

THE REFORM OF THE EUROPEAN
UNION'S FISCAL GOVERNANCE
FRAMEWORK IN A NEW
MACROECONOMIC ENVIRONMENT

2021

BANCO DE **ESPAÑA**
Eurosistema

Documentos Ocasionales
N.º 2121

Mario Alloza, Javier Andrés, Pablo Burriel,
Iván Kataryniuk, Javier J. Pérez and Juan Luis Vega

**THE REFORM OF THE EUROPEAN UNION'S FISCAL GOVERNANCE FRAMEWORK IN A NEW
MACROECONOMIC ENVIRONMENT**

THE REFORM OF THE EUROPEAN UNION'S FISCAL GOVERNANCE FRAMEWORK IN A NEW MACROECONOMIC ENVIRONMENT (*)

Mario Alloza

BANCO DE ESPAÑA

Javier Andrés

UNIVERSIDAD DE VALENCIA

Pablo Burriel

BANCO DE ESPAÑA

Iván Kataryniuk

BANCO DE ESPAÑA

Javier J. Pérez

BANCO DE ESPAÑA

Juan Luis Vega

BANCO DE ESPAÑA

(*) We are grateful to Óscar Arce, Pilar L'Hotellerie, Paloma Marín, Enrique Moral and Javier Vallés for their comments. Contact: javierperez@bde.es.

The Occasional Paper Series seeks to disseminate work conducted at the Banco de España, in the performance of its functions, that may be of general interest.

The opinions and analyses in the Occasional Paper Series are the responsibility of the authors and, therefore, do not necessarily coincide with those of the Banco de España or the Eurosystem.

The Banco de España disseminates its main reports and most of its publications via the Internet on its website at: <http://www.bde.es>.

Reproduction for educational and non-commercial purposes is permitted provided that the source is acknowledged.

© BANCO DE ESPAÑA, Madrid, 2021

ISSN: 1696-2230 (on-line edition)

Abstract

The main proposals for the reform of the European Union's fiscal policy framework affect three blocks of issues: (i) simplifying the rules to make them more transparent and flexible; (ii) incorporating new supranational risk-sharing instruments into the Economic and Monetary Union, in particular to facilitate the absorption of severe shocks; and (iii) the fiscal aspects necessarily being accompanied by reforms at the national (structural reforms) and supranational (e.g. pressing forward with the capital markets union) levels. Irrespective of their political feasibility, these proposals do not easily fit the current macroeconomic environment, which is far removed from that of the 1990s: structural trends, such as digitalisation, globalisation, the climate transition and population ageing, affecting the natural rates of interest and potential growth are emerging or taking hold. Also, after the Great Moderation, we have entered a period of severe global shocks. In this paper we argue that this setting calls for a paradigm shift in how the fiscal policy framework is designed, as opposed to the incremental reform approach of recent decades. This should include improved governance of fiscal rules, which should be simpler, more functional and more credible than the current ones, but it should also go a step further and incorporate supranational risk-sharing components enabling the smooth operation of the monetary and fiscal policy mix, from a wider euro area perspective. We provide quantitative elements to illustrate several challenges with a bearing on any reform process in the current setting: (i) medium-term debt anchors should be adapted to the medium and long-term interest rate and potential growth expectations; (ii) economies may remain subject to very severe shocks, meaning that fiscal space must be recovered in the medium term; and (iii) realistic mechanisms for absorbing existing fiscal imbalances must be implemented.

Keywords: fiscal policy, fiscal governance, fiscal rules, public debt, public deficit, interest rates.

JEL classification: E62, E63, H60, H61, H62, H63.

Resumen

Las principales propuestas de reforma del marco de política fiscal de la Unión Europea inciden en tres bloques de cuestiones: i) simplificación de las reglas, para dotarlas de mayor transparencia y flexibilidad; ii) incorporación de nuevos instrumentos supranacionales de compartición de riesgos en la Unión Económica y Monetaria, en particular para facilitar la absorción de perturbaciones de elevada intensidad, y iii) los elementos fiscales deben venir acompañados de reformas nacionales (reformas estructurales) y supranacionales (por ejemplo, avanzar en la unión del mercado de capitales). El encaje de estas propuestas en el entorno macroeconómico actual resulta complejo, independientemente del cálculo de su factibilidad política. Este entorno es muy diferente al vigente en los años noventa del siglo pasado: se están evidenciando o consolidando tendencias estructurales como la digitalización, la globalización, la transición climática o el envejecimiento poblacional, que afectan a los tipos de interés naturales y al crecimiento potencial. Asimismo, tras la era de la «gran moderación», se ha pasado a un período de perturbaciones globales de elevada intensidad. En el presente documento argumentamos que este contexto reclama un cambio de paradigma en el diseño del marco de política fiscal, frente a la aproximación de reforma incremental que se ha seguido en las últimas décadas. Este tendría que incorporar una gobernanza mejorada de las reglas fiscales, que deberían ser más simples, operativas y creíbles que las actuales, pero ir más allá, e incorporar elementos supranacionales de compartición de riesgos que permitan un funcionamiento adecuado del *policy-mix* entre las políticas monetaria y fiscal, con una visión conjunta del área del euro. Proporcionamos elementos cuantitativos para ilustrar varios retos que condicionan, en la situación actual, cualquier proceso de reforma: i) las anclas de deuda de medio plazo deben ajustarse a las expectativas de medio y largo plazo acerca de los tipos de interés y el crecimiento potencial; ii) las economías pueden seguir viéndose sujetas a perturbaciones muy intensas, lo que conlleva la necesidad de recuperar los márgenes de maniobra de la política fiscal en el medio plazo, y iii) resulta necesario desarrollar mecanismos realistas de absorción de los desequilibrios fiscales existentes.

Palabras clave: política fiscal, gobernanza fiscal, reglas fiscales, deuda pública, déficit fiscal, tipos de interés.

Códigos JEL: E62, E63, H60, H61, H62, H63.

Contents

Abstract	5
Resumen	6
1 The key elements of the current debate	8
2 The original governance framework and its shortcomings	13
2.1 Rationality	13
2.2 Shortcomings	14
3 The successive adjustments to the original governance framework	16
4 Constraints on the new reform process	19
4.1 What is the appropriate debt level (anchor) in the medium term?	19
4.2 Expanding the risk-sharing channels in the euro area	23
4.3 An appropriate framework for the interaction of fiscal and monetary policy	25
4.4 Rules, transparency, control and standards	27
5 Conclusion	29
Box 1 Rules, discretion and institutions	30
Box 2 The European Stability Mechanism	32
References	33
Annex 1 Debt sustainability arithmetic	36

1 The key elements of the current debate

There is a broad consensus on the need to reform the fiscal governance framework in the European Union (EU).¹ While the available evidence shows the benefits of having a reference framework of national fiscal rules in the euro area, such as that provided by the Stability and Growth Pact (SGP) (see Box 1),² the consensus on the need for reform is based on the shared perception that the current system has been unable to achieve its two main objectives: (i) to make countercyclicality in fiscal policies a general phenomenon, which would have enabled space to be created during upswings for use in downturns, in particular in severe crises such as the global financial crisis and the recent health crisis;³ and (ii) to provide a fiscal policy stance that is consistent with the macroeconomic needs of the euro area as a whole.

In February 2020 the European Commission (EC) launched a public consultation⁴ to set in motion a reform of the fiscal framework. The debate on the need for reform is nothing new, and has gone hand in hand with discussions on the operation and application of the SGP and progress towards greater euro area integration in recent decades.⁵ This period has seen many legislative changes, starting in 2005 when the first refinements to the SGP framework were made. It was then strengthened significantly in the context of overcoming the euro area sovereign debt crisis, most notably with the approval of the Six Pack and the Two Pack, among other legislative measures. In tandem, the successive reforms acknowledged that adjustments were also needed on other non-budgetary policy fronts, and significant headway was made in terms of greater capital market integration in the euro area/EU and in the banking union.

In light of the health crisis, the SGP's general escape clause was activated and no date has been set for the return to normalcy. The clause allows Member States to undertake budgetary measures to deal adequately with extraordinary shocks, within the corrective and preventive procedures of the SGP.⁶ As regards the preventive arm, Regulation (EC) No 1466/97 states that “in periods of severe economic downturn [...], Member States

1 See, among others, Andrieu et al. (2015), Hernández de Cos and Pérez (2015), Beetsma et al. (2018), Banco de España (2017), Benassy-Quéré et al. (2018), Eyraud et al. (2018), Rodríguez and Cuerpo (2019), Gaspar (2020), Thygesen et al. (2021), European Commission (2020a), European Fiscal Board (2020), Martin, Pisani-Ferry and Ragot (2021), Martínez Mongay et al. (2021) and the sequence of comments on the VoxEU website on the [EU Economic Policy and Architecture after Covid](#) debate moderated by J. Pisani-Ferry and J. Zettelmeyer.

2 See Kopits (2001) for a methodological discussion on the benefits and desirable features of fiscal rule frameworks from a general perspective.

3 Galí and Perotti (2003) show how SGP signatories' discretionary fiscal policy became more countercyclical after the pact's first years in force than in the preceding decades. However, Larch et al. (2021) show how fiscal policy has been procyclical in the EU (and in a broader set of advanced countries) in recent decades. According to this study, compliance with fiscal rules makes fiscal policy more countercyclical.

4 See European Commission (2020b).

5 See Brunila, Buti and Franco (2001) for a review of the earliest debate. González-Páramo (2005) provides a comprehensive overview of the initial conceptual discussions about the fiscal rules framework and its interaction with monetary policy.

6 According to the [Communication](#) from the Commission to the Council on the activation of the general escape clause of the Stability and Growth Pact: “The general escape clause does not suspend the procedures of the Stability and Growth Pact. It will allow the Commission and the Council to undertake the necessary policy coordination measures within the framework of the Pact, while departing from the budgetary requirements that would normally apply.”

may be allowed temporarily to depart from the adjustment path towards the medium-term budgetary objective [...], provided that this does not endanger fiscal sustainability in the medium term". For the corrective arm, the aforementioned Regulation stipulates that, in the case of a severe economic downturn, the Council may also decide, on a recommendation from the EC, to adopt a revised fiscal trajectory. According to the EC, the decision to deactivate the general escape clause should be taken based on an overall assessment of the state of the economy based on quantitative criteria, with the level of economic activity in the EU compared to pre-crisis levels as the key quantitative criterion. Thus, on the basis of the EC's Spring 2021 Economic Forecast, the general escape clause will continue to be applied in 2022 and is expected to be deactivated as of 2023.⁷

The debate on the reform of the fiscal governance framework in the EU is raging, with several different contributions being made. These can be grouped into three blocks. First, the proposal for simplifying the fiscal rules and strengthening their governance arrangements. Second, the need to incorporate new supranational fiscal policy components that contribute to the euro area's macroeconomic stabilisation is underscored. Lastly, proposals suggest the reforms in the fiscal arm need to be part of, and contribute to, a more ambitious process to implement the reforms required to complete an optimally functioning monetary union.

As regards the first block, the aim of simplifying the rules would be to make them more transparent and flexible. A widely shared proposal would be to focus on the part of the current framework concerning the definition of a medium-term debt target, which anchors fiscal policy conduct, and to select, from among the current operational instruments, the one related to the expenditure benchmark, which would ensure fiscal policy's countercyclical role. The rule could exclude certain components, such as the interest burden on government debt, as well as certain investments. An escape clause would also be available for exceptional circumstances. This architecture should be accompanied by a strengthened governance system ensuring compliance, and afford a more prominent role in its supervision and coordination to multilateral agents (European Fiscal Board (EFB); EC; and the Eurogroup) and national independent fiscal councils.⁸ Precisely defining all these elements, which are very complex, could possibly lead to a simpler framework than the current one provided they are designed adequately. However, the definition of the expenditure benchmark in the economic literature is not free from controversy.⁹

Turning to the second block, supranational instruments would allow for risk sharing in the event of symmetric and asymmetric shocks of varying severity to the euro area economies; specifically, they would facilitate the absorption of very severe shocks. "Centralised" fiscal policy tools could be automatic, such as a common unemployment insurance scheme (reinsuring domestic ones) or a more general stabilising

⁷ See, among others, the [EC's presentation of the European Semester Spring Package](#) of 2 June 2021.

⁸ See Martin, Pisani-Ferry and Ragot (2021).

⁹ See Marinheiro (2021).

instrument dependent on the cyclical position (the output gap).¹⁰ They could also take the form of ad hoc, temporary agreements funded via common debt. These agreements would be foreseeable in the event of severe shocks, such as the measures adopted in the COVID-19 health crisis, most notably the NGEU package, the Support to mitigate Unemployment Risks in an Emergency (SURE) loans and the European Stability Mechanism (ESM) credit lines to cover direct and indirect health sector expenses linked to the coronavirus crisis. This type of instrument lessens the likelihood of Member States suffering spells of sovereign distress and, as a result, potentially needing to resort to the bail-outs currently covered by the ESM (see Box 2). However, whether funded via common debt or by greater tax revenue-raising capacities at the European level, risk sharing must be accompanied by an incentive system that prevents negative cross-country externalities and moral hazards from emerging, something of utmost importance in a monetary union. The incentives could be anchored to a “no bail-out” clause, which already exists in the current legislation (Article 125 of the Treaty).

