

Macro-economic impact of the EU Recovery Funds

Eulalia Rubio Barceló
Jacques Delors Institute

Documento de Trabajo

Número 45
Febrero 2023

B 21662-201

In June 2020, in response to the Covid-19 crisis, the EU leaders agreed on the establishment of an exceptional and temporary EU recovery plan. Known as “Next Generation EU”, the Plan amounts to €807bn in current prices (the equivalent of 5% of the EU 2020 GDP) and it is financed through the issuance of common EU debt. Most NGEU funds are allocated to a new EU programme, the Recovery and Resilience Facility (RRF), providing financial support to Member States in form of grants and loans to implement national, pre-agreed, multi-annual agendas of investments and reforms. Spain is one of the largest beneficiaries of the RRF, having received €77.4bn in RRF grants to be used between 2020 and 2026.

This article discusses the expected macro-economic impact of the EU Recovery and Resilience Facility (RRF), also known as the “EU Recovery Fund”. After describing the main features of the RRF, it presents the estimations made by the Commission and the ECB on the macro-economic impact of the RRF. Section three then discusses how the new macro-economic scenario generated by Russia’s invasion of Ukraine and the developing energy crisis may alter these estimations. Section four examines in greater detail the expected impact of the RRF funds in Spain. Section five sets out the conclusions.

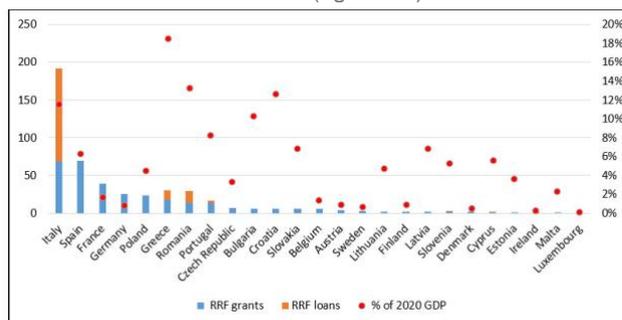
1. Main features of the Recovery and Resilience Facility

The RRF was created in 2020 with the aim of promoting a coordinated EU fiscal response to the Covid-19 crisis. It is not a classic fiscal stimulus programme, as it combines a short-term objective -boosting the EU’s aggregate demand via an increase in public investment– with a medium to long-term objective – transforming the EU economy through productive-enhancing investments and reforms, notably in the green and digital sector.

In particular, the Facility provides a significant amount of grants (€338 bn) and access to concessional loans (up €386 bn) by the Member States to finance National Recovery and Resilience Plans (NRRP). These Plans must be fully implemented by the end of 2026 and they must support coherent packages of reforms and investments. The notion of investment, however, is understood in broad terms, as the Plans may include fiscal transfers or tax cuts insofar as they are measures with a durable impact. 37% and 20% of the Plans must be allocated to supporting the climate and digital transition respectively. All actions must respect the principle of not causing significant damage to the environment.

At the time of writing this article, 27 Member States have adopted their NRRP. The size of the Plans varies significantly (see Chart 1), reflecting both the uneven distribution of the RRF grants and the willingness of the different Member States to take up the RRF loans.

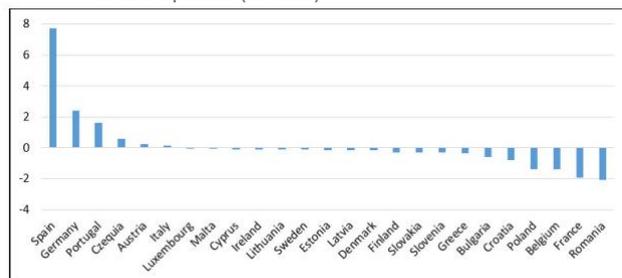
Chart 1. RRF allocation (grants and loans), in €bn (left axis) and as a % of GDP (right axis)



Source: own elaboration based on Commission and Eurostat data

The RRF grants were distributed among the Member States in 2020 following a distribution key based on population, GDP per capita and unemployment levels. To give the Member States some degree of predictability regarding the amount of the RRF grants at their disposal while favouring those most hit by the Covid crisis, it was decided to distribute them in two tranches. The first tranche (70%) was allocated according to pre-Covid data (population and GDP per capita in 2019 and average unemployment rate in 2015-2019). The second tranche (30%) was distributed according to the expected impact of the Covid-19 crisis on the Member State economies (defined as the forecasted GDP loss for 2020 and 2021). In June 2022, the distribution of this 30% tranche was reviewed based on actual GDP data for 2020 and 2021. For some countries, this has led to meaningful changes in the overall RRF grant allocation (see chart 2). Spain, in particular, has seen its RRF grant allocation grow significantly due to an unexpectedly larger fall in GDP after Covid.

Chart 2. Changes in the RRF grant allocation after the June 2021 update (in €bn)



Source: own elaboration based on Commission data

Whereas the €386bn RRF grants have been fully pre-allocated, the take-up of RRF loans is voluntary. The original RRF regulation stipulated that all the Member States could request an amount in loans equivalent to 6.8% of their GNI and that they had to submit their request for loans before August 2023. So far, only seven EU countries have made use of this option, and only three of them (Italy, Greece and Romania) have requested the full amount of the RRF loans they are eligible for. As a result, €196.4bn remains available for RRF loans.

