# LA RESPUESTA DE LA UNIÓN EUROPEA FRENTE A LA CRISIS DEL COVID

## THE RESPONSE OF THE EUROPEAN UNION TO THE COVID CRISIS

TRABAJO FIN DE GRADO

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ECONOMÍA Y FINANZAS GRUPO 441 | JUNIO DE 2021

## Abstract

The objective of this paper is to give a detailed explanation on the responses designed by different European institutions and their respective mechanisms so that the European economy is able to overcome the COVID-19 shock. This economic shock has shown the relevance of the European Central Bank as well as the European Commission and the cooperation across member states. All in all, it is a big opportunity for countries to take advantage of the funds that will be described below.

## Key words

Monetary policy, interest rates, disbursements, fiscal policy, budgetary rules

## JEL codes

E52, E58, E62, E65, H12,

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# 1. Introduction

The objective of this paper is to give a detailed explanation on the responses designed by different European institutions and their respective mechanisms so that the European economy is able to overcome the COVID-19 shock.

When the pandemic became a clear struggle first for countries such as Italy and Spain in Europe, nobody was able to predict what would come afterwards. The speed at which the virus spread was only matched by the economic concerns and the uncertainty that a lockdown would have on not only the European, but on the whole world economy. This crisis has been an economic shock that was never seen before and therefore, no country or European institution had foreseen, which made the European Union question its impact on not only the health and safety of their citizens but on their future. Specifically, their future is determined by the economy of each country which is a beneficiary of the help and solutions provided and coordinated by the European Union.

The paper is divided in three main sections. Firstly, I will define the role that the European Commission has adopted to overcome the current crisis and compare some of the responses to those in another important and devastating recessions such as the previous financial and sovereign debt crisis. These measures include relaxing some of their fiscal rules, by activating existing escape clauses, some of them never activated before; raising funds by the issuance of social bonds to be provided to those countries in need. These countries needed to set different schemes and timelines as well as specify the use of some important instruments as the issuance of common debt, while thinking about the health and safety of their citizens and learning from the data retrieved day after day about the consequences of the COVID crisis.

The second section focuses on the European Central Bank (ECB), and similarly to the European Commission, I will analyse the impact this institution had during the pandemic, and how it was able to adapt and react quickly to the challenges. The ECB was able to perform different programmes. Some of them based on previous mechanisms, which implemented the peculiarities of an economic context such as a pandemic crisis, while other existing programmes adapted to the new context, aiming to provide liquidity and funding at favourable rates and conditions. In this section, the objective is to give a chronological review of the programmes and how they had been recalibrated in order to adapt to the shock, but also, I will go through one of the main responsibilities of the ECB: inflation. I will analyse how inflation could be affected by the current economic context of low inflation and interest rates and the evolution of government bond yields since 2008, which is linked to inflation expectations and investors' behaviour.

Finally, in the third section, I will focus on how the European funds will be used by Spain. This section aims to give a detailed explanation on how Spain is coping with the pressure not only on the health care system but also on the management of funds and coordinating these measures to ensure the survival of not only small and medium sized enterprises but also bigger companies that were almost bankrupt and needed to be bailed out. In order to do so, I will analyse the Recovery, Transformation and Resilience Plan submitted by the Spanish Government in which they have defined the roadmap to achieve a more green, digital and resilient Spain.

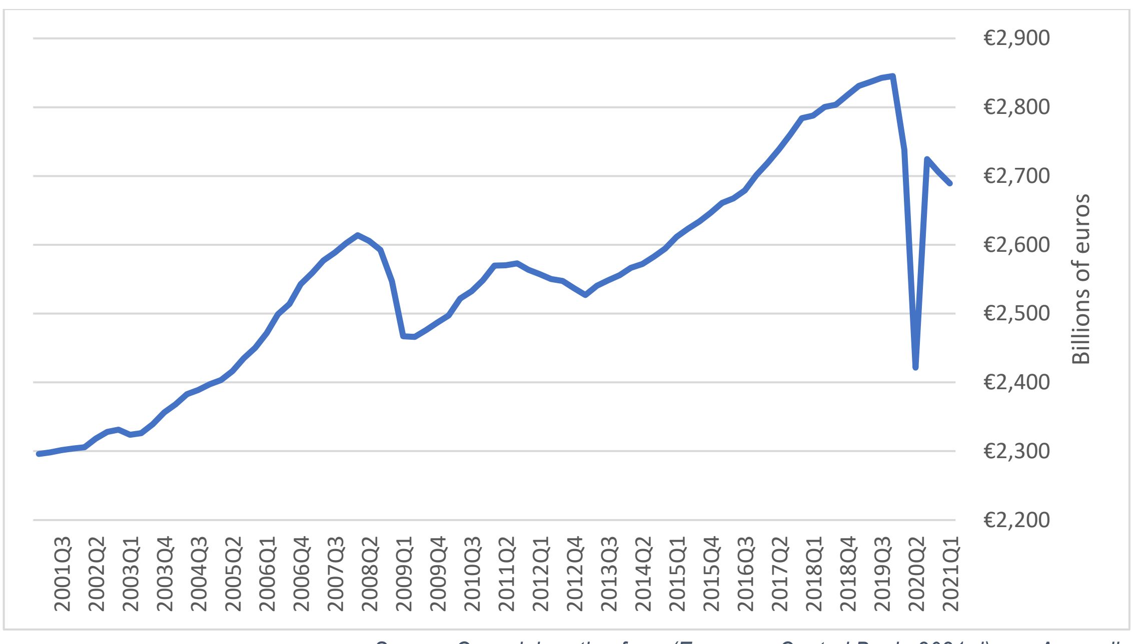
After the completion of these three sections, the hope is that the reader will get a clear vision on how the European Union and its institutions support the proper functioning of our society, in this case in economic terms, as a strong economy would help to create and transform Europe into a better place, a more technological, and environmental caring place to live.

Europe is made of different countries, different cultures and philosophies, which historically has made it difficult to coordinate centrally as the Commission and the Central Bank aim to, setting a clear division between the north and south countries. This paper also gives a thoughtful picture of how funds have been disbursed and the country's most in need.

## 2. The economic impact of COVID-19

In this section, I will briefly present a quantitative analysis of the COVID-19 crisis, as below you can find Figures which display the GDP for the European Union and for some countries that have been severely affected such as Spain, Italy or others.

*Figure 2.1. Real GDP for the European Union after the pandemic.*




*Source: Own elaboration from (European Central Bank, 2021.d) see Appendix.*
*Note: This figure displays the data for the Euro Area 19, seasonally adjusted at market prices until March 2021.*

As shown in Figure 2.1, it took more than seven years for the GDP to recover from the impact of the Great Recession and the European sovereign debt crisis[1]. Once the GDP recovered to its previous level, we could experience the growth, not as high paced as it was before 2008, but high enough to obtain 200 billion euros in 4 years. Moreover, the impact of the COVID-19 over the GDP of the European Union caused GDP to fall over 2,421 billion euros which is below the lowest data of the Great Recession and close to the levels of 2004.

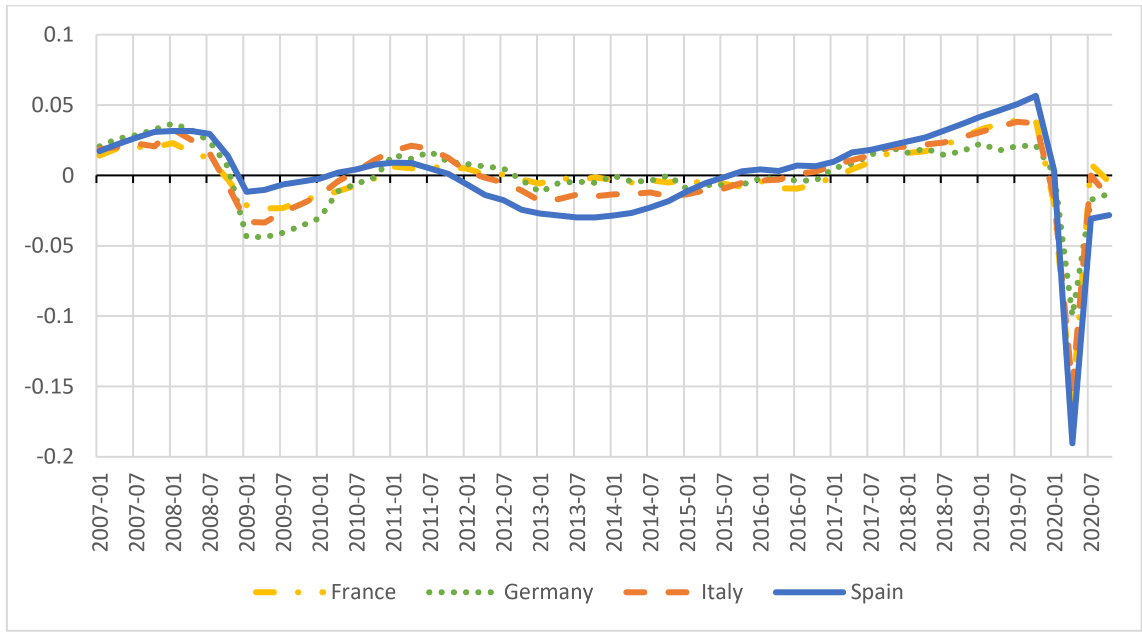
In Figure 2.2, we can see the differences between the economies of Spain, Italy, Germany and France, presented as the logarithmic transformation after applying the Hodrick-Prescott filter over their real GDP level. This transformation has made possible to compare the effects of not only the COVID-19 crisis but also de financial and sovereign debt crisis.

Moreover, the graph shows how Spain was affected by the sovereign debt crisis but was able to recover more and achieve higher GDP growth although showing higher volatility than the others

[1] Also, see Figure 2.3.

countries. In the graph, it is also dissplayed and easily to compare how strong this recession has been as the GDP decreased their increasing growth trend getting close to -0.2 for Spain, France and Italy, whereas during the other crises, the same levels never went below -0.05.

*Figure 2.2. The impact of COVID-19 over the real GDP of Spain, Italy, Germany and France.*




*Source: Own Elaboration from (Federal Reserve Bank of St Louis, Germany, Spain, Italy and Spain) see Appendix. Note: Figure 2.2 displays the impact over the real GDP for each of the countries after transforming the data into logarithms and then applying the Hodrick-Prescott filter in order to extract the tendency of the different time series. It shows the quarterly evolution of real GDP, illustrating the main differences between the four countries and their economies since 2007 and up to october 2020.*

Finally, in Figure 2.3 I present the impact over the Spanish GDP on past crises since 1980, not only economically but also the time it took for the GDP to get back to its previous level. In order to do so, I have formulated that the GDP level at the beginning of their respective recession is 100 (the black line) and therefore, once it cuts again the line, the GDP has returned back to its previous level.

On the other hand, on the horizontal axis, it is displayed, the time (quarterly) that takes the economy to be back on its previous level. As you can see, recessions have been getting more and more severe as their GDP is higher and needs more time to recover.

*Figure 2.3. The impact of the last recession in Spain.*

*Source: Own Elaboration from (Federal Reserve Bank of St Louis, Spain) see Appendix.*
*Note: This figure displays the economic impact of recessions in Spain since 1980 and the time that was needed to get back to its previous GDP levels.*

The question will be whether the COVID crisis will support this theory that crises are becoming more severe or if economic agents have learnt from past recessions and are able to give a quicker response in a context that it is more difficult than before. With that statement I mean that, behind other crises such as the Great Recession, you could argue that bankers, economists and governments should have been able to forecast its problems and anticipate its impact. You could even complain that the financial system does not operate fairly as the Lehman Brothers default was based on the capitalist system, but in this case, the COVID crisis arose from lockdowns and imposed curfews required to save lives, as in the main concern was the health and safety of the citizens.

Once I have provided this insight of the economic context in Europe and some of its countries, in particular in Spain, I can fully analyse the three main sections of this paper.

## 3. The European Commission response to COVID-19

According to the mandate of the European Commission[2] its duty is to: "help to shape the EU's overall strategy to propose new EU laws and policies to monitor their implementation and to manage the EU budget. It also plays a significant role in supporting international development and delivering aid".

When the COVID-19 crisis hit at the beginning of March 2020, an economic shock that was never seen before made the European Commission question its impact, and therefore the role that they would have to play to provide Europe with the necessary help to overcome it, using all the instruments available to mitigate the consequences of the pandemic. At the beginning, no one knew for sure what the consequences on a six month to 2-year horizon would be, which made more difficult to react quick enough due to the uncertainty.

The objective of this section is to summarise how the European Commission responded to the COVID-19 crisis and describe the differences with previous recessions, such as the financial and the sovereign debt crises, not only on how the crisis has propagated but also on how the European Union has responded.

Firstly, I will analyse the measures adopted to provide the necessary help to overcome the crisis, such as: the use of the full flexibility of the Stability and Growth Pact and Member State Aid Frameworks, by which the Commission relaxed their rules and activated the necessary escape clauses. The Commission have also used the background of such measures as their peculiarities and exceptions, in order to enable more resources and rely on past experiences.

Moreover, I will analyse the different schemes provided by the European Commission and the scope of these schemes as well as their future impact. This analysis will take place chronologically in order to show how the European Commission was able to adapt to the changes and different stages of the pandemic, as this crisis was new and different.

### 3.1. Flexibility of EU budgetary rules

#### 3.1.1. Stability and Growth Pact

Overtime the Commission has been involved in different ways in order to coordinate the budget deficits and regulate the different member states debt levels. In 1992 the Maastricht Treaty was signed, paving the way for the creation of the euro as the common currency and limiting government

[2] European Commission.

deficits to 3% of GDP and public debt levels to 60% of GDP, in order to enable countries to share a single currency. This would be enforced by monitoring and coordinating the public finances, establishing the Stability and Growth Pact, hereafter SGP.

The SGP has been evolving and changing through the years. After the financial crisis, it was made more comprehensive and predictable. By setting new governance rules in 2011 and 2013 and in 2015, the European Commission issued guidance on how it would apply the SGP rules to strengthen the link between structural reforms, investment, and fiscal responsibility in order to support jobs and growth aiming for a more flexible SGP.