Lastly, the third block of arguments stresses that the fiscal components of risk sharing alone will not suffice to complete the monetary union; further domestic and supranational measures will be required. The steps needed in this respect include strengthening domestic structural reform agendas, making them more ambitious so that they boost economic convergence and lay the foundations for broader risk sharing; pressing forward with capital market integration in the EU/euro area (private channels are a key risk-sharing tool in monetary unions);¹¹ and completing the last phase of the banking union, which should finalise important elements such as the definition of a European deposit insurance scheme.

Irrespective of their political feasibility, these proposals do not easily fit the current macroeconomic environment. The setting for this necessary reform bears little resemblance to that of the 1990s, when the cornerstones of the current model for euro area fiscal policy coordination were laid. Over recent decades, far-reaching structural trends, such as digitalisation, globalisation, climate change and population ageing, have emerged or taken hold. These trends are largely triggering lower natural rates of interest and influencing potential output growth rates, at least in advanced economies. Also, after the Great Moderation, the European and world economy has, over the last 15 years, suffered particularly severe global shocks. Further, these trends are testing the resilience of traditional public safety nets, which in the EU are structured around a broad spectrum of welfare states.¹² Supporting them has resulted in the build-up of increasingly higher levels of government debt in recent decades, to peak levels at present, and in heavier tax burdens being borne by households and firms (see Chart 1).

This setting calls for a paradigm shift in how the new governance framework is designed, as opposed to the incremental approach of recent decades. In line with the foregoing discussion, the new framework should include improved governance of fiscal rules,

10 See Banco de España (2017).

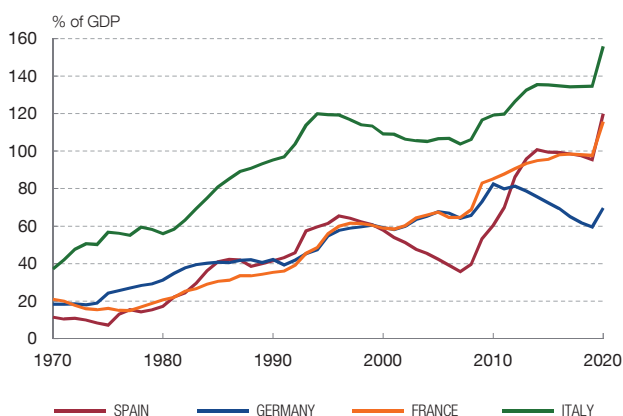
11 See Banco de España (2017), Gordo and Kataryniuk (2019) and Burriel et al. (2020).

12 See Delgado-Téllez et al. (2020a).

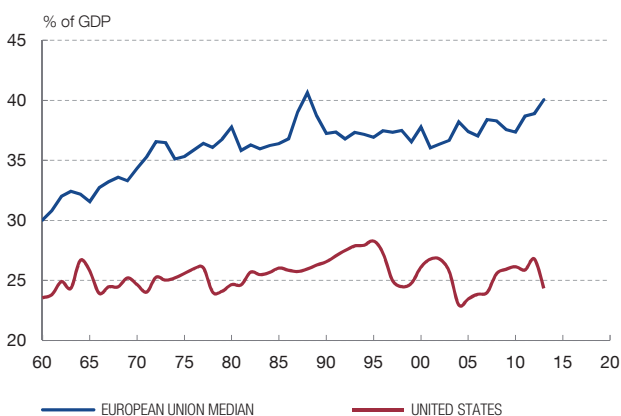
Chart 1

FUNDING OF GOVERNMENT EXPENDITURE IN THE EURO AREA IN RECENT DECADES: GOVERNMENT DEBT AND TAXATION

1 GOVERNMENT DEBT IN THE MAIN EURO AREA ECONOMIES



2 TAX REVENUE



SOURCES: IMF (Historical Public Debt Database) and Eurostat.

which should be simpler, more functional and more credible than the current ones, but it should also go a step further and incorporate supranational risk-sharing fiscal components enabling the smooth operation of the monetary and fiscal policy mix, from a wider euro area perspective. Also, the medium-term anchors should be adapted to the specific interest rate and potential growth environment at each point in time, recognise that economies may continue to be subject to very severe shocks (such as those seen over the last decade) and, at the same time, develop realistic mechanisms for absorbing existing fiscal imbalances. Nonetheless, the foregoing should take into account the need to recover fiscal space in the medium term, which entails application of a prudent, transparent and credible fiscal policy framework.

Mindful of this situation, the Four Presidents' Report¹³ and the Five Presidents' Report¹⁴ set out a medium to long-term agenda of proposed reforms. The 2015 analysis in the latter report was based on the idea that the Economic and Monetary Union (EMU) was an economic and political project, whose completion would require solidarity and respect for commonly agreed rules from all members. Recognising that the legacy issues were an objective difficulty, the report identified prerequisites to ensure that activating solidarity mechanisms – in particular, in the fiscal realm (Fiscal Union) – was broadly socially acceptable: (i) Member States must embark on structural reforms with the triple objective of enhancing the quality and governance of national economic policies, making adjustment mechanisms more flexible in the event of crises and, in sum, having resilient economies with sufficient fiscal buffers over the economic cycle (Economic Union); and (ii) private risk-sharing mechanisms must also be improved via truly integrated financial and capital

¹³ See Rompuy (2012).

¹⁴ See Juncker (2015).

markets (Financial Union). The report proposed that the process be organised in stages. The second stage (set to start in July 2017 and end before 2025) featured the more far-reaching reforms, including the creation of a centralised shock absorption mechanism, in which the Member States could participate by undertaking to adhere to a set of commonly agreed legal benchmarks for convergence.

The rest of this paper contextualises and develops these ideas. Section 2 sets out the rationality of the original governance framework, founded on the Maastricht Treaty (1992), and the main shortcomings of its design. Section 3 discusses the experience with this governance framework and the successive adjustments implemented to rectify the initial shortcomings of its design. In Section 4 we discuss the main constraints on the current options to reform the fiscal governance framework in a new macroeconomic environment; specifically, the issue surrounding the definition of the medium-term debt anchors (and their dependence on the interest rate and potential growth environment at each point in time), the need to recover fiscal space in the medium term (given that the economies may continue to be subject to particularly severe shocks) and, therefore, the need to develop realistic mechanisms for absorbing existing fiscal imbalances. However, while we provide quantitative elements to illustrate these challenges, we do not assess which would be the correct path to follow to transition towards a new setting, or the ideal timetable for implementing a potential reform of the fiscal rules framework. These matters are left for future papers. Lastly, Section 5 presents the main conclusions drawn from the analysis conducted in the paper.

2 The original governance framework and its shortcomings

2.1 Rationality

Under the Maastricht Treaty, the EMU's design had two core parts: a single monetary policy and a set of coordinated national fiscal policies. An independent central bank targeting price stability was entrusted with monetary policy. In turn, the stabilising arm of the autonomous national fiscal policies was tasked with addressing idiosyncratic shocks and cyclical slippages, and such policies were also subject to certain constraints, implemented via the common rules. The existence of externalities¹⁵ warranted some constraints on independent conduct of fiscal policy as: (i) serious budgetary deviations could generate economic and financial instability across the euro area as a whole and influence the single monetary policy; and (ii) budgetary discipline could not be entrusted exclusively to market mechanisms, despite the included safeguards, such as the “no bail-out clause” or the prohibition of privileged access by the public sector to central bank financing.¹⁶ The Treaty stipulates two quantitative reference values (60% for the ratio of government debt to GDP and 3% for the ratio of budget deficit to GDP).

The SGP, signed in 1997 by the EU Member States in preparation for the EMU, developed the governance of the quantitative reference values stipulated in the Treaty. The 60% reference value for the ratio of government debt to GDP enabled deficit dynamics to be constrained. Budget deficits could only exceed the 3% of GDP reference value exceptionally and temporarily, insofar as adjustment plans had been adopted that would bring them below that value in the medium term. Monitoring these quantitative reference values would enable the prevention of imprudent national fiscal policies and the correction of excessive debt or deficit positions, i.e. breaches of the reference value thresholds. The SGP also regulated the role of the EC and the Ecofin Council, in addition to the various political-administrative coordination procedures: annual submission by the Member States of their Stability Programmes, which enable the degree of compliance with the pact to be assessed, and the preparation by the European institutions of recommendations, warnings and even sanctions.

The quantitative limits were defined taking into account, approximately, the average economic situation at the end of the 1990s. Assuming potential growth of 2% and an inflation target of 2%, a budget deficit limit of 3% of GDP would stabilise the ratio of government debt to GDP at 60% (see Annex 1 for the arithmetic for these figures). These reference values were set uniformly for all EU Member States. For the euro area as a whole, between 1995 and 1999 the interest burden on debt, the primary surplus, the budget deficit

¹⁵ Previously identified in the Delors Report (see Committee for the Study of Economic and Monetary Union (1989)).

¹⁶ After the period of high inflation in the 1970s and 1980s, the independence of the ECB and the prohibition of monetary financing enshrined in the Maastricht Treaty largely responded to the arguments developed in the academic literature that the lack of fiscal discipline could represent a source of inflation (see Sargent and Wallace (1981)). The aim of these constitutional safeguards was to prevent Member States with stressed public finances from opting to reduce the actual value of public-sector liabilities by causing inflation surprises. Over the course of the 1990s, successive academic papers developed in greater detail the interaction between fiscal and monetary policy (see Leeper (1991)).

and government debt stood at 4.8%, 1.1%, 3.7% and 72.4% of GDP, respectively. The implicit interest rate on sovereign debt, real GDP growth and the real interest rate stood at 6.6%, 2.5% and 5%, respectively. At that time, these aggregates were consistent with the long-term values reflected in the quantitative limits.

2.2 Shortcomings

The design of the Maastricht Treaty left significant gaps in the governance of the euro area. First, due to the apparent simplicity of the framework, the rules only touched on the role of the business cycle as a determinant of the position of the public finances.

It only envisaged the discretionary application of the excessive deficit/debt correction path, which could potentially take into account this consideration, with no explicit reference to the importance of the cyclical position, in particular, in determining the actual budget deficit. After the first SGP crisis in 2003, in relation to the EC's excessive deficit procedure proposals for Germany and France, and considering that the simple indicators could skew fiscal policy procyclically, some flexibility was incorporated. In this regard, the 2005 reform sought to increase both national ownership and the EC's discretion to flexibly interpret the deficit limit and the correction deadlines, which would take into account the national economies' different cyclical positions. To achieve this, additional indicators, such as the structural budget deficit, were incorporated.¹⁷

Second, the quantitative limits were included in the Treaty as if they were "structural values" of the economies. It was not taken into consideration that the limits were calibrated on the basis of the average macroeconomic conditions at the end of the 1990s, and that they could cease to be applicable in the event of structural transformations in the economies.

Third, the role that macroeconomic imbalances could play in a monetary union was not factored in. Specifically, the original design was incapable of identifying the risk of macroeconomic imbalances, especially national ones, arising in the private sector that could potentially generate serious economic and financial instability for the euro area as a whole.

Fourth, neither did the Treaty envisage the creation of a crisis management framework. This was left to supranational monetary policy operations and the ad hoc coordination of national policies within the Council of the European Union. The Treaty did not provide for an institution, potentially funded via a centralised budget, that could help fulfil two key functions.¹⁸ First, the macroeconomic stabilisation of the euro area as a whole, which, in the absence of such institution, was left exclusively in the hands of monetary policy. Second, the capacity to absorb jointly the risks stemming from asymmetric shocks (or the asymmetric effects of common shocks), to compensate for the loss of national fiscal autonomy laid down in the Treaty. While the first omission may have been due to expectations

¹⁷ The European Central Bank was particularly critical of the reform of the corrective arm, stating that sound fiscal policies were prerequisites for macroeconomic stability, growth and cohesion in the euro area (see ECB (2005)).

¹⁸ A European Treasury, which had already been championed in the Werner Report (see Werner Committee (1970)).

that the national fiscal policy coordination framework would function optimally, the second was mainly attributable to political realism.¹⁹ That said, there was certainly some scepticism about fiscal policy's stabilising capacity and the desirability of coordination between fiscal policy (defined on the basis of the aggregation of national reference values) and the ECB's monetary policy underlying the economic thinking at the time.

Neither were the mixed macroeconomic conditions (apart from the fiscal variables) of the euro area countries taken into account. These countries joined the euro area with very different economies in terms of their industrial structure, sectoral specialisation, degree of competitiveness, structural unemployment level, development level (and the attendant need for public investment) and the financial patterns of their households and firms, among others. In a nutshell, this was a set of fiscal rules for a possibly already very mature economic and monetary union, rather than for one in the process of being perfected, since there were some expectations that deeper monetary and financial integration would bring about economic convergence.

