2013), *Fiscal consolidations and spillovers in the Euro area periphery and core*, European economy, economic papers, no. 506.

2 See A.J. Auerbach and Y. Gorodnichenko (2013), "Output spillovers from fiscal policy", *American Economic Review*, 103 (3), pp. 141-146.

3 Based on M. Alloa, P. Burriel and J. J. Pérez (2017), *Coordinated Fiscal Policies in the Euro Area: Revisiting the Size of Spillovers,* Working Paper, Banco de España, forthcoming.

4 The equations are estimated using the local projections method of Ó. Jordà (2005), "Estimation and inference of impulse responses by local projections", *American Economic Review*, 95, pp. 161-182.

SPILLOVER EFFECTS OF PUBLIC SPENDING (a)

Table 1
BY COUNTRY

	On GDP						On exports					
	By origin			By destination			By origin			By destination		
	Impact	1 year	2 years	Impact	1 year	2 years	Impact	1 year	2 years	Impact	1 year	2 years
Germany	0.0	0.2	0.5	0.0	0.7	1.8	0.0	0.2	0.5	0.1	0.9	2.4
France	0.2	-0.1	1.2	0.0	0.3	0.7	0.5	0.7	3.4	0.0	0.3	0.6
Italy	-0.1	0.4	0.9	-0.1	0.1	0.2	0.1	0.6	1.1	0.0	0.1	0.1
Spain	0.1	0.8	1.6	0.1	0.2	0.6	-0.3	0.2	1.0	0.0	0.1	0.3
TOTAL	**0.0**	**0.3**	**1.0**	**0.0**	**0.3**	**0.8**	**0.1**	**0.4**	**1.5**	**0.0**	**0.3**	**0.9**

Table 2
BY COUNTRY AND PUBLIC SPENDING COMPONENT

	Government consumption						Public investment					
	By origin			By destination			By origin			By destination		
	Impact	1 year	2 years	Impact	1 year	2 years	Impact	1 year	2 years	Impact	1 year	2 years
Germany	0.0	0.2	0.6	0.1	0.5	0.9	0.2	0.9	1.9	0.2	1.5	3.7
France	0.0	-0.6	-1.0	0.0	0.3	0.7	0.9	0.5	2.1	0.2	1.1	2.3
Italy	0.1	0.7	1.0	0.0	0.2	0.3	0.0	0.9	2.2	0.0	0.0	-0.3
Spain	0.2	0.6	1.2	0.1	0.3	0.7	-0.2	1.4	2.1	0.1	0.3	0.9
TOTAL	**0.0**	**0.1**	**0.2**	**0.1**	**0.3**	**0.6**	**0.4**	**0.8**	**2.1**	**0.1**	**0.9**	**1.9**

SOURCE: Banco de España.

a Estimates obtained from regressions based on the local projections method for each pair of countries considered. In each regression, the exogenous change in a country's public spending is related to the economic impact on a neighbouring country. On the basis of the coefficients of these regressions, the public spending multiplier between the two countries is calculated as the ratio of the effect on the recipient country's GDP to the effect on the public spending of the country where the fiscal expansion takes place. These multipliers between pairs of countries are aggregated to construct the spillover effect by origin, which measures how the increase in a country's public spending affects economic activity in the neighbouring countries, and by destination, which reflects the effect of a fiscal expansion in the neighbouring countries on the economy of a specific country.

cross-country impacts can be summarised taking the country of origin of the fiscal expansion and the impact that this has on the remaining countries (destination). Thus, the spillover effect by origin (see accompanying table) reflects the degree in which an increase in public spending in a country affects the activity of the other countries. For instance, taking the first row of the top left-hand panel of the table corresponding to "Germany", the effect by origin of 0.5 after two years indicates that a fiscal expansion in this country generates an effect on the other euro area countries equivalent to half of the initial expansion. For its part, the spillover effect by destination shows the impact exerted by a simultaneous expansion in spending in the other countries on a specific country's GDP. In particular, if the first row of the top left-hand panel of the table is taken, in the block "by destination", a fiscal impulse in the rest of the euro area would entail an expansion of Germany's GDP, after two years, equivalent to almost double the initial expansion (a value of 1.8).

