EUROPEAN
COMMISSION

Brussels, 23.5.2022
SWD(2022) 610 final

COMMISSION STAFF WORKING DOCUMENT

2022 Country Report - Spain

Accompanying the document

Recommendation for a COUNCIL RECOMMENDATION

on the 2022 National Reform Programme of Spain and delivering a Council opinion on the 2022 Stability Programme of Spain

{COM(2022) 610 final} - {SWD(2022) 640 final}

European Commission

Spain

2022 Country Report

ECONOMIC AND EMPLOYMENT SNAPSHOT

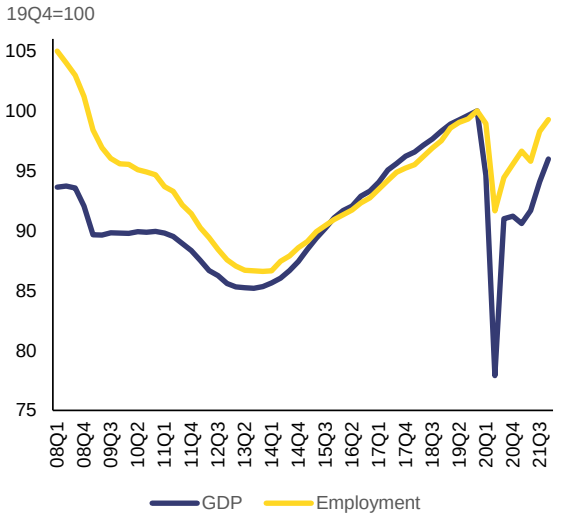
Spain's economic recovery is on track, but vulnerabilities remain

The COVID-19 pandemic halted six years of strong economic growth and dynamic job creation. Between 2013 and 2019, Spain's GDP grew by 17% and 2.7 million jobs were created. This cycle came to an abrupt end in 2020, when Spain experienced the largest GDP contraction (-10.8%) in the EU. The economic impact of the lockdown measures was amplified by some features of the Spanish economy, such as its reliance on tourism and other contact-intensive services, a business fabric with a predominance of small and medium-sized enterprises (SMEs) and structural labour market weaknesses. As a result, more than 1.1 million workers (largely temporary employees) lost their jobs and the employment rate decreased by 4.5 percentage points in the first three months of the crisis.

At the same time, after the initial shock of the pandemic, labour market resilience is underpinning the recovery. After a modest expansion in the first half of 2021, the recovery gained traction during the second half due to a strong labour market and the recovery of tourism. Real GDP grew by 5.1% in 2021, although it was still 3.8% below the pre-pandemic levels in Q4-2021. By contrast, headcount employment almost matched pre-crisis levels in Q4-2021 (Graph 1.1) although at a lower level for hours worked. Despite decreasing over 2021, unemployment rate remains well above the EU average, especially among the young.

Employment resilience suggests a change in pattern compared to previous crises, when job destruction outpaced the fall in GDP. The effective deployment of short-time work schemes since the initial stages of the pandemic, benefitted from the support of the EU instrument for temporary Support to mitigate Unemployment Risks in an Emergency (SURE, see Annex 3) and was complemented by other internal adjustment mechanisms. These schemes have cushioned the impact of the COVID-19 crisis on the labour market and paved the way for a quick recovery. In contrast, during the 2008-2013 crisis the fall in the number of jobs (-15.8%) was almost twice as high as the fall in GDP (-8.5%).

Graph 1.1: **GDP and number of jobs**



Source: Eurostat, own calculations.

Regional disparities persist in Spain, including between urban and rural areas. The pandemic has had asymmetric consequences among the Spanish regions, having a greater impact in those regions whose economy depends more on tourism. Some socio-economic indicators show significant territorial disparities, such as unemployment, poverty and competitiveness (see Annex 15).

Full recovery from the COVID-19 crisis is expected to be delayed due to the economic impact of the Russian military aggression against Ukraine. Despite the limited direct economic exposure of the

Spanish economy, activity may be affected through different channels (see details below). According to the Commission's Spring Economic Forecast (see Annex 19 for details), GDP growth is expected to slow down in the first half of 2022, and gain again traction in the second half of the year, when energy price increases and supply bottlenecks are expected to start easing. However, both are set to remain high over the forecast period. Hence, full recovery of the pre-pandemic level of GDP is expected to be delayed until mid-2023.

Domestic and external demand are set to sustain GDP growth over 2022 and 2023. Overall, GDP is expected to expand by 4.0% in 2022 and by 3.4% in 2023. The revived tourism activity has been the main driver of economic growth since the summer of 2021 and is expected to keep momentum in 2022. This will provide a large contribution of net exports to GDP growth. Moreover, economic growth is set to accelerate from 2022-Q3 thanks to faster implementation of investments under the RRP and some reactivation of private consumption, despite the deterioration of households' purchasing power due to high inflation and a reduction in real wages. The savings accumulated during the pandemic and a strong labour market are set to partially mitigate this effect. The unemployment rate is expected to decrease from 14.8% in 2021 to 13.4% in 2022 and 13.0% in 2023.

High energy prices and their spread to other products will keep inflation high in 2022. Energy prices have been the main driver of the steep increase in the HICP inflation rate over the last year (7.9% y-o-y in Q1-2022), but the transmission to the prices of other goods and services has recently become more evident. Inflation is expected to moderate slowly during the rest of the year, helped by recent governmental measures such as fuel discounts and the cap on wholesale gas prices, although remaining high. Thus annual HICP inflation is expected to reach 6.3% in 2022, increasing from 3.0% in 2021. In 2023, further moderation of energy prices is projected to reduce annual inflation to 1.8%. Core inflation is set to remain relatively high over the forecast period, although wage moderation is expected to help contain second round effects.

The extraordinary measures in the face of the COVID-19 crisis have led to a significant deterioration in public finances, which is gradually being reversed. Before the pandemic, government debt in relation to GDP had decreased from 100.7% in 2014 to 95.5% in 2019. Due to favourable financing conditions, borrowing costs also fell sharply, helping bring the government deficit down to below 3% of GDP before the COVID-19 crisis. However, the combination of the fall in economic activity and the decisive policy response to support businesses and households brought the deficit to 10.3% of GDP in 2020. As crisis-related measures were progressively phased out and the economic recovery consolidates, the deficit, which decreased to 6.9% in 2021, is set to narrow further to 4.9% in 2022 and 4.4% in 2023, and public debt to decrease to 115.1% of GDP in 2023 from 113.7% in 2021.

At the same time, the impact of the phasing out of the remaining COVID-19 support measures is uncertain, although no significant cliff-edge effects have emerged so far. Borrower relief measures and public guarantee schemes introduced in response to the COVID-19 crisis have so far averted broad-based liquidity problems. In addition, the authorities have recently extended the maturity of the public guaranteed loans and their grace period for six additional months, applicable in those sectors most affected by the increase in energy costs (see below). However, uncertainty remains on the impact their phasing out could have on the financial situation of the private sector. Moreover, excessive debt may weigh on firms productivity by reducing their capacity to invest in capital, innovation or skills.

Sustained growth is expected to support a gradual correction of macroeconomic imbalances. The long-standing imbalances of the Spanish economy were following a steady declining trend before the pandemic. However, those imbalances have worsened as a result of the economic fallout from the COVID-19 crisis. Spain is still characterised by a

combination of a large stock of external and internal debt, both public and private, in a context of high unemployment and relatively low productivity. A gradual improvement is expected (see Annex 17), due to sustained GDP growth and supported by the successful implementation of the RRP.

The implementation of the RRP is expected to increase Spain's resilience. By providing funding for strategic investments, the RRF can support economic growth while fiscal consolidation takes place. Targeted and efficient expenditure – focused on the twin green and digital transition – is expected to have a positive impact on productivity and support the recovery through inclusive growth. While a law has been passed to facilitate implementation, increasing the absorption capacity and securing a timely implementation of mutually reinforcing measures in the RRP would increase their positive impact. All these factors together are expected to decisively contribute to increasing the country's social, economic and environmental resilience.

The economy is expected to regain cost competitiveness during the recovery despite high inflation pressures. Real unit labour costs increased substantially in 2020 due to the fall in labour productivity resulting from confinement measures and the extended use of short-time work schemes during the pandemic. The declining path started in 2021 is expected to be sustained over the forecast period, under the assumption of a slower increase of wages than prices. The minimum wage increased steeply since 2019 (36% in nominal terms), with the aim of addressing wage inequalities in a context of high in-work poverty and job precariousness ([1]). Further increases are planned as part of a political objective to reach 60% of the average wage by 2023. As on previous occasions, they are expected to be based on an ex-ante assessment, and taking into account the multiple effects on net employment, social cohesion, competitiveness and internal demand, amongst other aspects.

Despite limited exposure to Russia and Ukraine, high energy prices and trade spill-overs have hit the economy

Direct economic exposure to Russia and Ukraine is limited and lower than for other Member States. Trade dependencies and value chain interlinkages with Russia and Ukraine are small overall and restricted to a number of sectors. In particular, as compared with other products, both the traded values and the shares in total Spanish goods imports are significant for Russian oil and gas (although lower than for the EU average), and for Ukrainian cereals and sunflower oil. On aggregate, a mere 0.3% of the Spanish economy's value added depends on Russian final demand (compared to 0.6% for the EU27). The share of Russian value added is also limited in Spanish final demand, although it is relevant for fuel products. The number of Russian tourists had increased significantly before the pandemic, particularly in certain parts of the Mediterranean coast, but they still represent a small share overall. The stock of foreign direct investment by Russia is negligible, while the presence of Spanish corporates in those countries is limited to a few exceptions in infrastructure and retail trade activities. The exposure of Spanish financial institutions, which is already low compared to other EU countries, is now very limited due to the declining trend since sanctions were adopted in 2014 after Russia's annexation of Crimea. This also explains the limited house purchases by Russian citizens since then.

Despite low reliance on Russian energy supply, further price increases from already high levels exert considerable pressure on consumer prices and production costs. The share of energy imports from Russia is relatively low compared with other EU countries, especially for gas and

([1]) Bank of Spain (2021), *"Los efectos del salario minimo interprofesional en el empleo: nueva evidencia para España"*, assessed the 22% rise of minimum wage in 2019 and concluded that it had a limited impact on overall employment but a negative one for young and low-skilled workers.

oil. However, despite having a highly diversified basket of oil and gas suppliers, overall dependence on foreign energy supply is high for Spain, making the economy particularly sensitive to price developments in global markets. The main demand of imported oil products in Spain comes from transport activities (mostly by road) and non-energy industrial use (mostly chemicals and non-metallic mineral products), while natural gas is either transformed for electricity generation or used for energy purposes by industries, commercial activities and households. Developments in the natural gas market have had a substantial impact on electricity prices since mid-2021, and further since the Russian invasion of Ukraine. This has dented consumers' purchasing power (low-income households in particular) and stressed firms' positions, particularly firms in electro-intensive activities such as the iron and steel industries.

Government measures prioritise the containment of retail prices for energy and the support to vulnerable households, but may not be sufficient to contain negative second round risks. The government has reacted swiftly to contain the rise in energy retail prices (which to a large extent extend previous packages adopted last year) and provide income support to those most affected by negative economic effects, including low-income households and electro-intensive industries. The Spanish economy is particularly sensitive to the balance of risks given its strong reliance on EU demand and supply, the legacy of the COVID-19 crisis (among the deepest in the EU) and persistent macroeconomic imbalances. In this context, the negative effects on employment and the deterioration of the business financial situation could be partly mitigated by the likely activation of the new employment flexibility and stability mechanism – the so-called *Mecanismo* RED – in specific sectors. Also by a delay in the phasing out of the public guarantee schemes introduced during the pandemic and which have been recently reinforced by the National Response Plan to the war in Ukraine (including EUR 10 billion of additional guarantees and the extension of the maturity and the grace period of existing ones). Regarding commitments at EU level, the Spanish government has already allocated EUR 1.2 billion to provide protection and build hosting centres for displaced people from Ukraine, while on the expected increase of military expenditure, Spain is currently far below the NATO reference of 2% of GDP (0.9% in 2020 compared with 1.3% for the EU27 average).

Addressing the remaining socio-economic and environmental challenges will underpin sustained growth

Spain has made progress towards the UN's Sustainable Development Goals (SDGs), but lags behind the EU in several areas. Improvements have been made in recent years, particularly on poverty, health and education within the fairness dimension, and on clean energy and climate action contributing to environmental sustainability. Nevertheless, several of the underlying indicators remain well below the EU average, such as those on support for the circular economy and higher productivity, while other socio-economic indicators have deteriorated due the COVID-19 pandemic (see Annex 1).

The green transition requires large-scale interventions. The transformation of the economy under the European Green Deal is particularly demanding in terms of energy efficiency and decarbonisation, clean and sustainable mobility, and the circular economy. Spain aims to lower greenhouse gas (GHG) emissions by 23% by 2030 (compared to 1990), and achieve climate neutrality by 2050 (Annexes 5 and 6). Significant investment is needed in order to renovate public and private buildings, cut transport emissions, generate and distribute renewable energy, for water and waste management, and support the reskilling and upskilling of the workforce.

Structural factors continue to hamper productivity growth. Innovation and digital gaps, skill shortages and mismatches, labour market inefficiencies, and regulatory barriers are among the most significant (Annexes 7 to

11). The persistence of the effects of the pandemic on productivity remains to be seen in the Spanish economy, particularly in relation to existing skills shortages and mismatches, and the need for reorganization of business activity.

The pandemic exacerbated the challenges for employment, fairness and inclusion. The Social Scoreboard supporting the European Pillar of Social Rights pointed to moderate progress before the COVID-19 outbreak, but the pandemic has had a very significant socioeconomic impact, aggravating existing challenges for vulnerable groups (Annexes 12 to 15). Many indicators still point to critical situations, particularly in relation to equal opportunities for young people, structural deficiencies in the labour market and the limited impact of social transfers on poverty reduction, including child poverty.

Fiscal consolidation and higher economic growth will contribute to economic stability in the medium term. The impact of the pandemic crisis was cushioned by decisive policy action. Nevertheless, it halted the correction of macroeconomic imbalances, and the strength of the economic recovery would be challenged if productivity, employment and macroeconomic and financial conditions are not supportive (Annexes 16 to 20). Accelerating population ageing puts additional pressure on government spending making the correction of the structural fiscal deficit in the medium to long term more demanding, while growth-enhancing policies appear necessary to facilitate the reduction of high private debt levels.

THE RECOVERY AND RESILIENCE PLAN IS UNDERWAY

Progress on the Recovery and Resilience Plan in 2021

The Spanish Recovery and Resilience Plan (RRP) comprises 30 components along four main axes: green and digital transitions, social and territorial cohesion, and gender equality. It includes 110 investments (for a total estimated cost of EUR 69.5 billion) and 102 reforms, articulated in 416 milestones and targets to be met during the period 2021-2026 (see Annex 2). It provides a balanced response to the six policy pillars of the RRF, with a significant focus on social and territorial cohesion and on the green transition (Graph A2.1).

The implementation of the RRP is underway. The Commission disbursed EUR 10bn on 27 December 2021 based on the satisfactory fulfilment of the first 52 milestones of the RRP. Additional measures of the RRP adopted since December 2021 include the establishment of the National Evaluation Office for public procurement, legal acts to support building renovation, and the reform of the labour market including the streamlining of labour contracts and establishing a permanent short-time work scheme. On investments, the central government has transferred approximately EUR 11 billion to regions to implement measures under the RRP. Box 1 contains a summary of key deliverables in 2022 and 2023.

Supporting the green transition

Meeting Spain's renewable and decarbonisation targets represents a significant challenge. The RRP aims to make a significant contribution to meeting this challenge by promoting renewable energy generation and complementary investments in storage, networks and renewable hydrogen. Its target is for 42% of gross final energy consumption to come from renewable energy by 2030 (from 21% in 2020; see also Annex 5, Table A5.1). Considerable reform efforts have already been made to achieve the first set of milestones, which included the Law on Climate Change and Energy Transition, promoting long-term contracting of renewable generation, reducing administrative barriers while ensuring the protection of the environment, facilitating investment in energy storage, and developing renewable fuels and gases. Looking forward, the RRP includes significant investments in infrastructure and clean technologies (innovative renewable capacity, and electricity storage and grids), building renovation (energy efficiency), as well measures for reskilling for the green transition.

Greenhouse gas (GHG) emissions continue to grow most in transport. Measures to encourage a modal shift remain key to achieve Spain's GHG emission reduction targets. The RRP allocates significant investments to sustainable mobility, including the shift from road to rail and electric mobility, and it seeks to modernise the railway infrastructure (including in Trans-European Transport Network (TEN-T) corridors). It also promotes the sustainable and digital transformation of transport, with aims that include reducing private vehicle use in urban areas. In addition, a significant number of measures for the deployment of the charging infrastructure and the promotion of the electric vehicles are also envisaged.

Spain will have to renovate a significant number of buildings in order to meet its energy consumption targets by 2030. The RRP aims to ensure that at least 355 000 residential dwellings, 690 000 m2 of non-residential buildings, and 1 230 000 m2 of

public buildings are renovated by 2026. These investments will result in an average reduction in primary energy demand of at least 30%. However, while these will make a significant contribution to achieve National Energy and Climate Plan (NECP) targets, greater efforts, including to quickly modernise a larger part of the building stock, are needed (see next section).

The RRP also includes relevant measures to promote the circular economy and improve waste management. The Law on Waste and Contaminated Soils for a Circular Economy (Ley 7/2022 of 8 April 2022) represents a significant step towards improving coordination and reducing fragmentation of waste management. It introduces a harmonised taxation scheme for waste disposal (landfill and incineration) across regions, and compulsory separate collection of bio-waste in national legislation. It also reviews the general framework for the application of extended producer responsibility, it provides for authorisations granted by regions for collective waste management systems for producers to have national validity, and seeks to improve data collection. However, waste management remains a significant challenge for Spain with 52% of waste still going to landfills, and recycling rates for municipal waste below EU targets. Further measures are needed to address this issue (see next section).

Despite progress, challenges for water management remain. The RRP aims to improve hydrological planning, and reform the legal framework and investments in infrastructure. Investments aim to improve wastewater collection and treatment and promote further water reuse. Additional resources will also be awarded to improve water supply and reduce water leakages in small and medium-sized municipalities. The new strategic project for the digitalisation of urban water cycle promotes the use of new technologies to improve governance and transparency.

Spain is highly vulnerable to the adverse effects of climate change. Spain's geographical location and topography make it particularly prone to floods, droughts, coastal erosion, water shortages and biodiversity losses. The RRP includes a number of measures and policies to protect the coastline and the marine environment, promote river restoration and aquifer recovery, and mitigate the risk of floods. There are also measures to integrate climate risks in water management, prevent forest fires, and protect and restore marine and terrestrial ecosystems and their biodiversity. The National Strategy for Green Infrastructure, Connectivity and Ecological Restoration adopted in 2021 was one of the milestones fulfilled under the first payment request.

Reinforcing economic and social resilience

Equal opportunities and access to the labour market are a particular challenge for young people. Early school leaving, NEETs, and unemployment rates remain among the EU's highest. The RRP aims to address these challenges, contributing to the implementation of the European Pillar of Social Rights, with measures to improve digital skills, and the vocational and education training (VET) system. For instance, the 2021 National Digital Competences Plan supports the digital transformation of education. New curricula were introduced in 2020 to modernise the VET system and laws are planned to improve the relevance of VET skills to business. The new Organic Law on education entered into force in 2021 and aims to reduce early school leaving and improve educational inclusion. A new curriculum model for key competences, fundamental learning and inclusive academic planning seeks to improve educational outcomes. The Youth Guarantee Plus Plan 2021-2027 is expected to increase equal opportunities and improve employability for young people.

The labour market faces a number of structural challenges hampering progress on fair working conditions. The reforms of labour markets included in the RRP seek to reduce labour market segmentation by limiting the use of temporary contracts, and improve

the functioning of collective bargaining. Reforms of active labour market policies and the public employment services seek to improve their effectiveness and boost workers' reskilling capacities and employability. The reinforcement of short-time work schemes by creating a permanent mechanism for flexibility and stability (*Mecanismo RED*) is expected to provide further income support and training opportunities for workers facing negative economic shocks and reduce unemployment volatility and its associated socioeconomic costs. Legislation that contributes to close the gender pay gap, protect workers in distribution activities on behalf of third parties using technological means, and provide adequate protection to those in subcontracted activities, aim to support fair working conditions.

The share of people at risk of poverty or social exclusion is high, with significant regional disparities, and it worsened during the pandemic. Close to one in three children was at risk of poverty or social exclusion in Spain in 2020 (well above the 24% EU average). The pandemic is likely to have increased the risk of poverty (see Annex 12). In this regard, the entry into force of a national minimum income scheme (part of the RRP's first set of milestones) has boosted support to poor families. The RRP also includes a reform to reorganise and simplify non-contributory benefits in 2022. Tax benefits will also be reviewed in order to improve support to low and middle income families. A new law seeks to encourage the availability of affordable and social housing, which remains a significant challenge, especially for young people and low-income households.

The RRP aims to strengthen the public health system's resilience and capacity. The action plan for primary and community care was approved in 2021. The forthcoming Public Health Strategy and reforms related to the health workforce, digitalisation and prevention measures seek to modernise the health system and adapt it to current and future challenges. The law on the equity, universality and cohesion of the National Health System aims to improve its accessibility. Investments aim to address existing shortcomings in hospital infrastructure. Long-term care is also to be strengthened, in view of ageing and longer life expectancy. Investments in the RRP also have to support the deinstitutionalisation of long-term care. Moreover, primary care requires further funding support.

The RRP includes reforms and sizeable investments to promote territorial cohesion in many components. Key examples include the Urban Agenda, the Just Transition Strategy, the Strategy for Science, Technology and Innovation, the Digital Strategy, the National Strategy for Artificial Intelligence, the National Health Strategy, the review of active labour market policies and the reform of the tax system. Reforms also aim to strengthen local autonomy and co-governance. In particular, the reform of local government aims to digitalise local public services to guarantee their provision, and local entities will also manage digitalisation funds.

Closing the productivity gap and supporting the digital transition

Insufficient linkages with businesses and underinvestment continue to weigh on Spain's science and innovation system. The RRP aims to strengthen the educational, science and innovation system and crowd-in private investment. To this end, two Royal Decrees have been adopted on the re-organisation and quality of university courses, and establishing a scheme to create, recognise, authorise and accredit universities and their centres. The RRP also envisages amending the Science, Technology and Innovation law in order to improve coordination between different levels of government, establish longer contracts for entry to a scientific career and improve knowledge transfer. Furthermore, it allocates significant resources to R&D, public-private collaboration, proof of concept, and interdisciplinary projects linked to the green and digital transitions. However, further efforts are needed (see next section).