¹⁹ See Bini-Smaghi, Padoa-Schioppa and Papadia (1994).

3 The successive adjustments to the original governance framework

The shortcomings identified in the governance framework have been thrown into relief over the last 15 years. The global financial crisis, the subsequent euro area crisis and the more recent COVID-19 crisis have put the euro area's fiscal governance framework to the test and have resulted in successive adjustments to the framework in order to partially address its aforementioned shortcomings.

Broadly speaking, the recent shocks have exceeded the risk-absorbing capacity of the most vulnerable countries' national budgets. This has largely been magnified by the fact that the fiscal rules did not ensure that upswings were taken advantage of to achieve a sufficiently healthy budgetary position. The global financial crisis and the European sovereign debt crisis threw into relief the importance of interactions between macroeconomic imbalances arising in the public and private sectors (specifically, in the case of the latter, the financial sector), intensified by the existence of very sizeable real and, above all, financial spillovers among countries, the existence of redenomination risks (understood as the possibility that a monetary union breakup could lead to euro-denominated debt being translated into a legacy currency) and the disruptive potential of financial fragmentation (i.e. where financial costs for financial agents diverge on account of their geographical location). In all these cases, resolute monetary policy conduct was accompanied by far-reaching institutional changes in other areas.

In this connection, significant headway has been made in times of crisis.²⁰ The response to the 2008-2009 global financial crisis and the 2011-2012 euro area sovereign debt crisis saw the strengthening of the euro area's budgetary surveillance mechanisms and the introduction of the Macroeconomic Imbalances Procedure (the Six Pack in 2011, the Fiscal Compact in 2012 and the Two Pack in 2013).²¹ These developments continued to affect the coordination of national measures, providing a more favourable institutional context both fiscally and macroeconomically (structural reforms).²² In addition, important strides were made on the supranational front, with the creation of the ESM in 2012, which established a permanent mechanism for conditional financial assistance for euro area countries, and the creation of the banking union (2012), which saw responsibility for banking supervision transferred to the Single Supervisory Mechanism (SSM). Furthermore, the Macroeconomic Imbalances Procedure was introduced to try to incorporate into the governance framework the importance of monitoring macroeconomic imbalances.

²⁰ See Gordo and García-Perea (2016) and Kataryniuk, Mora-Bajén and Pérez (2021).

²¹ The Six Pack reinforced the sanctions under the SGP and introduced new rules and the Macroeconomic Imbalances Procedure. In the Fiscal Compact, the Treaty's signatory Member States undertook to implement the balanced budget rule in their respective national legislation. Lastly, the Two Pack conferred on the Commission the capacity to issue an opinion on the draft budgetary plans prior to their parliamentary approval. These reforms led to a substantial revision of the national budgetary frameworks, including the introduction of a new part of the budgetary process, the independent fiscal institutions (see Gordo et al. (2015)).

²² Various authors have shown that implementation of the recommendations has, in any event, been relatively low. See Darvas and Leandro (2015) or Efstathiou and Wolff (2018).

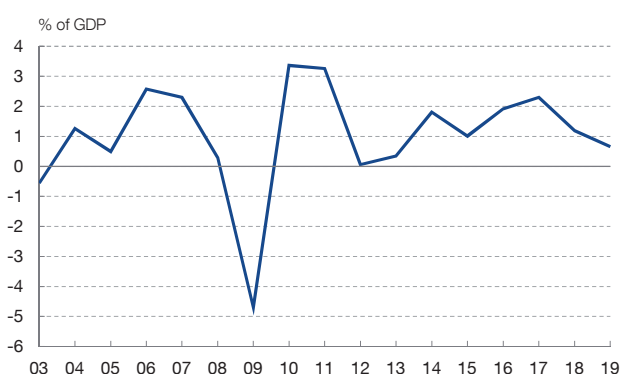
Subsequently, the COVID-19 health crisis has resulted in temporary, centralised fiscal instruments being designed, representing somewhat of a paradigm shift.²³ This meant the Member States could, first, address the shock via emergency assistance (healthcare sector) and unconditional loans at favourable interest rates (SURE, unemployment). In addition, from 2021 onwards, these instruments will fund the future recovery via a combination of assistance and loans subject to some conditionality. These conditions are not of a budgetary nature, but instead relate to how the funds are earmarked and how efficiently they are used, as well as the implementation of structural reforms (NGEU). Additional changes were incorporated into the ESM in 2020, establishing the Pandemic Crisis Support credit line. Furthermore, as mentioned above, the SGP general escape clause was activated. This has enabled very expansionary national budgetary policies to be run in 2020 and 2021, in keeping with the prevailing cyclical circumstances.

However, the successive reforms have not covered all the pending issues: the framework for the interaction of fiscal and monetary policy still has some key shortcomings. Beyond the undoubtedly successful and appropriate coordinated action during the COVID-19 crisis, varying degrees of improvement could be made to the current policy mix's underlying design. First, the national fiscal policies, which remain the basis of the overall fiscal policy stance in the euro area, are not determined by taking into account the position of the euro area as a whole. This may result in certain mismatches between the area's needs and those of its Member States. This was clearly highlighted in the wake of the 2008–2009 crisis, when fiscal policy adopted a markedly contractionary stance and

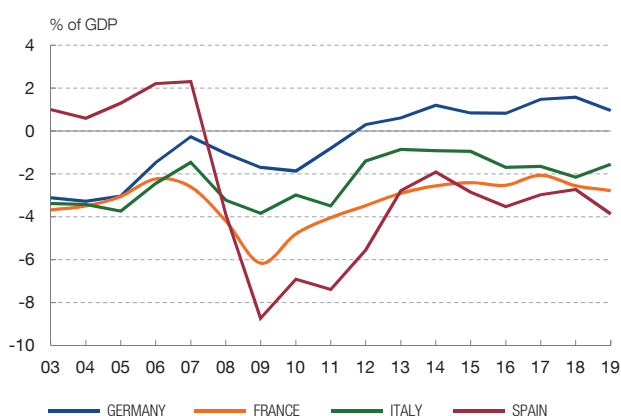
Chart 2

REAL-TIME CHANGE IN THE GENERAL GOVERNMENT STRUCTURAL BALANCE

1 EURO AREA (a)



2 FOUR LARGEST ECONOMIES



SOURCES: EC and Burriel et al. (2021).

a The structural balance refers to the EC's calculation in its Spring Forecast for the following year, based on Eurostat's preliminary flash estimate of the general government balance and real GDP.

23 See Arce et al. (2020), Delgado-Téllez et al. (2020b) and Banco de España (2021).

took on a procyclical profile, especially in 2011-2013, followed by an approximately neutral stance until the onset of the pandemic in 2020. This has been corrected in the context of the COVID-19 crisis through the above-mentioned (temporary) measures (see Chart 2), enabling an appropriate policy mix to be run, with highly expansionary national fiscal policies accompanying a similarly expansionary monetary policy.

Against this background, the fact that there are very few references to the make-up of public finances in the budgetary rules framework is also important. This aspect takes on an important role in a setting where monetary policy space is more frequently limited on account of interest rates being close to their lower bound, given the secular decline in the natural rates of interest. A fiscal policy composition that is more favourable to economic growth and investment would provide for greater monetary policy space.

4 Constraints on the new reform process

4.1 What is the appropriate debt level (anchor) in the medium term?

The (chiefly empirical) economic literature shows that high levels of government debt over prolonged periods tend to be associated with lower economic growth.²⁴ According to the reference literature, this adverse impact comes into play once certain government debt ratio thresholds - determined not only by the level of debt but also by its dynamics - have been exceeded, such that a high level of government debt that is being reduced has a lesser negative impact. At the same time, the evidence shows that the interaction of government debt levels, the quality of fiscal policy design and other idiosyncratic factors in each country are relevant. These are the grounds of the rationale for imposing reference values or legal limits on debt levels in national budgetary frameworks and, in the case of Europe, in the SGP.

The sustainable level of government debt over the medium term hinges on the sovereign's macroeconomic fundamentals. Over the long term, and for a given inflation rate, the primary balance (i.e. excluding the interest burden) allowing for the stabilisation of a given government debt-to-GDP ratio depends on the differential between the real interest rate (r) and the real output growth rate (g) (see Annex 1). Thus, the wider the gap between interest rates and economic growth, the higher the primary balance needed to maintain a stable medium-term government debt-to-GDP ratio. Around the time the SGP came into force, the $r-g$ differential was positive, at close to 2 percentage points (pp) on average in the period 1995-1999. As a result, the medium-term stabilisation of existing government debt levels at around 60% (with inflation of 2%, i.e. the ECB's target) was consistent with running an overall budget balance of around -3% of GDP. In the current context, however, and given the budget deficit reference value of 3% of GDP, the trend towards negative $r-g$ differentials would be consistent with government debt levels stabilising at a higher percentage of economic output (see Chart 3).

Aside from the foregoing simplified arithmetic, the literature discusses determining reference thresholds for debt in broader contexts.²⁵ In line with the empirical literature mentioned above, the theoretical literature suggests that, beyond the levels demanded by different budgetary frameworks, there are "prudent" government debt levels for each country above which that country would become more vulnerable and come under greater financial market scrutiny. Should lenders be able to analyse an economy's current and future strength, the status of its public finances and the quality of its national

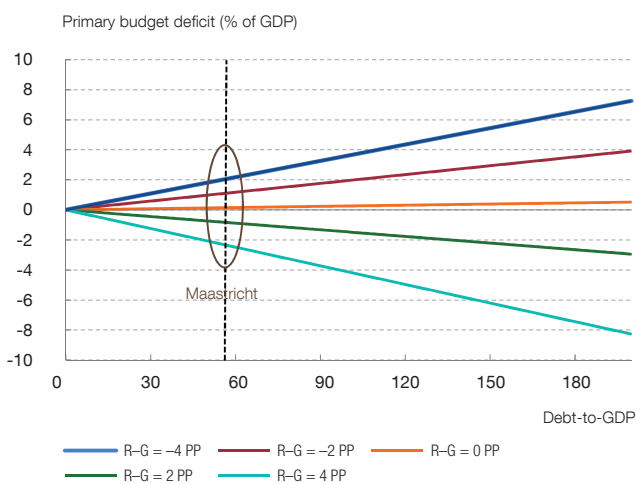
24 See, for example, Reinhart, Reinhart and Rogoff (2012) and the literature review in Hernández de Cos, López Rodríguez and Pérez (2018). There are several channels through which a high debt level can dampen economic growth. First, higher government debt increases the exposure to macroeconomic risks on account of both a lack of a fiscal buffer to stabilise the economy (whose construction, by limiting productive spending or hiking distortionary taxes, would adversely affect economic growth) and a greater incidence of sovereign debt episodes (for example, through the bank-sovereign doom loop). Second, running high levels of government debt absorbs economic resources that could be earmarked for potentially more productive private uses, limiting long-term economic growth.

25 See Alloza et al. (2020) for an empirical characterisation of the "prudent" public debt limit for Spain consistent with financial market expectations.

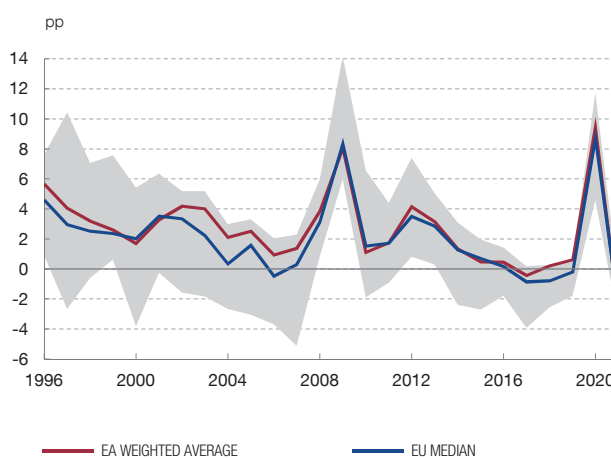
Chart 3

DEBT SUSTAINABILITY ARITHMETIC

1 RELATIONSHIP BETWEEN THE PRIMARY BUDGET DEFICIT AND LONG-TERM DEBT FOR DIFFERENT R-G ASSUMPTIONS



2 R-G DIFFERENTIAL IN THE EU (a)



SOURCE: EC.

a The shaded area denotes the range between the 10th and 90th percentiles of the EU Member States.

institutions, they would be in a position to impose stricter debt limits on countries with weaker and/or more volatile macroeconomic fundamentals. One set of papers, in particular, studies the determinants of the maximum level of debt that a country can allow itself without the risk of resorting to a default thereon, and the emergence of non-linear reactions in the proximity of that level, which may ultimately trigger explosive increases in the cost of debt.