The results of the analysis show that there are significant fiscal spillover effects in the euro area, in the medium term (over a two-year horizon). Specifically, having regard to the origin of the fiscal expansion, an increase in the public spending of the countries considered produces, on average, a relevant impact on the GDP of their partners (see the left-hand panel of the table), with a multiplier around unity, and on a scale similar to the effect it has on their own economies (see Table 4.1 of the main body of the text).[5] As regards the heterogeneity of the results by country, the lower spillover effects in Germany than in France, Italy and Spain would be indicative of a lower import content in public spending in the first case. In any event, the results presented should be viewed as illustrative, given that the estimates are obtained with high uncertainty (broad confidence bands).

The results pertaining to the economic effect on each country of the increases in public spending in the other neighbouring countries (by destination) show greater heterogeneity (see the "by destination" columns of the top left-hand panel). This is discernible in the differential effect that fiscal expansions have on exports (see the top right-hand panel of the table), highlighting the importance of the trade channel in the transmission of fiscal policy shocks. Hence Germany, given its greater export intensity, receives a high spillover effect of the fiscal expansion of its neighbours, while the impact on Italy is more limited.

Analysing separately the economic impact of government consumption and public investment (see the lower panel of the table), it can be seen that the increases in investment show greater spillover effects. These prove moreover to be of a similar amount for the countries analysed, with a multiplier close to 2, two years after their implementation, while there is high heterogeneity when the expansion is implemented through government consumption.

In short, the evidence presented here suggests that there are significant spillover effects of fiscal policy among the biggest euro area countries[6], which would be particularly relevant in the case of a budgetary expansion based on public investment.

5 However, it should be stressed that the spillover effects in the very short term are close to zero.

6 See, for example, J. in't Veld *(2013), Fiscal consolidations and spillovers in the Euro area periphery and core,* European Economy, Economic Papers, no. 506.

The recent financial crisis in the United States had a differentiated impact on activity and unemployment rates in the different States, which depended, among other factors, on the relative weight of the real estate sector in each State's productive structure (see Chart 1.1). To alleviate the adjustment costs arising from idiosyncratic shocks (or from common shocks with heterogeneous impacts), the United States has risk-sharing mechanisms – with differing degrees of automatism – so that the consequences are borne in part by the Union as a whole.

Among these mechanisms, unemployment insurance is of particular importance: it incorporates a common system for the entire Union in which the federal State complements the unemployment coverage arrangements in place in each State (see Chart 1.2).[1] The system is based on the accumulation of a buffer of funds in periods of expansion (known as forward funding) earmarked for funding benefits in crisis periods. These funds are accumulated through employers' social contributions in two tranches (Federal and State), which are consolidated in designated accounts at the Federal level (known as trust funds).

Within the State tranche, each State enjoys considerable discretionarity when setting the different levels of tax-raising and benefits, albeit observing common Federal rules. Specifically, the tax base varies from State to State,[2] as does the State contribution

1 See S. Albrizio, J. C. Berganza and I. Kataryniuk (2017), "Federal unemployment insurance in the United States", Analytical Articles, Banco de España, 25 May.

2 The tax base cannot be less than $7,000. In 2017, the base oscillated between $7,000 in Arizona, with a range of tax rates between 0.13% and 7.73%, and $45,000 in Washington, with a range of tax rates between 0.04% and 10.59%. The duration of unemployment benefits stands between 20 and 30 weeks for those workers who are unemployed owing to reasons beyond their control and will. The benefit is equivalent to between 35% in Alaska and almost 60% in Hawaii of the final wage received.