Labour market segmentation resulted in underinvestment in human capital and low productivity. Due to their limited duration, short-term labour contracts limit incentives to invest in human capital against expected long-term returns. The reforms under the RRP to improve skills and the effectiveness of labour market policies (including by addressing segmentation) have the potential to bring long-lasting increases in productivity and potential growth.

Reinforcing skills, including digital skills, is expected to improve productivity. Several reforms and investments in the RRP focus on upskilling people and reskilling workers. This includes future-proofing skills by training individuals for the green and digital transitions (e.g. through the National Digital Competences Plan and new VET curricula on digital areas), and efforts to address skill gaps in the event of structural shocks (including via the RED mechanism and the modernisation of active labour market policies).

Strategic projects to boost the competitiveness and productivity of key sectors are being deployed. Known as PERTEs ([2]), these aim to transform value chains, support firms of all sizes and strengthen the productivity and competitiveness of value chains, with associated investments. PERTEs already approved by the Spanish government include: electric and connected vehicles, health, energy storage, renewable energy and hydrogen, agro-business, Spanish language, the circular economy, naval industry, aerospace industry, and the digitalisation of the water cycle. Further PERTEs and other measures to strengthen innovation and SME performance are being considered. SMEs and the self-employed will benefit in particular from a programme to promote scalable, public-private collaboration with a view to accelerating their digitalisation (e.g. through the Digital Toolkit Programme). Also, financial instruments helping SMEs to invest and favouring their growth are reinforced. The RRP also includes specific measures to support connectivity (e.g. fixed very high capacity networks and 5G).

Regulatory fragmentation and low innovation across firms and regions hamper growth and productivity and prevent firms from scaling up. Increasing both productivity growth and their size is particularly relevant for SMEs, given their larger share in the economy compared to other large EU Member States. To this end, the RRP includes several legislative initiatives to facilitate the setting up and growth of firms (laws for *Business Creation and Growth, Start-ups)*. Other relevant reforms concern the financing of innovative firms and insolvency proceedings, and the fostering of entrepreneurship.

The RRP includes measures to improve the efficient use of resources. Spain's circular use of materials is below the EU average, while its overall resource productivity is above it. Spain plans to increase the resource efficiency by improving separate waste collection and the efficiency and sustainability of irrigation, and investing in building renovation. However, its performance on waste management remains a challenge (see next section).

Reinforcing fiscal sustainability and reducing macroeconomic imbalances

The RRP aims to bring the government revenue-to-GDP ratio closer to the EU average. Spain's structural deficits were large prior to the COVID-19 outbreak and its fiscal position has worsened further as a result of the pandemic. Under the RRP, Spain has already taken measures to bring government revenues closer to the EU average as a percentage of GDP (e.g. by modifying corporate and personal income taxes, introducing financial transaction taxes, etc.). Further measures envisage developing green taxation (e.g. taxes on single-use plastics and on landfilling and incineration of waste as introduced by the Law on Waste and

([2]) Proyectos Estratégicos para la Recuperación y la Transformación Económica (PERTEs)

Contaminated Soils for a Circular Economy; and the reform of the tax on fluorinated gases) and adopting a broad tax reform.

The RRP also seeks to improve the effectiveness of public expenditures. In particular, it promotes further spending reviews via a new 2022-2026 cycle, it reinforces their governance, including the interaction between the Ministry of Finance and the Independent Fiscal Institution AIReF, and aims to follow-up effectively on their previous and forthcoming recommendations (in the spirit of 'comply or explain').

A reform of the pension system seeks to improve its adequacy, while limiting the impact of demographics on fiscal sustainability. By linking pensions to consumer prices, the reform is expected to support purchasing power. Other measures are in the process of being implemented or adopted as part of a package to support the overall fiscal sustainability of the pension system. These include: measures to increase the effective retirement age, further link contributions and entitlements, reduce the pension gender gap, change tax incentives, modify the contribution system for self-employed workers, the extension of the reference period for calculating pensions, and an intergenerational equity mechanism.

Investments and reforms in public administration are needed in order to implement the RRP and reinforce its institutional capacity and resilience. As part of the first set of milestones already fulfilled, Spain adopted a law with measures to reduce temporary employment in public administration and ensure sufficiently effective provisions to prevent and penalise abuse. Further measures are foreseen to help stabilise public sector employment and to improve public administrations' recruitment procedures and human resources. The reform also aims to complete the implementation of the public procurement reform and further develop ex-ante policy evaluation. Coordination and cooperation between the different levels of government is also foreseen to be reinforced. Furthermore, the provision of public digital services is to be improved.

The RRP can also help reduce high private and external debt by increasing competitiveness and reducing the reliance on energy import. Measures to increase the competitiveness of Spain's business fabric include the upskilling of the labour force, reducing labour market segmentation, and supporting companies, including SMEs, for business growth and to innovate, adopt new technologies and reach new markets. Reforms and investments favouring renewable energy and energy efficiency can reduce energy imports and contribute to reduce external debt. The RRP also includes reforms to improve the effectiveness of pre-insolvency and insolvency instruments, including a special procedure for microenterprises and a reform of second chance for natural persons, with the goal of preventing insolvencies and facilitate resource reallocation.

Box 1:

Key deliverables expected under the Recovery and Resilience Plan in 2022-23

- Tenders for investment support to innovative or value added renewable capacity.
- Regulation establishing guarantees of origin for renewable gases.
- Introduction of taxes on single-use plastics and waste incineration and landfill.
- Entry into force of the Law on 5G cybersecurity.
- Assignment of the 26GHz band (remaining 5G bands to be assigned).
- Entry into force of the reform of Insolvency Law.
- Support to R&D&I projects in sustainable automotive.
- Reform of public recharging services.
- Award of TEN-T core network projects.
- Reform of the reception system for migrants and applicants for international protection.
- Reform of the pension system.
- Action plan for primary and community care.
- Civil Service Act to reinforce public administrations' human resources policies.
- Law on the single integrated Vocational Training System modernising the system.
- Legislative reforms to establish a scheme to address cyclical and structural shocks.

Source: CID Annex.

FURTHER PRIORITIES AHEAD

Beyond the challenges addressed by the RRP, as outlined above, Spain faces additional challenges not sufficiently covered in the RRP. In the current geopolitical context, accelerating the green transition, increasing cross-border energy interconnections with the rest of Europe, and containing energy consumption including by enhancing energy efficiency are key. In addition, further progress is required on fiscal sustainability, the correction of macroeconomic imbalances, the circular economy and to improve productivity. Addressing these challenges will also help make further progress in achieving SDG indicators relating to affordable energy and housing (7 and 11), macroeconomic stability (8), circular material use and waste generation (12), and productivity (8 and 9). EU funds could make an important contribution to addressing these challenges. A gradual correction of macroeconomic imbalances is expected to take place during the lifetime of the RRF.

Accelerating the green transition

Despite the low dependence on Russian fossil fuels, energy prices have substantially surged since summer 2021, underlining the need to accelerate the green transition. Russia is the fourth supplier of natural gas to Spain (via liquefied natural gas (LNG)), but Russian imports only represented 10% of the total imports in 2020 (well below the EU average of 44%). Spain's dependence on Russian oil (2%) is also well below the EU average (26%), and relatively small ([3]). Nonetheless, the current energy market tension resulting from Russia's invasion of Ukraine has led to a large increase in the energy prices, faced by Spanish businesses and consumers. This has added to the energy price increases since the summer of 2021. Stepping up efforts to meet current renewable energy targets laid down in the NECP, and the even more ambitious targets proposed under the Fit for 55 package, becomes even more important in the current energy market context. Renewable electricity sources reached 68.3 GW of capacity in mainland Spain by end 2021 (equivalent to 63.5% of total installed capacity). Renewable electricity covered 48.4% of mainland demand.

Renewable deployment will need to increase considerably over the next decade to the meet the targets of the Fit-for-55 package. These require 122GW of renewables by 2030, including 67GW of wind power and 35GW of solar power. Building on the RRP, additional measures to support renewable deployment (with a focus on decentralised installations and self-consumption, including by streamlining permitting procedures and improving access to the grid) and complementary investments (in storage, network infrastructure, electrification of buildings and of mobility, and renewable hydrogen) can help further decarbonise the economy, including industry, transport and housing, and reduce reliance on fossil fuels and exposure to international prices. Progress in decentralised renewable energy production and deep renovations in both residential and non-residential buildings, particularly in mid-size cities, could be achieved by putting in place appropriate financing schemes, upskilling and training of workers in the construction sector, awareness raising campaigns and

([3]) Eurostat (2020), share of Russian imports over total imports of natural gas and crude oil. For the EU27 average, the total imports are based on extra-EU27 imports. For Spain, total imports include intra-EU trade. Crude oil does not include refined oil products.

technical assistance to support the use of grants and financial instruments for renovations.

In addition, and in line with the REPowerEU initiative, integrating Spain effectively into the single energy market would play an important role in terms of the security of the EU's energy supply. The effective integration of Spain in the single energy market requires increasing its energy interconnections. The NECP aims for 15% of electricity interconnection capacity by 2030, against 5% in 2021. In particular, further electricity interconnections with neighbouring countries could support greater integration of renewable capacity of the Iberian Peninsula in the single energy market. Spain could also support additional cross-border gas interconnections, to contribute to the EU's security of supply. New infrastructure and network investments related to gas are recommended to be future-proof where possible, in order to facilitate their long-term sustainability through future repurposing for sustainable fuels.

Further investing in energy efficient housing would also make the economy more resilient and alleviate affordability challenges. The rise in energy prices is expected to have a significant impact on households' real incomes, especially low-income households, hamper consumption; and, in turn, affect economic growth. Deteriorating living conditions will hit especially vulnerable groups, particularly young people and families with children at risk of poverty or exclusion. In this context, building on the RRP, deploying additional energy efficient social and affordable housing, particularly in areas with pronounced shortages and stressed markets, could help contain energy consumption and address the green transition more decisively, while at the same time supporting vulnerable households, as they are more exposed to energy poverty (Annex 6). Focus on renovation of the existing less energy-efficient stock would contribute to these objectives without resulting in further consumption of land, and could lead to more immediate results. Furthermore, well-targeted social and affordable rental housing, provided by both the private and the public sectors, also through forms of cooperation to purchase and renovate a significantly larger social housing stock (currently only a small fraction of the EU average), and a regular re-evaluation of both social rents and the existing legislation, could be considered. Such measures could help alleviate housing affordability challenges (Annex 1) while limiting the fiscal impact of public support for investment in enhancing the energy efficiency of the housing stock.

Decoupling economic growth from resource use

EU circular economy targets are increasingly ambitious, representing an additional challenge for Spain. The Fit-for-55 package is due to further increase ambitions in waste management. In this regard, the country's recycling rate of municipal waste and its use rate of circular materials fall below the EU average, while the share of waste being landfilled is well above it.

Enhanced coordination across different levels of government and additional investments can support Spain in meeting separate collection and recycling obligations ([4]). Achieving recycling targets has been cascaded downwards to lower levels of government. However, instruments to enforce them may not be sufficiently effective. Additional reforms could therefore strengthen coordination between the different levels of government, including continuing with the work for a common interpretation of provisions and for the planning and use of waste treatment infrastructure ([5]). Further support from the Technical Support Instrument can help spread best practices (Annex 3 and 7). Additional investments to strengthen Spain's recycling capacity may be warranted, including to promote the circular economy in specific sectors. Furthermore, innovation and investment to promote the circular economy

([4]) 2018 EU Waste legislative package

([5]) See Country Report 2020 and EIR 2019.

are key to ensuring greater resource efficiency. Spain also suffers from water scarcity and there is a need and potential to further develop water reuse, including from a circular economy perspective

Ensuring the sustainability of public finances

Establishing a credible consolidation path can help Spain reduce its structural deficit in the medium term and anchor expectations in the long term. Fiscal sustainability is underpinned in the short term, by favourable financing conditions related to the supportive monetary policy stance and the average maturity of government debt (above 8 years). However, in the medium and long-term perspective a budgetary strategy is needed to establish a credible consolidation path and anchor expectations.

Fiscal sustainability in the medium to long-term will be impacted by the high level of debt and an unfavourable initial budgetary position. Costs due to Spain's ageing population are to impact fiscal sustainability. In particular, health care and, to a lesser extent, long-term care costs are expected to increase sustainability gaps over the medium and long-term. This will take place at a time where it is also necessary to address deficits in primary care and regional disparities in access and quality of healthcare. For pensions, expenditure was projected to decrease under the previous legislation. In this regard, the pension reforms included in the RRP need to be carefully designed and implemented as a consistent package to ensure they positively contribute to mitigate medium- and long-term risks. With regard to the tax system, this is set to undergo a broad reform. As a result, there appears to be scope to improve by emphasising taxes considered more conducive to economic growth and which can reduce the large share that labour tax revenues represent in total revenues (see annex 18). Moreover, Spain has been carrying out spending reviews and intends to continue to do so in 2022 and beyond with a view to improve the quality of public spending. However, the allocation of public spending to boost productivity appears to be low (see next section). This limits the ability to crowd-in positive effects on private investment.

The Spanish economy has resumed the trend of reducing its long-standing macroeconomic imbalances. Prior to the outbreak of the pandemic, Spain was following a steady trend of reducing its high levels of external, public and private debt. This was put on hold and partly reversed during the pandemic mainly due to the sizeable fall in GDP in 2020. Following the easing of restrictions and gradual economic expansion, the level of imbalances has now returned to a path of moderate improvement. Sustained GDP growth and high current account surpluses over the coming years will prove fundamental to deleveraging and reducing external liabilities (annex 17). In this regard, the RRP has the potential to help bring down imbalances. However, further investments and reforms, such as in R&D and innovation, skills and improving labour market outcomes, could provide further support.

Maximising the overall impact of EU funds

Spain needs to maximise the potential of the RRF funds and other available EU funds. Spain has expressed its intention to benefit from the loan allocation under the RRF and is soon to receive further support through the allocation of the 2021-27 cohesion policy funds, the 2023-2027 Spanish CAP Strategic Plan (annex 3) and a higher grant allocation under the RRF. Maximising the absorption and impact of all these funds will require a strong administrative capacity, effective mechanisms to coordinate the actors involved in planning, implementation and control, and the ability to exploit synergies and complementarities across EU funding. Reducing the gap between regions, including between urban and rural areas, would stimulate long-term sustainable and inclusive growth boosting their economic potential.

Boosting productivity-enhancing investment

Further investment in R&D and stronger links with the scientific ecosystem can boost firms' productivity. Spain is one of the EU countries with the lowest investment in R&D (1.4% of GDP in 2020, compared to 2.2% in the EU). Insufficient funding concerns both the public and private sector, hindering productivity growth and the economy's capacity for innovation. The RRP will provide much needed financial support to the sector. However, the situation requires the scale-up of public research and support for private investment to continue. An effort to streamline the efficiency of R&D support, incentives and governance, and to improve the quality of innovation output would be highly beneficial (see Annex 9). Actions to further strengthen the collaboration between the public and private sector are key to spur knowledge transfer. Support for innovation among SMEs would be particularly beneficial, including collaboration with research institutes in innovative projects and talent acquisition among new graduates.

There is scope for further investment in reskilling and upskilling the workforce for the twin transition. Public employment services, and their coordination at regional level, as well as the modernisation of Active Labour Market Policies, play a key role in this by providing continuing vocational training for the workforce and facilitating transitions (job-to-job and from unemployment to employment). In this context, further strengthening of the capacities of public employment services as envisaged in the RRP – if matched with the allocation of adequate resources – is expected to support a broader and more effective use for those searching for a work. This will also require strong cooperation with the educational system and the private sector to better identify current and future needs for skills in the labour market. Existing gaps include Science, Technological, Engineering and Mathematics (STEM) graduates and Information and Communications Technology (ICT) specialists (see Annex 13), while a regular evaluation of reskilling measures supporting the green transition seems warranted. Tackling these challenges is key to Spain contributing to the achievement of the 2030 EU headline targets on employment and skills.

Enhanced cooperation on the transition towards sustainable and productive models can boost competitiveness. Economic complexity and global interlinkages require a holistic approach, integrating private-public cooperation on different fronts, such as those mentioned above on R&D and skills. For instance, if properly developed and implemented, integrated strategic projects such as PERTEs can provide a coordinated approach that can enhance firms' competitiveness.

KEY FINDINGS

Spain's Recovery and Resilience Plan includes measures to address a series of structural challenges through:

- Furthering the decarbonisation of the energy sector and promoting sustainable mobility.
- Helping to mitigate the adverse effects of climate change.
- Supporting the digital transition in public administration, industry and SMEs.
- Investing in digital skills and inclusion, artificial intelligence, cyber security and connectivity, and the digitalisation of tourism and culture systems.
- Adopting labour market reforms to reduce the high share of workers on temporary contracts.
- Supporting the upskilling and reskilling of workers.
- Reinforcing economic and social resilience by fostering a reduction of early school leaving, and improving employability.

Beyond the reforms and investments in the Recovery and Resilience Plan, Spain would benefit from:

- Accelerating the deployment of renewable energy, focusing on decentralised installations and self-consumption, including by further streamlining permitting procedures and improving access to the grid.
- Supporting complementary investments in storage, network infrastructure, electrification of buildings and transport and renewable hydrogen.
- Effectively integrating Spain into the single energy market by expanding energy interconnection capacity.
- Promoting deep renovation, and adequate availability of social, affordable and energy-efficient housing, and combating energy poverty.
- Increasing the recycling of municipal waste and use of circular materials by introducing reforms to enhance coordination among all levels of government.
- Investing to meet separate collection of waste and recycling obligations, as well as to further develop the potential for water reuse.
- Reducing the structural budget deficit of the general government and anchoring fiscal expectations in the face of demographic challenges.
- Boosting investment in productivity-enhancing areas, such as innovation, skills and strategic competitiveness.
- Reducing the gap between regions, including between urban and rural areas, building on the effective use of funding provided by the RRF and other EU funds.
- Further strengthening administrative capacity to ensure the effective absorption and higher impact of the RRF and other EU and national available funds.

ANNEXES

LIST OF ANNEXES

LIST OF TABLES

LIST OF GRAPHS

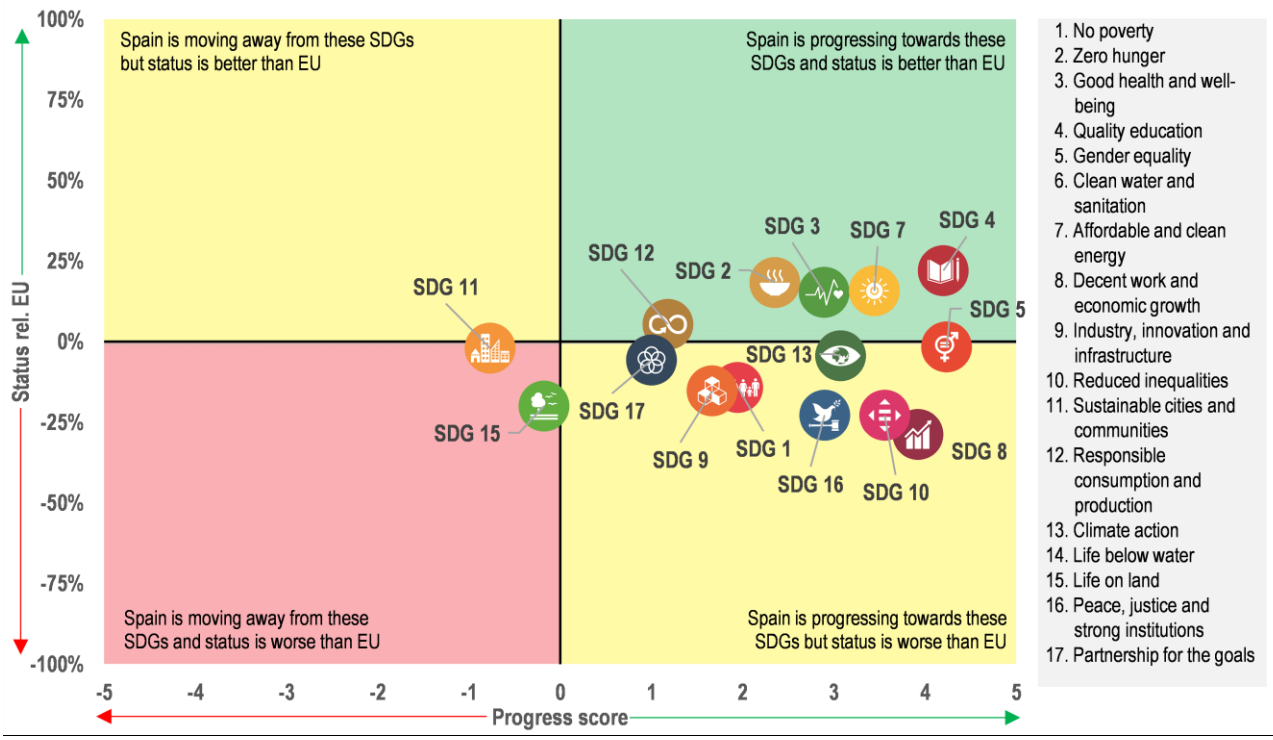
ANNEX 1: SUSTAINABLE DEVELOPMENT GOALS

This Annex assesses Spain's progress on the Sustainable Development Goals (SDGs) along the four dimensions of competitive sustainability. The 17 SDGs and their related indicators provide a policy framework under the UN's 2030 Agenda for Sustainable Development. The aim is to end all forms of poverty, fight inequalities and tackle climate change, while ensuring that no one is left behind. The EU and its Member States are committed to this historic global framework agreement and to playing an active role in maximising progress on the SDGs. The graph below is based on the EU SDG indicator set developed to monitor progress on SDGs in an EU context.

While Spain performs well on some SDG indicators related to *environmental sustainability* and is improving on others, it deteriorated on sustainable cities and communities (SDG 11). Spain has made some progress on energy consumption indicators including the 'share of renewable energy in gross final energy consumption' (SDG 7) (from 16.2% in 2015 to 21.2% in 2020; EU average 22.1%) and 'circular material use rate' (SDG 12) (from 7.5% in 2015 to 11.2% in 2020; EU average 12.8%). Nevertheless, it remains below the EU average. As for 'affordable energy' (SDG 7), the percentage of the Spanish population unable to keep their homes adequately warm is higher (10.9% in 2020) than the EU average (8.2%). The Spanish RRP includes measures to address some of the energy-related challenges, namely on the energy renovation of buildings, the decarbonisation of energy production, and the circular economy (including implementing the Spanish Strategy for the Circular Economy). On SDG 11 Spain is moving away from the goal in particular due to a higher share of the 'population living in households suffering from noise' (from 15.7% in 2015 to 21.9% in 2020; EU average was 17.3% in 2019), and a lower 'share of buses and trains in total passenger transport' (15.4% compared to EU 17.2% in 2020). The Spanish RRP's largest investments therefore aim to foster sustainable mobility (Component 1).