These new governance rules arose after the Great Recession in 2008, which caused the Eurozone to go through a European government debt crisis, that threatened the euro. The peak of this crisis was in 2013 and it was caused due to the high-risk premium imposed by lenders on those bonds issued by countries highly indebted. As a consequence, the SGP was revised and reformed so that in certain situations[3], countries could issue more debt increasing their deficit by activating the general escape clause.

Moreover, this reform to the SGP was signed in 2012 and entered into force on the 1st of January 2013: The Treaty on Stability, Coordination and Governance in the Economic and Monetary Union; (also referred to as TSCG) or from now on the Fiscal Stability Treaty. It aimed to strengthen the economic rules of the European Monetary Union.

Some of these important measures are:

- **Balanced budget rule**: This measure is based upon the SGP deficit rule and introduced a varying upper limit which depends on the debt-level of the state. Concretely, a balanced budget would be present when the structural deficit[4] does not exceed a country-specific Medium-Term budgetary Objective (MTO), which at most can be set to 0.5% of GDP for states with a debt-to-GDP ratio exceeding 60% – or at most 1.0% of GDP for states with debt levels within the 60%-limit[5].
- **Automatic correction mechanism:** It must be automatically triggered in the event of significant observed deviations from the MTO or the adjustment path towards it and it

[3] The clause can be triggered by the Council upon a recommendation by the Commission 'in the case of a severe economic downturn in the euro area or in the Union as a whole'. The only requirement is that any enhanced flexibility in applying the existing rules 'does not endanger fiscal stability in the medium-term' (European Commission).

[4] Structural deficit: It occurs when a country (or public institution) is spending more than the revenues they obtain, in a situation in which their economy is operating at its full potential and therefore, government spending is financed by borrowing, becoming unsustainable.

[5] Directorate-General of Economic and Financial Affairs (2012).

should aim at correcting them, including their cumulated impact on government debt dynamics. It should also apply to temporary deviations justified by exceptional circumstances[6].

- **Debt issuance coordination**: For the purpose of better coordinating the planning of national debt issuance actions, member states shall submit its public debt issuance plans in advance to the European Commission.

Under these new measures, the European Commission not only strengthened the coordination and governance of the Economic European Union, but also gave the flexibility needed for the member states to adapt their budgetary deficits in difficult situations, unlike during the 2008 Great Recession, when the role of the European institutions was hard and not flexible enough to reactivate the economy.

The Commission considered on the 13th of March 2020, that the COVID-19 outbreak qualified as "unusual events outside the control of the government" and therefore it allowed exceptional spending to contain the pandemic crisis by activating the general escape clause that suspends the fiscal adjustments recommended by the Council.

Hence, on the 20th of March 2020, they proposed the activation of the general escape clause of the Stability and Growth Pact as part of their strategy to respond quickly, forcefully and in a coordinated manner to the coronavirus pandemic as it allowed member states to deal with the crisis without being constrained by their budgetary requirements. The President, Ursula von der Leyen said that *"I want to make sure that we respond to the human as well as socio-economic dimension of the Coronavirus pandemic in the best way possible"*[7].

Therefore, unlike the financial crisis and the rigid policies and role of the European institutions during that shock and posterior debt crisis, the ministers agreed to allow the Commission and the Council to undertake the necessary policy coordination measures within its framework, although they remained fully committed to the respect of the Stability and Growth Pact. The general escape clause was activated for the first time ever, aiming to tackle the economic consequences of the pandemic while departing from the budgetary requirements that would normally apply[8].

[6] European Central Bank (2012).
[7] European Commission Audiovisual Service (2020).
[8] Council of the EU (2020). European Commission (2020).

### 3.1.2. Member State Aid Temporary Framework

In addition to relaxing the SGP, the European Commission implemented the Member State Aid Framework, which was firstly adopted at a time where the banks were the problem and not the solution. The Commission has been trying to make this clear, reinforcing the message over and over again since the beginning of the pandemic.

These times were during the financial crisis in 2008, when the Framework supported access to finance, founding its scheme firstly on short-term measures to boost demand and restore confidence and secondly, on "smart investment" to obtain higher growth and sustainable prosperity[9].

The main fiscal response to the pandemic would come from the member states' national budget, as they have the responsibility to take effective action to support their citizens and companies, in particular, the Small and Medium-sized Enterprises (SMEs). The European Commission has again given flexibility to the member states to design the measures that will tackle these effects by using the Framework.

This framework, provides aid mainly through four different ways:

- **Direct grants, selective tax advantages and advance payments:** Set up schemes and address its liquidity needs.
- **State guarantees for loans taken by companies from banks:** Guarantees to ensure banks keep providing loans to the customers who need them.
- **Subsidised public loans to companies:** Grant loans with favourable interest rates to companies and therefore cover immediate working capital and investment needs.
- **Safeguards for banks that channel state aid to the real economy:** The Framework makes clear that such aid is considered as direct aid to the banks' customers, not to the banks themselves.

In general, the Temporary Framework is trying to complement other possibilities that fall outside of the State Aid rules focusing on particularly impacted sectors such a tourism, transport, hospitality… The first Framework took place from the 19th of March 2020 and was revised before the end of December in order to decide whether to extend this period or not. Then, a draft proposal was sent

[9] European Commission (2009).

from the Commission to the member states as well as a survey was conducted to seek the opinions and coordination of this implementation.

Although the Framework took place in March 2020, it has been amended several times in order to protect jobs, enable recapitalisation and subordinated debt measures and incentivise private investment. In addition, it has also been amended to prolong the validation of the Temporary Framework first to June 2021, then September 2021 and at the time this research was completed, it was lastly prolonged until the 31st of December 2021[10]. Further help was provided after this last extension by increasing the aid ceilings (as they had effectively doubled) and for companies with turnover losses of at least 30% compared to the same period of 2019. In this case the state can contribute to the part of the fixed costs of companies that are not covered by their revenues, in an amount up to €10 million per company (previously €3 million).

## 3.2. EU funding for short-time work schemes

The Support to mitigate Unemployment Risks in an Emergency (SURE) instrument is part of the European Commission response to the coronavirus and its consequences. It is designed to assist EU Member States in addressing sudden increases in public expenditure to preserve employment. The funds raised under SURE are aimed at helping to cover the costs directly related to the financing of national short-time work schemes, and other similar measures they have put in place as a response to the coronavirus pandemic, including for the self-employed.

This instrument is up to €100 billion[11]. In order to have a better idea of this amount and the impact of the actions taken by the European Commission, only the EU Funding for short time working scheme amounts for 3.27% of the European Union´s second quarter 2020 GDP[12]. The social bonds[13] have a liquid yield curve[14] as bonds issued under SURE benefit from a social bond label. This provides investors in these bonds with confidence that the funds mobilised will serve a truly social objective.

[10] European Commission (2020.h).
[11] European Commission (2020.c).
[12] Data retrieved from (Federal Reserve Bank of St Louis).
[13] Social bonds: are use of proceeds bonds that raise funds for new and existing projects with positive social outcomes. They promote integrity in the social bond market through guidelines that recommend transparency, disclosure and reporting (International Capital Market Association , 2020).
[14] Yield curve: a graphical representation that plots the interest rates of its bonds across different maturities. Shows the yield and investor is expected to earn if he lends his money for a given period of time. It is said to be liquid because there is no high liquidity premium over the asset.

### 3.2.1. The EU SURE disbursements in 2020

**On the 21st of October 2020**, the European Commission issued a €17 billion inaugural social bond under the EU SURE instrument, which stands (as mentioned above) for Support to mitigate Unemployment Risk in an Emergency and aims to help protect jobs and keep people in work[15].

The funds raised will be transferred to the beneficiary member states in the form of loans to help them cover the costs directly related to the financing of national short-time work schemes and similar measures as a response to the pandemic. SURE, could also finance some health-related measures, in particular at the workplace, used to ensure a safe return to normal economic activity. As stated before, these funds are raised by the issuance of social bonds under the European Commission and benefiting from the Treaty of Rome in 1957 as it states that it is 0% risk weighted as an issuer (Basel III)[16].

The EU's borrowings are direct and unconditional obligations of the EU, guaranteed by the EU member states through the EU budget. The European Commission is empowered by the EU Treaty to borrow on the international capital markets, on behalf of the European Union[17].

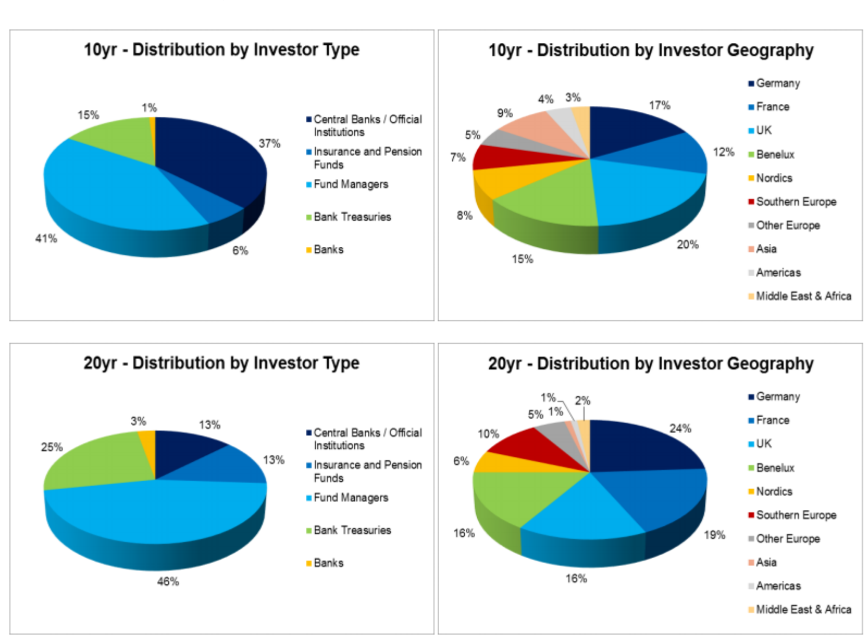
In that context, the Commission announced that it would issue the entire EU SURE bond of up to €100 billion and adopted an independently evaluated Social Bond Framework. However, in order for SURE to become available, all 27 member states had to agree to contribute voluntarily to the instrument by counter-guaranteeing the risk borne by the EU of 25% of these total 100 billion euros. Each member state's share in the overall guarantee was proportional to its share in the gross national income of the EU which allowed to set the work scheme without requiring any up-front cash contributions[18].

"*Investors were attracted by the conditions of the issuance and the idea of helping EU Member States in supporting employment through these difficult times. The successful launch is a vote of confidence in the European Union as issuer and borrower*" said Johannes Hahn, European Commissioner for Budget and Administration[19].

[15] European Commission (2020.d).
[16] The literature on this statement is ambiguous as there is an international concern on whether this implementation, under Basel III, makes European sovereign debt "dangerous" as it blindness their risk (Jenkings, 2019) threatening a 'doom loop'. Also, (Korte & Steffen, 2014) write about how this 0% weight makes debt issued by EU members attractive to investors although it could undermine bank's risk as they are undercapitalised to a certain extent.
[17] European Commission (2020.e).
[18] European Commission (2021.e).
[19] European Commission (2020.e).

The EU SURE bonds investor type´s distribution is displayed in Figure 3.1 and gives a brief overview of how much are different institutions interested on these bonds. Fund managers and bank treasuries are the two main investors for the 20-year bond. However, Central Banks and official institutions decrease their interest from 10-year bonds (37% of total investors) to a 13% for the higher maturity bonds. In terms of the where these investors are located, Germany, France and the United Kingdom are the three countries with the highest percentages, which therefore states the interest of these economical leaders on the successful economic recovery for the other European countries, as it would help their economies too.

*Figure 3.1. EU SURE bonds investor distribution.*

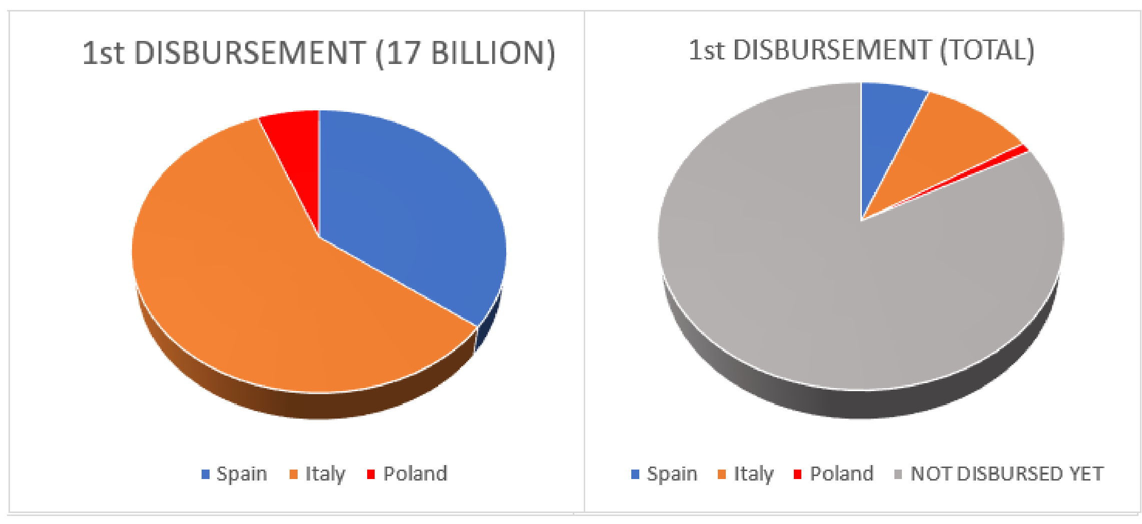



*Source: European Commission, (2020.f).*

*Note: The figure shows how the investors are distributed depending on the maturity of the bonds, their activities and their location. We can therefore see that Fund managers are strongly attracted by these SURE bonds and also, Germany, France and the United Kingdom investors add up to 59% of the total.*

As the total amount approved by the European Commission under the SURE disbursements is 100 billion euros, I will be showing how much has been disbursed and for which Member State out of the total amount (those 100 billion euros) and the amount disbursed. Therefore, Figure 3.2 displays the amounts up to the 21st of October:

*Figure 3.2. EU SURE bonds first disbursement.*




*Source: Own elaboration from (European Commission, 2020.c).*
*Note: The first disbursement for the EU SURE work-scheme amounted to 17 billion euros out of a total 100 billion euros that will be disbursed throughout 2020 and 2021. Figure 3.2 shows the allocation of this first disbursement and how much is yet to be allocated.*

**At the end of October**, Italy, Spain and Poland already received a total of €17 billion under the EU SURE instrument, as observed in Figure 3.2, in which we can see that Spain and Italy amount to 94% of the total amount disbursed. Therefore, Poland only received 1 billion euros. The proposed to make €90.3 billion in financial support available to 18 member states.