Looking at the governance of the RRF, it is worth noting that the Facility introduces many specificities with respect to more “classic” EU cohesion funds. Firstly, unlike the operational programmes of the cohesion funds, NRRPs include both investment and reform actions. Secondly, RRF funds can be used retrospectively to finance actions taken in response to the pandemic as of February 2020 (in other words, to cover expenses already incurred by national budgets). While this is an option that has also been extended to EU cohesion policy funding in response to recent crises (first the pandemic and then the Ukrainian refugee crisis), retroactive eligibility is the exception rather than the rule for EU funds. Thirdly, the EU cohesion funds are paid out to the Member States at the same rhythm at which they execute the actions (that is, the Commission pays the Member States the costs incurred). In contrast, the RRF funding instalments from the Commission to the Member States are conditional on the progress achieved with respect to the pre-agreed quantitative and qualitative objectives (milestones and targets). Adopting a performance-oriented and not a cost-oriented approach means that the times at which the Commission makes the payments may differ from the times of the actual execution of RRF-financed actions. Lastly, whereas the Commission adopts the Member State cohesion operational plans and makes cohesion fund payments alone, in the case of the RRF, the national plans are adopted by the Council and decisions on disbursements are taken by the Commission, but can be blocked by the Economic and Financial Committee (EFC), a body composed of high-level national officials. Thus, both the quality of the Plans and the progress of the Member States in implementing them will be closely monitored and controlled by the other Member States.

2. Macro-economic impact of the EU Recovery Funds: estimations of the Commission and the ECB

The multiple objectives of the RRF, the complexity of the instrument (combining investments and reforms) and the novelties in the mode of governance makes it particularly difficult to estimate the macro-economic impact of the funds. Moreover, the war in Ukraine and the developing energy crisis have led to major changes in the macro-economic context, challenging the results of estimations conducted before the war.

While keeping in mind these caveats, it is helpful to take a look at existing macro-economic estimations. The most robust ones were conducted by the Commission’s DG ECFIN (European Commission 2020, Pfeiffer et al 2021) and by experts from the European Central Bank (Bankowski et al 2021, Bankowski et al 2022). There are various methodological differences between the macro-economic simulation exercises of the ECB and the DG ECFIN (Table 1). Whereas the analyses of the Commission aim to estimate the impact of the “Next Generation EU” package (that is, all the different EU programmes financed by common EU debt raised in response to the pandemic), the ECB studies focus on the impact of the

Recovery and Resilience Facility (the most important of all the NGEU programmes). The studies of the Commission assess the impact for the whole Union, whereas the ECB studies focus on the impact for euro area Member States. Lastly, whereas the studies of the Commission estimate the impact in terms of fiscal stimulus, the latest ECB study (Bankowski et al 2022) aims to disentangle the RRF impact through three different channels: the fiscal channel, the risk premium channel and the structural reform channel. We will discuss these three channels separately in the following sections.

Table 1. Differences between the two most recent ECB and DG ECFIN studies estimating the macro-economic impact of the EU Recovery Funds

	DG ECFIN (Pfeiffer et al, July 2021)	ECB (Bankowski et al 2022)
Country coverage	EU27	Euro Area Countries
Programme coverage	All NGEU funds	RRF (90% of NGEU)
Aim of the study	Estimating the NGEU fiscal effect, including cross-country spillover effects	Estimating the impact of RRF through three channels : structural reform, fiscal stimulus and risk premium
Models used for the simulation	Commission’s QUEST model embedded into a multi-country structure designed for spillover analysis	ECB’s general equilibrium model (EAGLE), and ECB’s semi-structural model (ECB-MC).
Results	+1.2% increase of EU GDP by 2024 and +0.8% increase by 2026. Fiscal spillover effects accounting for almost one third of the impact.	Taking all three main channels together, +1.4% increase of Euro area GDP by 2024 and +1.5% increase by 2026 Fiscal channel producing a +0.6% GDP increase in 2022-2023. Impact persistent but decreasing over time (+0.4% in 2026). The risk premium channel reducing the cost of financing to +0.2%GDP by 2026 The structural reform channel unfolding later but being the most important one in the medium/long term (+1% GDP by 2030)

Sources: Pfeiffer et al 2021, Bankowski et al 2022

2.1. The fiscal channel

Since it is a coordinated fiscal response to the crisis, the main expected effect of the RRF is to raise the GDP via an increase in public expenditure. As explained by the literature on fiscal multipliers, higher public expenditure may increase aggregate demand in the short term and aggregate supply in the medium and long term (IMF 2014). The short-term effect is strongly dependent on the economic cycle. It is much higher in periods of economic downturn than in periods of economic expansion, as the risk of crowding out private demand is lower. The long-term effect, in contrast, depends to a large extent on the composition of public expenditure. In general, fiscal transfers or tax cuts have a much lower multiplier effect in the medium to long term than public investment. Apart from these general teachings from the studies on fiscal multipliers, when assessing the impact of EU-level spending, a key factor to take into account is the additionality of EU funds, that is, the extent

to which they are used to finance new measures or to replace national budgets.

All these general considerations point to different variables that can determine the greater or lesser fiscal impact of the RRF funds, such as the size of the funds, the rhythm of disbursement, the type of RRF actions financed and the level of additionality with respect to national budgets. The first studies estimating the impact of the EU Recovery Funds were hampered by a lack of information (see e.g. European Commission 2020, Codogno et al 2021, Watzka and Watt 2020). Since they were conducted before the Plans were adopted, they had to rely on numerous assumptions as regards the size, duration and composition of the Plans, which later proved to be false. For instance, the first studies assumed the full uptake of RRF loans and expected a bigger slice of the RRF to be spent in the form of grants rather than loans.

More recent studies have been based on more realistic assumptions (Table 2). In particular, the latest ECB analysis (Bankowski et al 2022) is grounded on accurate assumptions on the disbursement rhythm of the RRF funds as well as the nature of the RRF actions financed, as it relies on a granular analysis of the content of the 25 adopted NRRPs.