While Spain is improving on some SDG indicators related to *fairness* (1, 5, 8, 10), it still needs to catch up on poverty (SDG 1). Spain performs well on the 'healthy life years at birth' indicator (SDG 3) (69.9 years in 2019 compared to 65 years in 2014 and the EU average

Graph A1.1: **Progress towards SDGs in Spain in the last five years**



For detailed datasets on the various SDGs see the annual Eurostat report 'Sustainable development in the European Union', https://ec.europa.eu/eurostat/product?code=KS-09-22-019; Extensive country specific data on the short-term progress of Member States can be found here: Key findings - Sustainable development indicators - Eurostat (europa.eu).

Source: Eurostat, latest update of 28 April 2022. Data mainly refer to 2015-2020 and 2016-2021.

of 64.6 years in 2019) and on the percentage of the population aged 16 and above 'with good or very good self-perceived health' (SDG 2) (73% in 2020 compared to the EU average of 69.5%). In addition, Spain has improved on several fairness-related indicators such as 'people at risk of poverty or social exclusion' (SDG 1) (27% in 2020 compared to 28.7% in 2015), 'in-work at-risk-of-poverty rate' (SDG 1) (11.8% in 2020 compared to 13.1% in 2015) or 'long-term unemployment rate' (SDG 8) (6.2% in 2021 compared to 9.5% in 2016), and 'early leavers from education and training' (SDG 4) (13.3% in 2021 in Spain, compared to 19% in 2016). However, Spain still underperforms compared to the EU average on all these indicators and problems with poverty, social exclusion, long-term unemployment and early school leaving persist. The Spanish RRP includes measures aiming at addressing challenges in all these areas. On the negative side, the severe housing deprivation rate (SDG 1) has deteriorated (from 1.5% in 2015 to 3.4% in 2020), which is an indication of deteriorating living conditions, adding to housing affordability problems among certain groups in the Spanish population, including young people, low-income households and families with children. Social and affordable housing is partially addressed by the Spanish RRP (the introduction of a new Housing Law encouraging an increase in the availability of affordable and social housing, and funding for the construction of 20 000 new social rental dwellings in energy efficient buildings).

Spain performs below other large Member States on *productivity*. Spain has a high 'share of households with high-speed internet connection' (SDG 9) (93.8% of households in 2021 compared to the EU average of 70.2%). In addition, the percentage of 'adults with at least basic digital skills' (SDG 4) (64% in 2021) is above the EU average (54%), though that means that 36% of the population aged between 16 and 74 years lacks basic digital skills. In spite of some improvements on the productivity indicators, the country ranks below the EU average on most of them. For SDG 8 "decent work and economic growth" the percentage of 'young people neither in employment nor in education and training (NEET)' aged between 15 and 29 (SDG 8) remains high (15.2% in 2021) and above the EU average (13.2% in 2021). Also, for SDG 9 ("innovation"), the Spanish research and innovation system suffers from underinvestment as shown by the 'gross domestic expenditure on R&D' indicator (SDG9) (1.41% of GDP in 2020 compared to the EU average of 2.32%) and the number of R&D personnel (SDG 9) (1.03% of active population in 2020 compared to the EU average of 1.43%, see Annex 8). The Spanish RRP includes important reforms and investments aiming at boosting innovation and digital skills notably in components 17, 19, 20, and 21 but there remains room for improvement when it comes to addressing the remaining challenges.

Spain is improving on SDG indicators related to *macroeconomic stability (8, 16) but faces medium-term challenges.* Spain has improved on "decent work and economic growth (SDG 8) and "peace, justice and strong institutions" in the years before the pandemic. Due to the COVID-19 pandemic Spain suffered from a fall in 'real GDP per capita' (SDG 8) from EUR 23 760 in 2016 to EUR 23 510 in 2021 (EU average: EUR 27 810). Spain also showed a lower 'investment share of GDP' (SDG 8) than the EU average (20.3% of GDP compared to 22.3% for the EU in 2020). Spain faces challenges particularly in relation to the sustainability of public finances. The Spanish RRP includes a number of measures related to taxation and the effectiveness of public spending which are expected to improve the sustainability of public finances and support substantial additional investments, which will increase the "investment share of GDP.

The Recovery and Resilience Facility (RRF) is the centrepiece of the EU's efforts to support its recovery from the COVID-19 pandemic, fast forward the twin transition and strengthen resilience against future shocks. Spain submitted its recovery and resilience plan (RRP) on 30 April 2021. The Commission's positive assessment on 16 June 2021 and Council's approval on 13 July 2021 paved the way for disbursing €69.5 billion in grants under the Recovery and Resilience Facility over the period 2021-2026. The key elements of the Spanish RRP are set out in Table A2.1.

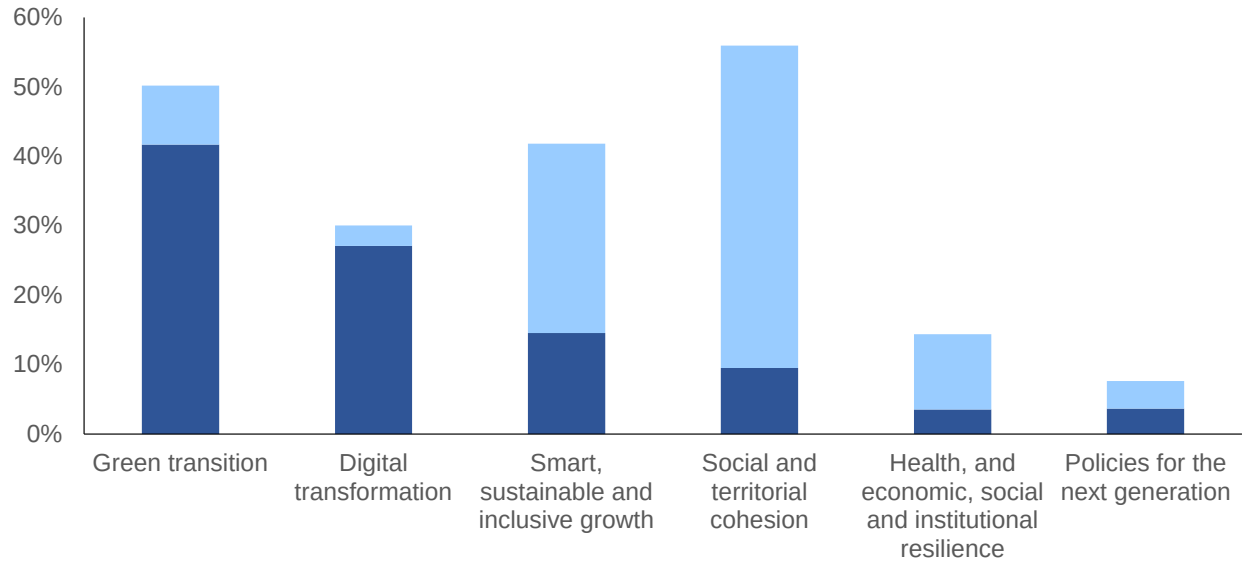
Table A2.1:**Key elements of the Spanish RRP**

Total allocation	EUR 69.5 billion in grants (5.6% of 2019 GDP)
Investments and Reforms	110 investments and 102 reforms
Total number of Milestones and Targets	416
Estimated macroeconomic impact (1)	Raise GDP by 2.1% by 2026 (0.3% in spillover effects)
Pre-financing disbursed	EUR 9 billion (August 2021)
First instalment	EUR 10 billion (December 2021)

(1) See Pfeiffer P., Varga J. and in 't Veld J. (2021), "Quantifying Spillovers of NGEU investment", European Economy Discussion Papers, No. 144 and Afman et al. (2021), "An overview of the economics of the Recovery and Resilience Facility", Quarterly Report on the Euro Area (QREA), Vol. 20, No. 3 pp. 7-16.
Source: European Commission

The implementation of the Spanish plan is well underway. The Commission disbursed EUR 9 billion to Spain in pre-financing in August 2021, equivalent to 13% of the financial allocation. Spain's first payment request was positively assessed by the Commission, taking into account the opinion of the Economic and Financial Committee, leading to a disbursement of EUR 10 billion in financial support (net of pre-financing) on 27 December 2021. The related 52 milestones cover reforms in the areas of sustainable mobility, energy efficiency, decarbonisation, connectivity, skills, education, social protection, labour market, taxation and public administration. Their satisfactory fulfilment helps to address the related Country Specific Recommendations in 2019 and 2020 (see Annex 4). In April 2022, Spain submitted its second payment request, for which the Commission's assessment is ongoing. Overall, Spain reports a timely implementation of the milestones and targets due by the end of Q1-2022, which does not however prejudge the timing of the submission of subsequent payment requests or the Commission's formal assessment of the fulfilment of the relevant milestones and targets.

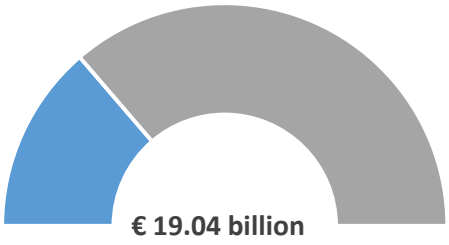
Graph A2.1: **Share of RRF funds contributing to each policy pillar**



Each measure contributes towards two policy areas of the six pillars, therefore the total contribution to all pillars displayed on this chart amounts to 200% of the estimated cost of the Spanish RRP. The bottom part represents the amount of the primary pillar, the top part the amount of the secondary pillar.
Source: RRF Scoreboard https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/country_overview.html.

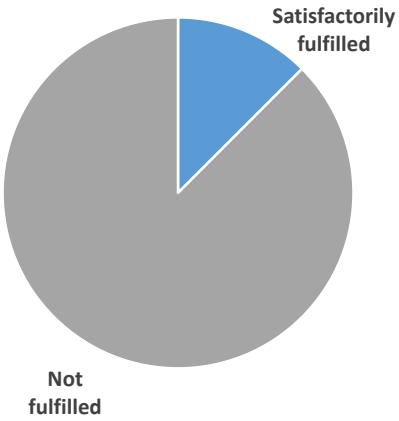
The progress made by Spain in implementing its plan is published in the Recovery and Resilience Scoreboard ([6]). The Scoreboard also gives an overview of the progress made in implementing the RRF as a whole, in a transparent manner. The graphs below show the current state of play of the fulfilled milestones and targets, as completed by Spain and subsequently assessed as satisfactorily fulfilled by the Commission.

Graph A2.2: **Total grants disbursed under the RRF**



This graph displays the amount of grants disbursed so far under the RRF. Grants are non-repayable financial contributions. The total amount of grants given to each Member State is determined by an allocation key and total estimated cost of the respective recovery and resilience plan.
Source: RRF Scoreboard
https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/country_overview.html

Graph A2.3: **Fulfilment status of milestones and targets**

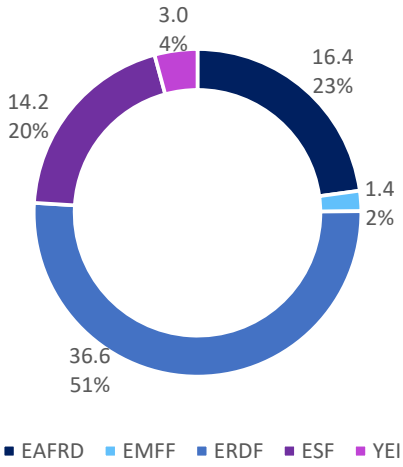


This graph displays the share of satisfactorily fulfilled milestones and targets. A milestone or target is satisfactorily fulfilled once a Member State has provided the evidence to the Commission that it has completed the milestone or target and the Commission has assessed it positively in an implementing decision.
Source: RRF Scoreboard
https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/country_overview.html

([6]) https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/country_overview.html

The EU's budget of more than EUR 1.2 trillion for 2021-2027 is the investment lever to help implement EU priorities. Underpinned by an additional amount of about EUR 800 billion through NextGenerationEU and its largest instrument, the Recovery and Resilience Facility, it represents significant firepower to support the recovery and sustainable growth.

Graph A3.1: **ESIF 2014-2020 total budget by fund**



bn EUR in current prices, % of total
The data for the EAFRD and REACT-EU refer to the period 2014-2022.
Source: European Commission, Cohesion Open Data

In 2021-2027, EU Cohesion policy funds ([7]) will support long-term development objectives in Spain by investing EUR 36.26 billion ([8]) including EUR 868.7 million from the Just Transition Fund directed to alleviating the socio-economic impacts of the green transition in the most vulnerable regions. The 2021-2027 Cohesion policy funds Partnership agreements and programmes take account of the 2019-2020 Country Specific Recommendations and investment guidance provided as part of the European Semester, ensuring synergies and complementarities with other EU funding. In addition, Spain will benefit from EUR 30.9 billion support for the 2023-27 period from the Common Agricultural Policy, which supports social, environmental, and economic sustainability and innovation in agriculture and rural areas, contributing to the European Green Deal, and ensuring long-term food security.

For the period 2014-2020, the European Structural and Investment Funds (ESIF) for Spain are set to invest a total of EUR 53.86 billion ([9]) from the EU budget. The total investment including national financing amounts to EUR 71.60 billion (Graph A3.1), representing around 0.88% of GDP for 2014-2020 and 29% of public investment ([10]). By 31 December 2021, 91% of the total was allocated to specific projects and 43% was reported as spent, leaving EUR 40.74 billion to be spent by the end of 2023 ([11]). Competitiveness of SMEs, research and innovation, sustainable and quality employment, social inclusion and environmental protection and resource efficiency (totalling EUR 24.4 billion) feature prominently among the eleven objectives for the Cohesion policy funds. By the end of 2020, Cohesion policy funds had supported more than 90 000 enterprises, including more than 7.3 million participants in funded projects, of whom more than 2.4 million gained a qualification and more than 340 000 received a job after taking part in a Youth guarantee project. The investment contributed to improving the energy efficiency of more than 30 000 households.

Cohesion policy funds are already making a substantial contribution to the Sustainable Development Goals (SDGs) objectives. In Spain, Cohesion policy funds supported 11 of the 17 SDGs with up to 93% of expenditure contributing to the achievement of the goals in the 2014-2020 period (Graph A3.1).

The REACT-EU instrument (Recovery Assistance for Cohesion and the Territories of Europe) under NextGenerationEU provided EUR 14 484.9 million in additional funding to the 2014-2020 cohesion policy allocations

([7]) European Regional Development Fund (ERDF), European Social Fund+ (ESF+), Cohesion Fund (CF), Just Transition Fund (JTF), Interreg.

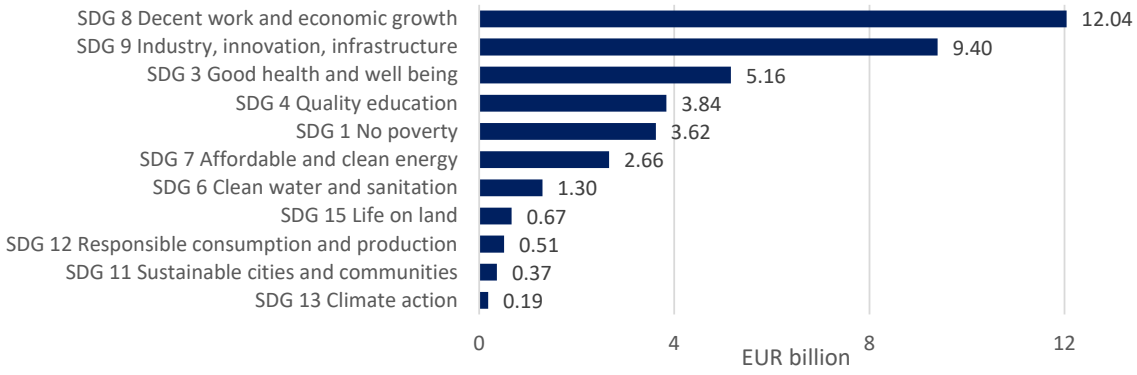
([8]) Current prices, source: Cohesion Open Data

([9]) ESIF includes cohesion policy funds (ERDF, ESF+, CF, Interreg) and the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EMFF). According to the 'N+3 rule', the funds committed 2014-2020 must be spent by 2023 at the latest (by 2025 for EAFRD). Data source: Cohesion Open data, cut-off date 31.12.2021 for ERDF, ESF+, CF, Interreg; cut-off date 31.12.2020 for EAFRD and EMFF.

([10]) Public investment is gross fixed capital formation plus capital transfers, general government.

([11]) Including REACT-EU. ESIF data on https://cohesiondata.ec.europa.eu/countries/ES

Graph A3.2: **Cohesion policy contribution to the SDGs**



Source: European Commission, DG REGIO

for Spain. This will help to ensure a balanced recovery, foster convergence and provide vital support to regions following the coronavirus outbreak. REACT-EU provided support in Spain to purchase vaccines, contribute to the short-time work schemes, reinforce the healthcare system, strengthen education, training and skills development, promote energy efficiency and reduce material deprivation with direct food delivery.

The Coronavirus Response Investment Initiative ([12]) provided the first EU emergency support to Spain in relation to the COVID-19 pandemic. It introduced extraordinary flexibility enabling Spain to re-allocate resources for immediate public health needs (EUR 2 707 million). For instance, Spain shifted resources to purchase protective equipment and healthcare material, reinforcement of healthcare staff, working capital for SMEs, and support to digitalise the education system and the public administration. Spain also benefited from the temporary 100% EU financing of incurred measures in Cohesion policy, with approximately EUR 2 726 million in 2021.

Spain received support under the European instrument for temporary support to mitigate unemployment risks in an emergency (SURE) to finance short-time work schemes, similar measures and as an ancillary, health-related measures. The Council granted financial assistance under SURE to Spain in September 2020 for a maximum of EUR 21.324 billion, which was disbursed by 25 May 2021. SURE is estimated to have supported approximately 30% of workers and 15% of firms for at least one month in 2020, primarily in accommodation and food services, wholesale and retail trade, and transportation and storage. Spain is estimated to have saved a total of EUR 1.59 billion on interest payments as a result of SURE's lower interest rates.

The Commission provides tailor-made expertise via the Technical Support Instrument to support Spain in designing and implementing growth-enhancing reforms, including for implementing its RRP. Since 2018, Spain has received assistance through 52 technical support projects. Projects delivered in 2021 included supporting the authorities in evaluating the effectiveness of Spanish pre-insolvency procedures and public spending in the autonomous communities. The Commission is also assisting Spain in implementing specific reforms and investments in their RRP, for instance, for the monitoring and implementation of the green RRP components, or the implementation of the National Artificial Intelligence Strategy. In 2022, new projects will start to support, among others, the development of a governance system for the implementation of the national plan for digital skills.

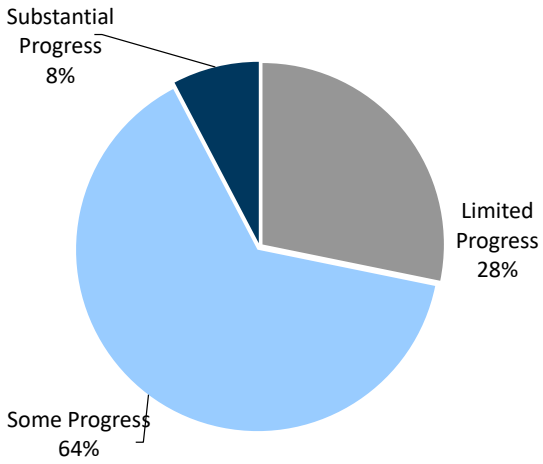
Spain also benefits also from other EU programmes. Notably, the Connecting Europe Facility, which allocated EU funding of EUR 909.9 million to specific projects on strategic transport networks, and Horizon 2020, which allocated EU funding of EUR 6.340 billion to R&D and innovation.

([12]) Re-allocating ESIF resources according to Regulation (EU) 2020/460 of the European Parliament and of the Council of 30 March 2020, and Regulation (EU) 2020/558 of the European Parliament and of the Council of 23 April 2020.

ANNEX 4: PROGRESS IN THE IMPLEMENTATION OF COUNTRY-SPECIFIC RECOMMENDATIONS

The Commission assessed the 2019-2021 country-specific recommendations (CSRs) ([13]) addressed to Spain in the context of the European Semester. The assessment takes into account the policy action taken by Spain to date ([14]), as well as the commitments in the Recovery and Resilience Plan (RRP) ([15]). At this early stage of the RRP implementation, overall 72% of the CSRs focusing on structural issues in 2019 and 2020 have recorded at least "some progress", while 28% recorded "limited" (see Graph A4.1). With the further implementation of the RRP, considerable additional progress in addressing structural CSRs is expected in the years to come.

Graph A4.1: **Spain's progress on the 2019-2020 CSRs (2022 European Semester cycle)**



Source: European Commission.

([13]) 2021 CSRs: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021H0729(09)
2020 CSRs: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32020H0826(09)
2019 CSRs: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019H0905(09)

([14]) Incl. policy action reported in the National Reform Programme, as well as in the RRF reporting (bi-annual reporting on the progress with implementation of milestones and targets and resulting from the payment request assessment).

([15]) Member States were asked to effectively address all or a significant subset of the relevant country-specific recommendations issued by the Council in 2019 and 2020 in their RRPs. The CSR assessment presented here takes into account the degree of implementation of the measures included in the RRP and of those done outside of the RRP at the time of assessment. Measures foreseen in the annex of the adopted Council Implementing Decision on the approval of the assessment of the RRP which are not yet adopted nor implemented but considered as credibly announced, in line with the CSR assessment methodology, warrant "limited progress". Once implemented, these measures can lead to "some/substantial progress" or "full implementation", depending on their relevance.