The concept of a “prudent” government debt-to-GDP ratio level has also been discussed in the literature focusing on the development of government debt sustainability indicators. Some papers have more accurately defined the fiscal limit as the value equal to the discounted sum of the primary surpluses that an economy can attain in the future.²⁶ If this value is less than current government debt, it would indicate a need to drastically adjust fiscal plans (to generate more resources) or to resort to a partial debt default at some point in time, with the consequent increase in risk premia. Both the “prudent” debt level and the fiscal limit are country-specific and, crucially, they do not depend solely on budgetary variables, but also on the overall functioning of the economy, which would explain how similar debt levels can give rise to different borrowing costs. Consequently, even though the debt levels above which a given country may encounter financing difficulties cannot be accurately defined, it is very important to monitor developments in debt. A debt crisis can develop unexpectedly and relatively quickly, especially if, at some point in the recovery, a

²⁶ See Bi (2012).

more active monetary policy is needed in order to eliminate inflationary spurts.²⁷

The current high levels of government debt evidence the difficulties of transitioning to the medium-term debt anchors. At present, converging towards a debt-to-GDP ratio of 60% would call for a concerted and constant fiscal effort over a prolonged time frame, thereby also limiting fiscal policy's capacity as a stabiliser for the duration of the adjustment process. Thus, using the historical average values of real growth, inflation and interest rates, the euro area would need to maintain a fiscal surplus of 1.1% of GDP over 20 years in order to reduce the debt ratio to 60% (see Chart 4). This is substantially higher than the average primary deficit of 0.4% of GDP observed for the euro area as a whole since 1995. For this constant fiscal effort to be at more plausible values, the macroeconomic environment would need to be far more favourable than it has been in recent decades. For instance, if real growth in the euro area were twice its historical value (1.3% on average in the period 1995-2021), maintaining a constant primary deficit of close to 0.2% of GDP would suffice to reduce the debt ratio to 60% in 20 years. Similarly, if the implicit rate on government debt in the euro area were around 0.8% over the coming 20 years (compared with the 1.6% expected for 2019-2021), a constant fiscal effort of 0.5% of GDP would be needed during that period to reach the 60% debt target. Although simplistic, these exercises illustrate that significant effort could be needed for the transition to the medium-term fiscal targets in any macroeconomic environment that is not unusually favourable.

This is especially relevant given the need to recoup fiscal policy headroom in the medium term. Following an economic crisis, public finances tend to deteriorate as fiscal policy is used to stabilise the economy. The trajectory towards fiscal consolidation should take into account the likelihood of a further economic crisis and the fiscal headroom needed to combat it. This headroom could be quantified in a highly stylised form, using the average change in the government debt ratio in the five years following an economic crisis. From a historical perspective, this change in the government debt ratio has been close to 20 pp for the euro area as a whole, although there is a high degree of cross-country heterogeneity, largely reflecting differing output volatility and other specific factors (see Table 1). In view of the difficulty faced by countries in achieving the fiscal buffer needed to attain appropriate economic stabilisation in the event of a recession, it is worth discussing the part that supranational headroom could play in the transition towards healthier fiscal positions. Moreover, an institution like the ESM could play a significant role in mitigating potential sovereign risks, acting as a backstop in the event of shocks affecting some countries.

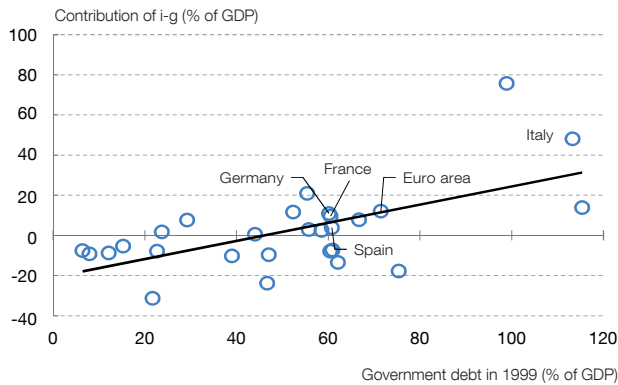
Given the magnitude of and disparity in Member States' starting fiscal position, stop-gap measures that help harmonise them could be needed. The transition to "desirable" fiscal positions would be especially demanding, in terms of time and effort, for countries with a higher government debt ratio. The economic literature

27 See Andrés, Burriel and Shi (2020).

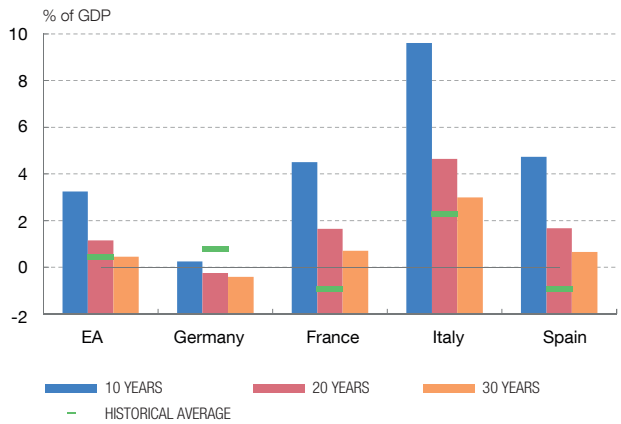
Chart 4

FISCAL EFFORT REQUIRED TO REDUCE GOVERNMENT DEBT OVER A CERTAIN TIME HORIZON UNDER DIFFERENT MACROECONOMIC FUNDAMENTALS SCENARIOS

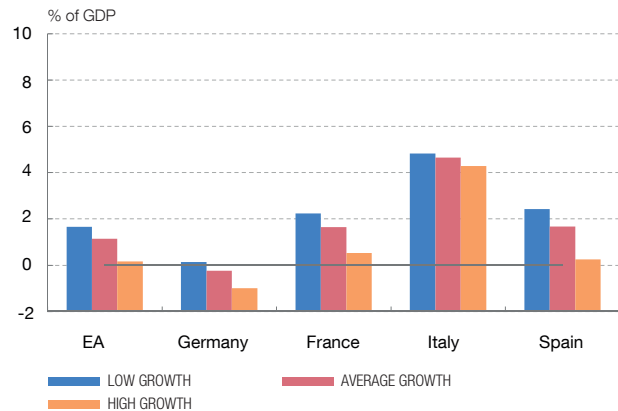
1 RELATIONSHIP BETWEEN THE GOVERNMENT DEBT RATIO IN 1999 AND THE CONTRIBUTION OF THE I-G DIFFERENTIAL IN 1999-2019



2 CONSTANT PRIMARY BALANCE REQUIRED TO ACHIEVE A DEBT-TO-GDP RATIO OF 60% OVER A CERTAIN TIME HORIZON (a)



3 CONSTANT PRIMARY BALANCE REQUIRED TO ACHIEVE A DEBT-TO-GDP RATIO OF 60% IN 20 YEARS: THE ROLE OF REAL GDP (b)



4 CONSTANT PRIMARY BALANCE REQUIRED TO ACHIEVE A DEBT-TO-GDP RATIO OF 60% IN 20 YEARS: THE ROLE OF INTEREST RATES (c)



SOURCE: EC.

- a The calculations assume average growth for real GDP, nominal GDP and inflation according to their 1995-2021 average. For the implicit interest rate on government debt, the average value for 2019-2021 is assumed.
- b Average growth refers to a scenario where real GDP grows at its average 1995-2021 pace. The low and high growth scenarios multiply the 1995-2021 average by 0.5 and 2, respectively.
- c Average interest rate refers to a scenario where interest rates hold at their 2019-2021 average. The low and high interest rate scenarios multiply the 2019-2021 average by 0.5 and 2, respectively.

proposes two courses of action that would help ease this problem. First, a “two-speed” convergence to the medium-term anchors could be considered, enabling Member States with a worse starting position to converge to the necessary targets by smoothing the required fiscal adjustments over time.²⁸ Second, some authors have proposed one-off measures allowing for an immediate levelling of the starting debt positions through the

²⁸ Implementation of fiscal adjustment measures has been the subject of numerous studies, with consensus growing that the composition and timing of an appropriate fiscal adjustment need to be carefully designed to limit the related possible adverse effects on economic growth (see, for example, Corsetti et al. (2010) and Guajardo, Leigh and Pescatori (2011)). Although relevant to the current setting, the idea that it is optimal to spread the tax burdens arising from tax hikes over a long timescale (tax smoothing) can be traced back to seminal studies on this matter (see Barro (1979)).

Table 1

AVERAGE INCREASE IN GOVERNMENT DEBT IN HISTORICAL RECESSIONS (a)

	Average impact	Maximum impact
Euro area (weighted average)	20.2	25.6
Germany	9.5	16.9
France	21.1	26.1
Italy	19.9	28.6
Spain	39.3	61.0
EU: arithmetic mean	18.3	31.6
EU: 25th percentile	10.0	15.9
EU: 75th percentile	24.1	42.4

SOURCE: Own calculations, drawing on EC data.

a The average impact is calculated as the average change in debt observed over a five-year time horizon from the onset of an economic crisis. The maximum impact shows the highest value of the change in debt during that period. An economic crisis is deemed a period in which there is at least one year of negative real GDP growth during a five-year time window. A sample period running from 1995 to 2021 is used for the analysis.

creation of redemption funds.²⁹ Such measures could be implemented by creating a European agency that assumes the portion of each country's debt that exceeds a certain threshold, to be funded with a commitment of future income guaranteeing the fund's operations. The success of such one-off measures would depend on the correct design of incentive mechanisms that anchor their credibility and limit moral hazard problems, such as indiscipline, that push up the cost of debt for participating countries.

4.2 Expanding the risk-sharing channels in the euro area

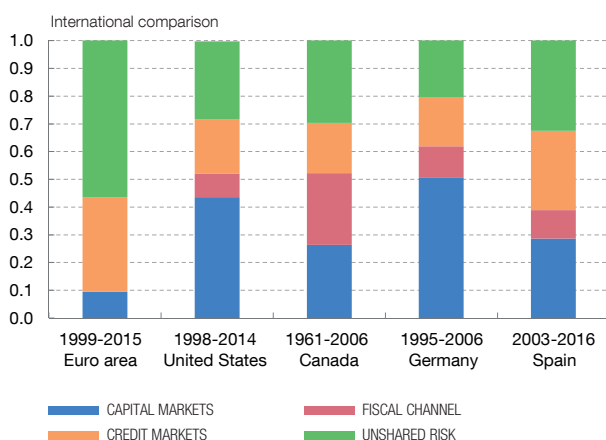
The introduction of permanent and automatic supranational mechanisms might increase the scope and effectiveness of fiscal policy within the euro area. In particular, these mechanisms might increase the capacity of budgetary policy to automatically absorb adverse (symmetrical) shocks at the aggregate level or the idiosyncratic (asymmetric) shocks in 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.

Private channels can play an important role in correct risk diversification in monetary unions. First, the impact of an adverse shock in a country belonging to a monetary union may be softened if the country's resident agents obtain income (be it financial or labour) from other countries (regions) not affected by the shock (income channel). Second, the

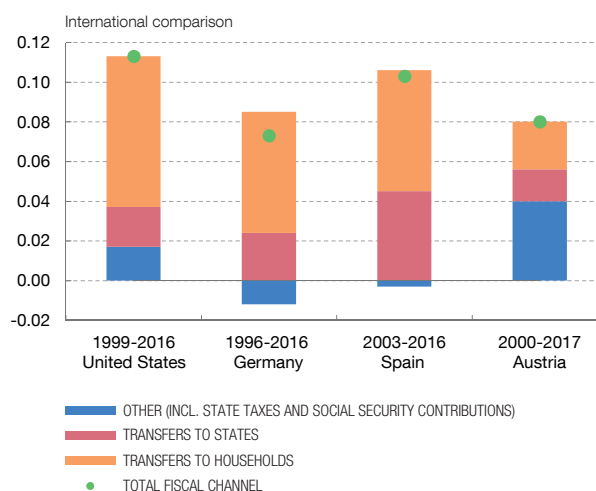
²⁹ The nature of the redemption is based on the argument that the large increase in debt witnessed in the last decade was the result of aspects related exclusively to the great financial crisis or the recent COVID-19 crisis, i.e. a perception of the debt as a legacy of previous economic conditions. There are different proposals which vary in terms of the size of the redemption and the timeline for its implementation, the resources to be used for funding it (VAT, wealth tax, seigniorage income) or the mechanisms to be used to bestow credibility on the redemption. For more details, see, for example, Pâris and Wyplosz (2014), Corsetti et al. (2015) or Cioffi et al. (2019) and the references they cite.