Table 2. Assumptions used as a basis for the ECB and the DG ECFIN calculation of the fiscal stimulus stemming from RRF funds

	ECFIN (Pfeiffer et al 2021)	ECB (Bankowski et al 2022)
Size of the fiscal stimulus	100% NGEU grants allocated (RRF and REACT EU) 6 Member States requesting RRF loans, amounting to €166bn (46% of total available RRF loans)	100% RRF grants 6 Member States requesting RRF loans, amounting to €166bn (46% of total available RRF loans)
Rhythm of disbursement	Linear deployment (the same amount each year); two scenarios : fast deployment (4 years) and slow deployment (6 years)	Estimated on the basis of the indicative payments' calendar included in the 25 adopted National Recovery plans (more frontloaded)
Type of actions financed	100% of RRF actions are productive investment	Based on a detailed analysis of the 25 adopted NRRP plans: 80% productive investment, 20% social transfers
Level of additionality	100% of RRF grants and 50% of loans are additional to national spending (Average: 84%)	77% of RRF actions are additional to national spending. Based on a detailed analysis of the 25 adopted NRRP plans

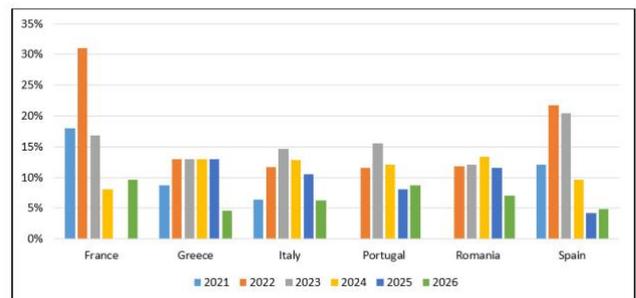
Sources: Pfeiffer et al 2021, Bankowski et al 2022

On observing the results of the studies of the Commission and the ECB (see Table 1), we see that the estimated fiscal impact of the Commission is stronger, both in the short term (+1.2% of EU GDP by 2024 compared to +0.6% by 2023 estimated by ECB analysis) and in the medium term (+0.8% vs +0.4% by 2026). This can be explained by the fact that the Commission assesses the impact of all NGEU funds (roughly €800bn) and not only RRF funds (€726bn). It also focuses on the impact for the whole Union and not only for a sub-set of countries (the euro area countries). Given that the euro area includes many Member States that receive low amounts of RRF funds per capita, the focus on the euro area may also lead to an

expected lower fiscal impact. Lastly, the study of the Commission (Pfeiffer et al 2022) quantifies both the direct effect of RRF funds on each country's domestic demand and the indirect effect on other countries' economies through trade spillovers. The study concludes that spillover effects account for almost one third of the total RRF impact. For small and open economies such as Luxembourg, Denmark or Ireland, this indirect effect is even larger than the direct effect of spending their own RRF envelope.

Both studies also provide estimates of the fiscal impact for each Member State. Not surprisingly, the impact is stronger for large countries receiving higher amounts of RRF funds (particularly Italy and Spain). However, the speed and intensity of the impact also depends on the expected rhythm of disbursement, which varies from country to country, as each Member State has negotiated its own calendar of milestones, targets and corresponding EU payments with the Commission. Chart 3 shows the timelines of the different Plans. As can be observed, some countries (Greece, Italy and Romania) are expected to receive the RRF payments at relatively regular intervals during the entire 2021-26 period, whereas others (France, Spain and Portugal) have preferred to frontload the RRF payments during the first years.

Chart 3. Timelines of the different National RRF Plans



Source: own elaboration based on data from the different NRRPs

The content of the RRF Plans is also different from country to country, leading to different fiscal stimulus effects. According to the ECB study, some countries (e.g. Greece or Spain) will use most of the RRF funds to finance additional measures whereas others (e.g. Germany, Luxembourg and, to a lesser extent, Austria) will use an important part of the RRF funds to cover the costs of measures already financed by national budgets. There are also differences in the nature of the RRF actions financed. Some countries (Spain, Greece and Italy) have allocated more than 80% of the funds to public or private investments, while others allocate roughly 40-50% of the RRF funds to financing social transfers or other current expenditures (Germany and France).

2.2. The structural reform channel

The RRF is also expected to have a transformative impact by incentivising the adoption and implementation of reforms. Assessing the impact of the RRF reforms, however, is particularly difficult. Existing macro-economic models are well geared to quantify the impact of “classic” labour, service and good liberalisation reforms. There is a large amount of literature on the effects of such reforms, and the models are quite robust in associating different types of reform measures with different changes expected in price markups in labour, service and goods markets. Nonetheless, most of the reforms included in the NRRP are not these classic liberalisation reforms which were so noticeable in the 2011-2013 euro area bailout programmes. The RRF’s reform agendas are dominated by public sector reforms (e.g. reforms aimed at improving public procurement procedures, reform of the judiciary system), changes in framework conditions to facilitate the green and digital transition (e.g. establishment of new efficiency standards for buildings) and “soft” labour market policies (measures related to digital skills and active labour market policies). These types of reforms are expected to have no adverse macro-economic effects in the short term (contrary to what happens with some liberalisation reforms) and positive effects in the long term via a reduction of public sector inefficiencies, improvements in the quality of public investment and favouring private investment on green and digital. However, it is difficult to estimate their effect on long-term growth, as the impact is less straightforward than for classic liberalisation reforms.

The only study that has attempted to estimate the effect of the RRF reform component is Bankowski et al (2022). The study concludes that, on average, the reforms envisaged in the NRRPs could result in a 1% increase in the euro area GDP by 2030. Even so, it also considers that the overall impact may be underestimated due to the difficulties in capturing the impact of this type of reforms on growth by standard macroeconomic models. Bankowski et al also provide estimates per country. The largest impact is estimated to be in Italy (+3.1% of the GDP by 2030), which has one of the most ambitious plans in terms of reforms. On the contrary, the reform component is very modest in the German plan, and thus the impact of reforms is expected to be quite limited (only +0.1%).