Table A4.1:**Summary table on 2019, 2020 and 2021 CSRs**

Spain	Assessment in May 2022*	RRP coverage of CSRs until 2026**
2019 CSR1	**Limited Progress**	**Some progress**
Ensure that the nominal growth rate of net primary government expenditure does not exceed 0.9 % in 2020, corresponding to an annual structural adjustment of 0.65 % of GDP.	Not relevant anymore	Not applicable
Take measures to strengthen the fiscal [framework]	Some Progress	Relevant RRP measures being implemented as of 2021
and public procurement frameworks at all levels of government.	Limited Progress	Relevant RRP measures planned as of 2022
Preserve the sustainability of the pension system.	Limited Progress	Relevant RRP measures being implemented as of 2022
Use windfall gains to accelerate the reduction of the general government debt ratio.	Not relevant anymore	Not applicable
2019 CSR 2	**Some Progress**	
Ensure that employment services have the capacity to provide effective support	Some Progress	Relevant RRP measures being implemented as of 2022
and ensure that social services have the capacity to provide effective support.	Some Progress	Relevant RRP measures being implemented as of 2022
Foster transitions towards open-ended contracts,	Substantial Progress	Relevant RRP measures being implemented as of 2022
including by simplifying the system of hiring incentives.	Limited Progress	Relevant RRP measures planned as of 2022
Improve support for families,	Some Progress	Relevant RRP measures being implemented as of 2021
reduce fragmentation of national unemployment assistance	Limited Progress	Relevant RRP measures planned as of 2022
and address coverage gaps in regional minimum income schemes.	Some Progress	Relevant RRP measures being implemented as of 2021
Reduce early school leaving	Some Progress	Relevant RRP measures being implemented as of 2021
and improve educational outcomes, taking into account regional disparities.	Limited Progress	Relevant RRP measures being implemented as of 2021
Increase cooperation between education and businesses with a view to improving the provision of labour market relevant skills and qualifications,	Some Progress	Relevant RRP measures being implemented as of 2021
in particular for information and communication technologies.	Some Progress	Relevant RRP measures being implemented as of 2021
2019 CSR 3	**Some Progress**	
Focus investment-related economic policy on fostering innovation,	Some Progress	Relevant RRP measures being implemented as of 2021
resource efficiency	Some Progress	Relevant RRP measures being implemented as of 2021
and energy efficiency,	Some Progress	Relevant RRP measures being implemented as of 2021
upgrading rail freight infrastructure	Some Progress	Relevant RRP measures being implemented as of 2022
and extending electricity interconnections with the rest of the Union, taking into account regional disparities.	Some Progress	Not applicable
Enhance the effectiveness of policies supporting research and innovation.	Some Progress	Relevant RRP measures being implemented as of 2021
2019 CSR4	**Limited Progress**	
Further the implementation of the Law on Market Unity by ensuring that, at all levels of government, rules governing access to and exercise of economic activities, in particular for services, are in line with the principles of that Law	Limited Progress	Relevant RRP measures planned as of 2022
and by improving cooperation between administrations.	Limited Progress	Relevant RRP measures implemented as of 2021

(Continued on the next page)

Table (continued)

2020 CSR1	**Some Progress**	
Take all necessary measures, in line with the general escape clause of the Stability and Growth Pact, to effectively address the COVID-19 pandemic, sustain the economy and support the ensuing recovery. When economic conditions allow, pursue fiscal policies aimed at achieving prudent medium-term fiscal positions and ensuring debt sustainability, while enhancing investment.	Not relevant anymore	Not applicable
Strengthen the health system's resilience and capacity, as regards health workers, critical medical products and infrastructure.	Some Progress	Relevant RRP measures being implemented as of 2021
2020 CSR2	**Some Progress**	
Support employment through arrangements to preserve jobs,	Substantial Progress	Relevant RRP measures being implemented as of 2021
effective hiring incentives and	Limited Progress	Relevant RRP measures planned as of 2022
skills development.	Some Progress	Relevant RRP measures being implemented as of 2021
Reinforce unemployment protection, in particular for atypical workers.	Limited Progress	Relevant RRP measures planned as of 2022
Improve coverage and adequacy of minimum income schemes and	Some Progress	Relevant RRP measures being implemented as of 2021
family support, as well as	Some Progress	Relevant RRP measures being implemented as of 2021
access to digital learning.	Some Progress	Relevant RRP measures being implemented as of 2021
2020 CSR 3	**Some Progress**	
Ensure the effective implementation of measures to provide liquidity to SMEs and the selfemployed, including by avoiding late payments.	Substantial Progress	Relevant RRP measures being implemented as of 2021
Front-load mature public investment projects and	Some Progress	Relevant RRP measures being implemented as of 2021
promote private investment to foster the economic recovery.	Some Progress	Relevant RRP measures being implemented as of 2021
Focus investment on the green and digital transition, in particular on fostering research and innovation,	Some Progress	Relevant RRP measures being implemented as of 2021
clean and efficient production and use of energy, energy infrastructure,	Some Progress	Relevant RRP measures being implemented as of 2021
water and waste management and	Some Progress	Relevant RRP measures being implemented as of 2021
sustainable transport.	Some Progress	Relevant RRP measures being implemented as of 2021
2020 CSR 4	**Limited Progress**	
Improve coordination between different levels of government and	Limited Progress	Relevant RRP measures being implemented as of 2021
strengthen the public procurement framework to support recovery in an efficient manner.	Limited Progress	Relevant RRP measures planned as of 2022
2021 CSR1	**Some Progress**	
In 2022, use the Recovery and Resilience Facility to finance additional investment in support of the recovery while pursuing a prudent fiscal policy. Preserve nationally financed investment.	Full Implementation	Not applicable
When economic conditions allow, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions and ensuring fiscal sustainability in the medium term.	Some Progress	Not applicable
At the same time, enhance investment to boost growth potential. Pay particular attention to the composition of public finances, on both the revenue and expenditure sides of the budget, and to the quality of budgetary measures in order to ensure a sustainable and inclusive recovery. Prioritise sustainable and growth-enhancing investment, in particular investment supporting the green and digital transition.	Some Progress	Not applicable
Give priority to fiscal structural reforms that will help provide financing for public policy priorities and contribute to the long-term sustainability of public finances, including, where relevant, by strengthening the coverage, adequacy and sustainability of health and social protection systems for all.	Limited Progress	Not applicable

* See footnote 15.

** Measures indicated as "being implemented as of 2021" are only those included in the first RRF payment request submitted by Spain and positively assessed by the European Commission.

Source: European Commission.

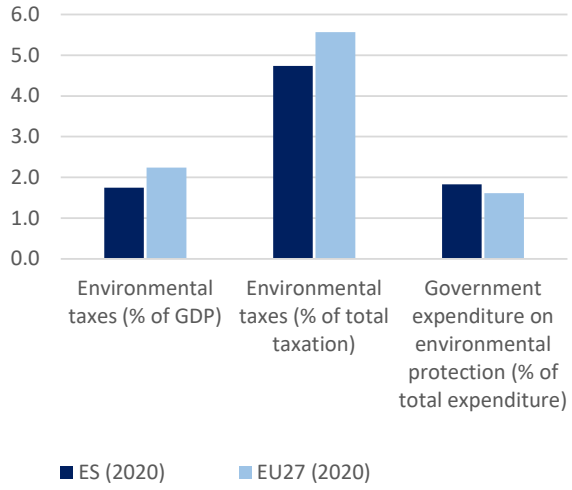
The European Green Deal intends to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use. This annex offers a snapshot of the most significant and economically relevant developments in Spain in the respective building blocks of the European Green Deal. It is complemented by Annex 6 on the employment and social impact of the green transition and Annex 7 for circular economy aspects of the Green Deal.

With additional measures, Spain is set to overachieve its 2030 targets for the non-Emissions Trading System (ETS) sectors. Spain has overachieved its 2020 target of reducing greenhouse gases (GHG) emissions by 10% in non-ETS sectors (compared to 2005) by 13 percentage points (pps). However, with the existing measures Spain is set to miss its current emission reduction target for the non-ETS sectors (-26%), but the target could be overachieved and the proposed Effort Sharing Regulation (ESR) target of -37.7% could be achieved, if additional measures are implemented. Spain's Climate Law aims at reducing GHG emissions by 23% by 2030 (compared to 1990). The achievement of this target assumes an effort sharing reduction of 39% for non-ETS and 61% for ETS sectors (both compared to 2005) according to Spain's National Energy and Climate Plan (NECP).

In its Recovery and Resilience Plan (RRP), Spain allocates 40% of the grants to climate objectives through crucial reforms and investments to accelerate the transition to a more sustainable, low-carbon and climate-resilient economy ([16]). Among those measures, the RRP includes investments in sustainable mobility aimed at reducing emissions from transport, the sector where GHG emissions are still showing the greatest increase. Furthermore, over EUR 10 billion of ERDF support will be allocated to actions contributing to a greener, net zero carbon economy and resilient Europe during the period 2021-2027. The main driver for decarbonising the mobility and transport sector is a modal shift as well as the promotion of alternative fuels transport systems and in particular zero emissions transport systems. It is estimated that 35% of passenger-kilometres that are currently travelled in conventional vehicles in urban environments will shift to non-emitting forms of transport by 2030, according to Spain's National Energy and Climate Plan.

Spain's performance with respect to fiscal indicators supporting the European Green Deal is mixed. While environmental taxation revenues are lower than the EU average, the share of expenditure on environmental protection in total government expenditure is higher. In terms of the share of total tax revenues as well as GDP percentage, Spain's energy and transport tax revenues are lower than the EU average and continue to decrease. Moreover, taxation of pollution and resources is very low ([17]). At the same time, the climate risk to public finances due to uninsured assets is relatively low.

Graph A5.1: **Fiscal aspects of the green transition**



(1) Taxation and government expenditure on environmental protection.
Source: Eurostat

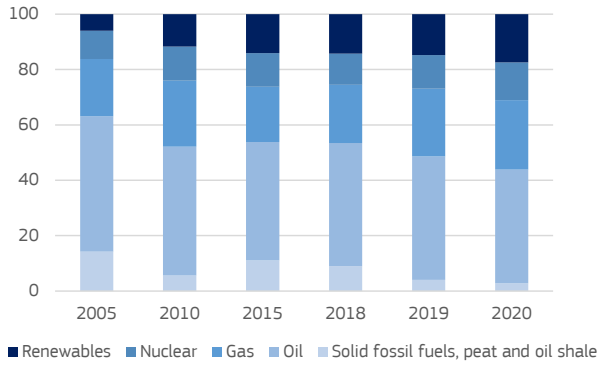
Spain's energy mix is still highly reliant on oil and petroleum products. In 2020, the share of final consumption of energy from natural gas stood at 25%, while oil amounted to 41%. With a very ambitious NECP, Spain has decided to put renewable energy at the forefront of its energy

([16]) The share of financial allocation contributing to climate objectives has been calculated using Annex VI of the RRF Regulation.

([17]) For more information on taxation see Annex 18.

transition and decarbonisation strategy, standing at 17% of final consumption of energy in 2020. By 2030, renewables would see a substantial increase in the energy mix (42% of gross final energy consumption), and the NECP confirms the intention of phasing out coal and decommissioning the remaining coal power plants by 2030. Spain electricity mix is highly decarbonized, with 68.2% of total demand from carbon-free sources in 2021. Coal registered in 2021 the lowest historical production and the lowest participation in the national generation structure (1.9% of the total).

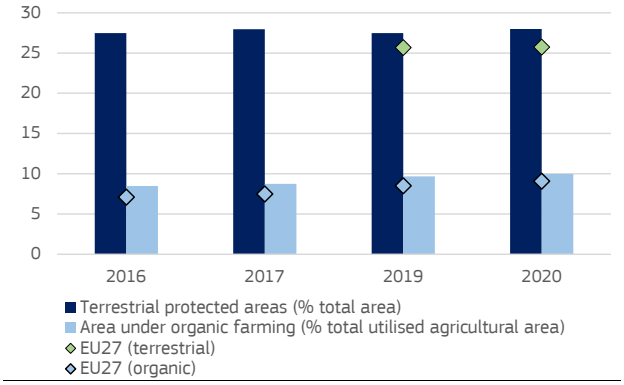
Graph A5.2: **Thematic – energy**
Share in energy mix (solids, oil, gas, nuclear, renewables



The energy mix is based on gross inland consumption, and excludes heat and electricity. The share of renewables includes biofuels and non-renewable waste.
Source: Eurostat

Spain has a very rich biodiversity, but further progress needs to be achieved. 27.3% of the Spanish territory is covered by the EU Natura 2000 network (EU average is 18.5%). This poses important challenges in terms of conservation, management and resources, but also provides important opportunities to preserve biodiversity, support ecosystem services and achieve positive outcomes from a socio-economic perspective. The designation of Natura 2000 sites is nearly completed, although some further progress is needed in its marine component. The main challenges are to establish the necessary conservation objectives and measures to protect and manage the Natura 2000 network and to implement properly the species protection requirements under the Birds and Habitats Directives, also providing sufficient technical, human and financial resources. For this purpose, site-specific procedural tools as environmental impact assessments could be considered to respect the maintenance of their conservation objectives. Only around 9% of protected habitats and 19% of protected species have a favourable conservation status, though there are many deteriorating trends for species. Spain needs to prioritise the restoration of terrestrial, marine and freshwater ecosystems in order to ensure good conservation status. Moreover, Spain is one of the Member States with the highest number of invasive alien species of Union concern established in its territory. Spain could also further capitalise on its rich natural capital to promote green growth and job creation, for instance, through more environmentally sustainable forms of tourism.

Graph A5.3: **Thematic – biodiversity**
Terrestrial protected areas and organic farming



For terrestrial protected areas data for 2018, and data for the EU average (2016, 2017) is lacking.
Source: EEA (terrestrial protected areas) and Eurostat (organic farming).

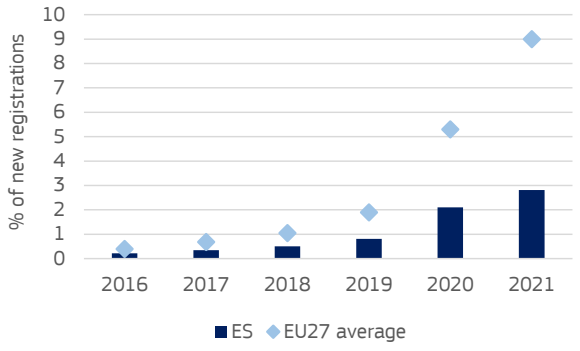
Air quality in Spain remains cause for concern. While the emission of several air pollutants has decreased in Spain over recent decades, air quality could be further improved. In particular, personal transport and traffic congestion in the major metropolitan areas in Spain (Madrid and Barcelona), exacerbates problems with air quality leading to health and economic costs. Moreover, around 800 agglomerations in Spain do not fully comply with the Urban Waste Water Treatment Directive. The status of water under the Water Framework Directive shows that for surface water approximately 46% of agglomerations are failing to achieve good ecological status and 6% are failing to achieve good chemical status. For groundwater 25% were failing to achieve good quantitative status and 35% were failing to achieve good chemical status.

Despite the progress that Spain has made in recent years, challenges remain in water

management, especially in the areas of water governance, water body rehabilitation and water efficiency. Further infrastructure investment are needed to improve water management, such as in wastewater collection and treatment, reduction of leaks in the networks and general water supply, improving monitoring, as well as nature based solutions, floods prevention and river restoration. Moreover, Spain should take further advantage of the potential of water reuse. Further measures are also needed to face water scarcity and droughts.

Spain shows a positive development in terms of transport infrastructure. The transport policy implemented in Spain since the mid-1980s has led to a significant improvement in its infrastructure. However, today Spain needs to tackle new challenges facing the road transport system, to urgently reduce its greenhouse gas emissions and to become more sustainable and efficient. A specific challenge over the coming years will be the implementation of the Spanish Strategy for Safe, Sustainable and Connected Mobility 2030, adopted in 2021. Moreover, Spain has been successfully opening the rail market for domestic rail services. The entire sector has benefitted from the liberalisation of passenger rail traffic and the incorporation of new railway companies.

Graph A5.4: **Thematic – mobility**
Share of zero-emission vehicles (% of new registrations)



Zero emission vehicles include battery and fuel cell electric vehicles (BEV, FCEV)
Source: European Alternative Fuels Observatory.

The implementation of reforms and investments under the Spanish RRP are expected to reduce emissions from transport. Notably, the actions under the RRP will boost zero- and low-emission vehicles and the transformation of urban and metropolitan transport as well as the completion of the TEN-T network supported by connected and digitalised mobility. The decarbonisation of maritime and aviation transport will require further measures. Spain shall carry out reforms and investments to promote the development and consistent use of Sustainable Alternative Fuels (SAFs) for these transport modes, in line with the FuelEU Maritime and the ReFuel EU Aviation initiatives.

Table A5.1:**Indicators underpinning the progress on EU Green Deal from macroeconomic perspective**

						Target	Distance		'Fit for 55' Target	'Fit for 55' Distance	
			2005	2019	2020	2030	WEM	WAM	2030	WEM	WAM
Progress to policy targets	Non-ETS GHG emission reduction target [1]	MTCO2 eq; %; pp [1a]	242.0	-14%	-23%	-26%	-8	12	-38%	-20	0

			2005	2016	2017	2018	2019	2020	National contribution to 2030 EU target
Progress to policy targets	Share of energy from renewable sources in gross final consumption of energy [1]	%	8%	17%	17%	17%	18%	21%	42%
	Energy efficiency: primary energy consumption [1]	Mtoe	136.0	118.4	124.9	124.3	120.6	105.0	98.5
	Energy efficiency: final energy consumption [1]	Mtoe	98.1	82.2	84.7	86.7	86.5	73.8	73.6

			SPAIN						EU		
			2015	2016	2017	2018	2019	2020	2018	2019	2020
Fiscal and financial indicators	Environmental taxes (% of GDP)	% of GDP	1.9	1.9	1.8	1.8	1.8	1.8	2.4	2.4	2.2
	Environmental taxes (% of total taxation)	% of taxation [2]	5.7	5.5	5.4	5.3	5.1	4.7	6.0	5.9	5.6
	Government expenditure on environmental protection	% of total exp.	2.05	2.05	2.12	2.10	2.13	1.83	1.66	1.70	1.61
	Investment in environmental protection	% of GDP [3]	0.22	0.20	0.21	0.22	0.22	-	0.42	0.38	0.41
	Fossil fuel subsidies	EUR2020bn	5.62	4.83	5.46	5.65	5.60	-	56.87	55.70	-
	Climate protection gap	score 1-4	0.9 out of 4 (slight decrease from historical level of 1.3). This is a low risk category (4 being a high risk).								
Climate	Net GHG emissions	1990 = 100	117	113	121	119	113	94	79	76	69
	GHG emissions intensity of the economy	kg/EUR'10	0.32	0.30	0.31	0.30	0.27	0.26	0.32	0.31	0.30
	Energy intensity of the economy	kgoe/EUR'10	0.11	0.11	0.11	0.11	0.11	0.10	0.12	0.11	0.11
Energy	Final energy consumption (FEC)	2015=100	100.0	102.1	105.3	107.7	107.5	91.6	103.5	102.9	94.6
	FEC in residential building sector	2015=100	100.0	93.9	94.3	99.4	94.6	95.3	101.9	101.3	101.3
	FEC in services building sector	2015=100	100.0	103.4	106.6	107.8	108.3	99.3	102.4	100.1	94.4
Pollution	Smog-precursor emission intensity (to GDP) [4]	tonne/EUR'10	1.11	1.02	1.02	0.97	0.90	-	0.99	0.93	-
	Years of life lost caused due to air pollution by PM2.5	per 100.000 inh.	658	553	646	573	561	-	863	762	-
	Years of life lost due to air pollution by NO2	per 100.000 inh.	209	176	236	170	151	-	120	99	-
	Nitrate in ground water	mg NO3/litre	-	-	-	-	-	-	21.7	20.7	-
Biodiversity	Terrestrial protected areas	% of total	-	27.5	27.9	-	27.5	28.0	-	25.7	25.7
	Marine protected areas	% of total	-	7.9	-	-	12.0	-	-	10.7	-
	Organic farming	% of total utilised agricultural area	8.2	8.5	8.7	9.3	9.7	10.0	8.0	8.5	9.1

			2000-2006	2006-2012	2012-2018	00-06	06-12	12-18
Biodiversity	Net land take	per 10,000 km2	25.1	20.0	0.8	13.0	11.0	5.0

			2015	2016	2017	2018	2019	2020	2018	2019	2020
Mobility	GHG emissions intensity of transport (to GVA) [6]	kg/EUR'10	0.88	0.97	0.97	0.97	0.98	0.93	0.89	0.87	0.83
	Share of zero emission vehicles	% in new registrations	0.1	0.2	0.3	0.5	0.8	2.1	1.0	1.9	5.4
	Number of plug-in electric vehicles per charging point		6	4	5	9	14	17	8	8	12
	Share of electrified railways	%	63.6	63.7	63.7	63.8	63.7	-	55.6	56.0	-
	Congestion (average number of hours spent in road congestion per year by a representative commuting driver)		26.6	26.2	25.6	24.8	22.1	-	28.9	28.8	-

			Year	ES	EU
Digital	Share of smart meters in total metering points [7] - electricity	% of total	2018	93.1	35.8
	Share of smart meters in total metering points [7] - gas	% of total	2018	0.0	13.1
	ICT used for environmental sustainability [8]	%	2021	76.1	65.9

(1) The 2030 non-ETS GHG target is based on the Effort Sharing Regulation. The FF55 targets are based on the COM proposal to increase EU's climate ambition by 2030. Renewables and Energy Efficiency targets and national contributions under the Governance Regulation (Regulation (EU) 2018/1999). (2) Distance to target is the gap between Member States' 2030 target under the Effort Sharing Regulation and projected emissions, with existing measures (WEM) and with additional measures (WAM) respectively, as a percentage of 2005 base year emissions. (3) Percentage of total revenues from taxes and social contributions (excluding imputed social contributions). Revenues from the ETS are included in environmental tax revenues (in 2017 they amounted to 1.5% of total environmental tax revenues at the EU level). (4) Covers expenditure on gross fixed capital formation to be used for the production of environmental protection services (i.e. abatement and prevention of pollution) covering all sectors, i.e. government, industry and specialised providers. (5) The climate protection gap indicator is part of the European adaptation strategy (February 2021), and is defined as the share of non-insured economic losses caused by climate-related disasters.
(6) Sulphur oxides (SO2 equivalent), Ammonia, Particulates < 10µm, Nitrogen oxides in total economy (divided by GDP).
(7) Transportation and storage (NACE Section H). (8) Zero emission vehicles include battery electric vehicles (BEV) and fuel cell electric vehicles (FCEV). (9) European Commission Report (2019) 'Benchmarking smart metering deployment in the EU-28'.
(10) European Commission (2021). Each year the DESI is re-calculated for all countries for previous years to reflect any possible change in the choice of indicators and corrections to the underlying data. Country scores and rankings may thus differ compared with previous publications.
Source: Eurostat, JRC, European Commission, EEA, EAFO

The green transition not only encompasses improvements to environmental sustainability, but also includes a significant social dimension. While measures in this regard include the opportunity for sustainable growth and job creation, it must also be ensured that no one is left behind and all groups in society benefit from the transition. Spain's green economy is still limited and its development, supported by investments and reforms included in the Recovery and Resilience Plan (RRP), can foster sustainable growth and quality job creation; at the same time, the green transition is expected to affect low to middle-income groups to a larger extent.