Chart 5
STABILISATION CHANNELS

1 STRENGTH OF RISK-SHARING CHANNELS



2 COMPOSITION OF THE RISK-SHARING FISCAL CHANNEL



SOURCES: Risk-sharing channels: Own calculations, for the euro area, the United States and Spain; Hepp and von Hagen (2013), for Germany; and Balli, Kalemli-Ozcan and Sorensen (2012), for Canada. The fiscal channel breakdown is from Burriel et al. (2020).

households and firms in the affected economy may ease their consumption by turning to their savings or to the credit market (credit channel). Logically, the greater the financial integration of, or labour mobility within, the monetary union, the more powerful these two channels will be. However, the presence of nominal rigidities in a monetary union tends to undermine the scale of some diversification mechanisms for idiosyncratic risks, as the different countries' capacity for adjustment is limited by their inability to adjust the exchange rate.³⁰ To this end, cross-country public insurance mechanisms would need to be implemented.

The risk-sharing channels in the euro area are currently limited, not only in the area of State budgets, but also as regards private channels. Indeed, the current strength of the risk-sharing mechanisms in place for euro area countries is limited (see Chart 5): around 60% of shocks affecting one Member State's GDP are reflected in that country's consumption. This is double the figure in the two fuller monetary unions of the United States and Canada (which are federal States), where substantially greater risks are shared through capital markets integration. The percentage of risk-sharing through fiscal transfers ranges between 7% and 11% in Austria, Germany, Spain and the United States, compared with practically zero in the euro area.³¹

Several alternatives exist for constructing inter-country public insurance mechanisms within a monetary union. The literature mainly identifies two types of mutual

³⁰ See Galí and Monacelli (2005) or Farhi and Werning (2017).

³¹ See Burriel et al. (2020).

fiscal insurance mechanisms: automatic and discretionary.³² Automatic mechanisms would include federal unemployment insurance and a centralised fiscal capacity, with transfers being granted on the basis of changes in pre-calibrated parameters related to the rise in unemployment or the output gap.³³ Discretionary mechanisms notably include proposals relating to emergency budgets aimed at absorbing very severe common shocks.³⁴ Under these proposals, budgets “for normal times”, focused on medium-term fiscal sustainability, would be combined with “emergency budgets”, which would be funded via debt and activated in coordination with the monetary authority to ensure an optimal response. In the case of the euro area, the response in “normal times” could be kept in the national arena, governed by reinforced fiscal rules, while the “emergency budgets” should be at supranational level and coordinated with the monetary authority.

The approval of the Recovery Fund may be viewed as a trial run for how this type of instrument might function. Grants under the NGEU, which are linked to the impact of the crisis, entail some risk sharing, although the lag in their implementation, the structural nature of the expenditure and their temporary nature mean that they cannot be considered as a cyclical stabilisation mechanism. However, even though it is expected to be repaid over a lengthy time frame against a background of relaxed monetary conditions, funding the grants through joint debt issuance represents a trial run for the euro area in giving a common fiscal response to large aggregate shocks.

4.3 An appropriate framework for the interaction of fiscal and monetary policy

The latest economic crises have shown the multiple ways in which fiscal and monetary policy can interact. First, monetary policy can provide fiscal policy with room for manoeuvre. Indeed, countercyclical monetary policy lowers economic agents’ finance costs (including the costs of sovereign debt)³⁵ in crises, when fiscal policy needs to play a more active expansionary role. In particular, in the recent health crisis, the decline in the cost of sovereign debt has provided fiscal authorities in all countries in the area with room for manoeuvre, enabling them to deploy unprecedented measures to sustain the income of households and firms.³⁶

Second, when interest rates are at their lower bound, countercyclical fiscal policy complements monetary policy.³⁷ In this setting, with continued, very moderate levels of inflation and unresponsive nominal interest rates, expansionary fiscal policy is particularly effective, as it pushes up future inflation expectations and lowers expected real interest

³² See Bilbie, Monacelli and Perotti (2021). Public authorities can also carry out actions that boost private insurance mechanisms, such as removing the barriers to cross-border investment.

³³ See Banco de España (2017).

³⁴ See Bianchi, Faccini and Melosi (2020).

³⁵ See Burriel, Martí and Pérez (2017) and Andrés, Burriel and Shi (2020).

³⁶ See Hernández de Cos (2020).

³⁷ Moreover, fiscal policy should ensure central banks’ capacity to implement their non-standard policies and, in particular, their viability, by preserving the value of their massive purchases of government debt, i.e. by guaranteeing that government debt is a safe asset.

rates, thereby giving a boost to spending on consumption and investment.³⁸ According to some authors,³⁹ this significant stabilising role of fiscal policy could be further strengthened if coordinated action is taken by the fiscal and monetary authorities that allows the spending increase to be offset by higher growth or inflation (rather than by future primary surpluses), as it would lessen agents' Ricardian behaviour, providing the announcements were credible. However, such fiscal policy conduct can pose significant debt sustainability risks and even lead to fiscal dominance over monetary policy if the central bank does not have mechanisms ensuring its independence.

At the same time, fiscal policy can help make monetary policy more effective, in an environment of persistently low inflation, by pushing the natural rate of interest upwards. To this end, it is essential that the composition of public spending be orientated to public and private investment, allowing higher economic productivity and a boost to potential growth and the natural rate.^{40, 41} Fiscal policy may also raise the natural rate, thereby reducing the surplus saving in the economy, for example by increasing the supply of risk-free assets through greater issuances.⁴² Lastly, fiscal policy should help ensure central banks' capacity for implementing their non-standard policies by preserving the value of their massive purchases of government debt, i.e. by guaranteeing that government debt is a safe asset.

In any event, one of the clearest lessons learnt from the experience of recent years is that, in a monetary union such as the euro area, the effectiveness of fiscal policy as a stabiliser for the union as a whole requires close policy coordination between Member States.⁴³ The difficulty lies in how to achieve such reinforced coordination within the SGP without interfering in national fiscal policies, which would not easily fit in the democratic process. First, the current fiscal rules envisage mechanisms for correcting excessive deficit or debt levels, but not for correcting national measures that are incompatible with the scale of the overall desired fiscal stance. Second, having an overall fiscal policy stance that is appropriate for the area as a whole does not guarantee

38 See Arce, Hurtado and Thomas (2016) and Christiano, Eichenbaum and Rebelo (2011).

39 See Bianchi, Faccini and Melosi (2020).

40 See Leeper, Walker and Yang (2010) and Fournier (2016).

41 One appropriate step in this direction would be the recent EU and US plans (dubbed Next Generation EU and the American Jobs Plan), which envisage additional investment of €750 billion and \$2 trillion, respectively, in these areas over the coming decade. Next Generation EU foresees investment of €750 billion (6% of GDP) up to 2026, of which at least 37% will be earmarked for investment in climate change-related projects and 20% in the digital transition. The American Jobs Plan in the United States envisages earmarking \$2 trillion to investments, chiefly in infrastructure, over the coming decade.

42 Moreover, according to Fernández-Villaverde et al. (2021), fiscal policy could also exert upward pressure on the natural rate of interest through measures that reduce economic agents' precautionary savings. These measures include increasing the income redistribution capacity of government revenue and spending policies, and strengthening social insurance mechanisms. In this regard, Mian, Straub and Sufi (2021) illustrate the trade-off faced by expansionary fiscal policy, which could act as an economic stimulus, but could also be a source of sovereign debt instability. The authors show that, in the case of the United States, there is a combination of permanent, but low, deficits and relatively high government debt, in which the output growth rate is higher than the interest rate and, thanks to the expansionary fiscal policy, converges to its potential rate.

43 The arguments for coordinating national fiscal policies to attain an overall expansionary fiscal policy for the euro area in recessionary settings, as a complement to monetary policy conduct, are backed up by the available evidence, which points to the existence of relevant fiscal policy spillover effects between the largest euro area countries, which would be especially significant in the case of a public investment-based budgetary expansion (see Banco de España (2017), Alloza, Burriel and Pérez (2019) and Alloza et al. (2019)).

that individual fiscal policies are adequate for the national fiscal sustainability and cyclical stabilisation targets, as has been observed in recent years. One possible solution to this coordination problem could be to establish a central mechanism entrusted with setting the euro area's overall fiscal policy stance, with national authorities carrying out their actions autonomously and in strict compliance with SGP rules. As discussed previously, the design of this central mechanism could be based on different frameworks and be compatible with the autonomous implementation of national fiscal policies whose stance is geared towards the needs of each country.

4.4 Rules, transparency, control and standards

The expenditure benchmark as an operational rule for modulating convergence to the medium-term debt anchor seems appropriate, according to the literature.⁴⁴ The usual 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 partially excluded, cannot exceed a reference ceiling, calculated on the basis of the economy's potential or medium-term growth. Furthermore, these benchmarks may include a correction factor which imposes a more restrictive limit on spending growth for countries with a debt ratio higher than the reference value. Their main advantage is that they help curb the procyclical bias of expansionary phases by preventing extraordinary income from being earmarked for increasing current public spending on a permanent basis. In this respect, the empirical literature suggests that fiscal frameworks that include expenditure benchmarks usually show better results in terms of long-term sustainability of public finances, while bringing about less volatility in economic activity. A well-designed expenditure benchmark would also simplify the multitude of current operational rules, which are based on various interacting variables (spending, deficit, structural deficit).

However, the specialist literature highlights the advisability of strengthening the fiscal rules with additional elements that ensure compliance.⁴⁵ In this respect, the introduction in recent years of independent fiscal councils or institutions, at both national and European level, including the reinforcement of the EC's powers in the oversight of the Member States, helps strengthen the institutional framework. In the light of international experience, other aspects of the national institutional framework (e.g. the degree of centralisation of the budgetary process, the processes for drawing up and releasing fiscal projections, the existence of national fiscal rules, and the setting of multi-year budgetary targets) are also key to the success of fiscal rules. The evidence available also indicates that national fiscal institutions, insofar as they can obtain better access to and knowledge of the data, the budgetary processes and national legislation, are usually less subject to the biases often detected in analyses, providing both their formal and operational independence

⁴⁴ See Banco de España (2017), Holm-Hadulla, Hauptmeier and Rother (2012) or Ayuso-i-Casals (2012) and the references they cite.

⁴⁵ See, inter alia, Hallerberg, Strauch and von Hagen (2007), von Hagen (2010), Merola and Pérez (2013), de Castro, Pérez and Rodríguez-Vives (2013), Reuter (2015), Hernández de Cos, Lacuesta and Moral-Benito (2016), Gilbert and de Jong (2017), Debrun et al. (2019) and Paredes, Pérez and Pérez-Quirós (2021).

is ensured. Lastly, the literature also indicates that the widespread and prompt availability of the statistical information needed to assess any rule, and the quality of such information, are key elements for evaluating the functioning of the rules in real time, correcting potential slippages and even assessing short and medium-term compliance.

It would be worth reconsidering the role of independent fiscal institutions at European and national levels. In a framework that places greater emphasis on supranational elements, such as that argued for in this paper, it would be worth strengthening the role of national fiscal institutions (national governments' first line of control) and their coordination with their counterparts at European level. At present, the European Fiscal Board is an independent body that advises the EC, in particular on the implementation of the fiscal framework and on the appropriateness of the national fiscal stance for the euro area as a whole.⁴⁶ The European Fiscal Board has no formal role vis-à-vis independent national fiscal councils; it might be desirable for this institution, or a similar one, to play a role in overseeing national institutions, possibly with strengthened governance and reporting, for operational purposes, to the legislative branch (European Parliament), rather than to the executive branch (EC). This would introduce a level of accountability for national fiscal councils and, in turn, strengthen the European Fiscal Board's independence.

Part of the literature argues that rules-based frameworks should give way to standards-based arrangements.⁴⁷ These authors argue that a straightforward and operational rules-based system cannot feasibly be defined, given the diversity of specific situations that have to be addressed. The changes to the SGP discussed in this paper are a reflection of these difficulties. This in turn shows that, however sophisticated a framework may be, it is impossible to accommodate all the possible contingencies that may arise. Consequently, they propose abandoning the formal rules-based systems and adopting a system of transnational standards, such as the need to prevent "excessive budget deficits". Two aspects are central to this proposal: (i) conducting country-specific government debt sustainability analyses; and (ii) determining which government behaviour is in line with the "standards" and which is not. The first aspect would require agreements as to the methodology to be used and the institution(s) to be entrusted with the analyses.⁴⁸ The second would require formulating which independent institution(s) would be tasked with determining whether a country's fiscal policy is in line with the standards. In practice, the conceptual problems identified are similar to those present in the debate surrounding formal rules-based frameworks: what the reference indicators are, who is responsible for checking compliance, and what form the potential corrective mechanism should take.

⁴⁶ See Asatryan et al. (2017).

⁴⁷ See Blanchard, Leandor and Zettelmeyer (2021).

⁴⁸ The successive reviews of the IMF's Debt Sustainability Analysis for Market-Access Countries (MAC DSA) reflect the significant complexity of this type of tool. The framework was introduced in 2002 and reviewed in 2003, 2005, 2011, 2013 and 2021. In addition to those in common with fiscal rules, the Debt Sustainability Analyses have their own specific problems, such as the need to include economic forecasts or risk identification. The difficulties identified in the MAC DSA include incorporating a realistic growth outlook, the sensitivity to changes in the model parameters and the models being anchored to long-term variables - which, by definition, are sustainable - that attach less importance to shocks. See IMF (2021).