**On 10th November**, the European Commission issued social bonds for the second time under the EU SURE instrument, for a total value of €14 billion.

**On the 17th of November**, the European Commission disbursed those €14 billion to nine EU countries in the second instalment of financial support to member states under the SURE instrument. Due to this operation, "Croatia has received €510 million, Cyprus €250 million, Greece €2 billion, Italy an additional €6.5 billion, Latvia €120 million, Lithuania €300 million, Malta €120 million, Slovenia €200 million and Spain an additional €4 billion"[20].

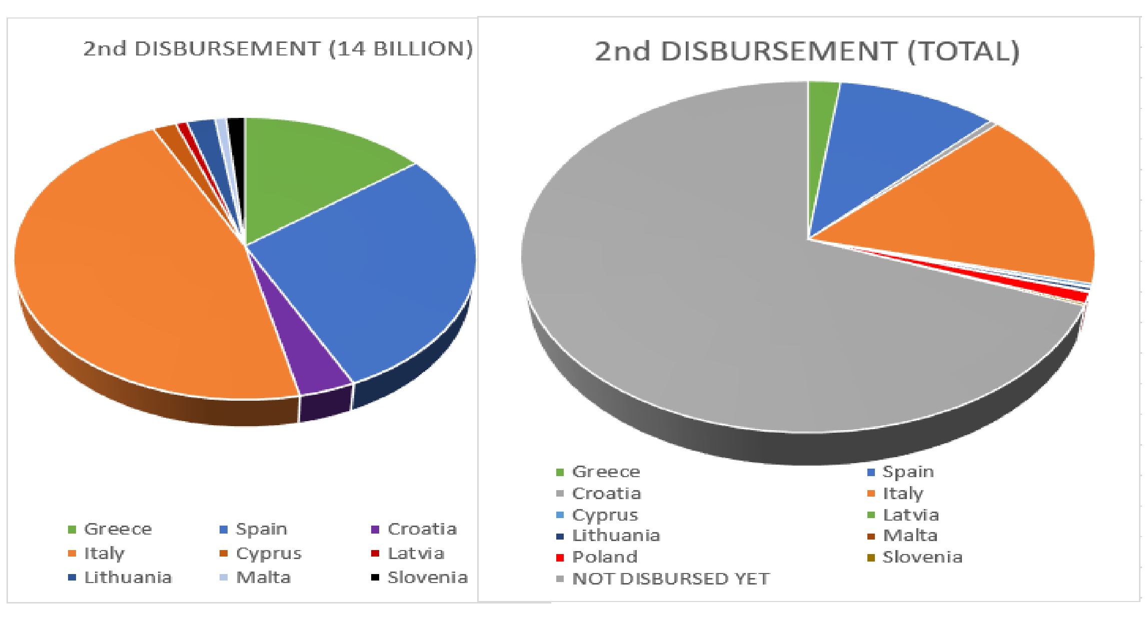
This support, as stated before, is in the form of loans granted on favourable terms that would assist these member states in addressing sudden increases in public expenditure to preserve employment and help cover the costs associated to the jobs that could be lost. Especially in the short-term and the survival of those SMEs and self-employed people.

This second disbursement of 14 billion euros is reported in Figure 3.3. It shows that, at the time this paper was completed, almost three quarters of the total envelope had not been disbursed yet

[20] European Commission (2020.a).

and almost a half of the total second disbursement was received by Italy and more than the remaining 25% by Spain. This is mostly due to the fact that these countries were the ones affected the most.

*Figure 3.3. EU SURE bonds second disbursement.*




*Source: Own elaboration from (European Commission, 2020.a).*

*Note: On this second disbursement, as it is shown in Figure 3.3, more countries were involved in these EU SURE funds although less money was issued and disbursed, 14 billion compared to the 17 billion euros disbursed before.*

**On the 25th of November**, the European Commission issued a €8.5 billion social bond under the EU SURE, the third bond issuance under the programme that year. In 2021, the Commission also launched lending lines under NextGenerationEU, the temporary recovery instrument of €750 billion to help build a greener, more digital and more resilient Europe.

**On the 1st of December**, the European Commission disbursed €8.5 billion in the third instalment of financial support to five Member States under the SURE instrument in which, Belgium has received €2 billion, Hungary €200 million, Portugal €3 billion, Romania €3 billion and Slovakia €300 million[21].

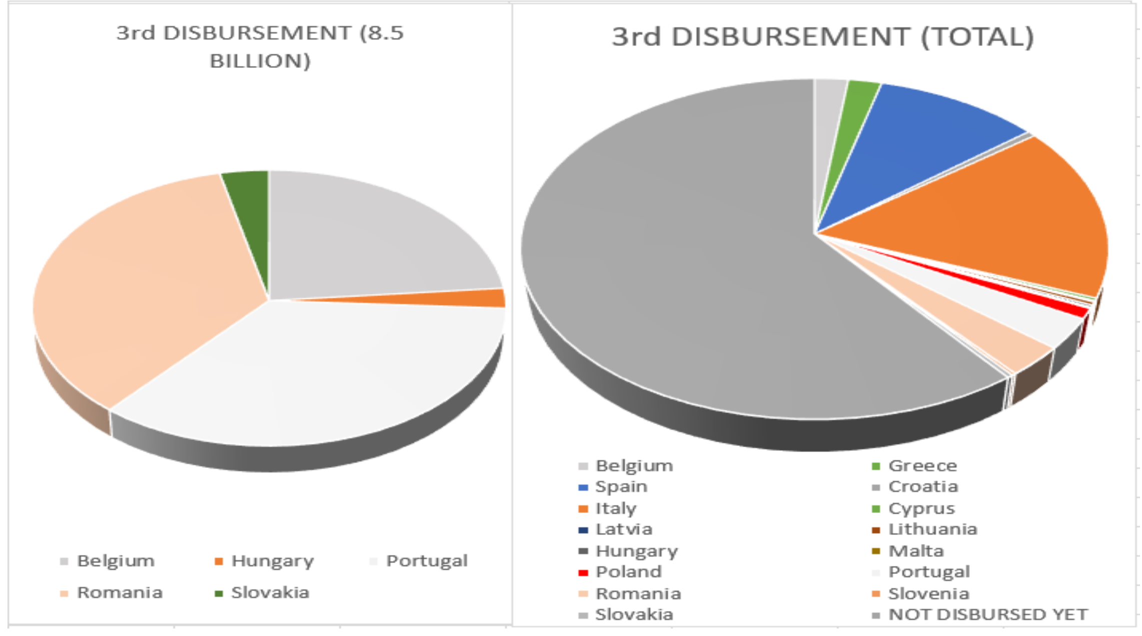
The EU SURE bond has attracted the largest-ever order book for any single tranche benchmark issuance and is the largest 15-year deal size by a supranational issuer to date. The favourable pricing terms that resulted from the high investors' interest are directly being passed on to the Member States receiving the loans[22]. This differs substantially to what happen in 2013 at the peak of the sovereign debt crisis because countries do not issue their own debt, therefore their

[21] European Commission (2020.b).
[22] European Commission (2020.b).

idiosyncratic risk is not associated to this debt. In the contrary, it is the Eurozone the institution that is backing these issuances and therefore mitigating this risk.

The overview up to the 1st of December 2020 of the disbursements to each member state as the proportion of the disbursed and total amount is displayed in Figure 3.4, showing that Portugal, Belgium and Romania shared almost the total disbursement.

*Figure 3.4. EU SURE bonds third disbursement.*




*Source: Own elaboration from (European Commission, 2020.b).*

*Note: On this fourth disbursement and the last of 2020, Figure 3.4 shows that only four countries received funds this time and the total amount disbursed is getting close to the half, 50 billion euros.*

At this stage, on the 1st of December 2020, President Ursula von der Leyen said: "*Our priority is to save people's lives, and also their livelihoods. The EU is mobilising €100 billion in loans for EU countries to finance short-time work schemes. This will provide support to our companies and help keep people employed. On this day, another five member states are receiving funding via SURE, and 15 have benefitted so far. More countries will be able to benefit soon*".

This statement made clear that the European Commission would supervise and provide with funds in order to maintain the economies as stable as they could be during this pandemic, alleviating its social impact. It seems pretty clear that the social impact of the COVID crisis would have been so much worse without European countries' strong safety nets, especially short-time work schemes and the European Union wants to grow and develop this "unity feeling" by setting a good standard of cooperation.

### 3.2.2. The main features and guidelines for 2021

On the 22nd of December, the European Commission, due to the long-term crisis expectations of the pandemic and therefore, their attached lockdowns and closed borders, decided its guideline for bond issuances under the different borrowing programmes such as:

- **SURE instrument** to support short-term employment schemes in the EU Member States.
- **European Financial Stabilisation Mechanism (EFSM)** was helpful to refinance debt to two EU countries[23], although now euro area countries in need of financial assistance are expected to turn to the European Stability Mechanism (ESM) if the problem was country specific. This mechanism was created by the European Commission to provide financial assistance to any EU country experiencing or threatened by severe financial difficulties[24]. The EFSF cannot enter new assistance programmes but continues to be active in the bond market to manage its debt[25].
- **Macro-Financial Assistance (MFA)** to help non-EU countries address the coronavirus crisis. It is a form of financial aid extended by the EU to partner countries experiencing a balance of payments crisis. It takes the form of medium/long-term loans or grants, or a combination of these, and is only available to countries benefiting from a disbursing International Monetary Fund (IMF) programme. And it includes candidate and potential candidate countries to the EU which is important because it would help their incorporation to the Eurozone by solving their imbalances and acting such as another member state.

Under these three programmes only, the EU is going to raise 62.9 billion euros and it is still preparing the issuance under the NextGenerationEU of €750 billion temporary recovery instrument. It will be based on the Recovery and Resilience Facility (RRF), as it will act as the centrepiece with a total amount of €672.5 billion in loans and grants available to support different packages for the European countries in need. The last section of this paper is based on this facility and the use of these funds.

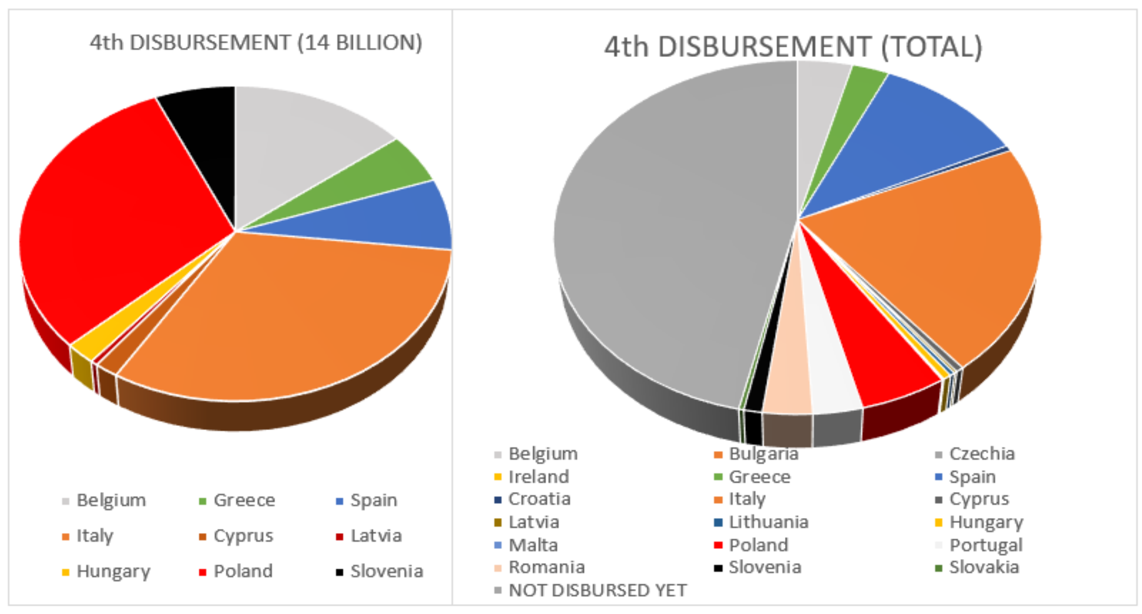
[23] Ireland and Portugal received financial assistance between 2011 and 2014, and Greece in July 2015 short-term bridge loans.
[24] The EFSM is the development of the European Financial Stability Facility (EFSF) as it was created as a temporary crisis resolution mechanism by the euro area Member States in June 2010, during Europe's sovereign debt crisis. Nowadays, it does not provide any further assistance as the task is performed solely by the EFSM (European Stability Mechanism, 2021).
[25] European Stability Mechanism (2021).

### 3.2.3. Keeping the pace in 2021 and evaluations

On the **2nd of February 2021**, the first disbursement of the EU SURE bonds in 2021 took place, the fourth issuance since the beginning of the financial plan. This fourth disbursement amounted to 14 billion. The quantities were distributed to the following nine Member States: Belgium has received €2 billion, Cyprus €229 million, Hungary €304 million, Latvia €72 million, Poland €4.28 billion, Slovenia €913 million, Spain €1.03 billion, Greece €728 million and Italy €4.45 billion[26].

At this disbursement, the European Commission made clear again their purpose to launch the NextGenerationEU, trying to increase the confidence among investors about its financial programme. As displayed before, Figure 3.5 displays the amount disbursed, in which Italy again and Poland received more than half of the total amount disbursed. Also, there is less than 50% of the total envelope to be disbursed for the coming months.