Spain's Recovery and Resilience Plan (RRP) outlines crucial reforms and investments for a fair green transition. The renovation of residential dwellings under the Energy Rehabilitation of Buildings Programme will contribute to achieving significant energy savings, resource efficiency gains and reductions in greenhouse gas (GHG) emissions. These investments are expected to generate employment in order to complete the required works and aim to support low-income households. Furthermore, the Just Transition component of the RRP includes reforms and investments accompanying the 12 Just Transition Protocols, covering areas affected by the closure of coal mines and coal-fired power plants. Investments in these areas will ensure the reskilling of workers and people affected by the green transition, allocating aid to training programmes, personalised job search assistance and reskilling pathways. In addition to the RRP, the Just Transition Fund (EUR 890 million), along with the European Social Fund Plus (ESF+) can altogether help unlocking the potential for 'green jobs' in Spain, contributing to the adaptation of workers and businesses, while at the same time mitigating the social impact of the transition in the regions concerned. Spain's integrated national energy and climate plan (NECP) of 20 January 2020 analyses the impacts on energy poverty and vulnerable households, although with limited details on the skills needed for a just transition. It includes clear targets to tackle energy poverty, notably by reducing the level of four indicators by at least 25% by 2025 (and possibly by 50%): share of households unable to keep their homes adequately warm; high share of income spent in energy; low absolute energy expenditure; and arrears on utility bills.

Although the economy has significantly reduced its carbon footprint, energy-intensive industries remain sizeable. Developing the green economy and its strong potential can contribute to quality job creation. The Spanish economy's greenhouse gas (GHG) emissions intensity decreased significantly between 2015 and 2020 (in terms of gross value added) and stands 10% below the EU average, with the average carbon footprint per worker at 11.12 tonnes of GHG emissions (against 13.61 tonnes in the EU) (see Graph A6.1). Two declining sectors have been identified: coal/lignite and fossil fuel based energy production ([18]). Total job losses since 2008 in coal regions linked to coalmines closures are estimated at 11 300 direct and 10 000 indirect jobs ([19]), with further regional challenges related to weak economic activity, remoteness and demographic decline. The automotive industry provides jobs for 9% of the total employed workforce for whom up- and reskilling opportunities will be particularly important (see Annex 15). The environmental goods and services sector provides jobs to a relatively small share of the employed population (1.6% versus 2.1% in the EU) ([20]), while wind and solar energy potential and energy efficiency improvements offer important further opportunities for green jobs ([21]). Labour shortages linked to the transition to a climate-neutral economy are identified in the education sector (Eurofound, 2021).

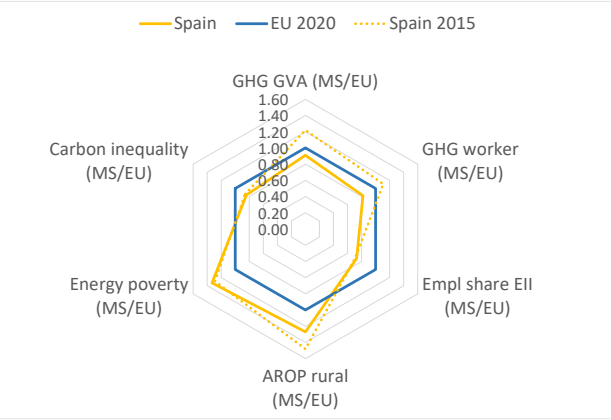
([18]) SWD(2021) 275 final.

([19]) 2020 European Semester: Overview of Investment Guidance on the Just Transition Fund 2021-2027 per Member State (Annex D).

([20]) There is currently no common EU-wide definition of green jobs. The environmental goods and services sector (EGSS) accounts only report on an economic sector that generates environmental products, i.e. goods and services produced for environmental protection or resource management.

([21]) https://publications.jrc.ec.europa.eu/repository/handle/JRC126047

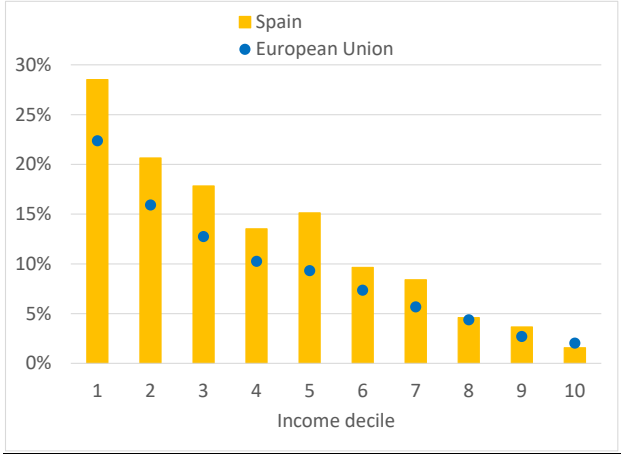
Graph A6.1: **Fair green transition challenges**



Numbers are the normalised indicator performance, signifying factors relative to the EU27 average.
Carbon inequality: average emissions per capita top 10% vs bottom 50% (2019).
Source: Eurostat, World inequality database.

As for the social dimension of the green transition, Spain faces substantial challenges, especially in terms of energy poverty. Although improving since 2015, the share of the population in rural areas at risk of poverty remains relatively high (23.8% versus 18.7% in the EU) ([22]). The share of the population unable to keep their homes adequately warm remained stable from 2015 to 2020, at 10.9% which is above the EU average (8.2%). Low- to middle-income groups are significantly more affected compared to the EU average, while the situation of high-income groups is closer to the EU average (see Graph A6.2). Consumption patterns vary across the population: the average carbon footprint of the top 10% of emitters is about 4.5 times higher than for the bottom 50% of the population (against 5.3 times in the EU).

Graph A6.2: **Energy poverty by income decile**



HH050: ability to keep home adequately warm,
HY020: total disposable household income
Source: Eurostat EU-SILC survey (2020, 2019 for IT and DE).

Tax systems are key to ensuring a fair transition towards climate neutrality ([23]). Spain's revenues from total environmental taxes slightly decreased from 1.93% of GDP in 2015 to 1.75% in 2020 (against 2.24% in the EU). The labour tax wedge for low-income earners ([24]) decreased from 30.6% in 2015 to 27.9% in 2020 (the EU average is 31.6%, see Annex 18). Redistributive measures accompanying environmental taxation can have the potential to foster progressivity and to have a positive impact on the disposable income of households in the lowest segments of income distribution ([25]).

([22]) As a proxy for potential transport challenges in the context of the green transition (see COM(2021) 568 final).

([23]) COM(2021) 801 final.

([24]) Tax wedge for a single earner at 50% of the national average wage (Tax and benefits database, European Commission/OECD).

([25]) SWD(2021) 641 final PART 3/3.

The efficient use of resources is key to ensuring competitiveness and open strategic autonomy, while minimizing the environmental impact. The green transition presents a major opportunity for European industry by creating markets for clean technologies and products. It will have an impact across the entire value chains in sectors such as energy and transport, construction and renovation, food and electronics, helping create sustainable, local and well-paid jobs across Europe.

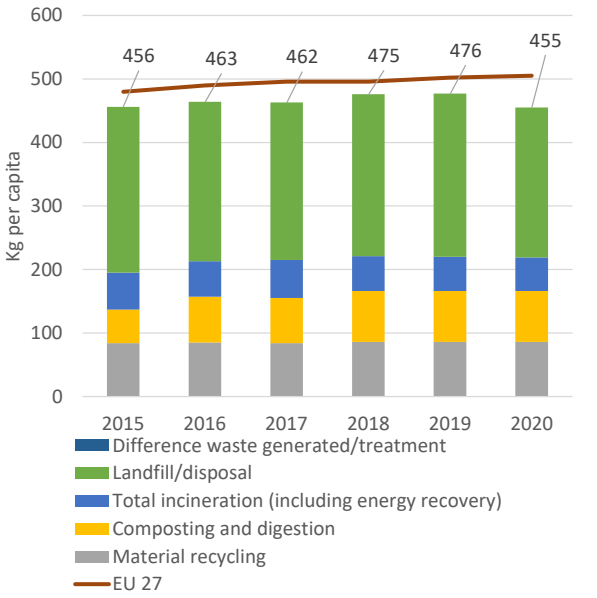
The circular (secondary) use of material in Spain stood at 11.2% in 2020, compared to the EU average of 12.8% although it is following a positive trend. The circular material use rate measures the share of material recovered and fed back into the economy, thus saving on the extraction of primary raw materials, in overall material use.

Improving resource productivity can help to minimise negative impacts on the environment and reduce dependency on volatile raw material markets. Resource productivity indicates how efficiently the economy uses material resources to produce wealth, dividing gross domestic product (GDP) by domestic material consumption (DMC). DMC measures the total amount of materials directly used by an economy. With 2.8 purchasing power standard (pps) generated per kg of material consumed in 2020, resource productivity in Spain is well above the EU average of 2.2 pps. per kg. ([26]). This positive performance is further supported by an upward trend in resource productivity in Spain over the last decade from 2.1 pps. per kg in 2011 ([27]).

A successful transition to a circular economy requires social and technological innovation, as its full potential can only be achieved if and when it is implemented across all value chains. Eco-Innovation is therefore an important enabling factor for the circular economy. Product design approaches and new business models can help to produce systemic circularity in innovations, creating new business opportunities. In all five components of the Eco-innovation index of 2021, Spain performs above the EU average. The recently approved Circular Economy PERTE will encourage eco-design to ensure a more efficient use of resources.

The amount of municipal waste generated has decreased overall in Spain over the last decade. With a slight increase in the past few years, the average amount in Spain in 2020 (455 kg per capita) remains below the EU average (505 kg per capita) ([28]).

Graph A7.1: **Municipal waste treatment**



Source: Eurostat

Despite progress on the transition towards the circular economy, waste management remains a significant challenge for Spain, but with substantial differences between regions. Spain is one of the countries which has missed the EU target of recycling 50% of municipal waste by 2020 (the overall recycling rate was of 36.4%). The EU has set up even more ambitious targets for the next decade, including achieving 55% recycling of municipal waste by 2025. The amount of landfilled waste, which remains considerable, is preventing faster progress towards the circular economy.

For the pre-treatment of municipal solid waste not collected separately, Spain makes

([26]) Statistics | Eurostat (europa.eu)

([27]) Statistics | Eurostat (europa.eu)

([28]) Statistics | Eurostat (europa.eu)

extensive use of mechanical biological treatment (MBT) plants. As regards municipal waste treatment in Spain, the only clear trend observed between 2014 and 2019 is a slight increase of municipal waste generation, as well as a moderate increase in the share and tonnage of the volume of organic waste that is composted or digested. Of the 143 biological treatment plants in Spain in 2019, 88 received residual municipal solid waste, whereas only 55 plants are equipped to treat separately collected biowaste. 74% of the municipal solid waste that is landfilled in Spain consists of reject from mechanical biological treatment, packaging sorting, and biowaste treatment; and the remaining 26 % is residual municipal solid waste that is directly landfilled without any pre-treatment (Ministry for the Ecological Transition and the Demographic Challenge, 2021). In summary, significant efforts are needed to increase the prevention, minimisation, sorting, reuse and recycling of waste, thereby diverting waste away from landfills or incinerators.

The Recovery and Resilience Plan (RRP) includes measures to promote the circular economy and improve waste management. The forthcoming Law on Waste and Contaminated Soils for a Circular Economy (Ley 7/2022 of 8 April 2022) envisaged in the RRP represents a significant effort to address the fragmentation challenges identified in waste management. It introduces a harmonised taxation scheme for waste disposal (landfill and incineration) across regions; compulsory separate collection of bio-waste in national legislation. It also reviews the general framework for the application of extended producer responsibility. Furthermore, it also provides for authorisations granted by regions for collective waste management systems to producers, to have national validity; and seeks to improve data collection setting up a national register to keep track of the production and management of waste.

Waste management policies require cooperation between different levels of government. Waste management is a regional competence, but waste collection and treatment is carried out at local level (either by a single municipality or by groups of them jointly). The State Waste Management Framework Plan 2016-2022 (PEMAR) lays down the structure and contents of the regional waste management plans, and extends the responsibility for achieving the recycling targets to regions, which has been also included in the new law on Waste and Contaminated Soils for a Circular Economy. There is a body for technical cooperation between public authorities, the Committee for Coordination in the field of Waste. The aim of this Committee is to make recommendations, conduct studies, reports and guidelines, as a body for inter-administrative coordination and technical cooperation and collaboration. Moreover, existing mechanisms to avoid regulatory fragmentation should help prevent different interpretations from resulting in different outcomes in Spain. Under the EU Technical Support Instrument, Spain will fund an initiative to support the implementation of improved recycling collection and treatment systems at municipal level (Annex 3).

Table A7.1:**Selected resource efficiency indicators**

SUB-POLICY AREA	2015	2016	2017	2018	2019	2020	EU27	Latest year EU 27
Circularity								
Resource Productivity (Purchasing power standard (PPS) per kilogram)	2.8	3.0	3.1	2.9	3.1	2.8	2.2	2020
Material Intensity (kg/EUR)	0.4	0.3	0.3	0.3	0.3	0.4	0.4	2020
Circular Material Use Rate (%)	7.5	8.2	8.8	9.0	9.6	11.2	12.8	2020
Material footprint (Tones/capita)	9.4	9.2	9.6	10.3	9.8	-	14.6	2019
Waste								
Waste generation (kg/capita)	-	2,774		2,945	-	-	5,234	2018
Landfilling (% of total waste treated)	-	53.6	-	48.2	-	-	38.5	2018
Recycling rate (% of municipal waste)	30.0	33.9	36.1	34.8	38.0	36.4	47.8	2020
Hazardous waste (% of municipal waste)	-	2.5	-	2.3	-	-	4.3	2018
Competitiveness								
Gross value added in environmental goods and services sector (% of GDP)	2.2	2.2	2.2	2.3	2.3	2.5	2.3	2019
Private investment in circular economy (% of GDP)	0.1	0.1	0.1	0.1	-	-	0.1	2018

Source: Eurostat.

The Digital Economy and Society Index (DESI) monitors EU Member States' digital progress. The areas of human capital, digital connectivity, the integration of digital technologies by businesses and digital public services reflect the Digital Decade's four cardinal points ([29]). This Annex describes Spain's DESI performance. Spain's Recovery and Resilience Plan (RRP) is devoting 28.2% of the total investment to digital (EUR 19.6 billion) ([30]). The RRP puts a particular focus on promoting the digitalisation of businesses, including SMEs (25% of the total digital budget), strengthening the digital skills of the Spanish population (22%), improving digital connectivity in the whole country (15%), improving the digitalisation of public services (28%), and supporting digital-related R&D and the deployment of digital technologies (10%).

The lack of ICT specialists is the main challenge for Spain in the DESI dimension of human capital. Spain shows a good performance on basic digital skills and a medium performance on female ICT specialists, but performs below the EU average on the ICT specialists indicator. The shortage of ICT specialists is a productivity-constraining factor, especially for SMEs and micro-enterprises, and a key challenge for Spain. The RRP includes significant investments in digital skills that will help to improve Spain's performance in this area.

Spain is one of the EU's best performers on digital connectivity. Spain performs particularly well in Fixed Very High Capacity Network (VHCN) coverage, but, until now, was only a mid-performer on 5G coverage, mainly due to some delays in auctioning all 5G pioneer bands. In turn, a rapid increase in 5G coverage is now expected following the auction of the 700MHz band ended in July 2021 and the 26GHz band to be auctioned by the end of 2022, as well as all the measures envisaged in Spain's RRP.

The low degree of digitalisation of SMEs is also a key challenge for Spain. Even though the rate of SMEs having at least a basic level of digital intensity is above the EU average, Spanish enterprises lag behind in the integration of advanced technologies such as cloud or big data. This gap, combined with a lack of ICT specialists, make it difficult for SMEs – micro-enterprises in particular – to attract talent and to benefit from the digital economy. The investments included in the RRP are expected to increase the share of firms with a basic level of digital intensity and to foster the adoption of advanced digital technologies.

Spain shows a satisfactory performance on digital public services. Spain is at the forefront in digital public services within the EU and continues to update its services and infrastructure, including through the RRP, to respond to the rapid evolution of technology and citizens' needs.

([29]) 2030 Digital Compass: the European Way for the Digital Decade Communication, COM (2021) 118 final

([30]) The share of financial allocation contributing to digital objectives has been calculated using Annex VII of the RRF Regulation.

Table A8.1:**Key digital economy and society index indicators**

Human capital	Spain DESI 2020	Spain DESI 2021	Spain DESI 2022	EU DESI 2022	EU top-performance DESI 2022
At least basic digital skills	**NA**	**NA**	**64%**	**54%**	**79%**
% individuals			2021	2021	2021
ICT specialists	**3.7%**	**3.9%**	**4.1%**	**4.5%**	**8.0%**
% individuals in employment aged 15-74	2019	2020	2021	2021	2021
Female ICT specialists	**19%**	**19%**	**19%**	**19%**	**28%**
% ICT specialists	2019	2020	2021	2021	2021
Connectivity					
Fixed Very High Capacity Network (VHCN) coverage	**89%**	**92%**	**94%**	**70%**	**100%**
% households	2019	2020	2021	2021	2021
5G coverage (*)	**NA**	**13%**	**59%**	**66%**	**99.7%**
% populated areas		2020	2021	2021	2021
Integration of digital technology					
SMEs with at least a basic level of digital intensity	**NA**	**NA**	**60%**	**55%**	**86%**
% SMEs			2021	2021	2021
Big data	**11%**	**9%**	**9%**	**14%**	**31%**
% enterprises	2018	2020	2020	2020	2020
Cloud	**NA**	**NA**	**27%**	**34%**	**69%**
% enterprises			2021	2021	2021
Artificial Intelligence	**NA**	**NA**	**8%**	**8%**	**24%**
% enterprises			2021	2021	2021
Digital public services					
Digital public services for citizens	**NA**	**NA**	**87**	**75**	**100**
Score (0 to 100)			2021	2021	2021
Digital public services for businesses	**NA**	**NA**	**94**	**82**	**100**
Score (0 to 100)			2021	2021	2021

(*) The 5G coverage indicator does not measure users' experience, which may be affected by a variety of factors such as the type of device used, environmental conditions, number of concurrent users and network capacity. 5G coverage refers to the percentage of populated areas as reported by operators and national regulatory authorities.

Source: Digital Economy and Society Index

This Annex provides a general overview on the performance of Spain's research and innovation system. Spain is a moderate innovation performer according to the 2021 edition of the European Innovation Scoreboard ([31]), and its performance remains below the EU average. Innovation suffers from underinvestment in R&D. Total R&D intensity reached 1.41% in 2020, still far below the EU average.

Low and stagnant public, and notably also private, R&D investment, have prevented Spain from improving its research and innovation (R&I) performance, which remains subdued, despite some pockets of research excellence. The country's share of scientific publications among the top 10% most cited scientific publications worldwide is below the EU average and has remained stagnant since 2010 (9.24% in 2018 compared to 9.3% in 2010). Private R&D intensity remains comparatively low, at a value close to half of the EU average, and as a result, overall performance of the research and innovation system as measured by patents, has also remained well below the EU average, preventing any increase in the pace of Spain's technological transformation. The Spanish National Recovery and Resilience Plan (RRP) will greatly increase R&D and innovation investments and help address the persistent gaps in both private and public R&D investment.

Spain's future competitiveness and green and digital transitions depend on its ability to translate sustained investment efforts into economic growth through business innovation and improved knowledge circulation. Despite certain measures to support private R&D investment, the policy mix does not seem not to yield the expected results as business R&D remains poor. This, coupled with a lack of sufficient incentives and effective governance structures, has resulted in weak business-science links and a modest share of employment in innovative enterprises, hindering Spain's economic transformation towards higher productivity sectors.

Spain plans to address this challenge by means of punctual reforms in its Law of Science and Innovation and with targeted investments. However, Spain could further improve and foster the cooperation between universities, research organizations and businesses by implementing the recent recommendations of the OECD-EC Roadmap on Knowledge Transfer. The Roadmap points to particular measures to promote and sustain business innovation such as increasing the institutional funding linked to knowledge transfer activities, creating effective intermediary bodies, and introducing more effective initiatives at the base of the innovation ladder ([32]).

([31]) 2021 European Innovation Scoreboard, Country profile: Spain https://ec.europa.eu/docsroom/documents/45936/attachments/1/translations/en/renditions/native

([32]) Roadmap and Policy Paper *Improving knowledge transfer and collaboration between science and business in Spain* (2021) https://community.oecd.org/community/cstp/roadmap-innova-es

Table A9.1:**Key research, development and innovation indicators**

Spain	2010	2015	2018	2019	2020	Compound annual growth 2010-20	EU average
Key indicators							
R&D Intensity (GERD as % of GDP)	1.36	1.22	1.24	1.25	1.41	0.3	*2.32*
Public expenditure on R&D as % of GDP	0.66	0.58	0.54	0.55	0.62	-0.6	*0.78*
Business enterprise expenditure on R&D (BERD) as % of GDP	0.7	0.64	0.7	0.7	0.78	1.1	*1.53*
Quality of the R&I system							
Scientific publications of the country within the top 10% most cited publications worldwide as % of total publications of the country	9.3	9.2	9.24	:	:	-0.1	*9.9*
PCT patent applications per billion GDP (in PPS)	1.7	1.6	1.4	:	:	-2.3	*3.5*
Academia-business cooperation							
Public-private scientific co-publications as % of total publications	5.6	6.3	6.7	6.6	6.4	1.5	*9.05*
Public expenditure on R&D financed by business enterprise (national) as % of GDP	0.05	0.034	0.032	0.035	:	-3.8	*0.054*
Human capital and skills availability							
New graduates in science & engineering per thousand pop. aged 25-34	11.1	15.9	15.8	15.3	:	2.5	*16.3*
Public support for business enterprise expenditure on R&D (BERD)							
Total public sector support for BERD as % of GDP	0.156	0.116	0.117	:	:	-3.6	*0.196*
R&D tax incentives: foregone revenues as % of GDP	0.027	0.029	0.026	:	:	-0.4	*0.1*
Green innovation							
Share of environment-related patents in total patent applications filed under PCT (%)	15.9	13,3	9,9	:	:	-5,7	*12,8*
Finance for innovation and Economic renewal							
Venture Capital (market statistics) as % of GDP	0.021	0.028	0.044	0.046	0.054	9.7	*0.054*
Employment in fast-growing enterprises in 50% most innovative sectors	3.2	4.8	6.2	6.1	:	7.4	*5.5*

Data: Eurostat, OECD, DG JRC, Science-Metrix (Scopus database and EPO's Patent Statistical database), Invest Europe
Source: DG Research and Innovation - Common R&I Strategy and Foresight Service - Chief Economist Unit

Productivity growth is a critical driver of economic prosperity, well-being and convergence over the long run ([33]). A major source of productivity for the EU economy is a well-functioning single market, where fair and effective competition and a business friendly environment are ensured, in which small and medium enterprises (SMEs) can operate and innovate without difficulty. Businesses and industry rely heavily on robust supply chains and are facing bottlenecks that bear a negative impact on firms' productivity levels, employment, turnover and entry/exit rates. This may impact the Member States' capacity to deliver on Europe's green and digital transformation.