2.3. The risk premium channel

The risk premium channel refers to the effect that the creation of NGEU had on the financial sovereign debt market. In fact the announcement of the EU Recovery Plan in July 2020 generated confidence and gave rise to a reduction in the sovereign risk premia for the most vulnerable economies in the euro area. Bankowski et al (2022) have tried to quantify this effect. The main difficulty when doing so is to disentangle the NGEU effect from the effect generated by the creation of a new ECB programme to buy public debt (the Pandemic Emergency Purchase Programme - PEPP) which was also announced in the spring of 2020. Looking in detail at the evolution of spreads

across time, Bankowski et al observe however that there was a temporary downward of sovereign yields right after the announcement of the ECB PEPP programme (March 2020) but it was the Franco-German initiative of 18 May 2020, the forerunner of NGEU, that helped produce a clear downward impact on sovereign risk premia. This reduction resulted in savings for sovereigns and stimulating effects for the entire euro area economy. The study estimates that this downturn will lead to a 0.2% increase in the euro area GDP by 2026, with significantly greater effects for highly indebted countries such as Italy and Spain.

3. Possible implications of the war in Ukraine for the implementation and impact of RRF funds

Both the ECB and Commission’s macro-economic estimations of the effects of the Recovery Funds were conducted before Russia’s invasion of Ukraine. They assumed that the funds would support a post-Covid expansionary phase and would be disbursed in a context of low inflation and low interest rates. The situation, however, has changed significantly in recent months. The inflation rate is at levels unforeseen for decades, the ECB has risen its interest rate and it is expected to normalise the highly accommodative policy of the last years and the EU economy is at risk of falling into recession next year.

This change in the macro-economic context will undoubtedly alter the impact of the Recovery Plans on the economy but its effect is uncertain. On the one hand, if the EU economy enters into recession, the fiscal multiplier may be stronger than estimated. Besides, in case of tensions in the sovereign debt market, more EU countries will be interested in taking up RRF loans, thus increasing the RRF’s overall fiscal effect. A financial market subject to tensions will also generate an additional risk premium effect beyond the “announced” downward effect created in May 2020. On the other hand, the literature indicates that persistent low interest rates are conducive to higher fiscal multipliers, as they reduce the risk of crowding out (Di Serio et al 2021). Besides, rising production costs, supply bottlenecks and skill shortages may hamper the implementation of the Plan. Last but not least, the Member States may find it difficult to finance all the RRF projects included in their Plans. The size of the NRRP was fixed in advance on the basis of an estimation of the costs of all the investments covered by the Plans, but the costs were estimated using a projected 2% annual inflation rate. With inflation at 9 or 10%, RRF payments may therefore prove insufficient to cover the costs of all the RRF actions.

Whereas it is difficult to predict how the new macro-economic context will affect the impact of the Plans on the economy, what seems clear is that the war will bring about changes in the content of the Plans. This is the goal of the May 2022 “REPOWER EU” proposal, currently under negotiation between the Council and the Parliament. The proposal aims to include a new chapter in all National Recovery Plans focused

on energy-related investments and reforms. These chapters will contain “green deal” investments –such as investments in renewables or energy efficiency– and investments in fossil fuel infrastructure, such as new LNG terminals and gas storage capacity. To finance these new chapters, the Commission invites the Member States to make use of the remaining €220bn of the RRF loans. It also allows them to transfer an additional 7.5% of their EU cohesion policy envelope (roughly €30bn) to the RRF. The Commission also proposes raising an additional €20bn by auctioning the EU Emission Trading System (ETS) allowances to finance these REPOWER chapters.

Finally, apart from the difficulties posed by the war, we should not forget that there are other specific risks and challenges inherent to the implementation of the NRRPs. On the one hand, the RRF funds must be spent in full within six years (2021-2026), a shorter period than the usual 7-year period granted to the Member States to use their cohesion funds. This requires an important institutional capacity to ensure the successful selection and timely execution of investment projects, particularly for those countries with large and ambitious plans and which also receive important amounts of cohesion funding – as is the case of Spain. On the other hand, reform conditionality is always a challenging exercise. In the case of the RRF, there may not be major problems of ownership, as the reforms included in the Plans have been proposed by the beneficiary Member States. However, the adoption and implementation of reforms will be monitored through qualitative milestones measuring outputs (e.g. adoption of a law) rather than quantitative impact-oriented targets (e.g. reduction in the average length of public procurement procedures). There is thus a risk that the adopted reforms will be improperly implemented on the ground and not achieve their intended impact.

4. Macro-economic impact of the RRF funds in Spain

The Spanish Recovery Plan is the second largest after the Italian one. It amounts to €69.5bn in grants, the equivalent of 5.6% of the Spanish GDP in 2019. Compared to other NRRPs, the Spanish Plan stands out for the profile of the payment calendars, with payments being strongly frontloaded during the first years. It also contains a large number of reforms, even if not all of them are major structural reforms.

At the moment of presenting the Plan, the Spanish government did not provide detailed information on its expected macro-economic impact. It was only indicated that the Plan

would increase the GDP by 2.7 pp in 2021 and by 2 pp on average during the 2021-2023 period, and that it could lead to an increase of 0.4 pp in the long-term GDP¹. These estimates were overly optimistic, as pointed out by the Commission in the Plan’s assessment. They were based on a fiscal multiplier of 1.2. and on an assumption of full and timely implementation of all RRF projects according to a government’s ambitious timeline – which foresaw the execution of roughly €25bn of the RRF funds in 2021, €25bn in 2022 and €19bn in 2023.