*Figure 3.5. EU SURE bonds fourth disbursement.*




*Source: Own elaboration from (European Commission, 2021.a).*

*Note: The amount not yet disbursed is now less than half of the total quantity approved to disburse, 46.5 billion euros. Spain and Italy are still the biggest receivers of EU SURE funds. This has to do with the fact that they are the most affected by the tourism shocks that affected the world as their economy is based on that sector.*

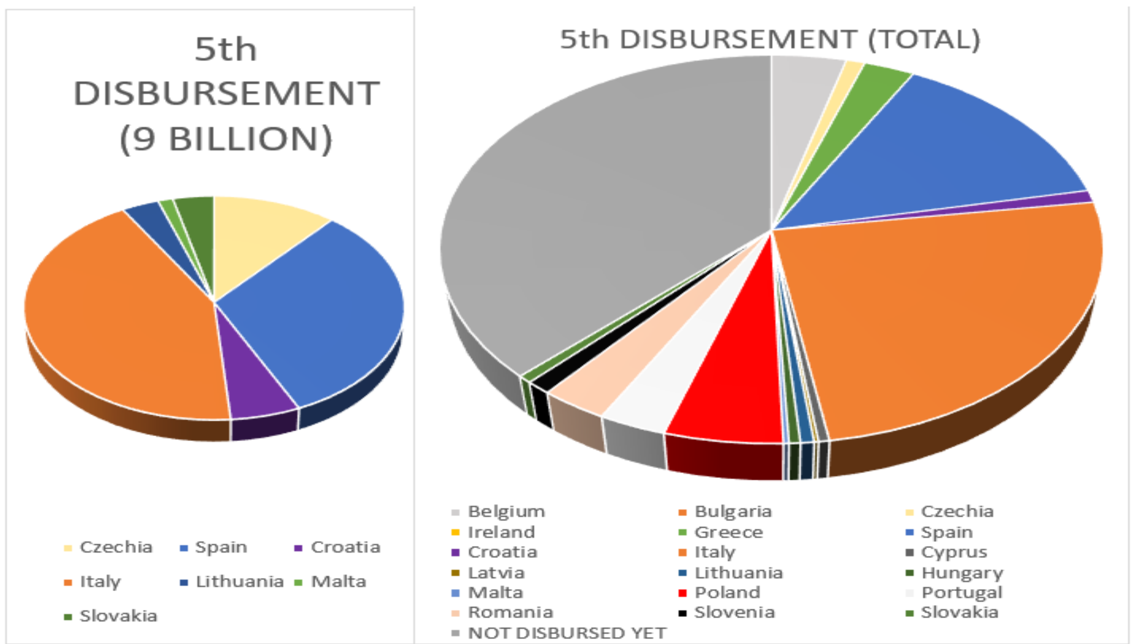
**On the 10th of March 2021**, the Commission issued €9 billion single tranche bond due in June 2036 under its EU SURE programme to protect jobs and workers, and to mitigate the severely negative socio-economic consequences of the coronavirus pandemic. Commissioner, in charge of Budget and Administration Johannes Hahn, said: "*The fifth EU SURE bond adds to the success story of the EU as a large-scale issuer and borrower. It is yet another sign of confidence that raising*

[26] European Commission (2021.a).

*the funds for NextGenerationEU will also be successful. The issuance of safe and sustainable SURE and as well as NextGenerationEU funds is a central element of our efforts to support the EU's recovery and to continue to give a helping hand to our businesses and citizens*"[27].

This 9 billion were disbursed on the 16th of March. Seven Member States benefitted from them, as it is displayed in Figure 3.6, specifically: Czechia has received €1 billion, Spain €2.87 billion, Croatia €510 million, Italy €3.87 billion, Lithuania €302 million, Malta €123 million and Slovakia €330 million. Which is the first time Czechia have received funding under SURE.

*Figure 3.6. EU SURE bonds fifth disbursement.*




*Source: Own elaboration from (European Commission 2021.b).*

*Note: On this sixth figure, it is displayed the disbursement related to the fifth SURE issuance, as funds keep flowing to those countries in need. As you can see, the trend is the same as Spain and Italy are the main receivers and this time, a new country enjoyed the opportunity brought by the Commission as Czechia received their first SURE funds.*

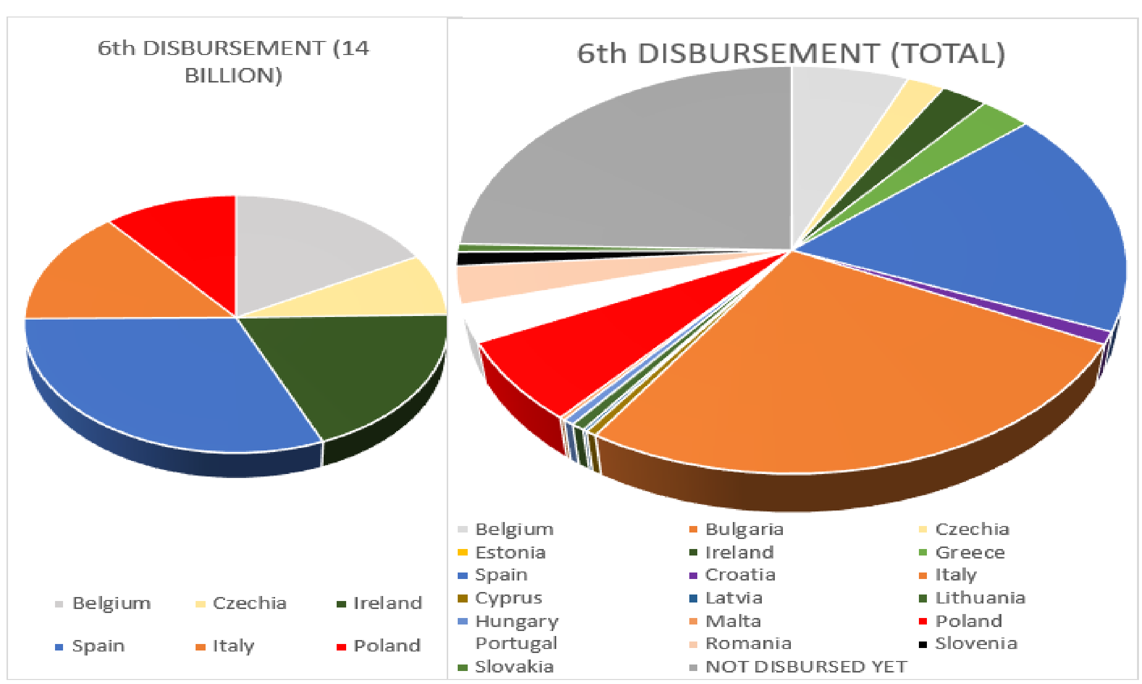
**On the 24th of March 2021**, almost one year after the first European countries made lockdowns mandatory and even closing their borders and the mobility between not only their own regions and counties but also between countries. This restricted commerce and international relationships, was the reason which made the European Commission to raise funds for the sixth time under the issuance of EU SURE bonds. These funds where disbursed later that week, on the 30th of March, in which Czechia has received €1 billion, Belgium €2.2 billion, Spain €4.06 billion, Ireland €2.47 billion, Italy €1.87 billion and Poland €1.4 billion.

[27] European Commission (2021.b).

It was the first time Ireland has received funding under SURE and so far, 17 EU Member States have received a total of €75.5 billion. It seems relevant that Ireland finally received these funds after Brexit reform was executed and the United Kingdom was out of the European Union, setting a gap between the two countries. The proportion of the amount disbursed to Ireland is available below in Figure 3.7.

Commissioner Paolo Gentiloni, Commissioner for Economy, said: "*As the effects of the pandemic continue to weigh on our economies, today the Commission is disbursing further significant financial support to six countries, including Ireland for the first time. This is a crucial contribution to national efforts to support workers through these difficult times. I'm proud of the European success story that is SURE*"[28].

*Figure 3.7. EU SURE bonds sixth disbursement.*




*Source: Own elaboration from (European Commission 2021.f).*

*Note: On this figure, it is the first time we see Ireland on this paper, receiving 2.47€ billion, which amounts to the 19% of the total sixth disbursement. Also, Spain, Italy and Poland receive funds again so that they are the three countries with the most funds received.*

As can be seen on the figures, among these six disbursements Italy and Spain are the countries that sum up more euros disbursed, Spain 13.9 billion euros and Italy 24.82 which equals to 18% and 27% of the total envelope, respectively. These countries received funds five out of the six times and in order to have a better understanding of what these amounts mean, compared to their 2020

[28] European Commission (2021.g).

GDP, Spain's funds amount to 4.81% of their 3Q GDP[29] and Italy's funds amount to 5.84% of their GDP[30] for the same period.

*Table 3.1. Disbursements by different categories.*

| DISBURSEMENT | MATURITY | YIELD | INVESTOR DEMAND | SIZE OF BOND |
|---|---|---|---|---|
| **FIRST** | 10 YEARS | -0.238% | 145 BILLION EUR | 10 BILLION EUR |
| | 20 YEARS | 0.131% | 88 BILLION EUR | 7 BILLION EUR |
| | | | **TOTAL** | **17 BILLION EUR** |
| **SECOND** | 5 YEARS | -0.509% | 105 BILLION EUR | 8 BILLION EUR |
| | 30 YEARS | 0.317% | 70 BILLION EUR | 6 BILLION EUR |
| | | | **TOTAL** | **14 BILLION EUR** |
| **THIRD** | 15 YEARS | -0.102% | 114 BILLION EUR | 8.5 BILLION EUR |
| | | | **TOTAL** | **8.5 BILLION EUR** |
| **FOURTH** | 7 YEARS | -0.497% | 83 BILLION EUR | 10 BILLION EUR |
| | 30 YEARS | 0.134% | 49 BILLION EUR | 4 BILLION EUR |
| | | | **TOTAL** | **14 BILLION EUR** |
| **FIFTH** | 15 YEARS | 0.228% | 86 BILLION EUR | 9 BILLION EUR |
| | | | **TOTAL** | **9 BILLION EUR** |
| **SIXTH** | 5 YEARS | -0.488% | 46.5 BILLION EUR | 8 BILLION EUR |
| | 25 YEARS | 0.476% | 50 BILLION EUR | 5 BILLION EUR |
| | | | **TOTAL** | **13 BILLION EUR** |

*Source: Own elaboration from (European Commission, 2020.e, 2020.f, 2020.g, 2021.c, 2021.d, 2021.f) see Appendix.*

In Table 3.1, we can see how these four disbursements have been made of, as their maturities, yields and quantities are displayed. Notice that for the lower maturities a lower yield is required, as they are even negative until the 20-year maturities. Another interesting fact about these disbursements is that for the same maturity, 30-year bonds, the first time it was issued, the yield was of 0.317% (on the 10th of November) and three months later (2nd of February) the yield had decreased for the same maturity, meaning that it was less risky and that investors expected the EU to recover well in 2021.

In the case of the fifth issuance, the yield was higher than on the third issuance for the same maturity and even higher than for a maturity of 30 years such as the fourth issuance. The reason is that the economic context on the 10th of March was of volatility in capital markets and rising global interest rates[31].

On the sixth issuance, the Commission stated on the press release about this issuance that, "*With more than 600 orders in the final orderbooks and modest new issue concessions the EU has*

[29] Data retrieved from (Federal Reserve Bank of St Louis, Spain).
[30] Data retrieved from (Federal Reserve Bank of St Louis, Italy).
[31] European Commission (2021.d).

*brought 2 new liquid reference benchmarks in the EU curve and established itself as the most liquid among supranational and agency issuer*"[32].

### 3.2.4. What is next?

In June 2020, the European Council approved the creation of the NextGenerationEU although it was not very clear how the procedures would be and when it would get implemented. As stated above, since an early beginning, different personalities within the Commission gave importance to the role that this recovery plan would have.

This stimulus package of 750 billion euros was announced on the 17 of December 2020. It will help the European countries to achieve a greener, more digital and resilient Europe. This initiative is supported by two financial instruments: the European Mechanism for Recovery and Resilience (MRR) and the Recovery Aid for Cohesion and the Territories of Europe (REACT-EU).

The division of these financial instruments and how they belong to the NextGenerationEU was released almost one year after the beginning of the pandemic, in 2021 and it marks the road for what will come later in the year. In order to be eligible for these funds, it is necessary to compile a country-specific recovery plan and send it to the Commission in order to be approved.

I will analyse the scope of the Spanish recovery plan and how these funds under the NextGenerationEU are implemented as well as the impact of the funds disbursed under SURE or other liquidity instruments in Section 5.

[32] European Commission (2021.f).

## 4. The European Central Bank and the COVID-19 crisis

After analysing the response of the European Commission to the pandemic, I will focus on the role that the European Central Bank (ECB) played helping the European countries to overcome the recession.

The European Central Bank was created on the 1st of January 1999 as the culmination of a process that started in June 1988, after the Council confirmed the objective of forming and Economic and Monetary Union (EMU) which was then consolidated on three main steps. These steps involved the increasing co-operation between central banks and monetary policies, banning on the granting of central bank credit to their national governments, irrevocably fixing of conversion rates, and finally, the entry into force of the Stability and Growth Pact[33].

The main objective of the ECB is to keep prices stable in the euro area as well as to contribute to the safety and soundness of the European banking system, which again ensures that money is safe for the European citizens. Specifically, "The primary objective of the European System of Central Banks [...] shall be to maintain price stability"[34].

The Governing Council of the European Central Bank aims to keep inflation below, but close to 2% over the medium term, trying to give investors' confidence about their future policies and monetary measures. "The aim is to keep inflation expectations anchored at the time inflation target. If the central bank's commitment to the inflation target is perfectly credible and inflation expectations are firmly anchored, then an inflation shock would just be a one-period shock to inflation"[35].

[33] Defined and put into its historical context previously on this paper (chapter 3.1.1).
[34] Official Journal of the European Union (2012).
[35] Carlin & Soskice (2015).