5 Conclusions

The suspension of the European fiscal framework owing to the application of the general escape clause, and the absence of a set date for its reactivation, opens a window of opportunity for reform. There is a broad consensus on the need for a reform. The main proposals affect three blocks of issues: (i) simplifying the rules to make them more transparent and flexible; (ii) incorporating new supranational risk-sharing instruments into the Economic and Monetary Union, in particular to facilitate the absorption of severe shocks; and (iii) the fiscal aspects necessarily being accompanied by additional action at the national (structural reforms) and supranational (e.g. completing the banking union and pressing forward with the capital markets union) levels. Irrespective of their political feasibility, these proposals do not easily fit the current macroeconomic environment. This is far removed from that of the 1990s: structural trends, such as digitalisation, globalisation, climate change and population ageing, affecting the natural rates of interest and potential growth are emerging or taking hold. Also, after the Great Moderation, we have entered a period of severe global shocks.

The new global macroeconomic environment and the experience of the last 25 years warrant a paradigm shift in the design of the governance framework. This should include improved governance of fiscal rules, which should be simpler, more functional and more credible than the current ones, but it should also go a step further and incorporate supranational risk-sharing components enabling the smooth operation of the monetary and fiscal policy mix, from a wider euro area perspective. Also, the medium-term anchors should be adapted to the specific interest rate and potential growth environment at each point in time, recognise that economies may continue to be subject to very severe shocks and, at the same time, develop realistic mechanisms for absorbing existing fiscal imbalances. Nonetheless, the foregoing should take into account the need to recover fiscal space in the medium term, which entails application of a prudent, transparent and credible fiscal policy framework.

RULES, DISCRETION AND INSTITUTIONS

In a famous 2003 speech, Ben Bernanke¹ coined the term “constrained discretion” to describe the operating framework that the Federal Reserve Board and other central banks had adopted over the previous decade as a middle ground to overcome the debate that had raged since the 1950s between those favouring a rules-based approach for making monetary policy and those arguing for reliance on discretion. The framework catered to the need to circumvent the systemic problems of time inconsistency² posed by numeric rules, which, broadly speaking, are sub-optimal owing to the inherent difficulty of designing contingent plans that flexibly adapt to hard-to-foresee circumstances. At the same time, a further aim was to avoid the well-documented potential costs of discretionary policies: a lack of predictability, a tendency toward excessive policy activism and the possibility of making serious mistakes.

In essence, the framework adopted assigned an essential role to the central bank’s commitment to price stability in the medium to long term. This would enable agents’ inflation expectations to be anchored and thus increase the central bank’s discretionary capacity to stabilise growth and employment in the short term. Conceived to maximise the potential synergies in the short, medium and long term between the inflation and employment targets, the framework postulated —which contributed significantly to the Great Moderation— was, however, crucially underpinned by the existence of a technically competent institution whose operating procedures were conducted independently from the political power and which enjoyed credibility based not just on promises, but also on the facts backing them up: the prototypical central banking template that had gradually been applied since the mid-1980s.³

On the fiscal policy front, under a “constrained discretion” framework, delegating to an independent authority (agent) the aim of preserving sound public finances in the long run could also, in principle, fulfil the dual function of: i) putting a stop to fiscal indiscipline, i.e. the tendency (bias) of governments to ignore their inter-temporal budget constraint; and ii) implementing fiscal policy measures that optimally address the short-term trade-offs posed by changing economic circumstances.⁴ In practice, however, the difficulty arises when bestowing on that delegated authority fiscal instruments (revenue and/or expenditure) that: i) have an actual impact on the budget; and ii) observe the basic principles of democratic representation, in particular given the redistributive implications of fiscal measures. Obviously, the difficulty of parliaments and governments ceding sovereignty is multiplied where such fiscal instruments must be transferred to supranational authorities.

Excluding the fiscal delegation model from the set of feasible instruments, the numeric rules at the different tiers of government (sub-national, national and supranational) have largely taken centre stage. These rules generally establish quantitative limits on government debt, the budget deficit and government revenue and spending over a certain period. The IMF’s dataset⁵ on national and supranational fiscal rules reports key fiscal rule characteristics in more than 90 countries; in addition to their ubiquity, the degree of heterogeneity is notable: different legal bases, coverage, monitoring and enforcement procedures, escape clauses, etc.

The IMF dataset also includes a broad set of institutional supporting arrangements whose aim is to enhance the quality of the budgetary process. Fiscal councils (whose function is recognised in the EU’s legislation on national fiscal frameworks) are perhaps the most sophisticated example of these arrangements. They are entrusted with specific tasks which vary depending on the country; for instance, while fiscal councils are sometimes responsible for preparing key pieces of analysis in the budgetary process (e.g. macroeconomic projections underlying the government revenue and spending, and budget deficit forecasts), in most cases their role is confined to issuing their official opinion on whether the reported budgetary targets, or the macroeconomic projections underpinning the budgets, are realistic. Crucially, unlike in the case of monetary policy, fiscal councils have essentially advisory mandates and they are generally not provided with their own tools that enable them to independently achieve the objective of preserving sound public finances in the long term.

In the case of the EU, the quantitative reference values for government debt and the budget deficit were enshrined in the Maastricht Treaty in 1992 and implemented via the Stability and Growth Pact (SGP) five years later. As discussed in the paper’s main text, since then the SGP has had to reinvent itself on multiple occasions, but not always along the same lines, in response to crises. Blanchard et al. (2019), Gaspar (2020), Pappa (2020) and Bilbiie et al. (2021) have recently provided concise reviews of how the EU’s fiscal governance has evolved; these four contributions stress how fiscal rules have multiplied in the EU and the resulting framework’s great complexity. In this regard, during the latest stage, the reforms in the period 2011-2013 were focused on improving national budgetary processes and establishing the national fiscal councils and the European Fiscal Board (EFB), rather than increasing the number of rules and making them more complex.

Have the various fiscal rules and institutions proven to be effective? Heinemann et al. (2018) conduct a meta-regression-analysis for the

1 See Bernanke (2003).

2 See Kydland and Prescott (1977).

3 See Kocherlakota (2016).

4 See Costain and de Blas (2012) and Costain and Basso (2016, 2017).

5 Available at <https://www.imf.org/external/datamapper/FiscalRules/map/map.htm>.

RULES, DISCRETION AND INSTITUTIONS (cont'd)

budgetary impact of numerical rules based on 30 studies published over the last decade. Upon initial consideration, their estimates suggest that the rules have helped contain fiscal aggregates; however, the results cease to be significant when corrected for the two sources of bias reported by the authors: 1) an endogeneity bias; and 2) a publication bias.⁶ Eyraud et al. (2018) show that

effectiveness improves considerably in the case of “well-designed” rules (which the IMF has dubbed “second-generation fiscal rules”), especially when they are accompanied by independent fiscal councils. This would suggest that rules and institutions complement each other in making the fiscal governance framework more effective.

6 They find that the results in working papers are, on average, less favourable to the thesis of the rules' effectiveness than the results of publications in refereed journals.

THE EUROPEAN STABILITY MECHANISM

The European Stability Mechanism (ESM) was set up in 2012 as an inter-governmental lender of last resort to resolve crises in euro area countries. Under its treaty, ESM funds are raised by means of capital subscribed by the euro area countries based on the contribution key. These funds are used as a guarantee when the ESM issues debt on the markets, enabling it to grant financial assistance to the Member States. Strict conditions are attached to such financial assistance.

Two types of financial assistance were originally available. The first referred to loans to sovereigns.¹ These could be precautionary conditioned credit lines (PCCLs), for countries whose financial situation was deemed sound and which observed all the rules established in the treaties, but which faced a liquidity crisis triggered by an exogenous shock; or enhanced conditions credit lines (ECCLs), for countries which did not comply with one or more of the eligibility criteria for accessing a PCCL and whose situation may lead to a solvency crisis.² While no conditions are attached to a PCCL, the ECCLs are conditional upon the implementation of macroeconomic reform programmes prepared by the European Commission, in liaison with the ECB and, where appropriate, the IMF. This was the tool used in the bail-outs of Greece, Ireland, Portugal and Cyprus. The second type of financial assistance refers to loans for bank recapitalisation. Initially, bank recapitalisation could be indirect, via loans to sovereigns to recapitalise the financial system (the tool used in the case of Spain), or direct, where the ESM would acquire solvent banks' financial instruments.

The recent reform of the ESM has changed both types of loan.³ As regards loans to sovereigns, the eligibility criteria for precautionary credit lines have been revised. In this respect, the reform seeks to make access to the lines more transparent and predictable, by clearly defining the qualitative and quantitative criteria assessing the macroeconomic and fiscal situation of countries requesting a PCCL. Specifically, the countries must meet the SGP criteria, i.e. debt must be either less than 60% of GDP or declining to that target at a rate of 1/20 per year; a cyclically adjusted budget balance that is compatible with their medium-term objective; and a budget deficit below 3% of GDP.⁴ In addition, the countries must not be subject to an excessive deficit procedure or excessive imbalances

procedure, and their government debt must be maintained at a sustainable level. These criteria must be met in the two years preceding the request.⁵

The direct recapitalisation instrument for financial institutions has been replaced by the activities of the Single Resolution Fund (SRF). Direct contributions will now be made by the SRF (part of the banking union), and it will therefore act as lender of last resort for the financial sector. The ESM will act as a backstop for the SRF, by means of a specific credit line covering the contingency of the SRF having insufficient funds for a bank resolution.

The ESM reform also envisages the mandatory introduction of single-limb collective action clauses (CACs) for sovereign debt issuances by euro area countries from 2022. The new clause replaces the two-limb Euro CACs currently in use in Europe, which are mandatory for all issuances with maturity above one year made after 1 January 2013. Through the single-limb CAC, a voting mechanism will be introduced which aggregates the votes across all the bond series concerned when modifications are proposed to the bond conditions. Thus, this clause allows a restructuring of all the bond issuances concerned with a single qualified majority of votes (normally 75%), irrespective of any dissenting minority of bondholders (holdouts) in an individual series. The current two-limb Euro CAC provides for a two-level voting structure, requiring majorities both in each individual series (2/3 of votes) and across all series concerned (75%). In theory, the new single-limb clauses will allow for a swifter debt restructuring when needed, and at the same time will provide greater certainty of an orderly restructuring process.

Lastly, in the context of the European response to the COVID-19 pandemic, European institutions agreed to activate the Pandemic Crisis Support. Through this instrument, loans have been made available to Member States, capped at 2% of their GDP, under a credit line totalling up to €240 billion. The credit line is available to all euro area countries until end-2022, and may be used to cover direct or indirect health sector expenses linked to the pandemic. However, to date, no Member State has requested Pandemic Crisis Support.

-
- 1 Participation in any one of the ESM programmes is a fundamental requirement for access to the ECB's Outright Monetary Transactions (OMTs). Under OMTs, the ECB can purchase a potentially unlimited amount of sovereign bonds on the secondary market of the country in question, insofar as such an intervention is deemed warranted from a monetary policy standpoint.
 - 2 Additionally, the ESM can purchase the debt of a country that has applied for either of these credit lines on the primary or secondary market.
 - 3 The reform was agreed by European leaders in December 2018 and signed in early 2021.
 - 4 These quantitative criteria were included in the annex to the revised ESM Treaty. Previously, the PCCL eligibility criteria were qualitative and required, in addition to sustainable government debt, compliance with fiscal rules. Countries under an excessive deficit procedure could still access a PCCL, provided they abided by Council decisions and recommendations.
 - 5 In addition, a letter of intent, rather than a memorandum of understanding, is now signed, committing to continuous compliance with the eligibility criteria *ex ante*. The memorandum required unanimous approval from all member countries, which could introduce new conditions during the process, potentially dampening a country's willingness to request access to a precautionary credit line.