The Spanish Independent Authority for Fiscal Responsibility (AIREF) accepted the assumption on the fiscal multiplier –while pointing out the large amount of uncertainty about it– but was sceptical regarding the capacity to execute all the RRF funds according to the government’s plans. In its report on the 2021-2024 Spanish stability programme, it estimated that the Plan’s biggest impact would be in 2022 rather than 2021². The Commission was even more cautious about the rhythm of disbursement and thus estimated that the biggest impact would take place in 2023 (table 4).

Table 3. Comparing the macro-economic estimations of the impact of the Spanish NRRP on GDP (pp deviation of real GDP level versus non-RRF scenario)

	2021	2022	2023	2024	2025	2026
Spanish government (April 2021)	2.7	2	--	--	--	--
AIREF (may 2021)	1.5	2.5	1.6	--	--	--
European Commission (may 2021)	1.3	2.3	2.4	2.5	1.9	1.2
Bank of Spain (December 2021)	0.3	1.6	--	--	--	--
AIREF (may 2022)	0.7	1.8	2.3	1.9	0.8	--
Spanish government (Sept 2022)	0.7	1.9	2.8	3.5	3.1	2.3

Sources: Spanish Stability Programme 2021-2024, AIREF (2021), AIREF (2022), European Commission (2021), Banco de España (2021) and Spanish Ministry of Finance (2022)

More recently, significant delays in the allocation of the RRF funds during 2021 as well as reported difficulties in the execution of some projects have led to a review of these estimations. In its report on the 2022-2024 Spanish Stability programme³, the AIREF reduces the fiscal multiplier to 0.9 and estimates that the Plan will lead to an increase of 1.8 pp of the GDP by 2022, 1.8 pp in 2023 and 2.3 pp in 2023. The fiscal authority justifies the adoption of a lower multiplier due to the fact that the RRF funds will be spent in a more adverse economic context, characterised by higher interest rates, a rise in production costs, supply disruptions and a tight labour market in strategic sectors for the deployment of the NRRPs such as

¹ This contrasts with the more detailed information provided by other governments. The German government, for instance, provided estimates on each of the Plan’s component impact on GDP over 2, 5 and 20 years and the Italian and French governments

also gave estimates broken down by different components or type of expenditures and on annual basis (see AIREF, 2021, p. 35-37)

² See AIREF (2021)

³ AIREF (2021)

the automotive industry, the construction industry or the digital sector. The Bank of Spain also points at a more moderate impact. In its December 2021 Economic forecast⁴, it estimates that the RRF funds will increase the GDP by only 0.3 pp in 2021 and by 1.6 pp in 2022. Lastly, the Spanish Government has also reviewed its macro-economic estimations⁵. The Government's new estimates are closer to those of AIREF, with an expected impact of 0.7 pp in 2021, 1.9 pp in 2022 and 1.8 pp in 2023. In these last estimates, the Spanish Government has included the impact of the reforms. According to the Government's calculations, from 2024 onwards the impact of the Plan will be mostly due to the positive effect of the reforms. These could increase the Spanish GDP by 3 pp in the long term (2030). Half of this increase would come from labour market reforms and reforms in the area of skills and education.

The great uncertainty about all these estimates should be noted. Leaving aside possible delays in the execution of the projects, it is very difficult to determine a fiscal multiplier for all the Spanish RRF funds. The literature gives some indication about the fiscal multipliers of "classic" investments in physical and human capital, but there is little evidence of the macroeconomic effects of innovative investments in areas such as the Artificial Intelligence Strategy or Research and Innovation in Hydrogen. Besides, the Spanish Plan foresees that a substantial part of the RRF funds should be implemented through the so-called Strategic Projects or PERTES. The impact of these projects is strongly dependent on the capacity to mobilise key private firms in these specific strategic areas. The Plan is also very vague as to the content of some key reforms, such as the fiscal reforms. There is also a lack of transparency on the implementation, monitoring and evaluation of the RRF projects –something that has been criticised by the AIREF.

Finally, the Government is currently working on an amendment of the Plan which responds both to the REPOWER proposal and the need to plan for the additional €7.7bn in grants received from the July 2022 update (see section 2). It has already indicated its intention to request €84bn of the RRF loans. This increase in the size and ambition of the Plan should logically increase the Plan's macro-economic impact.

5. Conclusions

The Recovery and Resilience Facility (RRF) is an unprecedented EU tool that provides significant support to the Member States in implementing national pre-agreed multi-annual agendas of investments and reforms. It is expected to have an important macro-economic effect on the EU economies

through three different channels: increasing public expenditure –particularly investment in climate action and digital transformation–, incentivising the adoption and implementation of reforms and reducing sovereign debt premia for the most indebted countries.

However, it is not easy to estimate its effects. The RRF presents many novelties in terms of governance, making it difficult to compare it with other existing EU funds. Besides, the range of investment projects financed is very large and there are major uncertainties as regards the capacity of the Member States to fully implement all the investment projects in a timely and effective way and to adopt and implement all the reforms. Last but not least, changes in the macro-economic context may alter the impact of the Recovery Plans on the economy, but their effect is not known.

Despite all these limitations, a look at the existing macro-economic estimations confirms the potential of these funds to help sustain the EU economy at a time of great uncertainty and the risk of recession. Whether this impact disappears or, on the contrary, remains persistent over time will largely depend on how effective implementation of the investments and reforms is in those countries receiving the largest amounts of RRF funds, particularly Italy and Spain.