*Figure 4.1. Inflation in the Euro Area since 2007.*

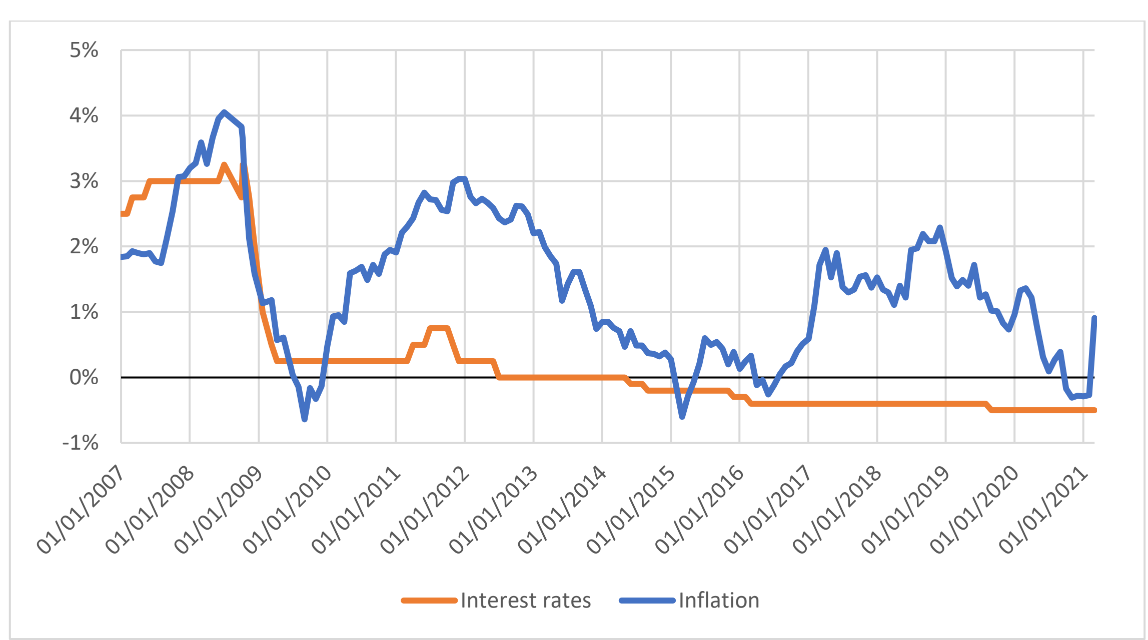
*Source: Own Elaboration from* (European Central Bank, 2021.a) *see Appendix.*

*Note: Figure 4.1 displays the inflation as a year-to-year percentage change.*

As we can see, although the ECB's inflation target is 2 percent, inflation has remained below the target for most of the period displayed in Figure 4.1. I focus on this time period in order to compare the differences with the financial crisis that arose in 2008 and the posterior European sovereign debt crisis.

These two crises produced an economic context of low interest rates which have been showing a decreasing pattern since 2008 and below 1% since July 2019. Therefore, when the pandemic caused a massive negative shock to global economy, the room to change interest rates as the main monetary policy tool was substantially short. Interest rates were already close to the zero lower bound as shown in Figure 4.2 and around 1% of inflation. This situation, if prolonged over the years, can lead to a deflation trap which central banks try to avoid, as it harms the economy as it may lead to a downward spiral of output, inflation and interest rates. Conventional monetary policy has been insufficient to escape it, as it is an inefficient tool for macroeconomic stabilization in this situation.

*Figure 4.2. Inflation vs Interest rates and the deflation trap.*




*Source: Own Elaboration from (European Central Bank, 2021.c) see Appendix.*
*Note: In relation to the previous figure and the inflation displayed as a year-to-year percentage change, I now compare it to interest rates as the deposit facility rate since 2007, which is just before overcoming the Great Recession and the sovereign debt crisis.*

In order to escape this deflation trap, central bankers may try to create expectations about a positive inflation shock although in practise this may not work. "*The way to create expectations of inflation in the future is to create expectations of future higher aggregate demand: if the authorities do not take measures to create the demand, there is no reason to think that people will expect higher inflation*"[36].

Expectations can be derived from certain financial instruments such as bonds, in particular, long-term bonds like a 10-year government bond yield, which is displayed in Figure 4.3. According to theory, investors in these bonds (which are close to being risk-free as they are backed by governments), expect to earn a return that is higher than inflation. In other words, investors would like to at least, not lose any purchasing power.

[36] Carlin & Soskice (2015).

*Figure 4.3. 10-year government bond yield.*

*Source: Own Elaboration from (European Central Bank, 2021.b) see Appendix.*
*Note: This figure displays the 10-year Government Benchmark bond yield for the euro area. I am using a 10-year bond yield and not a shorter maturity because this maturity is strongly linked to inflation expectations as investors want to maintain their purchasing power at least.*

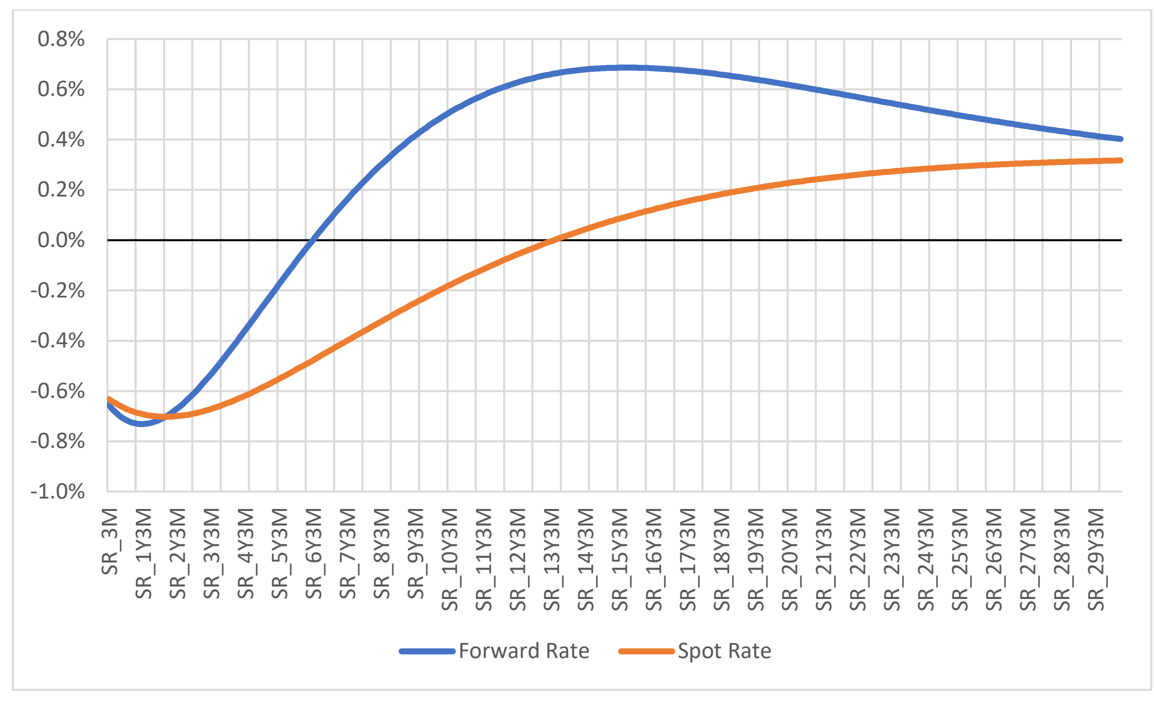
Figure 4.3 displays the 10-year government bond yield, which, as stated before, is an indicator from where to derive inflation expectations in the long run[37]. Bond yields and other mechanisms like asset purchases, are non-standard measures which are also commonly used to try to derive inflation expectations. These measures can access to other mechanisms such as the ability to set objectives related to these operations.

Inflation expectations and the preferences of investors, depending on the economic context that we live in can be better understood once we define concepts such as the term structure of interest rates or the spot and instantaneous forward rates.

On a general basis, spot rates are the return between time t-1 and t, contracted at time t-1 (t>0), whereas a forward rate is the return between time t-1 and t, contracted today. These two concepts affect the term structure of interest rates[38].

[37] This may also explain why open market operations, have been used for long term horizon. I will go more in detail in section 4.1.1.
[38] The term structure of interest rates: It refers to the relation between the interest rate and the maturity or horizon of the investment. It can be described using the yield curve (Saphiro).

*Figure 4.4. Term structure of interest rates (Spot and forward rates) for the Eurozone.*




*Source: Own Elaboration from (European Central Bank, 2021.e) see Appendix.*
*Note: In this figure, it is displayed the Term structure of interest rate on the 21st of April 2021. It represents the yield for AAA-rated government bonds.*

Figure 4.4 displays the yield curve of the instantaneous forward and spot rate of AAA-rated government bonds depending on its maturity. As can be seen on the horizontal axis, these bonds go from a maturity of 3 months, up to 30 years, representing the financing conditions for investors for different maturities.

It is important to discuss the implications of the term structure of interest rates as well as the 10-year government bond yield since both have massive implications on inflation expectations. Just as defined above, investors' aim is to at least maintain the purchasing power of their investments. The fact that this curve is so close to zero or even taking negative values means that investors expect inflation to be very low and even negative. The theory[39] suggests that, in this case, where the forward rate is higher than the future spot rate (blue line is higher than the orange line), there is a liquidity preference and investors are willing to substitute one maturity for another. This in fact, reflects the economic situation that we live in at the moment for central banks, as they would act to maintain low interest rates in order to ensure liquidity for the economy.

We could also infer from Figures 4.3 and 4.4 that because the 10-year bond yield has been decreasing over the past years, currently below zero percent and the yield curve is very close to

[39] The theory I am relying on is the one covered in the lecture notes of Professor Alex Saphiro, specifically, chapter IV. "Theories of the Term Structure".

zero, taking negative values for forward rates up to a maturity of 6 years, that inflation expectations are low at the moment.

The challenge was big as the massive shock that suffered the European countries in 2008 was country-specific and the Eurozone sovereign debt crisis greatly damaged the economy of their members. The ECB's decision to act as a lender of last resort, helped to preserve the Euro area currency bloc as large imbalances arose on the current accounts between northern and southern countries[40].

Acting as a lender of last resort in an economy is sometimes complicated and can be criticised as it could encourage banks and other institutions to assume more risk than what they should. Therefore, it is important to keep in mind that the ECB acts as a lender of las resort on behalf only of solvent banks. Providing emergency funds to governments is illegal in the euro area among other reasons because if they could request funding from the ECB, they would compromise its ability to keep prices stable and undermine its independence. In turn, the institutions that provide financial help to governments include European Commission, the European Stability Mechanism… these funds therefore go through the public economic ministries of each country even when they have specific objectives as the EU funding for short time work schemes previously discussed.

In general, central banks over the world, such as the ECB, are very cautious about being publicly related or defined as a lender of last resort because it may take some negative notations[41]. On the one hand, let us describe this precautionary view by saying that back in the 19th century, Bagehot was already taking into account as he thought that banks could do good by not leaving their policy in doubt. This would make "bank runs"[42] less likely and if they finally happened, the liquidity provided would reduce the need for a forced sale of assets, harming the economy even more[43].

Back during the financial and Eurozone sovereign debt crises, the non-standard measures adopted by the ECB where not enough during the first stages and therefore, amended through the years

[40] Lender of last resort: It is a central bank or international organization that lends money to banks or countries in difficult financial periods when they cannot borrow from anywhere else. Central banks have traditionally held this role because they are primarily the ones responsible for ensuring that financial markets function smoothly and the financial system is stable (Cambridge Dictionary, 2021) and (European Central Bank, 2019).

[41] On the other hand, these advantages have incorporated some problems such as moral hazard, adverse selection. At the same time, they decrease their commitment credibility and competence, based on the time consistency or the time horizon of their measures. The reasons to act as a lender of last resort (for example during the financial crisis) and therefore oversupplying liquidity are important to be managed well and only where they are in need, neither too early, nor too late.

[42] Bank run: An event in which many account holders at a bank withdraw all of their funds at the same time because they do not believe the bank is solvent. Ironically, the pressure of a bank run itself can cause the bank to become insolvent (Farlex Financial Dictionary, 2009).

[43] Bank for International Settlements (2014).

and needs, developing the margin of action of the central bank. At first, what started as a liquidity provision to banks became unlimited credit at a fixed interest rate, and the range of eligible assets that could be used as collateral in refinancing operations was expanded. When the deflation trap was a concern in Europe, the ECB set interest rates negative in order to maintain a functioning money market in which banks lend to each other. They also stablished Targeted Longer-Term Refinancing Operations (TLTROs) and an Asset Purchase Programme (APP), designed to support bank lending and put downward pressure on the term structure of interest rates; these measures will be fully defined below.

Following this description, I will describe the different non-standard monetary policy measures and their objectives. When they were created and what they have been used for.

## 4.1. Non-standard monetary policy measures definitions

Firstly, I will define the main non-standard monetary policy measures emphasising that they do not only convey setting interest rates and inflation expectations via central banks, by ensuring their credibility and transparency. These measures are performed on open markets, giving banks more flexibility on supervisory guidelines, deadlines and procedures and cooperating with other central banks in the world.

### 4.1.1. Open market operations

#### Targeted longer-term refinancing operations (TLTROs)

"The targeted longer-term refinancing operations (TLTROs) are Eurosystem operations that provide financing to credit institutions. By offering banks long-term funding at attractive conditions, they preserve favourable borrowing conditions for banks and stimulate bank lending to the real economy" (European Central Bank, s.f.).

TLTROs where first stablished on the 4th of June 2014. They are targeted operations because the amount that banks borrow is linked to the loans they make to non-financial corporations and households. In TLTRO III, the interest rate to be applied is linked to the participating banks' lending patterns. The more loans participating banks issue to non-financial corporations and households (except for house purchases), the more attractive the interest rate on their TLTRO III borrowings becomes (European Central Bank, s.f.). There have been already three programmes in which the third one, TLTRO III has been functioning since September 2019 and has a critical role on the way Europe will recover from the COVID-19 crisis. The maturity of TLTRO III is three years for each of the refinancing operations, whereas TLTRO II's maturities were of four years.

### Longer-term refinancing operations (LTROs)

This credit support measure was enhanced on the 8th of December 2011, during the Eurozone sovereign debt crisis in order to support bank lending and liquidity. They have been complementing other refinancing operations such as TLTROs occasionally over 2015 and 2016. These operations have a three-year maturity as the TLTRO III.

The difference in this case is that the interest rate is fixed at the average rate of the main refinancing operations over the life of the respective operation. Interest will be paid when the respective operation matures[44].

### Pandemic emergency longer-term refinancing operations (PELTROs)

These pandemic refinancing operations were first announced on the 30th of April 2020. Its aim is to provide liquidity support to the euro area financial system during the pandemic period. These operations were first decided to be a seven series of operations, which then were extended to have an additional fourth in 2021. Each operation will have an approximate maturity of a year and the interest rate will be 25 basis points below the current average rate implied, which is zero percent.

When PELTRO started to act as a refinancing operation, both TLTRO and LTRO were already in place, but differing on its maturities. In this case, the interest rates will be 25 basis points below the average rate applied in the Eurosystem's main refinancing operations.

PELTRO fits well as a response to the pandemic because its maturity is just of a year and it is flexible enough as to when it will finish (currently it was decided that it will finish in December 2021). The ECB is ready to adjust the end of these operations if needed.