Spanish's labour productivity has been decreasing steadily since 2010 ([34])**, and currently stands at 90% of the EU average**. Labour productivity in Spain is counter-cyclical ([35]), unlike in the majority of developed economies, mainly due to structural deficiencies in the functioning of the labour market. Spanish SMEs productivity, measured as the ratio of value added to employment, was EUR 31 100, below the EU average of EUR 40 000 ([36]). Spain's Recovery and Resilience Plan (RRP) includes measures to boost productivity in areas such as the labour market, R&D, vocational training, skills and digitisation of SMEs, as well as better regulation and better coordination between different levels of government.

Spain is well integrated into the Single Market, but there is scope for further regulatory improvements. Despite recent reforms, a number of professions (civil engineer, architect and tourist guide) have been identified in the past as facing higher regulatory restrictions than the EU average ([37]). The RRP has included measures to improve regulation. The forthcoming Law "Create and Growth", part of the RRP and due for final approval by Q4 2022, aims to improve the business regulation framework, to remove barriers to access and pursuit of economic activities, and to amend the Law of Market Unity, which is a key better-regulation instrument in Spain whose full implementation has been the subject of country specific recommendations over the last years. Other reforms in the RRP are expected to remove barriers in specific professions, such as the amendment of the Law on "lawyers and solicitors (*procuradores*)".

Spanish firms have been heavily impacted by the COVID-19 crisis. As a result, the number of vulnerable firms has increased ([38]). The numbers of bankruptcies might also increase significantly when the existing moratoria on declaration of insolvency is concluded on 30 June 2022. A reform of the Insolvency Law is due in Q2-2022 as part of the RRP. The rate of late payments in Spain is similar to the EU average (45%), and is decreasing. A reform to promote early payments in commercial transactions is expected to be part of the forthcoming Law "Create and Growth", with the aim to reduce the average payment periods in commercial transactions. A new law on start-ups to foster their creation and growth is also expected by Q4-2022. Spain is not in a critical situation as regards access to finance, either for loans or for equity ([39]). Nevertheless a measure in the RRP will strengthen the Compañia Española de Reafianzamiento SME S.A. (CERSA) with the aim to provide support to SMEs in the form of financial, commercial and technical guarantees.

Spain has been affected by recent global supply chain disruptions, to some extent reflecting a strong reliance on extra-EU trade. The ratio of intra EU–to-extra EU trade shows that Spain (1.35) relies to a higher extent on extra-EU trade than the EU average (1.59). Spanish companies reported shortages in the materials and labour necessary for their activity, mostly in the manufacturing industry, and in particular in the automotive, chemical, pharmaceutical and textile sectors. The tourism sector, which before the crisis represented 12.4% of GDP, accounted for just 5.5% of GDP in 2020 due to the crisis, though this share has rebounded significantly in 2021.

([33]) Annual Sustainable Growth Survey

([34]) Statistics | Eurostat (europa.eu)

([35]) Bank of Spain

([36]) SME Fact-Sheet Spain 2021

([37]) European Commission on Regulated Professions (COM(2016) 820 final)

([38]) Bank of Spain

([39]) SAFE

Table A10.1:**Key Single Market and Industry Indicators**

SUB-POLICY AREA	INDICATOR NAME	DESCRIPTION	2021	2020	2019	2018	2017	Growth rates	EU27 average*
HEADLINE INDICATORS									
Economic structure	Value added by source (domestic)	VA that depends on domestic intermediate inputs, % [source: OECD (TiVA), 2018]				75.72			**62.6%**
	Value added by source (EU)	VA imported from the rest of the EU, % [source: OECD (TiVA), 2018]				11.22			**19.7%**
	Value added by source (extra-EU)	% VA imported from the rest of the world, % [source: OECD (TiVA), 2018]				13.1			**17.6%**
Cost competitiveness	Producer energy price (industry)	Index (2015=100) [source: Eurostat, sts_inppd_a]	129.5	90.6	104.5	106.3	98.4	**31.6%**	**127.3**
RESILIENCE									
Shortages/supply chain disruptions	Material Shortage using survey data	Average (across sectors) of firms facing constraints, % [source: ECFIN CBS]	14	5	5	3	5	**180%**	**26%**
	Labour Shortage using survey data	Average (across sectors) of firms facing constraints, % [source: ECFIN CBS]	3	4	3	6	2	**50%**	**14%**
	Sectoral producer prices	Average (across sectors), 2021 compared to 2020 and 2019, index [source:Eurostat]						**5.6%**	**5.4%**
Strategic dependencies	Concentration in selected raw materials	Import concentration a basket of critical raw materials, index [source: COMEXT]	0.16	0.14	0.15	0.16	0.18	**-11%**	**17%**
	Installed renewables electricity capacity	Share of renewable electricity to total capacity, % [source:Eurostat, nrg_inf_epc]		57.80	54.60	51.50	51.20	**13%**	**47.8%**
Investment dynamics	Net Private investments	Change in private capital stock, net of depreciation, % GDP [source: Ameco]		3	5.1	4.5	3.8	**-21.1%**	**2.6%**
	Net Public investments	Change in public capital stock, net of depreciation, % GDP [source: Ameco]		-0.1	-0.3	-0.3	-0.4	**-75%**	**0.4%**

(Continued on the next page)

Table (continued)

SINGLE MARKET									
Single Market integration	Intra-EU trade	Ratio of Intra-EU trade to Extra-EU trade, index [source: Ameco]	1.52	1.43	1.33	1.32	1.35	**13%**	**1.59**
Professional services restrictiveness	Regulatory restrictiveness indicator	Restrictiveness of access to and exercise of regulated professions (professions with above median restrictiveness, out of the 7 professions analysed in SWD (2021)185 [source: SWD (2021)185; SWD(2016)436 final])	2				2	**0%**	**3.37**
Professional qualifications recognition	Recognition decisions w/o compensation	Professionals qualified in another EU MS applying to host MS, % over total decisions taken by host MS [source: Regulated professions database]				79.4			**45%**
Compliance - cooperation EC and MS	Transposition - overall	5 sub-indicators, sum of scores [source: Single Market Scoreboard]		Below average	Below average	Below average	Below average		
	Infringements - overall	4 sub-indicators, sum of scores [source: Single Market Scoreboard]		Below average	Below average	Below average	Below average		
Investment protection	Confidence in investment protection	Companies confident that their investment is protected by the law and courts of MS if something goes wrong, % of all firms surveyed [source: Flash Eurobarometer 504]	42						**56%**
BUSINESS ENVIRONMENT - SMEs									
Business demography	Bankruptcies	Index (2015=100) [source: Eurostat, sts_rb_a]		84.4	91	83.8	82.7	**2.1%**	**70.1**
	Business registrations	Index (2015=100) [source: Eurostat, sts_rb_a]		83.8	99.7	100.9	100.5	**-16.6%**	**105.6**
Access to finance	Late payments	Share of SMEs experiencing late payments in past 6 months, % [source: SAFE]	33.9	40.6	40.3	n.a.	n.a.	**-16%**	**45%**
	EIF Access to finance index - Loan	Composite: SME external financing over last 6 months, index from 0 to 1 (the higher the better) [source: EIF SME Access to Finance Index]		0.96	0.88	0.78	0.74	**30.1%**	**0.56**
	EIF Access to finance index - Equity	Composite: VC/GDP, IPO/GDP, SMEs using equity, index from 0 to 1 (the higher the better) [source: EIF SME Access to Finance Index]		0.12	0.11	0.15	0.34	**-66.1%**	**0.18**
	% of rejected or refused loans	SMEs whose bank loans' applications were refused or rejected, % [source: SAFE]	8	4.1	6	6.9	5.4	**48.4%**	**12.4%**
Public procurement	SME contractors	Contractors which are SMEs, % of total [source: Single Market Scoreboard]		43	39	39	30	**43.3%**	**63%**
	SME bids	Bids from SMEs, % of total [source: Single Market Scoreboard]		53	51	44	57	**-7%**	**70.8%**

(*) latest available

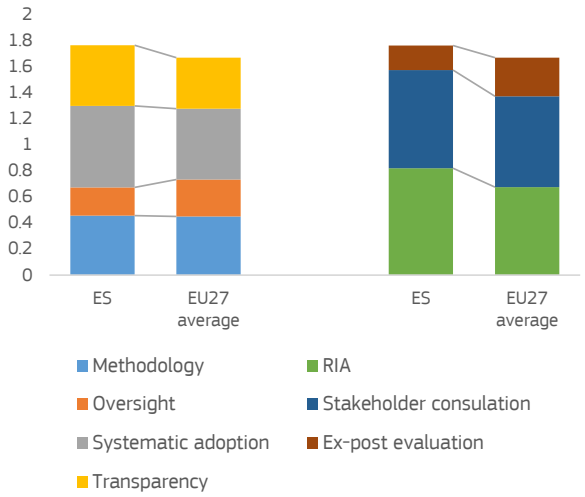
.

Source: See above in the table the respective source for each indicator in the column "description".

Good administrative capacity enables economic prosperity, social progress and fairness. Public administrations at all government levels deliver crisis response, ensure the provision of public services and contribute to building resilience for the sustainable development of the EU economy.

Overall, the effectiveness of public administration in Spain is below the EU average and has been declining since 2017 ([40]). While Spain has made progress on the digitalisation of its public administration and the provision of digital services (78.8 score in the e-government benchmark compared to the EU average of 73), the quality of legislation is weakened by regulatory fragmentation, limited *expost* evaluation of policies (Graph A11.1) and frequent use of emergency procedures for the adoption of laws. Reforms planned under the Spanish Recovery and Resilience Plan (RRP) seek to improve the evaluation of public policies and spending through the creation of a National Evaluation Office. Further measures will aim to overcome persistent challenges in the coordination between levels of government and make reform efforts more effective.

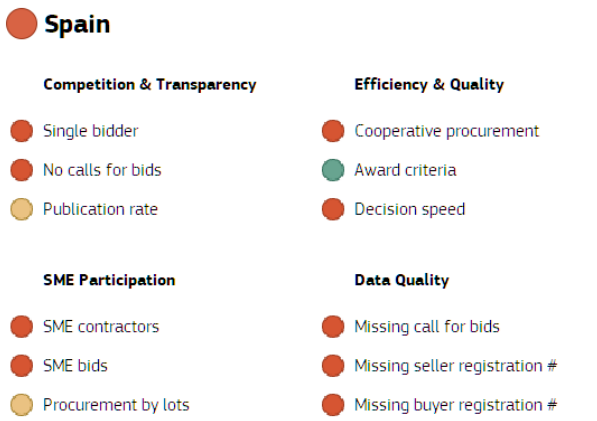
Graph A11.1: **Performance on evidence-based policymaking indicators**



RIA: regulatory impact assessment
Source: OECD (iREG indicators)

Selected features of Spain's public financial management require attention. It has a relatively strong legal fiscal framework (including for numerical fiscal rules and the medium-term budgetary framework). Despite the results of the Single Market's public procurement indicator, Spain's evolution in the past three years has been positive (Graph A11.2). Spain created the independent Office for Regulation and Supervision of Public Procurement and the National Evaluation Office. Nevertheless in 2018. The RRP aims to further strengthen public procurement. To this end, it includes a milestone to finalise the implementation of the public procurement reform provided in Law 9/2017 on public sector contracts. This reform requires: i) making the National Evaluation Office fully operational and ii) adopting the long due National Public Procurement Strategy. In addition, measures will be taken to advance electronic procurement and data sharing at all government levels.

Graph A11.2: **Performance on the single market public procurement indicator**



The competition and transparency indicators are triple-weighted, whereas the efficiency and quality indicators have unitary weights. All others receive a 1/3 weighting in the SMS composite indicator.
Source: Single market scoreboard 2020 data

The justice system faces efficiency challenges. In particular, the disposition time for civil and commercial cases in the Supreme Court remains very high (888 days in 2020, compared to 681 in 2018). The Government is taking a number of legal initiatives aimed at increasing the efficiency of the justice system. The quality of the justice system is good overall. The Parliament has adopted a new law strengthening the legal aid scheme and further investment in digitalising justice is ongoing. Additional courts have been opened in response to the COVID-19 pandemic, but the low number of judges per inhabitant is a

([40]) Worldwide Governance Indicators, 2020.

Table A11.1:**Public administration indicators**

ES	Indicator (1)	2017	2018	2019	2020	2021	EU27
E-government							
1	Share of individuals who used internet within the last year to interact with public authorities (%)	62.0	65.0	63.0	67.0	73.0	70.8
2	2021 e-government benchmark´s overall score (2)	na	na	na	na	78.8	70.9
Open government and independent fiscal institutions							
3	2021 open data maturity index	na	na	na	na	94.7	81.1
4	Scope Index of Fiscal Institutions	68.9	68.9	68.9	68.9	na	56.8
Educational attainment level, adult learning, gender parity and ageing							
5	Share of public administration employees with tertiary education, levels 5-8 (3)	55.0	54.8	57.2	57.8	58.2	55.3
6	Participation rate of public administration employees in adult learning (3)	14.3	15.5	15.4	14.6	20.6	18.6
7	Gender parity in senior civil service positions (4)	42.6	21.6	17.6	14.2	13.8	21.8
8	Share of public sector workers between 55 and 74 years (3)	25.0	25.4	27.5	30.3	31.1	21.3
Public Financial Management							
9	Medium term budgetary framework index	0.92	0.92	0.92	0.92	na	0.72
10	Strength of fiscal rules index	1.9	2.0	2.0	2.0	na	1.5
11	Public procurement composite indicator	-9.0	-8.7	-8.7	-8.7	na	-0.7
Evidence-based policy making							
12	Index of regulatory policy and governance practices in the areas of stakeholder engagement, Regulatory Impact Assessment (RIA) and ex post evaluation of legislation	1.61	na	na	1.76	na	1.7

"(1) High values stand for good performance barring indicators # 7 and 8.
(2) Measures the user centricity (including for cross-border services) and transparency of digital public services as well as the existence of key enablers for the provision of those services.
(3) Break in the series in 2021.
(4) Defined as the absolute value of the difference between the share of men and women in senior civil service positions. "
Source: ICT use survey, Eurostat (# 1); E-government benchmark report (# 2); Open data maturity report (# 3); Fiscal Governance Database (# 4, 9, 10); Labour Force Survey, Eurostat (# 5, 6, 8), European Institute for Gender Equality (# 7), Single Market Scoreboard public procurement composite indicator (# 11); OECD Indicators of Regulatory Policy and Governance (# 12).

challenge. As regards judicial independence, no systemic deficiencies have been reported ([41]).

Demographic developments also affect the public sector. Maintaining the administrative capacity could be problematic due to the large proportion of civil servants older than 55 (56.3 % of the central administration is expected to retire by 2030), and the large share of temporary contracts. The RRP addresses these risks by means of measures to improve recruitment and to reduce the share of temporary workers in the public sector.

([41]) For more detailed analysis of the performance of the justice system in Spain, see the 2022 EU Justice Scoreboard (forthcoming) and the country chapter for Spain of the Commission's 2022 Rule of Law Report (forthcoming).

ANNEX 12: EMPLOYMENT, SKILLS AND SOCIAL POLICY CHALLENGES IN LIGHT OF THE EUROPEAN PILLAR OF SOCIAL RIGHTS

The European Pillar of Social Rights provides the compass for upward convergence towards better working and living conditions in the EU. The implementation of its 20 principles on equal opportunities and access to the labour market, fair working conditions, social protection and inclusion, supported by the 2030 EU headline targets on employment, skills and poverty reduction, will strengthen the EU's drive towards a digital, green and fair transition. This Annex provides an overview of Spain's progress in achieving the goals under the European Pillar of Social Rights.

The initial shock of the COVID-19 crisis highlighted the long-standing structural challenges facing the Spanish labour market, especially with regard to youth unemployment. Short-time work schemes (ERTEs) cushioned the impact of the health crisis on employment. Following a positive evolution in 2021, unemployment and employment rates were back to their pre-pandemic levels in Q4-2021. However, young people face the highest rate of unemployment in the EU and suffer from significant labour market segmentation (in Spain, in January 2022, before the entry into force of the new law on the menu of contracts, almost one in four contracts (2021) and close to 85% of newly signed contracts were fixed-term; 67% and 88% respectively among the young). Job precariousness makes access to affordable housing difficult especially for young people in urban areas. As part of its Recovery and Resilience Plan (RRP), Spain passed two major labour reforms aimed at reducing temporary hiring in both public and private sectors, notably by simplifying the menu of contracts and increasing sanctions and controls. Also, the labour market reform approved in December 2021 has modified training contracts for young workers.

Long-term unemployment remains well above the EU average. To address the problem, the RRP envisages reforms to improve the effectiveness of active labour market policies (ALMPs), reinforce the capacity of central public employment services and ensure the provision of personalised, integrated and coordinated services, taking into account regional disparities. In addition, the European Social Fund (ESF) is already supporting diverse measures to strengthen the provision of ALMPs, with a focus on youth and the long-term unemployed. Tackling these challenges is key to Spain contributing to the achievement of the 2030 EU headline target on employment.

Table A12.1:**Social scoreboard**

Social Scoreboard for SPAIN		
Equal opportunities and access to the labour market	Early leavers from education and training (% of population aged 18-24) (2021)	13.3
	Individuals' level of digital skills (% of population 16-74) (2021)	64.0
	Youth NEET (% of total population aged 15-29) (2021)	15.2
	Gender employment gap (percentage points) (2021)	10.6
	Income quintile ratio (S80/S20) (2020)	5.8
Dynamic labour markets and fair working conditions	Employment rate (% population aged 20-64) (2021)	67.7
	Unemployment rate (% population aged 15-74) (2021)	14.8
	Long term unemployment (% population aged 15-74) (2021)	6.2
	GDHI per capita growth (2008=100) (2020)	93.8
Social protection and inclusion	At risk of poverty or social exclusion (in %) (2020)	27.0
	At risk of poverty or social exclusion for children (in %) (2020)	31.8
	Impact of social transfers (other than pensions) on poverty reduction (% reduction of AROP) (2020)	23.4
	Disability employment gap (ratio) (2020)	21.6
	Housing cost overburden (% of population) (2020)	8.2
	Children aged less than 3 years in formal childcare (% of under 3-years-olds) (2020)	45.5
	Self-reported unmet need for medical care (% of population 16+) (2020)	0.4

Critical situation | To watch | Weak but improving | Good but to monitor | On average | Better than average | Best performers

Update of 29 April 2022. Members States are classified on the Social Scoreboard according to a statistical methodology agreed with the EMCO and SPC Committees. It looks jointly at levels and changes of the indicators in comparison with the respective EU averages and classifies Member States in seven categories. For methodological details, please consult the Joint Employment Report 2022. Due to changes in the definition of the individuals' level of digital skills in 2021, exceptionally only levels are used in the assessment of this indicator; NEET: neither in employment nor in education and training; GDHI: gross disposable household income.
Source: Eurostat

Despite recent improvements, the rate of early leavers from education and training and of low-skilled adults remains very high. This hinders the transition from school to work, exacerbating youth unemployment and fuelling skills polarisation (see Annex 13). The share of adults (aged 25-64) participating in learning activities over the past four weeks had been

increasing over recent years, being 14.4% in 2021 (versus 10.8% in the EU) ([42]). However, it remains persistently low among low-skilled people (5.2%). Tackling education and adult learning challenges is key to Spain contributing to the achievement of the 2030 EU headline targets on skills and employment. Spain's implementation of its modernised Vocation Education and Training system and its National Digital Competences Plan can help in the development of skills relevant to the labour.

In a context of pre-existing income inequalities and high risks of poverty and social exclusion, the COVID-19 crisis further affected social cohesion. The share of people at risk of poverty or social exclusion (AROPE) remains among the highest in the EU (27% in 2020 compared to 21.9% in the EU), especially for children (31.8% in 2020 compared to 24.2% in the EU). Eurostat flash estimates on the at-risk-of poverty rate for income year 2020, point to an increase, including for children. Other groups particularly at risk include migrants and people with disabilities. Social expenditure is rather oriented towards the older generations and social transfers (income year 2019) excluding pensions have a low impact on child poverty reduction ([43]). Income support to children in Spain (among the lowest in the EU) builds largely on reducing the tax burden, which is of limited advantage for low-income families. In this context, the new child benefit for low-income families has the potential to improve support to these families. The new Family Law envisaged in the RRP is expected to further strengthen material support for children in vulnerable situations and to be complemented with a review of support for families through the tax system. Spain will invest at least EUR 527 million from the European Social Fund Plus (ESF+) for the implementation of the European Child Guarantee to support children at risk of poverty or social exclusion. Unemployment assistance is currently scattered across multiple schemes, resulting in low coverage and effectiveness. Temporary workers in particular have limited effective access to permanent coverage due to strict eligibility conditions.

Operating at their full potential, the new national minimum income scheme and the new child benefit can reduce the depth of poverty. However, the coverage of the national minimum income scheme is as yet incomplete ([44]). Regions have not made major changes to top up and complement it with their own schemes. Self-reported unmet needs for medical care were relatively low, but the pandemic disrupted access to non-COVID-19 care for many patients. There are significant regional disparities in investment in primary care and in the health system in general. Overall, there is scope for reinforced social policy action in order for Spain to contribute to achieving the 2030 EU headline target on poverty reduction.

([42]) Adult training participation increased in Spain from 9.4% in 2016 to 11% in 2020. Data for 2021 cannot be fully compared with previous years as for a break in the series following a new methodology for the EU Labour Force Survey, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=EU_Labour_Force_Survey_-_new_methodology_from_2021_onwards#Main_changes_introduced_in_2021.