References

- Alonso, D, Kataryniuk, I, Moreno, C and Pérez, Javier J, (2022) "El programa Next Generatio EU: características y claves para su éxito", ICE: Revista de economía, No 924, January-February
- Autoridad Independiente de Responsabilidad Fiscal (AIREF), (2021) "Informe sobre la actualización del programa de estabilidad 2021-2024", Informe 20/21, 11 May 2021
- Autoridad Independiente de Responsabilidad Fiscal (AIREF),(2022) "Informe sobre la actualización del programa de estabilidad 2022-2025", Informe 21/22, 12 May 2022
- Banco de España (2021), "Proyecciones macroeconómicas de la economía española (2021-2024): contribución del Banco de España al ejercicio conjunto de proyecciones del Eurosistema de diciembre de 2021", December 2021
- Bańkowski, K., Ferdinandusse, M., Hauptmeier, S., Jacquinet, P. and Valenta, V.(2021), "The macroeconomic

⁴ Banco de España (2021)

⁵https://www.lamoncloa.gob.es/lang/en/gobierno/news/Paginas/2022/20220922_rtrp_progress.aspx#:~:text=The%20Vice%20President%20of%20the,average%20each%20year%20until%202031.

impact of the Next Generation EU Instrument on the euro area”, Occasional Paper Series, No 255, ECB, January

- Bańkowski, K. Bouabdallah, O., Domingues Semeano, J., Dorrucci, E., Freier, M., Jacquinot, P. Modery, W. Rodríguez-Vives, M. Valenta, V. and Zorell, N (2022), “The economic impact of NextGeneration EU: a euro area perspective”, Occasional Paper Series, No 291, ECB, April
- Codogno L. and van den Noord, P. (2021), “Assessing Next Generation EU”, LSE 'Europe in Question' Discussion Paper Series, No166, European Institute, LES
- Di Serio, M, Fragetta, M. and Melina, G.(2021) “The Impact of r-g on the Euro-Area Government Spending Multiplier”., IMF working paper, WP 21/39, 2021.
- European Commission (2020), “Identifying Europe's recovery needs”, European Commission Staff Working Document SWD(2020)
- European Commission (2021), “Analysis of the recovery and resilience plan of Spain. Accompanying the Proposal for a Council Implementing Decision on the approval of the assessment of the recovery and resilience plan for Spain”, Staff Working Document 147, 16.6.2021
- Freier, M., Grynberg, C., O’Connell, M., Rodríguez-Vives, M. and Zorell, N. (2022), “Next Generation EU: A euro area perspective”, Economic Bulletin, No 1, ECB.
- Pfeiffer, P., Varga, J. and in 't Veld, J. (2021), “Quantifying Spillovers of Next Generation EU Investment”, European Economy Discussion Papers, No 144, European Commission, July.
- Picek, Olivier (2020) “Spillover Effects From Next Generation EU”, Intereconomics volume 55, p 325–331
- Spanish ministry of economy and digital transformation (2021), “Stability programme update 2021-2024. Kingdom of Spain”, 2021
- Spanish ministry of economy and digital transformation (2022), “Stability programme update 2022-2025 Kingdom of Spain”
- Spanish ministry of economy and digital transformation (2022), “Presentación de los avances en la ejecución del

Plan de Recuperación, Transformación y Resiliencia”, comparecencia de la ministra Calviño delante de la Comisión mixta del Congreso, 22 septiembre 2022, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.lamoncloa.gob.es/serviciosdeprensa/notasprensa/asuntos-economicos/Documents/2022/220922-PRTR-balance-ejecucion.pdf

- Watzka, S. and Watt, A. (2020), “The macroeconomic effects of the EU Recovery and Resilience Facility”, IMK Policy Brief, No 98, October.
- Verwey, M., S. Langedijk and R. Kuenzel (2020), “Next Generation EU: A recovery plan for Europe”, VoxEU, <https://voxeu.org/article/nextgeneration-eu-recovery-plan-europe> (10 September 2020).

About the author:

Eulalia Rubio Barceló is senior Research Fellow on European economic affairs at the Jacques Delors Institute in Paris. Her field of expertise is the EU’s budgetary and public investment policies.