### 4.1.2. International cooperation

International cooperation is very important overall because we live in a very globalised world, in which an economic problem in one country or economic union is very easily transmitted to others. This international cooperation is stablished and ensured by swap lines[45] within other central banks with respect to reserve currencies. These currencies are important for the proper functioning of domestic banks as they do business with foreign currency and therefore sometimes need these loans. These swap lines agreements were established by the ECB in 2007 and became very useful during the Great recession and the collapse of Lehman Brothers for example. In 2011 the ECB,

[44] European Central Bank (2011).
[45] Currency swap lines: A currency swap line is an agreement between two central banks to exchange currencies. This allows a central bank to obtain foreign currency liquidity from the central bank that issues it (European Central Bank, 2016.a).

along with the Bank of England, the Bank of Canada, the Bank of Japan, the Federal Reserve and the Swiss National Bank, set up a network of swap lines enabling the participating central banks to obtain currency from each other.

When the economy faces uncertainty and a global crisis such as the COVID-19 pandemic, customers' demand for foreign currency can increase and if banks do not have the currency, these banks could become unstable. Euro area banks can ask how much foreign currency they want to borrow, for example in US dollars, at a predefined interest rate. In return for the dollars, they must provide the ECB with high-quality collateral.

Many of these currency agreements act mainly as a safety net and have never been activated but as I will explain below, the pandemic was a good example of the ECB being ready to activate the necessary monetary policy instruments to make sure that they can be deployed when needed.

### 4.1.3.Asset Purchase Programmes

These programmes, unlike the above, do not provide liquidity by contractual agreements such as swap lines but by injecting capital into the economy via purchasing assets, which is a more direct to transmit to households or governments.

#### Asset Purchase Programme (APP)

This programme was initiated in mid-2014 to support the monetary transmission mechanism, which was needed to ensure price stability. This is a large programme which consists of other four sub-programmes, that address to both, the private and public sector:

- corporate sector purchase programme (CSPP).
- public sector purchase programme (PSPP).
- asset-backed securities purchase programme (ABSPP).
- third covered bond purchase programme (CBPP3).

Although the programme was initiated in 2014, these purchases have been implemented since 2009, but it is since October 2014 that the objective of these programme is to achieve inflation rates below, but close to, 2% over the medium term. This is achieved by the purchase of the ECB with their own funds, which could be compared to injecting money into the economy and therefore, affecting inflation.

### Pandemic emergency purchase programme (PEPP)

"The (PEPP) is a non-standard monetary policy measure initiated in March 2020 to counter the serious risks to the monetary policy transmission mechanism and the outlook for the euro area posed by the coronavirus (COVID-19) outbreak" (European Central Bank, s.f.).

It is a temporary asset purchase programme which was first established with an envelope of 750 billion euros and then extended twice. It consists of both private and public sector securities. Also, CSPP was expanded to include longer maturities' securities that can be purchased under CSPP or PEPP. For the purchases of public sector securities under the PEPP, the benchmark allocation across jurisdictions will be the Eurosystem capital key of the national central banks.

The capital key of the European Member States is the ECB's capital that comes directly from their national central banks. They are similar to shares of this capital and are calculated as a proportion of the respective country's share in the total population and gross domestic product of the EU, which have an equal weighting. This capital key is used, for example, to guide the purchases in the ECB's purchase programmes because it includes only the euro area national central banks[46].

This programme will end once the Governing Council considers that the COVID-19 crisis phase is over after March 2022, and the maturities reinvested under the programme will last until the end of 2023. It complements the asset purchase programmes; they have had in place since 2014.

### 4.1.4. Temporary collateral easing measures.

These measures are adopted in order to facilitate the availability of eligible collateral[47] for those counterparties within the Eurosystem that participate in liquidity providing operations. It also supports the provision of bank lending in which credit claims are accepted as collateral. At the same time, the Eurosystem is increasing its risk tolerance, which lowers collateral valuation "haircuts[48]" for all assets consistently.

## 4.2. A chronological review of the ECB measures

March 2020 and the beginning of the pandemic marked the beginning of a year, 2020 during which the ECB monetary policy decisions would be of a massive relevance as it would be seen as a

[46] European Central Bank (2020.a).

[47] Collateral: Collateral is an item of value that a lender can seize from a borrower if he or she fails to repay a loan according to the agreed terms. Collateral acts as a guarantee that the lender will receive back the amount lent even if the borrower does not repay the loan as agreed (European Central Bank, 2016.b).

[48] "Haircuts": In financial markets, a haircut refers to a reduction applied to the value of an asset. It is expressed as a percentage. A haircut therefore provides a kind of safety buffer against any loss in value and the time it takes to sell the collateral, once the borrower fails to repay the loan (European Central Bank, 2016.c).

message for the future on the unity and the coordination of European Union against a great economic shock like this.

Christine Lagarde said: *"extraordinary times require extraordinary action. There are no limits to our commitment to the euro*". And with these words she stated the relevance and commitment from the ECB to mitigate the impact of the coronavirus pandemic by putting in place a set of monetary policy and banking supervision measures that would start during the first half of March 2020.

**On the 12th of March 2020**, the first measures were applied. It was a quick response by the ECB as the first quarantines and lockdowns began on Italy and Spain around that day. The announcement started by stating some open market operations, related to TLTRO III and LTRO.

Interest rates on TLTRO III were reduced by 25 basis points and during June 2020 to July 2021, all these operations could be as low as 25 basis points below the average deposit facility rate. The maximum amount allowed to be borrowed increased to 50% of eligible loans (previously 30%), the bid limit per operation was removed since it was of 10% and the lending performance threshold reduced to 0% from 2.5%[49].

The Eurosystem also conducted on a weekly basis, temporarily, additional longer-term operations (LTROs) to provide the necessary and immediate liquidity support to the euro and the financial system. These operations had a fixed rate at the average deposit facility rate over the life of the respective operation.

In terms of asset purchase programmes (APP), the ECB announced a temporary envelope of additional net asset purchases of €120 billion until the end of the year, which ensured a strong contribution from the private sector purchase programmes.

Three days after, **on the 15th of March 2020**, the first monetary policy decisions were taken to mitigate the effect of the pandemic. The ECB in cooperation with other central banks such as the Bank of Japan, the Bank of England, the Federal Reserve and others… agreed to lower the pricing on the standing US dollar liquidity swap arrangements by 25 basis points. They also decided to offer these operations with 84-day maturity in addition to existing 1-week operations enhancing the provision of global US dollar liquidity.

**On the 18th of March 2020**, the ECB made an announcement related to their monetary policy decisions for the third time over a week. It is clear that the commitment and the priority were to give

[49] European Central Bank (2020.b).

a quick response, aiming to mitigate any doubts that could exist from the past. This time, the response was coordinated and powerful, as they approved the PEPP (previously discussed), with the overall envelope of 750 billion euros. The net purchases under the programme will be at a monthly pace of €20 billion.

It is key to emphasise that purchases under this programme took place until the end of 2020 and included all assets eligible under APP, although these purchases will be conducted in a flexible manner, which will allow for fluctuations in the distribution of their flows over time, across asset classes and jurisdictions. This was a first approximation to what later would be decided to extend further until the economic situation was better stabilised.

The ECB also decided to ease the collateral standards adjusting the main risk parameters of the collateral framework, which would ensure that counterparties could continue benefitting from the full use of the Eurosystem's financing operations.

As the conclusion of this announcement, the Governing Council stated: "*The Governing Council is fully prepared to increase the size of its asset purchase programmes and adjust their composition, by as much as necessary and for as long as needed".* And therefore "*The ECB will not tolerate any risks to the smooth transmission of its monetary policy in all jurisdictions of the euro area*"[50].

**On the 20th of March 2020**, the ECB decided to improve the swap lines' effectiveness in providing US dollar funding as the central banks that previously agreed to lower the pricing on the standing US dollar liquidity, decided to increase the frequency of 7-day maturity operations from weekly to daily.

Having a higher frequency on the operations makes it more flexible as there are more possibilities to ask for these funds, participating in these financial operations than by having to participate on the interbank market, which is more expensive. The ECB reacted in coordination with other important central banks to what was happening at every moment.

The first announcement of the 7th of April 2020, almost one month after the beginning of the pandemic, was based on temporary collateral easing measures as the Governing Council decided to increase its risk tolerance by reducing the collateral valuation haircuts by 20%.

Moreover, the ECB expanded the use of credit claims as collateral, in particular, the Additional Credit Claims framework (ACC), which provides the possibility to National Central Banks to enlarge

[50] European Central Bank (2020.c).

the scope of this credit claims for counterparties. This measure eases the availability of credit from banks to enterprises and households, therefore ensuring that this channel operates correctly, and funds arrive to where they are most needed.

**On the 15th of April 2020**, the ECB announced for the first time a measure related to the macroprudential policy, as it was based on the macroprudential consequences of the implementations previously discussed.

They calculated that more than 20 billion euros of Common Equity Tier 1 capital[51] (CET1)[52] would be freed by euro area banks. These included releases or other reductions of the countercyclical capital buffer, systemic risk buffer and buffers for other systematically important institutions. It was an important announcement because the less reserve requirements that would be needed temporarily would decrease banks' stress, having a wider range of opportunities to confront this situation.

**On the 22nd of April 2020**, a new announcement was made in order to complement the decision made on the 7th of April 2020. Both measures coordinated properly would ensure that banks have sufficient assets that could be mobilised as collateral to participate in liquidity-providing operations.

The Governing Council decided to accept the eligibility of marketable assets and their issuers that fulfil minimum credit requirements in the event of a deterioration in credit ratings by their accepted credit rating agencies. This avoids potential countercyclical dynamics and ensures collateral availability.

Specifically, this measure meant that those assets and their issuers rated at BBB on the 7th of April would still be eligible if the scenario of a downgrade on credit ratings finally occurs, as long as they remained at or above a rating of BB[53].

On Thursday, **30th of April 2020** the ECB took a massive step towards the development and determination of the emergency measures. Two new open market operation measures were implemented. In terms of the TLTRO III, it was further reduced to 50 basis points below the average interest rate (previously 25 basis points), on the deposit facility over the period from 24 June 2020

[51] Tier 1 Capital: It is used to describe the capital adequacy of a bank and refers to core capital that includes equity capital and disclosed reserves. Equity capital is inclusive of instruments that cannot be redeemed at the option of the holder (Grant, Common Equity Tier 1, 2020).
[52] Common Equity Tier 1 (CET1): is a component of Tier 1 capital that is mostly common stock held by a bank or other financial institution. It is a capital measure introduced in 2014 as a precautionary means to protect the economy from a financial crisis (Grant, Tier 1 Capital, 2019).
[53] European Central Bank (2020.d).

to 23 June 2021, therefore increasing the time horizon of the scope of these measures to more than a year.

Moreover, in terms of PELTROs, the Governing Council also decided to offer seven additional refinancing operations starting in May 2020 which would be in line to the collateral easing measures previously approved in April. Their interest rate would be 25 basis points below the average rate, which was previously fixed at the exact average rate.

After less than two months, we have already analysed seven announcements of a very high importance, which proves how crucial it was for the ECB to react quickly in order to avoid a more harming recession.

In addition to the implementation of the PEPP, which was announced on the 18th of March, on the **4th of June 2020** the Governing Council decided to extend the envelope by €600 billion, up to a total of €1,350 billion. This purchase programme and extension added is very important for the ECB. Due to the downward inflation expectations made at that time, the PEPP would act as a mechanism to further ease the monetary policy and support funding conditions in the real economy. The time horizon of this programme was also extended up to June 2021.

One of the most important factors to be considered during these announcements (this was the ninth announcement over a three-month period), is that this shock affected both demand and supply. It was completely unexpected, affected al Eurozone countries (not idiosyncratic) and it had characteristics such as lockdowns and closing international borders, that had never happened before. Due to this uncertainty, the ECB had to constantly monitor and analyse whether their measures were enough, or it needed to be expanded. They had to recalibrate programmes by analysing its scope and impact over this short three-month period of time and draw conclusions in order to be more specific and act over those agents that are most in need.

Between **June and August 2020**, most of the actions were on currency swap lines. The frequency was reduced on 7-day US dollar operations from daily (as discussed on the 20th of March note) to three times per week although 84-day maturity continued to be offered weekly. In terms of liquidity operations, it was a step back, giving some hope that the economic situation was not as bad as it was thought, and that the recovery was closer at that moment.

On the 20th of August, the frequency was further reduced on the same US dollar operations from three times per week to weekly, while the 84-day maturity continued at the same frequency. Again,

as stated above, central bankers forecasted the beginning of the end and therefore started to impose again some of the prior frequencies to the pandemic measures.

In **September 2020**, the ECB decided that bonds with coupon structures linked to certain sustainability performance targets would become eligible as collateral for Eurosystem credit operations[54]. This further broadened the universe of Eurosystem-eligible marketable assets and signalled the Eurosystem's support for innovation in the area of sustainable finance which helped the transmission of credit from banks to households and enterprises.

The final announcement of the year was in **December 2020**, a year in which the ECB demonstrated the cohesion and leadership that was in doubt during 2008 and 2010. On this day, they decided to give another turn to almost every mechanism and programme that was put in place, setting the basis for 2021 and aiming to induce confidence in the European citizens and stability to investors and institutions that would be crucial to administrate the help provided, those that worked towards the public.

In terms of open market operations and TLTRO III, the Governing Council decided to extend the period over which considerably more favour term would apply up until June 2022 and raise the amount that counterparties would be entitled to borrow in these operations from 50 to 55 per cent. In order to provide an incentive for banks, these conditions were available only to banks that achieved a new lending performance target.

Moreover, the Governing Council decided to offer more lines of PELTROs in 2021, which would provide more and more liquidity. The interest rate remained 25 basis points below the average rate applied in the Eurosystem's main refinancing operations.

On the one hand, the pandemic emergency purchase programme's envelope was increased by €500 billion to a total of €1,850 billion and the horizon was again extended one year, until March 2022. On the other hand, the collateral easing measures described on the 7th and 22nd of April were extended to June 2022, aiming to ensure that banks will be able to use the liquidity provided by the Eurosystem, mainly the TLTROs described before.

[54] European Central Bank (2020.e).