References

- Andrés, J., P. Burriel and W. Shi (2020). "Debt sustainability and fiscal space in a heterogeneous Monetary Union: normal times vs the zero lower bound", *Working Paper* No 2001, Banco de España.
- Andrle, M., J. Bluedorn, L. Eyraud, T. Kinda, P. K. Brooks, G. Schwartz and A. Weber (2015). "Reforming Fiscal Governance in the European Union", *IMF Staff Discussion Note* 15/09.
- Alloza, M., J. Andrés, J. J. Pérez and J. A. Rojas (2020). "Implicit public debt thresholds: An operational proposal", *Journal of Policy Modeling*, 42, pp. 1408-1424.
- Alloza, M., P. Burriel and J. J. Pérez (2019). "Fiscal policies in the euro area: revisiting the size of spillovers", *Journal of Macroeconomics*, 61, September.
- Alloza, M., B. Cozmanca, M. Ferdinandusse and P. Jacquinot (2019). "Fiscal spillovers in a monetary union", *Economic Bulletin*, Issue 1, European Central Bank.
- Arce, Ó., S. Hurtado and C. Thomas (2016). "Policy Spillovers and Synergies in a Monetary Union", *International Journal of Central Banking*, 12(3), pp. 219-277.
- Arce, Ó., I. Kataryniuk, P. Marín and J. J. Pérez (2020). "Thoughts on the design of a European Recovery Fund", *Occasional Paper* No 2014, Banco de España.
- Asatryan, Z., X. Debrun, F. Heinemann, M. Horvath, L. Ódor and M. Yeter (2017). "Making the Most of the European Fiscal Board", *ZEW policy brief* No. 3., 4 May.
- Ayuso-i-Casals, J. (2012). "National Expenditure Rules – Why, How and When", *Economic Papers*, 473, DG ECFIN, European Commission.
- Balli, F., S. Kalemli-Ozcan and B. E. Sørensen (2012). "Risk sharing through capital gains", *Canadian Journal of Economics/Revue canadienne d'économique*, vol. 45(2), pp. 472-492.
- Banco de España (2017). Chapter 4, "Fiscal policy in the euro area", of *Annual Report 2016*.
- Banco de España (2021). Chapter 2, "The Spanish economy post-COVID-19: structural challenges and policies to address them", of *Annual Report 2020*.
- Barro, R. J. (1979). "On the determination of the public debt", *Journal of Political Economy*, 87(5), Part 1, pp. 940-971.
- Beetsma, R., N. Thygesen, A. Cugnasca, E. Orseau, P. Eliofotou and S. Santacroce (2018). "Reforming the EU fiscal framework: A proposal by the European Fiscal Board", *VoxEU.org*, 26 October.
- Bénassy-Quéré, A. et al. (2018). "Reconciling risk sharing with market discipline: A constructive approach to euro area reform", *CEPR Policy Insight* No 91.
- Bi, H. (2012). "Sovereign default risk premia, fiscal limits, and fiscal policy", *European Economic Review*, 56, pp. 389-410.
- Bianchi, F., R. Faccini and L. Melosi (2020). "Monetary and Fiscal Policies in Times of Large Debt: Unity is Strength", *NBER Working Paper* 27112.
- Bilbiie, F., T. Monacelli and R. Perotti (2021). "Fiscal Policy in Europe: Controversies over Rules, Mutual Insurance, and Centralization", *Journal of Economic Perspectives*, 35, pp. 77-100.
- Bini-Smaghi, L., T. Padoa-Schioppa and F. Papadia (1994). "The Transition to EMU in the Maastricht Treaty", *Essays in International Finance*, 194, Princeton University.
- Blanchard, O., A. Leandro and J. Zettelmeyer (2021). "Redesigning EU fiscal rules: From rules to standards", *Economic Policy*.
- Brunila, A., M. Buti and D. Franco (eds.) (2001). *The stability and growth pact: the architecture of fiscal policy in EMU*, Springer.
- Burriel, P., F. Martí and J. J. Pérez (2017). "The impact of unconventional monetary policy on euro area public finances", *Economic Bulletin*, Banco de España.
- Burriel, P., P. Chronis, M. Freier, S. Hauptmeier, L. Reiss and D. Stegarescu (2020). "A fiscal capacity for the euro area: lessons from existing fiscal-federal systems", *Occasional Paper* No 2009, Banco de España.
- Burriel, P., V. González-Díez, J. Martínez-Pagés and E. Moral-Benito (2021). "Real-time analysis of the revisions to the structural position of public finances", *Occasional Paper* No 2108, Banco de España.
- de Castro, F., J. J. Pérez and M. Rodríguez-Vives (2013). "Fiscal data revisions in Europe", *Journal of Money, Credit and Banking*, 45, pp. 1187-1209.
- Christiano, L., M. Eichenbaum and S. Rebelo (2011). "When Is the Government Spending Multiplier Large?", *Journal of Political Economy*, 119(1), pp. 78-121.
- Cioffi, M., M. Romanelli, P. Rizza and P. Tommasino (2019). "Outline of a redistribution-free debt redemption fund for the euro area", *Occasional Paper* No 479, Banca d'Italia.
- Committee for the Study of Economic and Monetary Union (1989). "Report on the Economic and Monetary Union in the European Community" (Delors Report).
- Corsetti, G., K. Kuester, A. Meier and G. J. Müller (2010). "Debt Consolidation and Fiscal Stabilization of Deep Recessions", *American Economic Review*, 100(2), pp. 41-45.

- Corsetti, G., L. P. Feld, P. Lane, L. Reichlin, H. Rey, D. Vayanos and B. Weder Di Mauro (2015). "A New Start for the Eurozone: Dealing with Debt", *Monitoring the Eurozone* 1, CEPR Press. London.
- Darvas, Z. M. and Á. Leandro (2015). "The limitations of policy coordination in the euro area under the European Semester" (No 2015/19). Bruegel Policy Contribution.
- Debrun, X., J. D. Ostry, T. Willems and C. Wyplosz (2019). "Public Debt Sustainability", *CEPR Discussion Paper* 14010.
- Delgado-Téllez, M., E. Gordo, I. Kataryniuk and J. J. Pérez (2020a). "The decline in public investment: 'social dominance' or too-rigid fiscal rules?", *Working Paper* No 2025, Banco de España.
- Delgado-Téllez, M., I. Kataryniuk, F. López Vicente and J. J. Pérez (2020b). "Supranational debt and financing needs in the European Union", *Occasional Paper* No 2021, Banco de España.
- ECB (2005). "Statement of the Governing Council on the ECOFIN Council's report on improving the implementation of the Stability and Growth Pact", 21 March.
- Efstathiou, K. and G. Wolff (2018). "Is the European Semester effective and useful?" (No 2018/09). Bruegel Policy Contribution.
- European Commission (2020a). "Communication on Economic Governance Review – Report on the application of Regulations (EU) No 1173/2011, 1174/2011, 1175/2011, 1176/2011, 1177/2011, 472/2013 and 473/2013 and on the suitability of Council Directive 2011/85/EU", Brussels.
- European Commission (2020b). "Economic governance review", Brussels, 17 February.
- European Fiscal Board (2020). *Annual Report*.
- Eyraud, L., M. X. Debrun, A. Hodge, V. D. Lledo and M. C. A. Pattillo (2018). "Second-generation fiscal rules: Balancing simplicity, flexibility, and enforceability", International Monetary Fund.
- Farhi, E. and I. Werning (2017). "Fiscal unions", *American Economic Review*, 107, pp. 3788-3834.
- Fernández-Villaverde, J., J. Marbet, G. Nuño and O. Rachedi (2021). "Inequality and the Zero Lower Bound", mimeo.
- Fournier, J. (2016). "The positive effect of public investment on potential growth", *Working Paper* No 1347, OECD Economics Department.
- Galí, J. and R. Perotti (2003). "Fiscal Policy and Monetary Integration in Europe", *Economic Policy*, October, pp. 533-572.
- Galí, J. and T. Monacelli (2005). "Monetary policy and exchange rate volatility in a small open economy", *The Review of Economic Studies*, 72, pp. 707-734.
- Gaspar, V. (2020). "Future of Fiscal Rules in the Euro Area", Keynote speech at workshop on "Fiscal Rules in Europe: Design and Enforcement" organised by DG ECFIN. Brussels. Available at: <https://www.imf.org/en/News/Articles/2020/01/28/sp012820-vitor-gaspar-fiscal-rules-in-europe>.
- Gilbert, N. D. and J. F. M. de Jong (2017). "Do European fiscal rules induce a bias in fiscal forecasts? Evidence from the Stability and Growth Pact", *Public Choice*, 170, pp. 1-32.
- González-Páramo, J. M. (2005). "The reform of the Stability and Growth Pact: an assessment", speech at the conference on "New Perspectives on Fiscal Sustainability", Frankfurt, 13 October.
- Gordo, E. and P. García-Perea (2016). "Los mecanismos de supervisión presupuestaria de la UEM", *Boletín Económico*, March, Banco de España.
- Gordo, E., P. Hernández de Cos and J. J. Pérez (2015). "Instituciones fiscales independientes en España y en la UEM", *Boletín Económico*, February, Banco de España.
- Gordo, E. and I. Kataryniuk (2019). "Towards a more resilient euro area", *Economics and Business Letters*, 8, pp. 106-114.
- Guajardo, J., D. Leigh and A. Pescatori (2014). "Expansionary austerity? International evidence", *Journal of the European Economic Association*, 12(4), pp. 949-968.
- Hagen, J. von (2010). "Sticking to fiscal plans: the role of institutions", *Public Choice*, 144, pp. 487-503.
- Hallerberg, M., R. Strauch, and J. von Hagen (2007). "The design of fiscal rules and forms of governance in European Union countries", *European Journal of Political Economy*, 23, pp. 338-359.
- Hepp, R. and J. von Hagen (2013). "Interstate risk sharing in Germany: 1970-2006", *Oxford Economic Papers*, vol. 65, No 1, pp. 1-24.
- Hernández de Cos, P. (2020). "The European response to the COVID-19 crisis". Opening address - Fundación Internacional Olof Palme Conference, 13 November.
- Hernández de Cos, P. and J. J. Pérez (2015). "¿De la reforma del pacto de estabilidad a la unión fiscal?", *Euro Yearbook* 2015, pp. 209-222.
- Hernández de Cos, P., A. Lacuesta and E. Moral-Benito (2016). "An exploration of real-time revisions of output gap estimates across European countries", *Occasional Paper* No 1605, Banco de España.
- Hernández de Cos, P., D. López Rodríguez and J. J. Pérez (2018). "The challenges of public deleveraging", *Occasional Paper* No 1803, Banco de España.

- Holm-Hadulla, F., S. Hauptmeier and P. Rother (2012). "The impact of expenditure rules on budgetary discipline over the cycle", *Applied Economics*, 44, pp. 3287-3296.
- IMF (2021). "Review of the Debt Sustainability Framework for Market Access Countries", *IMF Policy Papers*.
- Juncker, J.-C. (2015). "Completing Europe's Economic and Monetary Union" (Five Presidents' Report), European Commission.
- Kataryniuk, I., V. Mora-Bajén and J. J. Pérez (2021). "EMU deepening and sovereign debt spreads: using political space to achieve policy space," *Working Paper* No 2103, Banco de España.
- Kopits, G. (2001). "Fiscal Rules: Useful Policy Framework or Unnecessary Ornament?", *IMF Working Paper* No 01/145.
- Larch, M., E. Orseau, and W. van der Wielen (2021). "Do EU fiscal rules support or hinder counter-cyclical fiscal policy?", *Journal of International Money and Finance*, 112, 102328.
- Leeper, E. M. (1991). "Equilibria under 'active' and 'passive' monetary and fiscal policies", *Journal of Monetary Economics*, Vol. 27, Issue 1, February, pp. 129-147.
- Leeper, E. M., T. B. Walker and S. C. S. Yang (2010). "Government Investment and Fiscal Stimulus", *Journal of Monetary Economics*, 57, pp. 1000-1012.
- Marinheiro, C. F. (2021). "The Expenditure Benchmark: Complex and Unsuitable for Independent Fiscal Institutions", *Comparative Economic Studies*, forthcoming.
- Martin, P., J. Pisani-Ferry and X. Ragot (2021). "Reforming the European Fiscal Framework", *Les notes du conseil d'analyse économique* no 63.
- Martínez Mongay, C., E. Feás, M. Otero Iglesias and F. Steinberg (2021). "Elementos de discusión para una reforma de la gobernanza de la Unión Económica y Monetaria", *Documento de Trabajo* 4/2021, Real Instituto Elcano.
- Merola, R. and J. J. Pérez (2013). "Fiscal forecast errors: Governments versus independent agencies?", *European Journal of Political Economy*, 32, pp. 285-299.
- Mian, A., L. Straub and A. Sufi (2021). "A Goldilocks Theory of Fiscal Policy", mimeo.
- Moessinger, M. D. and M. Yeter (2018). "Do fiscal rules constrain fiscal policy? A meta-regression analysis", *European Journal of Political Economy*, 51, pp 69-92.
- Pappa, E. (2020). "Fiscal rules, policy and macroeconomic stabilization in the euro area" in ECB Forum on Central Banking, Sintra.
- Paredes, J., J. J. Pérez and G. Pérez-Quirós (2021). "Fiscal targets. A guide to forecasters?", July, ECB and Banco de España. Previous version: *CEPR Discussion Paper Series* 10553.
- Páris, P. and C. Wyplosz (2014). "PADRE: Politically Acceptable Debt Restructuring in the Eurozone", *Geneva Special Report on the World Economy*, 3, ICMB and CEP.
- Reinhart, C. M., V. R. Reinhart and K. S. Rogoff (2012). "Public Debt Overhangs: Advanced-Economy Episodes since 1800", *Journal of Economic Perspectives*, 26(3), pp. 69-86.
- Reuter, W. H. (2015). "When and why do countries break their national fiscal rules?", *European Journal of Political Economy*, 57, pp. 125-141.
- Rodríguez, L. and C. Cuerpo (2019). *Some elements for a revamped fiscal framework for Spain*, Working Papers, No 2018/03, Autoridad Independiente de Responsabilidad Fiscal.
- Rompuy, H. van (2012). "Report: Towards a genuine economic and monetary union" (Four Presidents' Report), European Commission.
- Sargent, T. J. and N. Wallace (1981). "Some Unpleasant Monetarist Arithmetic", *Quarterly Review* 531, Fall, Federal Reserve Bank of Minneapolis.
- Thygesen, N., R. Beetsma, M. Bordignon, X. Debrun, M. Szczyrek, M. Larch, M. Busse, M. Gabrijelcic, L. Jankovics and S. Santacroce (2021). "High debt, low rates, and tail events: rules-based fiscal frameworks under stress", VoxEU.org. Available at: <https://voxeu.org/article/rules-based-fiscal-frameworks-under-stress>.
- Werner Committee (1970). "Report to the Council and the Commission on the realisation by stages of economic and monetary union in the Community" (Werner Report).