1 US UNEMPLOYMENT SYSTEM

Chart 1
IMPACT OF THE CRISIS ON UNEMPLOYMENT AND WEIGHT OF CONSTRUCTION

Chart 2
RESERVES AND LOANS IN THE FEDERAL UNEMPLOYMENT SYSTEM

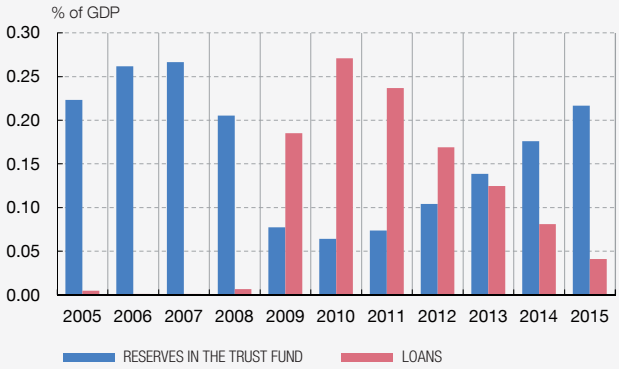


Chart 3
FEDERAL AND STATE SPENDING ON UNEMPLOYMENT TRANSFERS

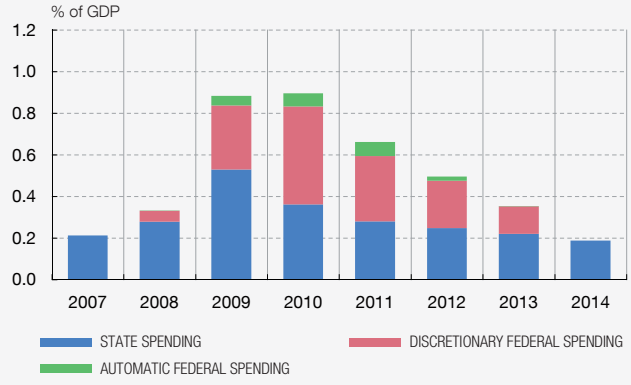
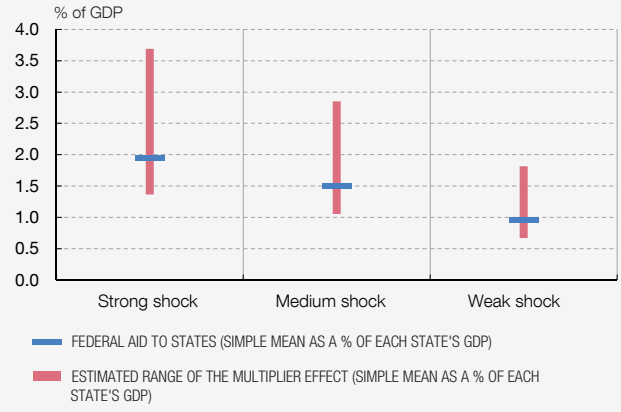


Chart 4
RESERVES AND LOANS IN THE FEDERAL UNEMPLOYMENT SYSTEM (a)



SOURCES: US Department of Labor, US Bureau of Economic Analysis and own calculations.

a The States are classified in three groups, depending on the size of the increase in the State unemployment rate, in terms of percentage points. The expenses and economic effects are calculated relative to each State's GDP. The range of the multipliers includes a minimum coefficient of0.7 and a maximum coefficient of 1.9, consistent with the CBO 2010 analysis, *Policies for Increasing Economic Growth and Employment in 2010 and 2011*.

rate, which is based on an incentive/penalty system for employers dependent upon dismissals in their companies in recent years.[3] This means that employers internalise the social cost of dismissals. So as not to restrict employee mobility, which is a natural adjustment mechanism in the face of shocks, the State in which the employee has generated the benefit entitlement should pay the benefit, irrespective of the unemployed worker's residence.