([43]) As it is based on income year 2019, SILC 2020 does not fully capture the effect of measures taken in 2020 to address the impact of COVID-19 crisis such as social transfers via ERTEs or the introduction of the national minimum income scheme on poverty reduction. Nonetheless, material deprivation indicators already reflect the impact of those measures.

([44]) In 2021, only about 28% of the potential beneficiaries received it according to simulations run by the European Commission Joint Research Centre, based on the EUROMOD model / EU-SILC.

This Annex outlines the main challenges for Spain's education and training system in light of the EU-level targets of the European Education Area strategic framework and other contextual indicators, based on the analysis from the 2021 Education and Training Monitor. Spain's education and training system struggles with quality and equity challenges that could worsen due to the pandemic. Spain lags significantly behind the EU average and EU-level targets in terms of the early school leaving rate.

Plans to ensure universal access to early childhood education and care (ECEC) must focus on equity and quality. Spanish education policies increasingly focus on improving access for children living in areas with a higher risk of poverty and social exclusion as well as rural areas. The Recovery and Resilience Plan (RRP) includes the creation of 65 000 free public places for ECEC. For 2021, the distribution of EUR 200 million has been agreed with the regional authorities (autonomous communities). To better assess the quality of ECEC provision for children aged 0-3, a reliable set of standard indicators is needed including at regional level ([45]).

The rate of early leavers from education and training continues to fall, particularly among young men. According to national data ([46]), the rate in 2021 (13.3%) was the lowest rate ever. Among women it remains much lower (9.7%) than among men (16.7%) and has fallen more steeply over time. 78.8% of the population aged 20-24 has secondary education level (ISCED 3) or higher, which is still below the EU average (84.3% in 2020). Furthermore, 70% of students leave basic vocational and educational training (VET) without finishing it. The RRP invests substantial amounts in programmes to combat early school leaving.

Segregation in primary education is high. TIMSS and PISA indicate that Spain has one of the highest degrees of school segregation at primary school level in the EU ([47]). However, the level of segregation is equal to the EU average in secondary schools. Parents' preferences, household, socio-economic, transport conditions, and services offered by schools determine school choices. The level of segregation differs significantly between regions.

A curricular reform aims to strengthen competence-based teaching. The reform, envisaged under the new Education Act, will affect ECEC, primary and secondary education. It will include methodological guidelines for teaching and learning according to a competence-based curriculum. The reform will also have a stronger focus on digital competences, education for sustainable development and citizenship education. Furthermore, it include the preparation of support, guidance and teaching material, as well as training for teachers (at least 4 000 professionals). The roll out of the new curricula is expected by 2022-2023.

Green skills will be fostered through the Action Plan 2021-2025 on Environmental and Sustainable Education (PAEAS). The Annual Work Programme 2022 ([48]) for the PAEAS was approved in December 2021. It includes guidelines on incorporating education for sustainable development into teaching methodologies; identifying new competences concerning sustainable development in all professional sectors; updating and creating new VET degrees on conservation and restauration of the environment; calls for innovation projects on sustainable education; training for teachers on sustainable development; and seminars on education for sustainable development (addressed to all citizens).

A reform of the teachers' profession is in the pipeline. The regulations that serve as the basis for teachers' initial training curricula (both bachelor's and master's degrees) needs to be adapted to the recent reform of the educational law, and requires adaptation to key competences, new teaching methodologies, and digital education. The reform also provides more selective access to teacher education.

([45]) https://www.educacionyfp.gob.es/revista-de-educacion/en/numeros-revista-educacion/numeros-anteriores/2021/394/394-8.html

([46]) https://www.educacionyfp.gob.es/prensa/actualidad/2022/01/20220128-abandonoeducativo.html

([47]) https://dobetter.esade.edu/es/segregacion-escolar-esadeecpol

([48]) https://www.miteco.gob.es/es/ceneam/plan-accion-educacion-ambiental/programa-trabajo-2022-paeas_tcm30-534147.pdf

Table A13.1:**EU-level targets and other contextual indicators under the European Education Area strategic framework**

				2015		2021	
Indicator			**Target**	**Spain**	**EU27**	**Spain**	**EU27**
Participation in early childhood education (age 3+)			**96%**	**96.8%**	**91.9%**	**97.3%** [2019]	**92.8%** [2019]
Low achieving 15-year-olds in:		**Reading**	**< 15%**	**16.2%**	**20.4%**	**23.2%** [2018]	**22.5%** [2018]
		Mathematics	**< 15%**	**22.2%**	**22.2%**	**24.7%** [2018]	**22.9%** [2018]
		Science	**< 15%**	**18.3%**	**21.1%**	**21.3%** [2018]	**22.3%** [2018]
Early leavers from education and training (age 18-24)	**Total**		**< 9 %**	**20.0%**	**11.0%**	**13.3%**	**9.7%**
	By gender	*Men*		24.0%	12.5%	16.7%	11.4%
		Women		15.8%	9.4%	9.7%	7.9%
	By degree of urbanisation	*Cities*		17.0%	9.6%	11.5%	8.7%
		Rural areas		24.6%	12.2%	15.5%	10.0%
	By country of birth	*Native*		17.5%	10.0%	11.3%	8.5%
		EU-born		37.2%	20.7%	28.5%	21.4%
		Non EU-born		32.4%	23.4%	22.0%	21.6%
Tertiary educational attainment (age 25-34)	**Total**		**45%**	**41.0%**	**36.5%**	**48.7%**	**41.2%**
	By gender	*Men*		34.9%	31.2%	43.1%	35.7%
		Women		47.0%	41.8%	54.4%	46.8%
	By degree of urbanisation	*Cities*		47.3%	46.2%	54.2%	51.4%
		Rural areas		31.9%	26.9%	40.9%	29.6%
	By country of birth	*Native*		45.7%	37.7%	54.0%	42.1%
		EU-born		28.0%	32.7%	38.5%	40.7%
		Non EU-born		20.2%	27.0%	30.1%	34.7%
Share of school teachers (ISCED 1-3) who are 50 years or over				35.2%	38.3%	35.5% [2019]	38.9% [2019]

The 2018 EU average on PISA reading performance does not include ES; Data is not yet available for the remaining EU-level targets under the European Education Area strategic framework, covering underachievement in digital skills, exposure of vocational educational training graduates to work based learning and participation of adults in learning.
Source: Eurostat (UOE, LFS); OECD (PISA).

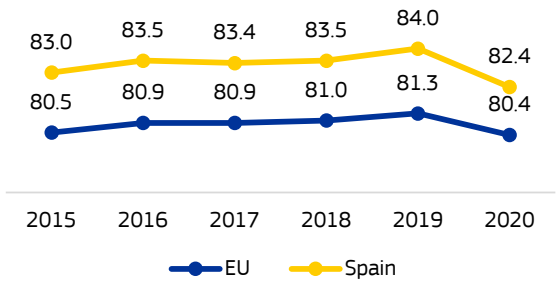
The forthcoming higher education reform has been intensively debated. The planned reform under the Spanish RRP is in consultation with stakeholders and expected by 2023.

Study choices in higher education are not well aligned with labour market needs. Tertiary education attainment is among the highest in the EU, and continues to grow, particularly for women. However, the employment rate for recent tertiary graduates in Spain is below the EU average. In addition, the number of Science, Technology, Engineering and Mathematics (STEM) graduates, including women, is declining since 2015. The share of Information, and Communications Technology (ICT) specialists in the labour force is growing, including female ICT specialists, but both remain below the EU average (see Annex 7).

Especially relevant in light of the ongoing COVID-19 pandemic, resilient healthcare is a prerequisite for a sustainable economy and society. This Annex provides a snapshot of the healthcare sector in Spain.

Life expectancy in Spain is higher than the EU average despite a fall by more than 19 months due to the COVID-19 pandemic. As of 17 April 2022, 2.19 cumulative COVID-19 deaths per 1 000 inhabitants and 248 confirmed cumulative COVID-19 cases per 1 000 inhabitants were reported. Spain fares comparatively well in avoiding deaths from treatable causes. Ischaemic heart disease, stroke and cancer are the leading causes of death.

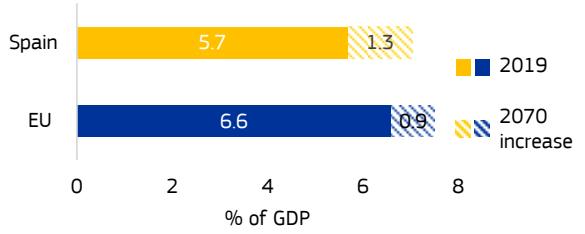
Graph A14.1: **Life expectancy at birth, years**



Source: Eurostat.

Health spending relative to GDP in Spain was below the EU average in 2019. Spending per capita on outpatient care is below the EU average, whereas spending on outpatient medicines is above the EU average. Current efforts aim to rationalize the use of medicines, including the use of antimicrobials. The public share of health expenditure is comparatively low (70.6% in 2019). Public expenditure on health is projected to increase by 1.3 pps. of GDP by 2070 (compared to 0.9 pps. for the EU), raising long-term fiscal sustainability concerns.

Graph A14.2: **Projected increase in public expenditure on health care over 2019-2070**



(reference scenario)
Source: European Commission/EPC (2021).

Spain faces health workforce shortages and an uneven distribution of staff. The number of nurses is low and shortages negatively impact primary care. Working conditions remain a challenge, with increasing use of temporary contracts (41.9% of all health workers in 2020, up from 28.5% in 2012), which since the start of pandemic has mainly been explained by special recruitment schemes to respond to the surge in demand. Spain has a low number of hospital beds, which has remained stable for a decade. The COVID-19 pandemic put a strain on acute and intensive care unit beds.

Through its Recovery and Resilience Plan (RRP), Spain plans to invest EUR 1.7 billion (2.5 % of the total RRP) in health care. The investments will renew hospital equipment, strengthen digital health infrastructure, improve

Table A14.1:**Key health indicators**

	2016	2017	2018	2019	2020	EU average (latest year)
Treatable mortality per 100 000 population (mortality avoidable through optimal quality healthcare)	66.8	65.5	64.6	62.6		92.1 (2017)
Cancer mortality per 100 000 population	229.8	226.6	221.9	218.3		252.5 (2017)
Current expenditure on health, % GDP	9.0	9.0	9.0	9.1		9.9 (2019)
Public share of health expenditure, % of current health expenditure	71.6	70.5	70.3	70.6		79.5 (2018)
Spending on prevention, % of current health expenditure	2.1	2.1	2.1	2.1		2.8 (2018)
Acute care care beds per 100 000 population	246.9	249.6	249.4	247.5		387.4 (2019)
Doctors per 1 000 population *	3.8	3.9	4.0	4.4		3.8 (2018)
Nurses per 1 000 population *	5.5	5.7	5.9	5.9		8.2 (2018)
Consumption of antibacterials for systemic use in the community, daily defined dose per 1 000 inhabitants per day **	25.6	25.0	24.6	23.3	18.3	14.5 (2020)

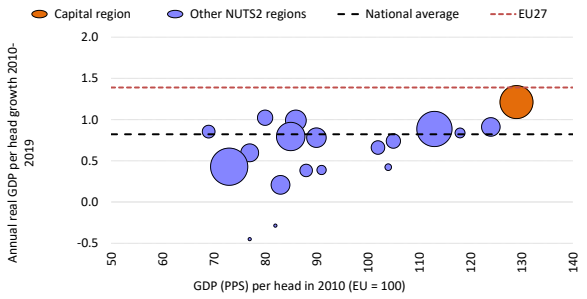
Notes: Doctors' density data refer to practising doctors except for FI, EL, PT (licensed to practice) and SK (professionally active). Nurses' density data refer to practising nurses (imputation from year 2014 for FI) except for IE, FR, PT, SK (professionally active) and EL (nurses working in hospitals only). More information: https://ec.europa.eu/health/state-health-eu/country-health-profiles_en
Source: Eurostat database; except: * Eurostat database and OECD, ** ECDC.

public health and the crisis preparedness system, skills, prevention, and pharmaceutical policies (rational use of medicines, innovative pharmaceuticals). The PERTE “Vanguard Health”, with an expected overall public and private investment of EUR 1.5 billion, will be an umbrella a number of actions for the transformation of the National Health System. Furthermore, the RRP includes mechanisms to reduce temporary employment of health workers and to improve the equity of the health system.

The regional dimension is an important factor when assessing economic and social developments in Member States. Taking into account this dimension enables a well-calibrated and targeted policy response that fosters cohesion and ensures sustainable and resilient economic development across all regions. Regional disparities remain significant in Spain with a noticeable difference between the capital and the northern regions on the one hand, and the southern regions on the other hand.

Only four regions in Spain had a GDP per head (in purchasing power standard, PPS) above the EU average in 2019. The GDP in Madrid corresponded to 124% of the EU average, almost double than in Extremadura and Andalucía ([49]). Moreover, in the years from 2010 to 2019, regions in Spain have been diverging in terms of GDP per head (Graph A15.1) ([50]).

Graph A15.1: **GDP per head (2010) and GDP growth (2010-2019) in Spain**



(1) Bubble size corresponds to the population size, 2019
Source: European Commission

Labour productivity varies extensively across Spanish regions. In 2018, gross value added per person employed was highest in País Vasco and Madrid, at 112% and 116% of the EU average respectively, but it remained below 90% in Andalucía, Murcia and Extremadura. At the same time, some of the regions with the lowest productivity rate – Canarias, Andalucía and Extremadura – also registered the lowest productivity growth in the period between 2010 and 2019 (around 0.5%) ([51]). In 2018, expenditure on R&D was low, at 1.24% of GDP in 2018, around 1 pp below the EU average, and mainly concentrated in a few regions.

Climate transition challenges differ significantly between Spanish regions, requiring major efforts to keep Spain on track for the 2030 climate targets. Renewable generation is regionally very concentrated, with almost half of the electricity generated from renewable energy produced in Castilla y León, Galicia and Andalucía. CO2 emissions on the other hand, are concentrated in regions with heavy industry that will likely have to adapt their processes to the green transition. Spain can leverage the EUR 890 million it will receive from the Just Transition Fund (JTF) to address the socioeconomic and environmental impacts of the transition on the regions that have closed coal mines and power plants in recent years (Graph A15.2). Moreover, regional inequalities persist on energy poverty. Less developed and urbanized regions have the highest proportions of their population living in energy poverty.

([49]) Measured in terms of the population-weighted coefficient of variation.

([50]) Disparities in GDP per head in Spain increased after the 2008 crisis hit the European economy, and they started to decline only after 2014, remaining nevertheless larger than in the pre-crisis period.

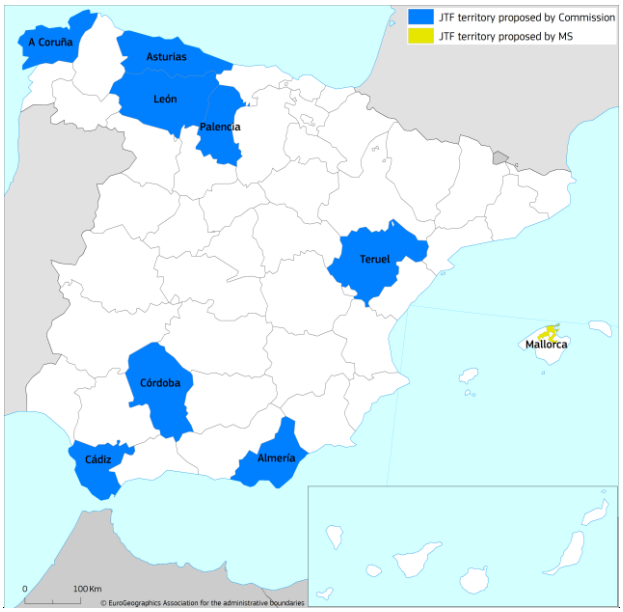
([51]) The Eurostat figures available on labour productivity levels latest year are from 2018. Growth rates in labour productivity, at the regional level, are estimated by the EC-JRC, and cover until 2019 (Source: ARDECO)

Table A15.1:**Spain, selected indicators at regional level**

NUTS 2 Region	GDP per head (PPS)	Productivity (GVA (PPS) per person employed)	Real productivity growth	GDP per head growth	Unemployment rate	R&D expenditure	People at risk of poverty or social exclusion	Regional Competitiveness Index	CO_2 emissions from fossil fuels per head
	EU27=100, 2019	EU27=100, 2018	Avg % change on preceding year, 2010-2019	Avg % change on preceding year, 2010-2019	% of active population, 2020	% of GDP, 2018	% of individuals 2020	Range 0-100, 2019	tCO_2 equivalent, 2018
European Union	100	100	1.00	1.39	7.1	2.19	21,9(e)	57.3	7.2
España	91	101	0.77	0.82	15.5	1.24	27.0	43.6	6.10
Galicia	82	97	1.27	0.99	12.0	0.94	25.3	40.2	7.4
Principado de Asturias	80	98	0.45	0.38	14.1	0.81	27.2	43.2	21.6
Cantabria	84	101	0.81	0.39	12.1	0.85	24.3	47.4	8.7
País Vasco	118	116	0.97	0.91	9.5	2.01	13.6	63.6	6.1
Comunidad Foral de Navarra	111	109	0.83	0.84	10.1	1.70	12.3	51.9	6.3
La Rioja	97	104	0.22	0.42	10.8	0.82	20.0	41.0	4.2
Aragón	99	101	0.56	0.74	11.7	0.92	18.8	41.8	11.6
Comunidad de Madrid	124	112	0.93	1.21	12.5	1.70	21.2	70.8	3.0
Castilla y León	86	98	0.71	0.78	12.1	1.32	19.4	37.6	11.7
Castilla-La Mancha	72	95	0.89	0.60	17.7	0.53	30.7	30.2	11.2
Extremadura	67	89	0.50	0.85	21.8	0.61	38.0	19.0	6.3
Cataluña	107	108	0.79	0.89	12.6	1.54	23.3	53.5	4.2
Comunidad Valenciana	80	96	0.64	0.79	16.2	1.06	29.7	41.2	4.1
Illes Balears	97	106	1.08	0.66	16.1	0.40	20.0	37.3	11.1
Andalucía	68	89	0.48	0.43	22.3	0.92	36.9	27.2	4.9
Región de Murcia	75	85	0.82	1.02	16.2	0.96	30.2	31.1	6.8
Ciudad Autónoma de Ceuta	72	92	0.15	-0.29	24.5	0.06	38.8	17.6	3.3
Ciudad Autónoma de Melilla	66	88	-0.07	-0.45	23.6	0.07	41.1	6.7	2.4
Canarias	73	92	0.39	0.21	22.6	0.47	39.8	26.8	5.2

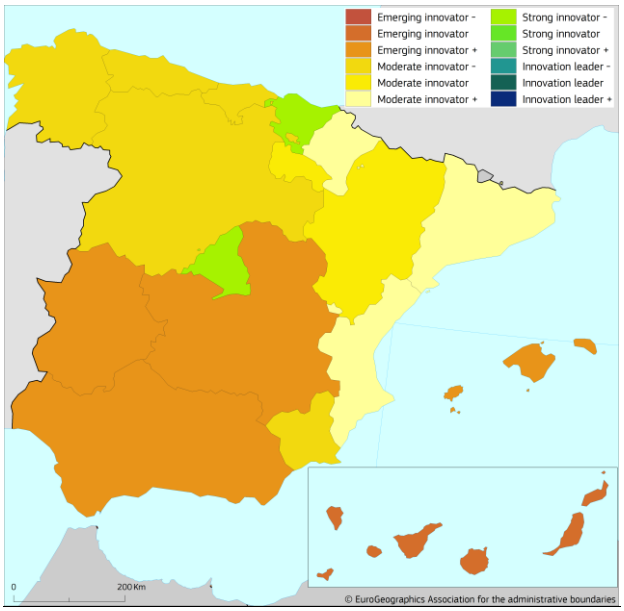
Ciudad Autónoma de Ceuta, Ciudad Autónoma de Melilla R&D expenditure reference year: 2015.
Source: Eurostat, EDGAR database.

Graph A15.2: **Territories most affected by the climate transition in Spain**



Source: European Commission

Graph A15.3: **Innovation performance in Spain**



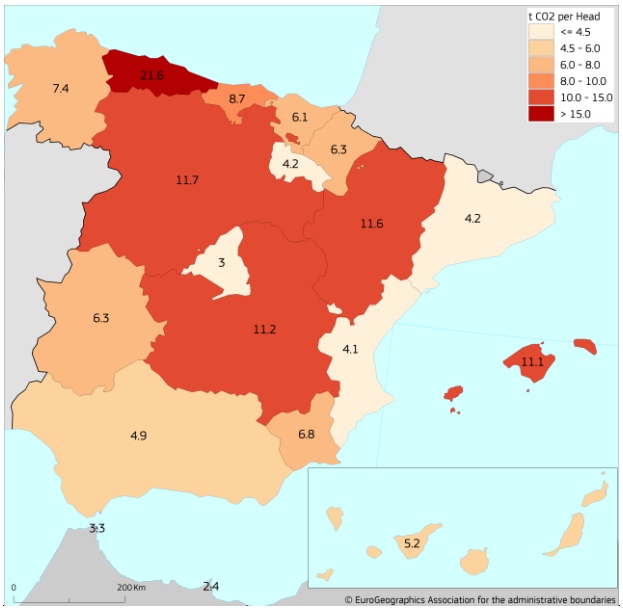
Source: European Commission

Innovation is asymmetric among regions. Spain's innovation performance has increased 13.4% between 2014 and 2021, although it remains below the EU average with a value of 96%. The innovation index of País Vasco, Madrid, Navarra and Cataluña are all above 110% of the EU average, while the value for Castilla-La Mancha, Extremadura and Canarias remains below 75%.

In 2020, the unemployment rate in Spain was higher than the EU average in all the Spanish regions, and significant disparities in labour market conditions remain. Overall, the unemployment rate in Spain was the second highest in the EU, with an average rate of 15.5% versus 7.1% in the EU. Across regions, unemployment rates were the lowest (10-11%) in regions such as País Vasco, La Rioja and Navarra, while the rates exceeded 22% in Andalucía, Canarias and Ceuta and Melilla. Between 2019 and 2020, following the COVID-19 outbreak, the

unemployment rate increased most in tourist-intensive regions (4.4 pp in Baleares and 2.1 pp in Canarias and Valencia).