Otras publicaciones ODF

Ene	2023	DT	Business Angels: Creadores de Valor de impacto en el ecosistema emprendedor	Juan Álvarez de Lara
Dic	2022	NT	El papel del Sistema de Derechos de Emisión en la transición a la neutralidad climática	Luis Antonio Galiano Bastarrica
Dic	2022	DT	Las divisas digitales de los Bancos Centrales: En los albores de un sistema financiero digital	Fernando Rojas Traverso Francisco del Olmo García
Nov	2022	NT	Efectos de la tokenización de activos para los mercados financieros	Carlos de Fuenmayor
Oct	2022	NT	Comptabilitat per la sostenibilitat: Aplicació pràctica d'un ràting ESG	Josep Maria Caselles Jaume Gené Jordi Martí
Jul	2022	DT	Instrumentos financieros vinculados a la inflación y su uso para la cobertura de riesgos	Francisco José Alcalá Vicente
Jun	2022	DT	La descarbonización del sistema energético global. Enseñanzas de los escenarios del Grupo Intergubernamental de Expertos sobre el Cambio Climático	José M ^a Martín-Moreno. Jorge Blázquez
Mar	2022	DT	Retos y oportunidades del estrés climático de la banca europea	Francisco del Olmo García y Fernando Rojas Traverso
Feb	2022	NT	Criptoactivos: un nuevo activo de inversión	Carlos de Fuenmayor
Dic	2021	DT	Bonos contingentes convertibles (Coco): de Basilea III a la transición sostenible	Arturo Zamarriego Muñoz
Nov	2021	NT	Special Purpose Acquisition Company (SPAC)	Carlos de Fuenmayor
Oct	2021	DT	Sostenibilidad de la deuda: geometría y límites difusos	Daniel Suárez Montes
Set	2021	NT	Bonos Sociales: Financiando la equidad	Julián Romero Zarco
Set	2021	DT	El imprescindible papel de las agencias de rating en el viraje hacia la sostenibilidad	Antonio Madera del Pozo
Jul	2021	NT	Measuring and targeting systemic cyclical risks – the Countercyclical Capital Buffer	Sofia Velasco
Jun	2021	NT	El Sandbox regulatori: És una oportunitat d'apropar el sector al regulador mitjançant la digitalització?	Pablo Domenech
May	2021	DT	Comportament diferencial en mercats de capital d'empreses sostenibles. Una mirada a les empreses emissores de bons verds	Jorge Sanz González
Abr	2021	NT	Carteres óptimas alternativas a la de mínima volatilidad de Markowitz	Laura Valls Sanchis
Feb	2021	DT	Megatendències i temàtiques en carteres de renda variable	David Cano y Francisco Lomba
Feb	2021	DT	Riscos relacionats amb el clima i mediambientals: una introducció a les expectatives supervisors i al risc	Arturo Fraile Izquierdo
Nov	2020	NT	Nuevos indicadores económicos para una nueva era	Diego Isabel La Moneda
Oct	2020	NT	Aspectos legales de las ISR a las entidades de capital de riesgo	Alex Plana Paluzie
Jul	2020	NT	Dark Pools and High Frequency Trading: A Brief Note	Anna Bayona
Jun	2020	DT	Los emisores soberanos ante la revolución sostenible	Andrés Alonso
Jun	2020	NT	El impuesto español sobre transacciones financieras, una medida alejada de la Tasa Tobin	Jordi Pey Nadal
May	2020	DT	¿Cómo valorar una start-up y qué métodos de valoración son más adecuados?	Roger Martí Bosch
Mar	2020	NT	Libra: ¿La moneda que puede cambiar el futuro del dinero?	Miguel otero Iglesias
Dic	2019	NT	¿Cómo puede un inversor particular implementar una estrategia sencilla y barata en factores? ¿Qué puede esperar de ella?	Ferran Capella Martínez

Dic	2019	DT	Una nota sobre la valoración de cross currency swaps	Lluís Navarro i Girbés
Nov	2019	DT	Criptoactivos: naturaleza, regulación y perspectivas	Víctor Rodríguez Quejido
Oct	2019	NT	¿Qué valor aportan al asesoramiento financiero los principales insights puestos de manifiesto por la behavioral economics?	Óscar de la Mata Guerrero
Jul	2019	NT	El MARF y su positivo impacto en el mercado financiero actual	Aitor Sanjuan Sanz
Jun	2019	NT	Las STO: ¿puede una empresa financiarse emitiendo tokens de forma regulada?	Xavier Foz Giralt
Abr	2019	NT	Criterios de selección para formar una cartera de inversión basada en empresas del Mercado Alternativo Bursátil (MAB)	Josep Anglada Salarich
Mar	2019	DT	Limitaciones del blockchain en contratación y propiedad	Benito Arruñada
Feb	2019	NT	MREL y las nuevas reglas de juego para la resolución de entidades bancarias	Francisco de Borja Lamas Peña
Dic	2018	DT	Principios éticos en el mundo financiero	Antonio Argandoña y Luís Torras
Nov	2018	NT	Inversión socialmente responsable 2.0. De la exclusión a la integración	Xosé Garrido
Nov	2018	NT	Transformación de los canales de intermediación del ahorro. El papel de las fintech. Una especial consideración a los <<robo advisors>>	David Cano Martínez
Oct	2018	DT	La Crisis Financiera 2007-2017	Aristóbulo de Juan
Jul	2018	NT	Evolución del <i>Equity Crowdfunding</i> en España, 2011-2017	Marc Montemar Parejo y Helena Benito Mundet
Jul	2018	NT	Demografía, riesgo y perfil inversor. Análisis del caso español	Javier Santacruz Cano
Jun	2018	NT	Gestión financiera del riesgo climático, un gran desconocido para las las empresas españolas	Ernesto Akerman Brugés
May	2018	NT	Las SOCIMI: ¿Por qué se han convertido en el vehículo estrella del sector inmobiliario?	Pablo Domenech
Mar	2018	NT	Desequilibrios recientes en TARGET2 y sus consecuencias en la balanza por cuenta corriente	Eduardo Naranjo
Ene	2018	NT	La Segunda Directiva de Servicios de Pago y sus impactos en el mercado	Javier Santamaría
Dic	2017	DT	“Factor investing”, el nuevo paradigma de la inversión	César Muro Esteban
Nov	2017	NT	La implantación de IFRS9, el próximo reto de la banca europea	Francisco José Alcalá Vicente
Oct	2017	NT	El Marketplace Lending: una nueva clase de activo de inversión	Eloi Noya
Oct	2017	NT	Prácticas de buen gobierno corporativo y los inversores institucionales	Alex Bardají
Set	2017	NT	El proceso de fundrasing: Como atraer inversores para tu <i>Startup</i>	Ramón Morera Asiain
Jun	2017	NT	Clases de ETF según su método de réplica de benchmarks y principales riesgos a los que están sujetos los inversores, con especial foco en el riesgo de liquidez	Josep bayarri Pitchot
May	2017	NT	Las consecuencias económicas de Trump. Análisis tras los cien primeros días	L.B. De Quirós y J. Santacruz
Mar	2017	DT	Indicadores de coyuntura en un nuevo entono económico	Ramon Alfonso
Ene	2017	NT	La protección del inversor en las plataformas de crowdfunding vs <i>productos</i> de banca tradicional	Álex Plana y Miguel Lobón
Oct	2016	NT	Basilea III y los activos por impuestos diferidos	Santiago Beltrán
Sep	2016	DT	El <i>Venture Capital</i> como instrumento de desarrollo económico	Ferran Lemus
Jul	2016	DT	MAB: una alternativa de financiación en consolidación	Jordi Rovira
Jun	2016	NT	Brasil, un país de futuro incierto	Carlos Malamud
May	2016	DT	La evolución de la estrategia inversora de los Fondos Soberanos de Inversión	Eszter Wirth
Abr	2016	DT	Shadow Banking: Money markets odd relationship with the law	David Ramos Muñoz