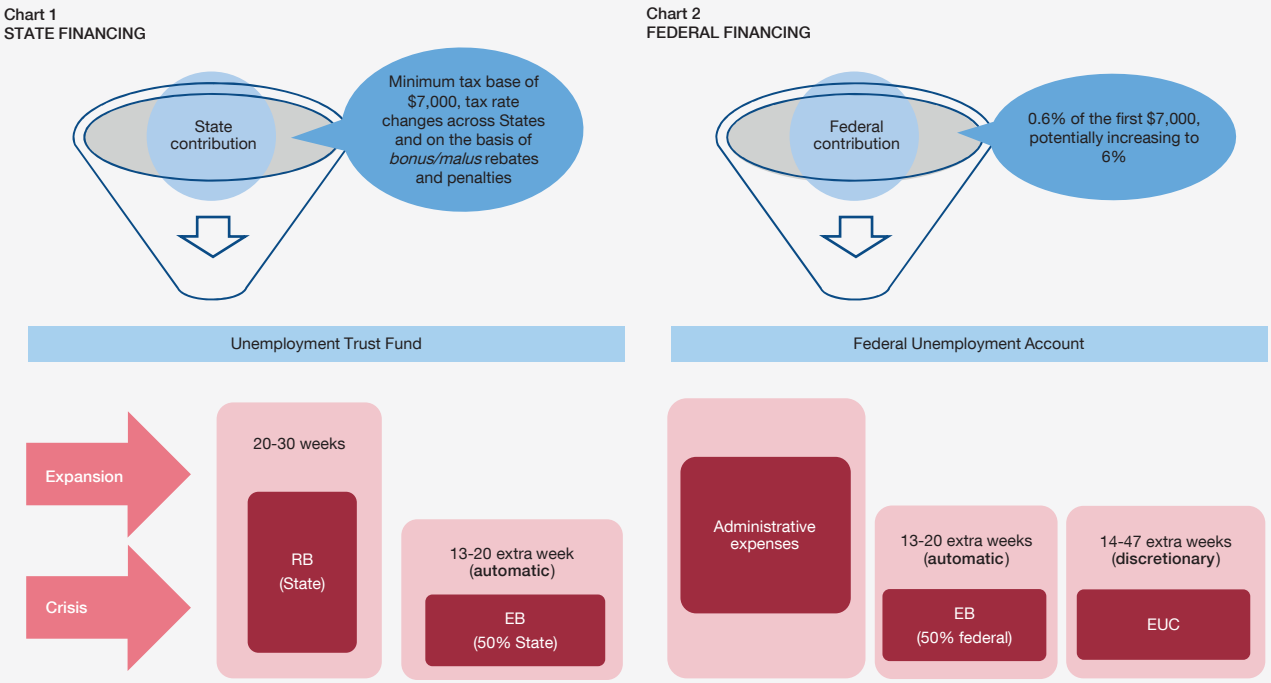
Within the federal tranche, the tax rate stands at 6% of the first $7,000 of employees' wage income. However, in normal conditions, employers receive a tax credit of 5.4%, meaning the rate is at 0.6%. The revenue raised is accumulated in a single account at the federal level.

The federal State has a very different role in periods of expansion and crisis. In periods of expansion, its role is essentially a passive one: it sets the system's minimum requirements and covers administrative costs. However, in times of crisis it adopts an active role to share risks and resolve potential liquidity problems, through two types of measures: loans to State accounts and direct transfers.

The federal State thus alleviates the liquidity problems of the State accounts through loans from the federal account to those State accounts that have been left without reserves. These loans help the States first, by providing low-cost financing at a time at which the cost of market financing might rise; and further, by enabling repayment terms to be extended, which mitigates any possible credit tightening. If the loan is repaid within the fiscal year, it is considered to be a liquidity loan and no interest is charged; if it is not returned, interest similar to that on federal public debt is charged and payment thereof must stem from the State budget. For every year the loan repayment is delayed, the tax credit on the minimum federal rate diminishes by 0.3 pp and what is raised is used to reduce current debt. In this way, both the interest on loans and the automatic increase in rates are used as a mechanism to lessen moral hazard in the fiscal behaviour of the federal States. The cumulative amount of these loans during the recent crisis came to account for 84% of the flow of State benefits and 0.3% of US GDP (see Chart 1.2). Along with the unusual size of the shock,

3 For further information, see J. Fath and C. Fuest (2005), *Experience Rating of Unemployment Insurance in the US: a Model for Europe?*, CESifo DICE Report, 3 (2), pp. 45-50.

2 FUNCTIONING OF THE UNEMPLOYMENT SYSTEM



SOURCE: Banco de España.
NOTE: RB: State benefits. EB: Extended benefits (automatic federal transfers). EUC: Emergency Unemployment Compensation (discretionary federal transfers).

the increase in access to funding was due to the insufficient amount of reserves in State accounts that had built up in the previous expansionary period. This led to the system being reformed as from 2014, in order to ensure a higher level of saving in boom periods and to prevent the payment of interest by States pursuing sound fiscal behaviour, but which had undergone a lasting crisis.[4]