# 5. Recovery, Transformation and Resilience Plan

## 5.1. Introduction

Within the economic context that we find ourselves in and given the severity of the COVID-19 in Spain, I feel the need to analyse the future of the country, once a “second phase” of the pandemic crisis has been achieved. I mean that, we are no longer in the context of imposed lockdowns and high uncertainty but trying to establish the path for the economic recovery. We look forward to planning how to use the European funds and in particular the NextGenerationEU to create a better place to live[55].

The NextGenerationEU is a stimulus package designed to emerge stronger from the pandemic by providing the necessary resources to the European countries so that they can make Europe greener, more digital and more resilient. It is the largest stimulus package ever financed by Europe in which, in coordination to the Multiannual Financial Framework, the amounts will sum up to 1.8 trillion euros from 2021 to 2027.

The first phase has already been discussed in previous sections, as how the lockdowns and closed borders had a massive impact over the European economy as a whole, which was just recovering from the previous crises. Over this phase, most of the measures adopted by countries were transfers to workers and enterprises which confronted the problems stated above.

The question now would be about how to reactivate the economy now that the problems are looking similar to those previous to the pandemic, such as unemployment or high indebtedness by the public sector. All this, making sure that the economy must be reactivated efficiently but over a context severely aggravated by the crisis. Therefore, in the long run it is preferrable to invest rather than use only the transfers received over the first phase, which is the main reason that Europe has asked countries to submit their plans in order to access the funds. Another reason is that the European funds are related to objectives that must be achieved, which will help us modernise our country.

This investing plan to reactivate the economy is already being compared to the Marshall plan and it faces two main questions: where should Spain invest these funds? and how are they going to be managed and absorbed by the economy?

[55] This introduction and some of the following content about the analysis of the Recovery, Transformation and Resilience Plan is based on the debate held by Funcas in which the State Secretary of Economics and Enterprise Support (Andrés Gonzalo García), reviewed and went through it, available on YouTube (Funcas, 2021).

Finally, it is important to state that Europe decided to mutualise debt in order to finance the European Recovery Plan, which is a major step towards the European integration, something Spain already proposed during the past crisis and has finally taken place. This achievement could be the first step towards achieving a bigger fiscal integration that we lacked previously.

This integration will have to be escalated as neither Europe nor their countries are able to change that fast, but it could be a massive step to look forward during the next years and even decades as it will help the coordination, implementation and finally the growth of their countries.

## 5.2. Content and summary of the measures

In terms of the European measures and mechanisms provided to face the COVID-19 crisis, the NextGenerationEU has been the main one in terms of the reactivation of the economy. Almost half of its funds are placed in what is called "European Mechanism for Recovery and Resilience (MRR)" which endowed is of a total of 672 billion euros until 2027.

In order to qualify for the MRR, Member States must present National Recovery and Resilience Plans, which define action programs with the aim of intensifying the potential for growth, job creation and economic and social resilience, as well as accelerating the ecological and digital transitions.

The plan is not about a unidimensional response to temporarily hold the demand and the economic activity; it is a public expenditure effort as well as an effort to support private investing coordinating it to successfully apply the structural reforms that began in 2018. It is intended to have a massive impact on the modernisation of the economy as well as over the macroeconomic impact over Spain.

It consists of the allocation of 70 billion euros, received from Brussels as transfers in which some of them will go directly to public expenditure and the rest will go to private investing.

Moreover, the plan is not to invest on which we have already invested high GDP percentages in the past, such as infrastructures or transports but on other concepts such as human capital, digital transformation and others. Some examples of it can be that the plan earmarks 40.29% of investments for promoting the green transition, and 29.58% for the digital transformation, which will be further defined below.

Thanks to NextGenerationEU and in particular to the SURE instrument, which helped to finance ERTEs and other stabiliser mechanisms, some of the financing needs in terms of the health care system have already been met. Furthermore, the NextGenerationEU will support the recovery of the investing levels previous to the pandemic, which was close to 4% of GDP.

In particular, the plan pays priority attention to developing life and professional opportunities for future generations, as the youth have already borne some of the costs of both from the previous financial crisis and from this health crisis, and they will have to bear the increase in public debt that has funded the response to the pandemic.

The plan contains four cross-cutting lines of action, ten lever policies and 30 components of the coherent investment and reform projects to modernise the country. These components are not just mere dreams but specific plans that have been reviewed and accounted for every detail, in order to achieve a higher degree of transparency.

### 5.2.1.Four cross-cutting lines of action

The Plan has four cross-cutting lines of action that serve as the backbone for all the levers and components, and they are fully in line with those set forth in the Recovery and Resilience Facility[56]. These four cross-cutting lines are displayed in Figure 5.1 in which their objectives are clear as they will act as the roadmap for the future Spain.

*Figure 5.1. The four crossing-lines of the plan.*

*Source: Gobierno de España (2021).*

- **Green transition**: It reinforces the public and private expenditure related to the reorientation of the production model, boosting the green transition, decarbonisation, and the energetic efficiency.
- **Digital transformation**: In line with the European digital strategy and the "Agenda España Digital 2025", it states the roadmap to an accelerated digital and human transition in Spain, through investments and reforms that boost the infrastructures, competencies and technologies needed for a digital economic and society.
- **Social and territorial cohesion**: It promotes the social and territorial cohesion of Spain through the reinforcement of the Welfare State.

[56] Gobierno de España (2021).

- **Gender equality**: It focuses on gender equality, specially through transversal measures orientated to rise the female employment rate.

### 5.2.2. Ten lever policies and their components

These four lines of action are reflected in ten lever policies with a great capacity to drive activity and employment. The first phase of the Plan, which lasts until 2023, promotes economic recovery in the short term and supports a transformation process that increases the Spanish economy's productivity and future growth potential[57]. This first phase will take place from 2021 to 2023 and then, the second place would last another three years until 2026.

Below, I will define the ten lever policies and afterwards, show the thirty components of the plan, located in each of the lever policies with their individual approved investment. Their specific investment programmes, although they have been defined already, will not appear, as their study lands out of the scope of this paper.

#### Lever policy I. Urban and rural agenda, agricultural development and the fight against depopulation

The crisis has also undermined the importance of the agricultural sector but also stated that in hard times it is necessary not only their help but also to invest in order to improve its efficiency by having a digital and social transformation. Rural population must be taken into account as they have a key role to the Spanish economy.

#### Lever policy II. Resilient infrastructures and ecosystems

"Infrastructures have the capacity to mobilise big amounts of investment in the short run and then, generate a structural impact over the aggregate of the economy and society"[58]. It is important to formulate solutions that will also help to preserve the Spanish biosystem and develop the sustainable mobility.

#### Lever policy III. A fair and inclusive energy transition

"Developing a decarbonised, competitive and efficient energy sector will enable the mobilisation of significant private investment, providing certainty and a predictable regulatory framework"[59]. It also enables a strategic positioning over a fast pace growing sector.

[57] Gobierno de España (2021).
[58] Gobierno de España (2021).
[59] Gobierno de España (2021).

Lever policy IV. A public administration for the 21st century

In Spain even more than other countries, it is very important to develop our public administration, enabling it to have a digital transformation and innovation. It is important that it is coordinated with the private sector.

Lever policy V. Modernisation and digitalisation of industry and SMEs, entrepreneurship and business environment, recovery and transformation of tourism and other strategic sectors

The industry-services ecosystem needs to be modernised. It is important that Spain gives the necessary importance to the digitalisation and modernisation process as well as the energy transition towards a greener country.  Spain should aim to become more competitive and make a contribution to the Sustainable Development Goals.

Lever policy VI. Promotion of science and innovation and strengthening of the capabilities of the National Health System

The health crisis has showed a clear gap between Spain and other countries, overall, on the insufficient level of investment that goes into science and knowledge. Investment should be made in areas such as Artificial Intelligence or the extension and renovation of the National Health Care System.

Lever policy VII. Education and knowledge, lifelong learning and capacity building

In terms of education, it would be important that the professional formation and modules other than universities studies are developed in order to have better qualified personal as well as education available for everyone at any level. These reforms would create new job opportunities in the medium and long term.

Lever policy VIII. The new care economy and employment policies

"Improving how the Spanish job market functions is crucial for economic and social welfare"[60]. Both a high structural unemployment rate and job market segmentation provoked companies to adjust to these circumstances. The problem arises when cutting their workforce not only generates job insecurity but also lowers productivity and causes greater inequality which the later would be one of the four cross-cutting lines of the plan.

[60] Gobierno de España (2021).

### Lever policy IX. Promotion of the culture and sports industries

Spanish culture and its language are a major asset for the economic and social development of the country as it has an international recognition. Alongside to this sector, it would be important to develop over other sectors such as the audio-visual production and videogames industry to capitalise on the opportunities afforded by the new digital economy.

### Lever policy X. Modernisation of the tax system for inclusive and sustainable growth

"The economic and social measures that have already been taken are absorbing the immediate impact of the health emergency, but they entail a substantial fiscal cost on top of the economic cycle-related cost through automatic stabilisers"[61].

The Spanish fiscal system has showed some shortcomings over the years as the tax revenue/GDP is lower than the average of the European union. It is also important to decrease the tax burden on employment income environmental taxes, but the most important measure in Spain is definitely the reform of the pension system.

Finally, Table 5.2 displays the amount that will be allocated for each of these level policies and their specific components. Some of these amounts have been subject to rules imposed by the European Commission as they set minimum percentages for some characteristics such as green transition or digital transformation. Some of these percentages look as follows:

- They should dedicate at least 37% of total spending to investments and reforms that support climate action goals.
- They must dedicate a minimum of 20% of spending to support the digital transition.

In collaboration with the MRR, the Recovery Aid for Cohesion and the Territories of Europe (REACT-EU) which has been formed as a new initiative lately in March, will endow 47 billion euros and their resources will be implemented through the European Regional Development Fund (ERDF), the European Social Fund (ESF) and the European Aid Fund for the Most Deprived (FEAD).

This Plan and its completion have set the bar very high, creating expectations of a better country and taking advantage of the opportunity that Europe has given Spain in terms of funds and cooperation. This would not matter if the government does not make a good use of the funds as which could make a difference for the next generations.

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[61] Gobierno de España (2021).

*Table 5.1. Investment distribution between policy levers and their components.*

| Tabla 10: Distribución de la inversión entre las diferentes palancas y componentes | M€ | % |
|---|---|---|
| **I. Agenda urbana y rural, lucha contra la despoblación y desarrollo de la agricultura** | **14.407** | **20,7%** |
| 1. Plan de choque de movilidad sostenible, segura y conectada en entornos urbanos y metropolitanos | 6.536 | 9,4% |
| 2. Plan de rehabilitación de vivienda y regeneración urbana | 6.820 | 9,8% |
| 3. Transformación ambiental y digital del sistema agroalimentario y pesquero | 1.051 | 1,5% |
| **II. Infraestructuras y ecosistemas resilientes** | **10.400** | **15,0%** |
| 4. Conservación y restauración de ecosistemas y su biodiversidad | 1.642 | 2,4% |
| 5. Preservación del espacio litoral y los recursos hídricos | 2.091 | 3,0% |
| 6. Movilidad sostenible, segura y conectada | 6.667 | 9,6% |
| **III. Transición energética justa e inclusiva** | **6.385** | **9,2%** |
| 7. Despliegue e integración de energías renovables | 3.165 | 4,6% |
| 8. Infraestructuras eléctricas, promoción de redes inteligentes y despliegue de la flexibilidad y el almacenamiento | 1.365 | 2,0% |
| 9. Hoja de ruta del hidrógeno renovable y su integración sectorial | 1.555 | 2,2% |
| 10. Estrategia de Transición Justa | 300 | 0,4% |
| **IV. Una Administración para el siglo XXI** | **4.315** | **6,2%** |
| 11. Modernización de las Administraciones públicas | 4.315 | 6,2% |
| **V. Modernización y digitalización del tejido industrial y de la pyme, recuperación del turismo e impulso a una España nación emprendedora** | **16.075** | **23,1%** |
| 12. Política Industrial España 2030 | 3.782 | 5,4% |
| 13. Impulso a la pyme | 4.894 | 7,0% |
| 14. Plan de modernización y competitividad del sector turístico | 3.400 | 4,9% |
| 15. Conectividad Digital, impulso de la ciberseguridad y despliegue del 5G | 3.999 | 5,8% |
| **VI. Pacto por la ciencia y la innovación. Refuerzo a las capacidades del Sistema Nacional de Salud** | **4.949** | **7,1%** |
| 16. Estrategia Nacional de Inteligencia Artificial | 500 | 0,7% |
| 17. Reforma institucional y fortalecimiento de las capacidades del sistema nacional de ciencia, tecnología e innovación | 3.380 | 4,9% |
| 18. Renovación y ampliación de las capacidades del Sistema Nacional de Salud | 1.069 | 1,5% |
| **VII. Educación y conocimiento, formación continua y desarrollo de capacidades** | **7.317** | **10,5%** |
| 19. Plan Nacional de Competencias Digitales *(digital skills)* | 3.593 | 5,2% |
| 20. Plan estratégico de impulso de la Formación Profesional | 2.076 | 3,0% |
| 21. Modernización y digitalización del sistema educativo, incluida la educación temprana de 0 a 3 años | 1.648 | 2,4% |
| **VIII. Nueva economía de los cuidados y políticas de empleo** | **4.855** | **7,0%** |
| 22. Plan de choque para la economía de los cuidados y refuerzo de las políticas de inclusión | 2.492 | 3,6% |
| 23. Nuevas políticas públicas para un mercado de trabajo dinámico, resiliente e inclusivo | 2.363 | 3,4% |
| **IX. Impulso de la industria de la cultura y el deporte** | **825** | **1,2%** |
| 24. Revalorización de la industria cultural | 325 | 0,5% |
| 25. España hub audiovisual de Europa *(Spain AVS Hub)* | 200 | 0,3% |
| 26. Plan de fomento del sector del deporte | 300 | 0,4% |
| **X. Modernización del sistema fiscal para un crecimiento inclusivo y sostenible** | **–** | **–** |
| 27. Medidas y actuaciones de prevención y lucha contra el fraude fiscal | – | – |
| 28. Adaptación del sistema impositivo a la realidad del siglo XXI | – | – |
| 29. Mejora de la eficacia del gasto público | – | – |
| 30. Sostenibilidad a largo plazo del sistema público de pensiones en el marco del Pacto de Toledo | – | – |
| **Total** | **69.528** | **100%** |

*Source: Gobierno de España (2021).*

*Note: Table 5.2 it is displays the amounts related to each of the lever policy, also specifying the components and their percentage of the total 69.5 billion euros available for Spain.*

## 6. Conclusions

In this study, I tried to give a detailed analysis of the responses given by Europe in general and Spain in particular and their specific institutions and mechanisms, which have been crucial during the different events of the COVID-19 crisis. I tried to explain chronologically how these events were happening and how institutions reacted and adapted to the different stages of the pandemic and the economic shock in general. Moreover, I tried to give a clear and easy-to-read paper in which the reader could be able to understand the mechanisms, instruments, rules and background.