Mar	2016	DT	El papel de la OPEP ante los retos de la Nueva Economía del Petróleo	José M ^a Martín-Moreno
Feb	2016	NT	Guerra de divisas: los límites de los tipos de cambio como herramienta de política económica. Un análisis a partir de los ICM	David Cano
Ene	2016	DT	1+1=3 El poder de la demografía. UE, Brasil y México (1990-2010): demografía, evolución socioeconómica y consecuentes oportunidades de inversión	Pere Ventura Genescà
Nov	2015	DT	¿Un reto a las crisis financieras? Políticas macroprudenciales	Pablo Martínez Casas
Oct	2015	NT	Revitalizando el mercado de titulaciones en Europa	Rosa Gómez Churruga y Olga I.Cerqueira de Gouveia
Abr	2015	NT	Ganancias de competitividad y deflación en España	Miguel Cardoso Lecourtois
Ene	2015	DT	Mercado energético mundial: desarrollos recientes e implicaciones geoestratégicas	Josep M. Villarrúbia
Dic	2014	DT	China's debt problem: How worrisome and how to deal with it?	Alicia García y Le Xía
Nov	2014	NT	CrowdEquity y crowdlending: ¿fuentes de financiación con futuro?	Pilar de Torres
Oct	2014	NT	El bitcoin y su posible impacto en los mercados	Guillem Cullerés
Sep	2014	NT	Regulación EMIR y su impacto en la transformación del negocio de los derivados OTC	Enric Ollé
Mar	2014	DT	Finanzas islámicas: ¿Cuál es el interés para Europa?	Celia de Anca
Dic	2013	DT	Demografía y demanda de vivienda: ¿En qué países hay un futuro mejor para la construcción?	José María Raya
Nov	2013	DT	El mercado interbancario en tiempos de crisis: ¿Las cámaras de compensación son la solución?	Xavier Combis
Sep	2013	DT	CVA, DVA y FVA: impacto del riesgo de contrapartida en la valoración de los derivados OTC	Edmond Aragall
May	2013	DT	La fiscalidad de la vivienda: una comparativa internacional	José María Raya
Abr	2013	NT	Introducción al mercado de derivados sobre inflación	Raúl Gallardo
Abr	2013	NT	Internacionalización del RMB: ¿Por qué está ocurriendo y cuáles son las oportunidades?	Alicia García Herrero
Feb	2013	DT	Después del dólar: la posibilidad de un futuro dorado	Philipp Bagus
Nov	2012	NT	Brent Blend, WTI... ¿ha llegado el momento de pensar en un nuevo petróleo de referencia a nivel global?	José M.Domènech
Oct	2012	L	Arquitectura financiera internacional y europea	Anton Gasol
Sep	2012	DT	El papel de la inmigración en la economía española	Dirk Godenau
Jun	2012	DT	Una aproximación al impacto económico de la recuperación de la deducción por la compra de la vivienda habitual en el IRPF	José María Raya
Abr	2012	NT	Los entresijos del Fondo Europeo de Estabilidad Financiera (FEEF)	Ignacio Fernández
Mar	2012	M	La ecuación general de capitalización y los factores de capitalización unitarios: una aplicación del análisis de datos funcionales	César Villazon y Lina Salou
Dic	2011	NT	La inversión socialmente responsable. Situación actual en España	M ^a Ángeles Fernández Izquierdo
Dic	2011	NT	Relaciones de agencia e inversores internacionales	Aingeru Sorarrin y Olga del Orden
Oct	2011	NT	Las pruebas de estrés. La visión de una realidad diferente	Ricard Climent
Jun	2011	DT	Derivados sobre índices inmobiliarios. Características y estrategias	Rafael Hurtado
May	2011	NT	Las pruebas de estrés. La visión de una realidad diferente	Ricard Climent
Mar	2011	NT	Tierras raras: su escasez e implicaciones bursátiles	Alejandro Scherk
Dic	2010	NT	Opciones reales y flujo de caja descontado: ¿Cuándo utilizarlos?	Juan Mascareñas y Marcelo Leporati
Nov	2010	NT	Cuando las ventajas de TIPS son superada por las desventajas: el caso argentino	M. Belén Guercio

Oct	2010	DT	Introducción a los derivados sobre volatilidad: definición, valoración y cobertura estática	Jordi Planagumà
Jun	2010	DT	Alternativas para la generación de escenarios para el stress testing de carteras de riesgo de crédito	Antoni Vidiella
Mar	2010	NT	La reforma de la regulación del sistema financiero internacional	Joaquín Pascual Cañero
Feb	2010	NT	Implicaciones del nuevo Real Decreto 3/2009 en la dinamización del crédito	M. Elisa Escolà y Juan Carlos Giménez
Feb	2010	NT	Diferencias internacionales de valoración de activos financieros	Margarita Torrent
Ene	2010	DT	Heterodoxia Monetaria: la gestión del balance de los bancos centrales en tiempos de crisis	David Martínez Turégano
Ene	2010	DT	La morosidad de banco y cajas: tasa de morosidad y canje de créditos por activos inmobiliarios	Margarita Torrent
Nov	2009	DT	Análisis del TED spread la transcendencia del riesgo de liquidez	Raül Martínez Buixeda