Direct transfers from the federation, for their part, may be automatic or discretionary. Automatic transfers – or extended benefits – are a programme that entails an extension of the duration of benefits in periods of high and rising unemployment at the State level, whose cost falls equally on the State accounts and the federal account. However, during the recent crisis, Congress decided that the total cost of the extension should be assumed by the federal account, owing to the fact that the States had included highly restrictive requirements for the activation of the programme, with the aim of making the increase in benefits not overly burdensome for the State accounts. As regards discretionary transfers, reference is made to eight programmes implemented since 1950 at times of crisis (the latest in the period 2008-2013), approved ad hoc by the Congress and funded by the federal budget. Chart 1.3 shows the significance of federal unemployment transfers during the recent crisis. As can be seen, Federal participation, which accounted for almost 50% of the total unemployment benefits during the period 2009-2012, falls off briskly in the economic recovery.

As with any other unemployment benefit system, the automatic or discretionary extension of benefits during a period of high unemployment has both advantages and costs. Among the positive aspects is their role as an automatic stabiliser: by providing a safety net for the unemployed, benefits granted enable them to maintain their purchasing power, to pursue the search for a job more in keeping with their characteristics and, at the aggregate level, they provide a boost to economic recovery. Among the negative aspects, an increase in benefits may slow the re-employment process after a recession, by means of the effect on the behaviour of economic agents.[5]

Chart 1.4 makes an approximation to the economic effect of the extension of transfers during the last financial crisis. The calculation is made taking into account federal spending (on a cumulative basis from 2008 to 2013) by State, and to measure its impact on activity a range of standard multipliers for unemployment benefits is taken into account.[6] As can be seen, the federal government spent around 2% of cumulative State GDP on benefits in the States most affected by the economic crisis in terms of employment, twice that spent in States where the impact of the crisis was lower. That led to a cumulative impact in terms of GDP of between 1.5 pp and almost 4 pp for the most affected States and between almost 1% and 2% for States posting a smaller increase in unemployment. It may therefore be concluded that federal benefits notably softened the impact of the economic crisis across States.[7] Adding to these effects would be those associated with the reduction of the financial burden resulting from the loans to State accounts.

4 For further information, see employment and training administration 20 CFR part 606, "Federal-state Unemployment Compensation Program; Funding Goals for Interest-Free Advances; Final Rule" (2010), Federal Register, vol. 75, no. 180, Rules and Regulations.

5 Specifically, an extension of benefits might increase the reservation wage and, consequently, it might: i) raise the renegotiation wage, distorting firms' hiring decisions, and ii) reduce the intensity with which workers search for a new job.

6 CBO 2010, Policies for Increasing Economic Growth and Employment in 2010 and 2011.

7 This estimate provides an indicative amount of the economic effect of the benefits, without aiming to estimate the net economic impact of the unemployment system, which, in addition to the effects calculated, would include the impact of contributions and the opportunity cost of loans.

Throughout recent decades, the persistence of budget deficits in the main advanced economies has prompted a growing public debt trajectory. Among the reasons justifying this, the search for short-term objectives by the political authorities or by specific pressure groups has occasionally been cited, although this may lead to inappropriate fiscal policies being pursued without taxpayers being able to internalise in full the consequences of these decisions for well-being or for future generations. This deficit bias may prove more significant in the case of a monetary union, if the Member States do not fully internalise the consequences that excessive debt may have on the other members.

The economic literature has proposed various mechanisms to reduce such deficit bias, including most notably: 1) adopting fiscal rules; 2) establishing independent fiscal councils; and 3) delegating certain fiscal decisions to an independent authority. The various existing – and not necessarily mutually exclusive – alternatives differ in the degree of control that they seek to impose on Governments' actions.

Fiscal rules are a key element in the current architecture of the euro area. Under the Stability and Growth Pact (SGP), the Member States undertake to hold their public debt and budget deficit under 60% and 3% of GDP, respectively. Further, there are commitments to maintain a structural balance close to zero throughout the cycle – the medium-term objective – and a spending rule which, broadly speaking, limits expenditure growth to each economy's potential or medium-term growth. The effectiveness of this set of rules has been questioned, in particular during the current crisis, meaning that at present various reform proposals have been mooted.