Annex 1 Debt sustainability arithmetic

There is an economic relationship describing government debt dynamics that is valid for every point in time t . This equation, known as the “government budget constraint”, relates the existing stock of government debt at the end of the period (B_t), the initial stock of debt (B_{t-1}), the nominal interest rate (i_t), the primary deficit (D_t^p) and other quantities (ADD_t , denoting the stock-flow adjustments which take into account the differences between the changes in the deficit and the changes in debt):

$$B_t = (1 + i_t) B_{t-1} + D_t^p + ADD_t$$

The foregoing equation is the starting point for analysing government debt dynamics. To this end, it is useful to express the foregoing relationship as a percentage of nominal GDP (with the variables represented by lower-case letters):

$$b_t = \frac{(1 + i_t)}{(1 + g_t)(1 + \pi_t)} b_{t-1} + d_t^p + add_t$$

where g_t is the real output growth rate and refers to the inflation rate (measured by means of the GDP deflator). The foregoing relationship may be expressed as the change in the debt-to-GDP ratio in terms of the differential between the real interest rate r_t and g_t :

$$b_t - b_{t-1} = \frac{(r_t - g_t)}{(1 + g_t)} b_{t-1} + d_t^p + add_t$$

Next, the steady state is defined as that point in time t when the macroeconomic variables grow at a constant rate and, therefore, the debt-to-GDP ratio stabilises. Also, to simplify, it is assumed that the stock-flow adjustments are approximately 0 in this steady state. Consequently, the foregoing equation is expressed as:

$$d^p = \frac{(g - r)}{(1 + g)} b$$

Despite the simplifications made, this long-term equation is useful as it determines the primary deficit that enables the government debt-to-GDP ratio to stabilise at a level b , for given macroeconomic parameters.

BANCO DE ESPAÑA PUBLICATIONS

OCCASIONAL PAPERS

- 2010 MIGUEL ÁNGEL LÓPEZ and M.^a DE LOS LLANOS MATEA: El sistema de tasación hipotecaria en España. Una comparación internacional.
- 2011 DIRECTORATE GENERAL ECONOMICS, STATISTICS AND RESEARCH: The Spanish economy in 2019. (There is a Spanish version of this edition with the same number).
- 2012 MARIO ALLOZA, MARIEN FERDINANDUSSE, PASCAL JACQUINOT and KATJA SCHMIDT: Fiscal expenditure spillovers in the euro area: an empirical and model-based assessment.
- 2013 DIRECTORATE GENERAL ECONOMICS, STATISTICS AND RESEARCH: The housing market in Spain: 2014-2019. (There is a Spanish version of this edition with the same number).
- 2014 ÓSCAR ARCE, IVÁN KATARYNIUK, PALOMA MARÍN and JAVIER J. PÉREZ: Thoughts on the design of a European Recovery Fund. (There is a Spanish version of this edition with the same number).
- 2015 MIGUEL OTERO IGLESIAS and ELENA VIDAL MUÑOZ: Las estrategias de internacionalización de las empresas chinas.
- 2016 EVA ORTEGA and CHIARA OSBAT: Exchange rate pass-through in the euro area and EU countries.
- 2017 ALICIA DE QUINTO, LAURA HOSPIDO and CARLOS SANZ: The child penalty in Spain.
- 2018 LUIS J. ÁLVAREZ and MÓNICA CORREA-LÓPEZ: Inflation expectations in euro area Phillips curves.
- 2019 LUCÍA CUADRO-SÁEZ, FERNANDO S. LÓPEZ-VICENTE, SUSANA PÁRRAGA RODRÍGUEZ and FRANCESCA VIANI: Fiscal policy measures in response to the health crisis in the main euro area economies, the United States and the United Kingdom. (There is a Spanish version of this edition with the same number).
- 2020 ROBERTO BLANCO, SERGIO MAYORDOMO, ÁLVARO MENÉNDEZ and MARISTELA MULINO: Spanish non-financial corporations' liquidity needs and solvency after the COVID-19 shock. (There is a Spanish version of this edition with the same number).
- 2021 MAR DELGADO-TÉLLEZ, IVÁN KATARYNIUK, FERNANDO LÓPEZ-VICENTE and JAVIER J. PÉREZ: Supranational debt and financing needs in the European Union. (There is a Spanish version of this edition with the same number).
- 2022 EDUARDO GUTIÉRREZ and ENRIQUE MORAL-BENITO: Containment measures, employment and the spread of COVID-19 in Spanish municipalities. (There is a Spanish version of this edition with the same number).
- 2023 PABLO HERNÁNDEZ DE COS: The Spanish economy and the COVID-19 crisis. Appearance before the Parliamentary Economic Affairs and Digital Transformation Committee – 18 May 2020. (There is a Spanish version of this edition with the same number).
- 2024 PABLO HERNÁNDEZ DE COS: The main post-pandemic challenges for the Spanish economy. Appearance before the Parliamentary Committee for the Economic and Social Reconstruction of Spain after COVID-19/Congress of Deputies – 23 June 2020. (There is a Spanish version of this edition with the same number).
- 2025 ENRIQUE ESTEBAN GARCÍA-ESCUADERO and ELISA J. SÁNCHEZ PÉREZ: Central bank currency swap lines (There is a Spanish version of this edition with the same number).
- 2026 PABLO AGUILAR, ÓSCAR ARCE, SAMUEL HURTADO, JAIME MARTÍNEZ-MARTÍN, GALO NUÑO and CARLOS THOMAS: The ECB monetary policy response to the COVID-19 crisis. (There is a Spanish version of this edition with the same number).
- 2027 EDUARDO GUTIÉRREZ, ENRIQUE MORAL-BENITO and ROBERTO RAMOS: Tendencias recientes de la población en las áreas rurales y urbanas.
- 2028 ÁNGEL LUIS GÓMEZ: The effects of changes in the composition of employment on euro area wage growth: panel data analysis. (There is a Spanish version of this edition with the same number).
- 2029 MIGUEL GARCÍA-POSADA GÓMEZ: Analysis of insolvency proceedings in Spain against the backdrop of the COVID-19 crisis: insolvency proceedings, pre-insolvency arrangements and the insolvency moratorium. (There is a Spanish version of this edition with the same number).
- 2030 ÁNGEL GÓMEZ-CARREÑO GARCÍA-MORENO: Juan Sebastián Elcano – 500 años de la Primera vuelta al mundo en los billetes del Banco de España. Historia y tecnología del billete.
- 2031 OLYMPIA BOVER, NATALIA FABRA, SANDRA GARCÍA-URIBE, AITOR LACUESTA and ROBERTO RAMOS: Firms and households during the pandemic: what do we learn from their electricity consumption?
- 2032 JÚLIA BRUNET, LUCÍA CUADRO-SÁEZ and JAVIER J. PÉREZ: Contingency public funds for emergencies: the lessons from the international experience. (There is a Spanish version of this edition with the same number).
- 2033 CRISTINA BARCELÓ, LAURA CRESPO, SANDRA GARCÍA-URIBE, CARLOS GENTO, MARINA GÓMEZ and ALICIA DE QUINTO: The Spanish Survey of Household Finances (EFF): description and methods of the 2017 wave.

- 2101 LUNA AZAHARA ROMO GONZÁLEZ: Una taxonomía de actividades sostenibles para Europa.
- 2102 FRUCTUOSO BORRALLO, SUSANA PÁRRAGA-RODRÍGUEZ and JAVIER J. PÉREZ: Taxation challenges of population ageing: comparative evidence from the European Union, the United States and Japan. (There is a Spanish version of this edition with the same number).
- 2103 LUIS J. ÁLVAREZ, M.ª DOLORES GADEA and ANA GÓMEZ LOSCOS: Cyclical patterns of the Spanish economy in Europe. (There is a Spanish version of this edition with the same number).
- 2104 PABLO HERNÁNDEZ DE COS: Draft State Budget for 2021. Testimony before the Parliamentary Budget Committee, 4 November 2020. (There is a Spanish version of this edition with the same number).
- 2105 PABLO HERNÁNDEZ DE COS: The independence of economic authorities and supervisors. The case of the Banco de España. Testimony by the Governor of the Banco de España before the Audit Committee on Democratic Quality / Congress of Deputies, 22 December 2020. (There is a Spanish version of this edition with the same number).
- 2106 PABLO HERNÁNDEZ DE COS: The Spanish pension system: an update in the wake of the pandemic. Banco de España contribution to the Committee on the Monitoring and Assessment of the Toledo Pact Agreements. 2 September 2020. (There is a Spanish version of this edition with the same number).
- 2107 EDUARDO BANDRÉS, MARÍA-DOLORES GADEA and ANA GÓMEZ-LOSCOS: Dating and synchronisation of regional business cycles in Spain. (There is a Spanish version of this edition with the same number).
- 2108 PABLO BURRIEL, VÍCTOR GONZÁLEZ-DÍEZ, JORGE MARTÍNEZ-PAGÉS and ENRIQUE MORAL-BENITO: Real-time analysis of the revisions to the structural position of public finances.
- 2109 CORINNA GHIRELLI, MARÍA GIL, SAMUEL HURTADO and ALBERTO URTASUN: The relationship between pandemic containment measures, mobility and economic activity. (There is a Spanish version of this edition with the same number).
- 2110 DMITRY KHAMETSHIN: High-yield bond markets during the COVID-19 crisis: the role of monetary policy.
- 2111 IRMA ALONSO and LUIS MOLINA: A GPS navigator to monitor risks in emerging economies: the vulnerability dashboard.
- 2112 JOSÉ MANUEL CARBÓ and ESTHER DIEZ GARCÍA: El interés por la innovación financiera en España. Un análisis con Google Trends.
- 2113 CRISTINA BARCELÓ, MARIO IZQUIERDO, AITOR LACUESTA, SERGIO PUENTE, ANA REGIL and ERNESTO VILLANUEVA: Los efectos del salario mínimo interprofesional en el empleo: nueva evidencia para España.
- 2114 ERIK ANDRES-ESCAIOLA, JUAN CARLOS BERGANZA, RODOLFO CAMPOS and LUIS MOLINA: A BVAR toolkit to assess macrofinancial risks in Brazil and Mexico.
- 2115 ÁNGEL LUIS GÓMEZ and ANA DEL RÍO: The uneven impact of the health crisis on the euro area economies in 2020. (There is a Spanish version of this edition with the same number).
- 2116 FRUCTUOSO BORRALLO EGEA and PEDRO DEL RÍO LÓPEZ: Monetary policy strategy and inflation in Japan. (There is a Spanish version of this edition with the same number).
- 2117 MARÍA J. NIETO and DALVINDER SINGH: Incentive compatible relationship between the ERM II and close cooperation in the Banking Union: the cases of Bulgaria and Croatia.
- 2118 DANIEL ALONSO, ALEJANDRO BUESA, CARLOS MORENO, SUSANA PÁRRAGA and FRANCESCA VIANI: Fiscal policy measures adopted since the second wave of the health crisis: the euro area, the United States and the United Kingdom. (There is a Spanish version of this edition with the same number).
- 2119 ROBERTO BLANCO, SERGIO MAYORDOMO, ÁLVARO MENÉNDEZ and MARISTELA MULINO: Impact of the COVID-19 crisis on Spanish firms' financial vulnerability. (There is a Spanish version of this edition with the same number).
- 2120 MATÍAS PACCE, ISABEL SÁNCHEZ and MARTA SUÁREZ-VARELA: Recent developments in Spanish retail electricity prices: the role played by the cost of CO₂ emission allowances and higher gas prices. (There is a Spanish version of this edition with the same number).
- 2121 MARIO ALLOZA, JAVIER ANDRÉS, PABLO BURRIEL, IVÁN KATARYNIUK, JAVIER J. PÉREZ and JUAN LUIS VEGA: The reform of the European Union's fiscal governance framework in a new macroeconomic environment. (There is a Spanish version of this edition with the same number).