In my opinion, this economic shock has given an opportunity to every single country of the European Union to understand and even feel proud of the importance of having Europe back. It has also represented the importance of the European Central Bank as well as the European Commission and the cooperation across member states.

Moreover, the use of the mutualisation of debt and other mechanisms, which have been historically criticised for not being applied during the financial and sovereign debt crisis, represent a massive step forward and will give confidence to those countries most in need of funds.

Finally, the above-mentioned mechanism also represents a big responsibility for Spain, as the use they will be able to give to these funds could not only have a major role on the future of the Spanish economy and their generations, but also on the future of the cooperation and collaboration between the northern and southern European countries. Therefore, making a good use of these funds and recovering from this crisis stronger should be the priority to everyone in Spain, no matter their political party or their respective differences, although this is sadly not that easy.

## Bibliography


Bank for International Settlements. (2014). *Re-thinking the lender of last resort.*

Cambridge Dictionary. (2021, April 12). *Cambridge Dictionary*. Retrieved from https://dictionary.cambridge.org/es/diccionario/ingles/lender-of-last-resort

Carlin, W., & Soskice, D. (2015). *MACROECONOMICS. Institutions, Instability and the Financial System.* Oxford.

Council of the EU. (2020, March 23). *Press Release*. Retrieved from Statement of EU ministers of finance on the Stability and Growth Pact in light of the COVID-19 crisis: https://www.consilium.europa.eu/en/press/press-releases/2020/03/23/statement-of-eu-ministers-of-finance-on-the-stability-and-growth-pact-in-light-of-the-covid-19-crisis/

Directorate-General of Economic and Financial Affairs. (2012). *Report on Public Finances in EMU.* European Commission.

European Central Bank. (2011, December 8). *ECB announces measures to support bank lending and money market activity*. Retrieved from European Central Bank: https://www.ecb.europa.eu/press/pr/date/2011/html/pr111208_1.en.html

European Central Bank. (2012). A Fiscal Compact for a stronger Economic and Monetary Union. *Monthly Bulletin*, 82-83.

European Central Bank. (2016.a, September 27). *What are currency swap lines?* Retrieved from European Central Bank: https://www.ecb.europa.eu/explainers/tell-me-more/html/currency_swap_lines.en.html

European Central Bank. (2016.b, November 2). *What is collateral?* Retrieved from European Central Bank: https://www.ecb.europa.eu/explainers/tell-me/html/collateral.en.html

European Central Bank. (2016.c, November 3). *What are haircuts?* Retrieved from European Central Bank: https://www.ecb.europa.eu/explainers/tell-me-more/html/haircuts.en.html

European Central Bank. (2019, August 26). *What is a lender of last resort?* Retrieved from European Central Bank: https://www.ecb.europa.eu/explainers/tell-me-more/html/what-is-a-lender-of-last-resort.en.html

European Central Bank. (2020.a, December 29). *Capital subscription*. Retrieved from European Central Bank: https://www.ecb.europa.eu/ecb/orga/capital/html/index.en.html

European Central Bank. (2020.b, March 12). *ECB announces easing of conditions for targeted longer-term refinancing operations (TLTRO III)*. Retrieved from European Central Bank: https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200312_1~39db50b717.en.html

European Central Bank. (2020.c, March 18). *ECB announces €750 billion Pandemic Emergency Purchase Programme (PEPP)*. Retrieved from European Central Bank: https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200318_1~3949d6f266.en.html

European Central Bank. (2020.d, April 22 ). *ECB takes steps to mitigate impact of possible rating downgrades on collateral availability*. Retrieved from European Central Bank: https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200422_1~95e0f62a2b.en.html

European Central Bank. (2020.e, September 22). *ECB to accept sustainability-linked bonds as collateral*. Retrieved from European Central Bank: https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200922~482e4a5a90.en.html

European Central Bank. (n.d.). *Pandemic emergency purchase programme (PEPP)*. Retrieved from European Central Bank: https://www.ecb.europa.eu/mopo/implement/pepp/html/index.en.html

European Central Bank. (n.d.). *Targeted longer-term refinancing operations (TLTROs)*. Retrieved from European Central Bank: https://www.ecb.europa.eu/mopo/implement/omo/tltro/html/index.en.html

European Commission. (2009). *Temporary framework for State aid measures to support access to finance in the current.* Communication from the Commission.

European Commission. (2020.a, November 17). *Commission disburses €14 billion under SURE to nine Member States*. Retrieved from European Commission: https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2137

European Commission. (2020.b, December 1). *Commission disburses €8.5 billion under SURE to five Member States*. Retrieved from European Commission: https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2241

European Commission. (2020.c, October 7). *EU SURE Social Bond Framework.* Communication from the Commission.

European Commission. (2020.d, October 21). *European Commission issues first emission of EU SURE social bonds*. Retrieved from European Commission: https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1954

European Commission. (2020.h, 21 december). *State aid: Commission puts forward initiatives to further facilitate implementation of recovery and coronavirus support measures.* Press Corner. Retrieved March 3, 2021, from https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2494

European Commission. (2021.a, February 2). *Commission disburses €14 billion under SURE to nine Member States*. Retrieved from European Commission: https://ec.europa.eu/commission/presscorner/detail/en/ip_21_309

European Commission. (2021.b, March 10). *European Commission raises further €9 billion under SURE via second issuance in 2021*. Retrieved from European Commission: https://ec.europa.eu/commission/presscorner/detail/en/ip_21_1063

European Commission. (2021.e). *SURE: Taking Stock After Six Months.*

European Commission. (2021.g, March 30). *Commission disburses further €13 billion under SURE to six Member States*. Retrieved from European Commission: https://ec.europa.eu/commission/presscorner/detail/en/ip_21_1467

European Commission Audiovisual Service. (2020, Marzo 20). *European Commission.* Retrieved from https://audiovisual.ec.europa.eu/en/video/I-186835?lg=EN

European Commission. (n.d.). *European Commission.* Retrieved from https://ec.europa.eu/info/about-european-commission/what-european-commission-does_en#:~:text=The%20Commission%20helps%20to%20shape,international%20development%20and%20delivering%20aid.

European Commission. (n.d.). *Regulation (EC) No 1466/97 and 1467/97.*

European Stability Mechanism. (2021, March 20). *About us*. Retrieved from European Stability Mechanism: https://www.esm.europa.eu/about-us/intro

European Stability Mechanism. (2021, March 20). *Before the ESM; EFSF - the temporary fiscal backstop*. Retrieved from European Stability Mechanism: https://www.esm.europa.eu/efsf-overview

Farlex Financial Dictionary. (2009). *Bank run.*

Funcas. (2021, May 19). PLAN DE RECUPERACIÓN, TRANSFORMACIÓN Y RESILIENCIA. Retrieved from https://www.youtube.com/watch?v=Y1nhMjW6WQc&list=WL&index=2

Gobierno de España. (2021). *PLAN DE RECUPERACIÓN, TRANSFORMACION Y RESILIENCIA.*

Grant, M. (2019, May 6). *Tier 1 Capital*. Retrieved from Investopedia: https://www.investopedia.com/terms/t/tier1capital.asp

Grant, M. (2020, July 27). *Common Equity Tier 1*. Retrieved from Investopedia: https://www.investopedia.com/terms/c/common-equity-tier-1-cet1.asp#:~:text=Common%20Equity%20Tier%201%20(CET1)%20is%20a%20component%20of%20Tier,economy%20from%20a%20financial%20crisis.

International Capital Market Association . (2020, June). *Social Bond Principles (SBP)*. Retrieved from International Capital Market Association : https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/social-bond-principles-sbp/

Jenkings, P. (2019, January 7). EU's wilful blindness to sovereign risk adds to eurozone danger. *Financial Times*. Retrieved March 3, 2021, from https://www.ft.com/content/c83f64c2-103a-11e9-a3aa-118c761d2745

Korte, J., & Steffen, S. (2014, September 7). *A 'sovereign subsidy' – zero risk weights and sovereign risk spillovers.* Retrieved March 3, 2021, from VoxEU: https://voxeu.org/article/sovereign-subsidy-zero-risk-weights-and-sovereign-risk-spillovers#fn

Official Journal of the European Union. (2012). *CONSOLIDATED VERSION OF THE TREATY ON THE FUNCTIONING OF THE EUROPEAN UNION.*

Saphiro, A. (n.d.). Bonds and the Term Structure of Interest Rates: Pricing, Yields, and (No) Arbitrage. *Foundations of Finance: Bonds and the Term Structure of Interest Rates*.

## Appendix A

Over this appendix I will state the references used in order to display the graphs and different variables in the analysis done previously. Some of these data have been retrieved from web pages such as the Federal Reserve Economic Data (FRED) or the Statistical Data Warehouse from the European Central Bank.

I also present the data used in order to make Table 3.1, since the data have been retrieved from different press releases by the European Commission.

**Figure 2.1. Real GDP for the European Union after the pandemic**

European Central Bank. (2021.d, May 9). Statistical Data Warehouse.

Retrieved from European Central Bank with series key: MNA.Q.Y.I8.W2.S1.S1.B.B1GQ._Z._Z._Z.EUR.LR.N

https://sdw.ecb.europa.eu/quickview.do?org.apache.struts.taglib.html.TOKEN=fb762ffc5beec4b2ace60f25697f40fb&SERIES_KEY=320.MNA.Q.Y.I8.W2.S1.S1.B.B1GQ._Z._Z._Z.EUR.LR.N&start=&end=&submitOptions.x=0&submitOptions.y=0&trans=N

**Figure 2.2. The impact of COVID-19 over the real GDP of Spain, Italy, Germany and France**.

Federal Reserve Bank of St Louis. (n.d.). Federal Reserve Economic Data (FRED).

Retrieved from Gross Domestic Product for Spain with code: (CPMNACSCAB1GQES)

https://fred.stlouisfed.org/series/CPMNACSCAB1GQES#0

Federal Reserve Bank of St Louis. (n.d.). Federal Reserve Economic Data (FRED).

Retrieved from Gross Domestic Product for Italy with code: (CPMNACSCAB1GQIT)

https://fred.stlouisfed.org/series/CPMNACSCAB1GQIT

Federal Reserve Bank of St Louis. (n.d.). Federal Reserve Economic Data (FRED).

Retrieved from Real Gross Domestic Product for France with code: (CLVMNACSCAB1GQFR)

https://fred.stlouisfed.org/series/CLVMNACSCAB1GQFR

Federal Reserve Bank of St Louis. (n.d.). *Federal Reserve Economic Data (FRED)*.

Retrieved from Real Gross Domestic Product for Germany with code: (CLVMNACSCAB1GQES)

https://fred.stlouisfed.org/series/CLVMNACSCAB1GQES

**Figure 2.3 The impact of the last recession in Spain**

Federal Reserve Bank of St Louis. (n.d.). Federal Reserve Economic Data (FRED).

Retrieved from Gross Domestic Product for Spain with code: (CPMNACSCAB1GQES)

https://fred.stlouisfed.org/series/CPMNACSCAB1GQES#0

**Figure 4.1. Inflation in the Euro Area since 2007.**

European Central Bank. (2021.a, April 04). Statistical Data Warehouse.

Retrieved from European Central Bank with series key: ICP.M.U2.N.000000.4.INX

https://sdw.ecb.europa.eu/quickview.do;jsessionid=2AB5D8BEBF11951997D0932C914A72C4?SERIES_KEY=122.ICP.M.U2.N.000000.4.INX&start=&end=&submitOptions.x=0&submitOptions.y=0&trans=YPC

**Figure 4.2. Inflation vs Interest rates and the deflation trap.**

European Central Bank. (2021.c, May 5). Statistical Data Warehouse.

Retrieved from European Central Bank with series key: FM.B.U2.EUR.4F.KR.DFR.LEV

https://sdw.ecb.europa.eu/quickview.do?org.apache.struts.taglib.html.TOKEN=b76bdce5fd6e039c39b77796d323b3d3&SERIES_KEY=143.FM.B.U2.EUR.4F.KR.DFR.LEV&start=&end=&submitOptions.x=0&submitOptions.y=0&trans=MF

**Figure 4.3. 10-year government bond yield.**

European Central Bank. (2021.b, April 11). Statistical Data Warehouse.

Retrieved from European Central Bank with series key: FM.M.U2.EUR.4F.BB.U2_10Y.YLD

https://sdw.ecb.europa.eu/quickview.do;jsessionid=6ACF2BD21F7301B32A500CEC26289AC5?SERIES_KEY=143.FM.M.U2.EUR.4F.BB.U2_10Y.YLD&resetBtn=+Reset+Settings&start=&end=&trans=N

**Figure 4.4. Term structure of interest rates (Spot and forward rates) for the Eurozone.**

European Central Bank. (2021.e). Euro area yield curves.

Retrieved from European Central Bank: Current year - AAA

https://www.ecb.europa.eu/stats/financial_markets_and_interest_rates/euro_area_yield_curves/html/index.en.html

**Table 3.1. Disbursements by different categories**

European Commission. (2020.e). European Union EUR 14 billion dual tranche bond issue due 4th November, 2025 and 2050. Press Release.

European Commission. (2020.f). European Union EUR 17 billion dual tranche bond issue due October 4th, 2030 and 2040. Press Release.

European Commission. (2020.g). European Union EUR 8.5 billion single tranche bond issue due 4th July, 2035. Press Release.

European Commission. (2021.c). European Union EUR 14.0 billion dual tranche bond issue due 2nd June 2028 and 4th November 2050. Press Release.

European Commission. (2021.d). European Union EUR 9 billion single tranche bond issue due 4th June 2036. Press Release.

European Commission. (2021.f). European Union EUR 13.0 billion dual tranche bond issue due 4th March 2026 and 2nd May 2046. Press Release.