In particular, some authors call for greater automaticity and simplification around a spending rule that ensures an anchoring of debt in the medium term. An example along these lines is the so-called "debt brake" rule in force in Switzerland, which restricts the ratio resulting from its spending relative to its revenue, subject to two adjustments. First, the formula takes into account the status of the cycle, allowing a deficit when the economy is below trend but demanding a surplus during expansions. Second, the rule includes an "adjustment account", which accumulates past deficits and surpluses. When the adjustment account shows a negative balance, the rule lowers the spending ceiling by a sufficient amount to pay the debt expected to build up over the next three years. In this way, unlike the SGP, the rule automatically tightens when repeated deficits ensue. Along these same lines, other authors propose introducing greater automaticity in the control of specific public spending items, as is the case, for instance, in certain pension systems in which budgetary equilibrium is imposed automatically, calculating the aggregate level of pensions on the basis of the system's revenue or each individual pension in terms of a personal account based on the contributions of each pensioner. The 2013 reform to Spanish pensions established, in fact, an automatic budgetary equilibrium mechanism, by defining a "revaluation index"[1] that adjusts the level of pensions annually on the basis of the gap between the system's revenue and expenditure.

The literature suggests that the effectiveness of fiscal rules may increase if accompanied by the establishment of independent fiscal councils.[2] Analyses by these institutions of general government fulfilment of the rules, the cost of new legislative initiatives, and the design and application of budgets and, in particular, of the macroeconomic scenarios underlying budgets, may reduce the bias towards excessive deficits. The current structure of European governance has strengthened the SGP, adopting in part these institutional innovations. The new fiscal governance framework requires the establishment of national independent fiscal authorities, who shall be entrusted with monitoring budgetary policies and compliance with the fiscal rules.

However, in the EU these independent fiscal institutions have not been assigned an explicit role in setting budgetary objectives, and nor have they been given powers to act on public spending or revenue and to modify these items should a specific fiscal policy be deemed inappropriate. In this respect, some academic proposals have suggested delegating one of these aspects (the setting of objectives or the correction instrument) to the independent fiscal institution.[3] It is sought thereby to restrict the degree of Governments' discretionarity, keeping in any event the functions afforded them by democratic mandate unchanged, in terms of income redistribution and the attainment of economic efficiency.

Against this background, a consultative European Fiscal Council has been created within the European Commission. Its functions include overseeing compliance with European fiscal rules, advising the European Commission on the fiscal policy stance deemed appropriate for the area as a whole and cooperating with the National Fiscal Councils. In this respect, from the European standpoint, some papers[4] analyse how delegating a fiscal policy instrument to an independent European authority can fit into the

1 See A. R. Sánchez (2014), *the automatic adjustment of pension expenditures in Spain: an evaluation of the 2013 pension reform,* Working Paper no. 1420, Banco de España.

2 See L. Calmfors (2011), *The role of independent fiscal policy institutions,* CESifo Working Paper, no. 3367; G. Kopits (2011), "Independent fiscal institutions: developing good practices", *OECD Journal on Budgeting*, 11 (3), pp. 1-18; C. Wyplosz (2005), "Fiscal policy: institutions versus rules", *National Institute Economic Review*, 191, pp. 70-84.

3 See J. Costain and B. de Blas *(2012), The role of fiscal delegation in a monetary union: A survey of the political economy issues,* Working Papers in Economic Theory 2012/11, Universidad Autónoma de Madrid and the references cited therein.

4 See H. Basso and J. Costain (2016), *Fiscal delegation in a monetary union with decentralized public spending*, CESifo Economic Studies, 62 (2), pp. 256-288.

current governance framework while taking into account the institutional framework of the monetary union. They conclude that a mechanism of this type could reduce aggregate public debt levels in the Union so that headroom may be gained for discretionary fiscal policy measures, from an aggregate standpoint.

In sum, the experience of recent years highlights the importance of pursuing disciplined fiscal policies that give rise to sufficient room for manoeuvre in the expansionary years, so that a stabilising function may be fully exerted in recessionary phases. The literature illustrates the advisability of setting fiscal rules that enable Governments to internalise the consequences of their decisions for future generations or, in the context of the euro area, for the other Member States. Also, the effectiveness of these rules may be boosted when they are accompanied by independent fiscal institutions.