Graph A15.4: **CO2 emissions from fossil fuels, 2018**



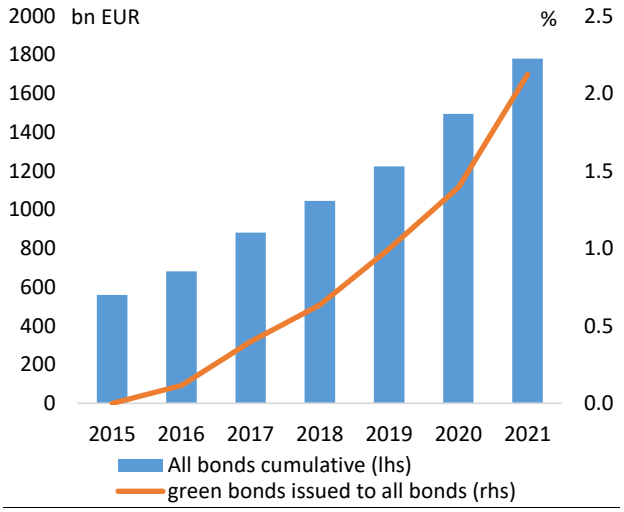
Source: European Commission

Disparities persist between continental Spain and Canarias. The GDP of Canarias represented 73% of the EU average in 2019. The proportion of the population at risk of poverty or social exclusion in Canarias in 2020 (39.8%) was also higher than the Spanish average (27%). The economy of the islands was hit particularly hard by the pandemic crisis, given their dependency on the tourism sector, which represents around 35% of their GDP. In 2020, unemployment increased by +2.5 pps to 22.6%, more than for the national average (+1.4 pps). Disparities also remain very high between the autonomous cities of Ceuta and Melilla and the Spanish average.

ANNEX 16: KEY FINANCIAL SECTOR DEVELOPMENTS

This Annex provides an overview of key developments in Spain's financial sector. Despite improvements in non-bank financing, banks are the most important financial intermediaries in Spain. The banking sector in Spain is large and mostly domestically owned. Banking sector concentration is significant with the five largest banks having a share of 66.4% of assets at the end of 2020, only slightly lower than in previous years. Due to the increase in deposits, which outpaced loan growth, the loan-to-deposit ratio declined to 83.3% in Q3-2021. The market-funding ratio has hovered around 40% since 2017 and stood at 43% at the end of 2020. After a robust increase in 2019 and 2020, the issuance of green bonds increased markedly in 2021.

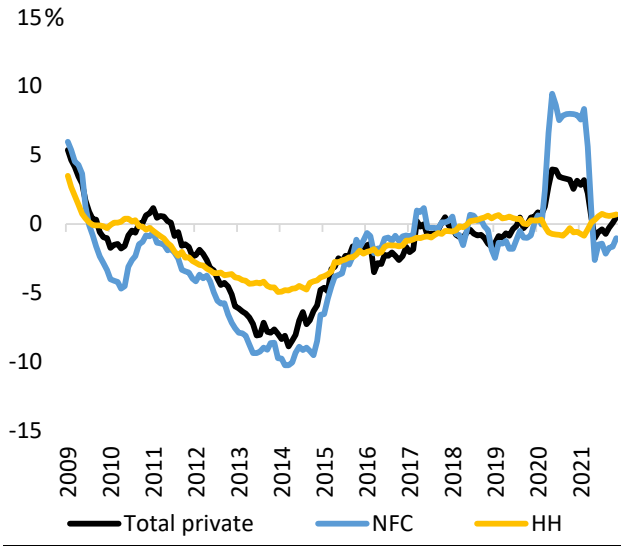
Graph A16.1: **Issuance of green bonds**



Source: Bloomberg

The banking sector has weathered well the pandemic period. Supported by retained earnings, the solvency ratio rose to 17.2% in Q3-2021, slightly higher than in 2020. Nevertheless, the largest banks still have lower capital buffers compared to other euro area countries, partially due to the less frequent use of internal models by Spanish banks. The public guarantees and loan moratoria have supported asset quality, with the non-performing loans ratio falling to 2.9% in Q3-2021. The increase in forborne loans needs to be monitored closely as the full impact of the pandemic on asset quality is not yet fully visible. After the negative result in 2020, profitability rebounded, with return on equity reaching 11% in Q3-2021. Banks have maintained comfortable liquidity positons in 2021, also benefiting from abundant central bank liquidity, which stood at 11.4% of total liabilities.

Graph A16.2: **Evolution of credit activity**



2005=100

Source: ECB

Lending activity moderated markedly in 2021, a trend that continued in the first months of 2022. The deceleration in credit activity in 2021 was driven mainly by the sluggish lending to non-financial corporations, also due to the gradual decline in lending supported by state guarantees. By contrast, lending to households, supported by both mortgage and consumer lending, proved to be more resilient in 2021 and in the first quarter of 2022.

Table A16.1:**Financial soundness indicators**

	2017	2018	2019	2020	2021
Total assets of the banking sector (% of GDP)	234.4	219.8	215.1	257.8	251.9
Share (total assets) of the five largest bank (%)	63.7	68.5	67.4	66.4	-
Share (total assets) of domestic credit institutions (%)1	95.5	95.3	95.2	95.0	94.9
Financial soundness indicators:1					
- non-performing loans (% of total loans)	4.4	3.7	3.1	2.8	2.9
- capital adequacy ratio (%)	15.4	15.4	15.7	16.8	17.2
- return on equity (%)	7.0	8.2	6.7	-3.5	11.0
NFC credit growth (year-on-year % change)	0.2	-1.9	0.0	7.9	0.8
HH credit growth (year-on-year % change)	-0.5	0.4	0.2	-0.6	0.6
Cost-to-income ratio (%)1	52.6	53.3	53.4	50.2	52.9
Loan-to-deposit ratio (%)1	89.3	90.6	92.6	85.5	83.3
Central bank liquidity as % of liabilities	7.9	7.9	6.1	10.9	11.4
Private sector debt (% of GDP)	139.2	132.7	128.6	146.4	-
Long-term interest rate spread versus Bund (basis points)	123.8	102.5	91.3	88.6	72.1
Market funding ratio (%)	40.9	42.1	43.6	43.0	-
Green bond issuance (bn EUR)	2.8	3.2	7.4	8.6	17.4

(1) Last data: Q3-2021
Source: ECB, Eurostat, Refinitiv.

The Macroeconomic Imbalance Procedure matrix presents the main elements of the in-depth review undertaken for Spain in accordance with Article 5 of Regulation (EU) No 1176/2011 on the prevention and correction of macroeconomic imbalances, as summarised in SWD(2022)631 ([52]). For Member States selected in the 2022 Alert Mechanism Report it presents, separately for each source of imbalances and adjustment issue, the main findings regarding the gravity and the evolution of the identified challenges, as well as policy response and gaps.

Spain is still facing vulnerabilities relating to high external and internal debt, both government and private, in a context of high unemployment. After the initial shock caused by the COVID-19 pandemic, external and private debt to GDP ratios resumed their declining trends observed prior to the outbreak of the pandemic in 2021, supported by the rebound in GDP growth. Private debt ratios are still higher than before the COVID-19 crisis, primarily because Spain was hit particularly hard by the pandemic, and stand well-above prudential and fundamental-based benchmarks. The net international investment position improved in 2021, to reach its highest level since 2005, although more improvement is needed given its size. The current account has been in surplus in recent years, although it narrowed in 2020 and 2021. The government debt to GDP ratio increased by 25 pps in 2020 to 120% before declining to 118.4% of GDP in 2021- still well above its 2019 level. However, the average maturity of debt has been extended to over eight years, and the interest burden has been locked in for a substantial period at record low levels. The unemployment rate started to decrease again in 2021, but labour market segmentation and youth unemployment remains high.

Going forward, external and internal debt ratios are expected to continue improving moderately. Private sector debt ratios returned to a declining path in 2021. The public guarantees schemes and loan moratoria have alleviated the impact of the pandemic on borrowers and bank balance sheets as asset quality has been safeguarded. The NPLs ratio for corporates decreased to 4.29% in December 2021, down from 4.51% at the end of December 2020 ([53]). Government debt is set to gradually decrease, in view of significant nominal GDP growth rates and as the deficit is forecast to narrow significantly over the coming years, after a 2021 budgetary outcome 1.5 pp better than foreseen in autumn 2021. However, downside risk to this outlook are predominant in a context of large global uncertainty, including on the evolution of monetary conditions, which could affect the ongoing consolidation process. Reducing external liabilities further will require maintaining sustained current account surpluses and measures to reduce the dependence on imports. The current account balance remained in positive territory in the course of 2021 (from -0.4% of GDP in Q1 to 4.8% in Q4), thanks to the recovery of tourism receipts, and is forecast to continue strengthening gradually going forward. The unemployment rate is expected to remain below pre-pandemic levels in 2022 and 2023, supported by a more resilient labour market and the positive impact of the reforms passed at the end of 2021. These actions include the new RED mechanism, -a new employment flexibility and stabilisation scheme-, and encompass legal changes aiming at reducing the use of temporary contracts in favour of permanent types of contracts.

A number of policy initiatives can prove fundamental in steering the further deleveraging process in the private and public sector, and sustaining strong current account surpluses that can reduce the stock of external liabilities. The RRP, thanks to its cross-cutting nature and scope, has the potential to provide significant impetus for addressing Spain's macroeconomic vulnerabilities. Measures intended to facilitate preventive debt restructuring and debt relief for natural persons are under preparation, which will contribute to facilitating the adjustment of private debt stock. Measures aimed at improving the efficiency of both the expenditure and revenue side will contribute to accelerating the downward trajectory of public debt. Reforms are ongoing to reduce the regulatory fragmentation and boost the innovation of firms and regions, which adversely affect growth and productivity. Reforms on active labour market policies, to be implemented by end-2022 are

([52]) European Commission (2022), COMMISSION STAFF WORKING DOCUMENT In-Depth Review for Spain in accordance with Article 5 of Regulation (EU) No 1176/2011 on the prevention and correction of macroeconomic imbalances.

([53]) Spanish Central Bank data

expected to boost labour productivity by upskilling and reskilling of the labour force.

For those reasons, and more generally on the basis of the elements of the in-depth review undertaken for Spain under Regulation (EU) No 1176/2011 on the prevention and correction of macroeconomic imbalances as summarised in the Staff Working Document (SWD (2022)631 final), **the Commission has considered in its Communication "European Semester – 2022 Spring Package" (COM(2022)600 final) that Spain continues to experience macroeconomic imbalances**.

Table A17.1: **Assessment of Macroeconomic Imbalances matrix**

	Gravity of the challenge	Evolution and prospects	Policy response
	Imbalances (unsustainable trends, vulnerabilities and associated risks)		
External position	Spain maintains a negative net international investment position, although recovering to 70% of GDP in 2021 from 85.5% of GDP in 2020. While this is the strongest position since 2005, it remains above prudential and fundamental-based benchmarks. The current account has shown surpluses in recent years even if narrowing over 2020-21 with the impact of the pandemic.	The reduction of Spain's external net debtor position came to a halt in the first half of 2020, mainly due to the contraction in GDP, but it resumed in 2021. The current account surplus is expected to expand in the coming years on the back of the gradual normalisation of international tourism that started in the second half of 2021. Along with the recovery of GDP, this is expected to contribute to a declining NIIP. The strong deterioration of the export market share in 2020 and early 2021 reflects the dependence on tourism of the Spanish economy. The export market share is expected to bounce back in the next years on the back of the gradual normalisation of international travels.	Reducing decisively Spain's large external liabilities requires sustaining current account surpluses for an extended period of time. The mix of reforms and investments foreseen and under implementation in a number of areas under the Recovery and Resilience Plan have the potential to further significantly raise the competitiveness of Spain's business sector and exports. Moreover, the Plan also envisages policies targeted to reduce dependency on energy imports, which are also conducive of improving the current account balance. Further competitiveness gains can be expected if the recovery of labour productivity is coupled with wage moderation and a gradual slowdown of inflation.
Public debt	Before 2020, the general government debt-to-GDP ratio was on a downward path and stood at 95.5% of GDP in 2019. It rose by around 26 percentage points in 2021, to 120% of GDP due to the combined effect of the large negative government balance, the fall in economic activity and the inclusion of SAREB's liabilities in the total public debt. It eased slightly to 118.4% in 2021, well above its 2019 level. While Spain does not appear to face fiscal sustainability risks in the short run, in the medium-term risks persist due to the worsening outlook for public finances caused by the pandemic and the high level of public debt. However, the low average interest payment on debt and the longer average maturity of public debt over the past years reduce the vulnerabilities.	The drop in GDP and the government's crisis response measures lead to a sharp deterioration of public finances in Spain with the government deficit increasing to 11% in 2020. The deficit narrowed to 6.9% in 2021 and is foreseen to narrow further in 2022 and 2023 (to 4.9% and 4.4%, respectively). The structural balance was -3.8% in 2021 and is projected to remain at -3.5% and -4.3%, in 2022 and 2023, respectively. Government debt is forecast to decrease further to 115.1% and 113.7% in 2022 and 2023, respectively.	A more efficient tax system and improvement in the quality of public spending – important deliverables in the RRP - can decisively contribute to reducing the structural deficit. A package of measures in the area of taxation, including combating tax fraud and a wide-ranging tax reform is underway and set to enter into force by Q1 2023. The framework for carrying out spending reviews was strengthened and topics for the 2022-2026 cycle of spending reviews have been already defined. By end-2022, the National Procurement Strategy designed to improve the efficiency and sustainability of public procurement, is scheduled to be adopted. The relinking of pensions to inflation will increase pensions expenditures, and the introduction of offsetting measures to be adopted in 2022 under the RRP is needed to mitigate risks to the long-term fiscal sustainability.
Private debt	The debt of the private sector stood at 140.9% of GDP (in consolidated terms) in Q3-2021, representing an increase of 11.3 pps since the beginning of 2020. The debt of non-financial corporations (NFCs) accounted for 81.1% of GDP and household debt to 59.8% of GDP. Both NFC and households debt ratios are above prudential and fundamental-based benchmarks indicating that strong deleveraging needs remain.	Following the outbreak of the crisis, the private debt to GPD ratio increased to a large extent due to the sizeable fall in GDP. Corporate debt increased more than household debt. The total stock of debt has been moderately declining since Q1-2021, reflecting the gradual pick-up in economic activity experienced throughout the year. The public guarantees schemes and loan moratoria have alleviated the impact of the pandemic on borrowers and bank balance sheets. The NPLs ratio for corporates decreased to 4.29% in December 2021, down from 4.51% at the end of December 2020. The latest available data point at a possible credit deterioration in 2022, warranting therefore further oversight.	A comprehensive reform aimed at the modernisation of the insolvency framework is being implemented by means of a law set to enter into force in Q2 2022, including additional instruments aimed at facilitating preventive debt restructuring and debt relief for natural persons. In addition, a set of measures intended to provide support to SMEs in the form of financial guarantees through CERSA will be adopted by Q4 2023. This will allow access to long-term financing and working capital operations to businesses.
	Adjustment issues		
Unemployment	Following the steady decline of the unemployment rate in the years previous to the pandemic it continued in 2021 with the measures taken with the pandemic. Nonetheless, the unemployment rate is one of the highest in Europe. Structural unemployment hampers the adjustment process of the economy. High levels of labour market segmentation (permanent vs. temporary employment) have marked the Spanish economy over the past decade.	The unemployment rate is expected to decline further in 2022 and 2023, below the pre-pandemic levels. It will remain though among the highest in the EU, particularly among young people (31% in Q4-2021). The use of temporary contracts is expected to decline, on the back of the legislative changes adopted in December 2021.	Short-time work schemes ('ERTEs') were vital to preserve employment over the COVID-19 crisis. In addition, several measures were taken to protect the self-employed by means of tax deferrals and benefits for suspension of activity. The reform, which is fostering a shift to permanent contracts, is expected to stabilize employment and help boost productivity. A successful implementation of the new RED mechanism in force since March 2022 and the upcoming reforms of active labour market policies in the RRP are essential to increase resilience of the labour market, reduce the unemployment rate and boost labour productivity through upskilling and reskilling of the labour force.

Source: European Commission

This Annex provides an indicator-based overview of Spain's tax system. It includes information on the tax structure, i.e. the types of tax that Spain derives most revenue from, the tax burden for workers, and the progressivity and redistributive effect of the tax system. It also provides information on tax collection and compliance and on the risks of aggressive tax planning activity.

Spain's tax revenues are relatively low in relation to GDP, with the highest contribution from labour taxation. In 2020, Spain's tax revenues as percentage of GDP were considerably below the EU aggregate. Labour tax revenues as percentage of GDP were also low in comparative terms, but given overall low tax revenues, the share of labour taxes in total tax revenues was slightly above the EU aggregate. However, revenues from consumption taxes and environmental taxes were significantly below the EU aggregate both as share of GDP and as share of total taxation. Revenues from capital taxes in 2020 were close to the EU aggregate as percentage of GDP but relatively high as a share of total tax revenues. While revenues from property taxes were relatively high, both as percentage of GDP and of total tax revenues, revenues from recurrent property taxes, which are less damaging for growth, were closer to the EU aggregate.

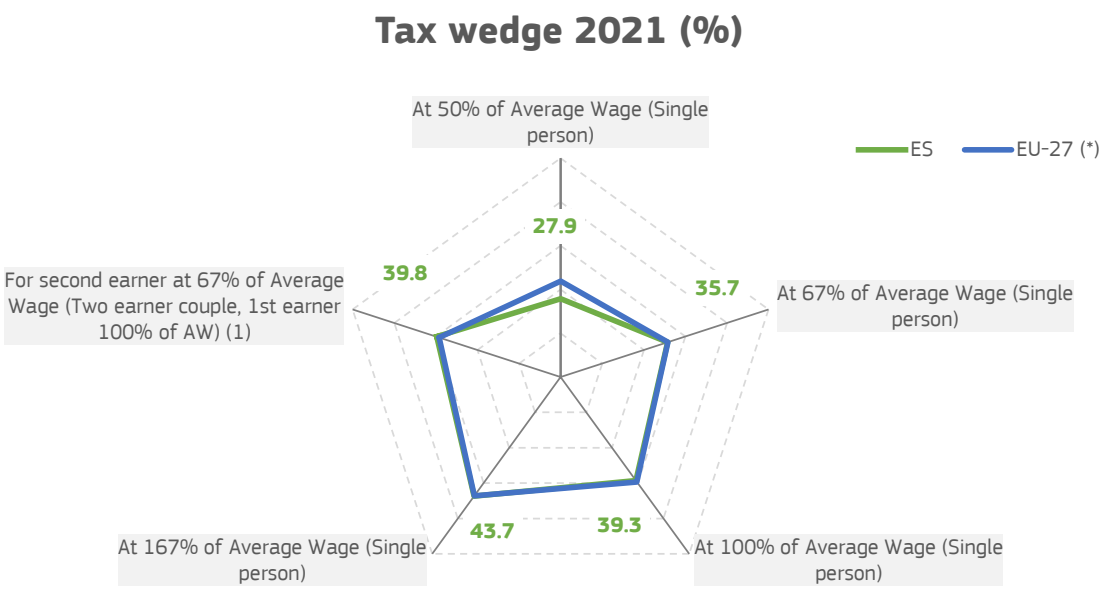
Spain's labour tax burden is relatively low across the income distribution. The labour tax wedge for Spain in 2021 was lower than the EU average at various income levels, i.e. for single people at the average wage (100%) as well as at 67% of the average wage. The tax wedge was substantially lower at 50% income level. Second earners at a wage level of 67% of the average wage, whose spouse earns the average wage, faced a tax wedge slightly higher than the EU average. In addition, the difference between their tax wedge and that of single people at the same wage was slightly above the EU average. In 2020 the tax-benefit system helped reduce inequality as measured by the GINI coefficient by slightly less than the EU average.

Table A18.1:**Indicators on taxation**

		Spain					EU-27				
		2010	2018	2019	2020	2021	2010	2018	2019	2020	2021
Tax structure	Total taxes (including compulsory actual social contributions) (% of GDP)	31.3	34.7	34.8	36.8		37.9	40.1	39.9	40.1	
	Labour taxes (as % of GDP)	16.6	16.8	17.5	19.8		20.0	20.7	20.7	21.5	
	Consumption taxes (as % of GDP)	8.1	9.6	9.4	9.1		10.8	11.1	11.1	10.8	
	Capital taxes (as % of GDP)	6.6	8.4	7.8	7.9		7.1	8.2	8.1	7.9	
	Total property taxes (as % of GDP)	2.1	2.7	2.6	2.7		1.9	2.2	2.2	2.3	
	Recurrent taxes on immovable property (as % of GDP)	1.0	1.2	1.1	1.2		1.1	1.2	1.2	1.2	
	Environmental taxes as % of GDP	1.6	1.8	1.8	1.7		2.4	2.4	2.4	2.2	
Progressivity & fairness	Tax wedge at 50% of Average Wage (Single person) (*)	30.5	29.2	27.9	27.9	27.9	33.9	32.4	32.0	31.5	31.9
	Tax wedge at 100% of Average Wage (Single person) (*)	39.7	39.4	39.4	39.0	39.3	41.0	40.2	40.1	39.9	39.7
	Corporate Income Tax - Effective Average Tax rates (1) (*)		23.3	23.3	23.3			19.8	19.5	19.3	
	Difference in GINI coefficient before and after taxes and cash social transfers (pensions excluded from social transfers)	7.2	7.2	7.1	6.9		8.4	7.9	7.4	8.3	
Tax administration & compliance	Outstanding tax arrears: Total year-end tax debt (including debt considered not collectable) / total revenue (in %) (*)		9.6	9.1				31.9	31.8		
	VAT Gap (% of VTTL)		6.3	6.9				11.2	10.5		
Financial Activity Risk	Dividends, Interests and Royalties (paid and received) as a share of GDP (%)		3.2	3.4	2.6			10.7	10.5		
	FDI flows through SPEs (Special Purpose Entities), % of total FDI flows (in and out)		5.5	6.8	6.0			47.8	46.2	36.7	

(1) Forward-looking Effective Tax Rate (OECD).
(*) EU-27 simple average as there is no aggregated EU-27 value.
For more data on tax revenues as well as the methodology applied see European Commission, Directorate-General for Taxation and Customs Union, Taxation trends in the European Union: data for the EU Member States, Iceland, Norway and United Kingdom: 2021 edition, Publications Office, 2021, https://data.europa.eu/doi/10.2778/843047 and the 'Data on Taxation' webpage (data https://ec.europa.eu/taxation_customs/taxation-1/economic-analysis-taxation/data-taxation_en). For more details on VAT GAP see European Commission, Directorate-General for Taxation and Customs Union, "VAT gap in the EU : report 2021", Publications Office, 2021, https://data.europa.eu/doi/10.2778/30877
Source: European Commission, OECD.

Graph A18.1: **Indicators on tax wedge**



The tax wedge is defined as the sum of personal income taxes and employee and employer social security contributions net of family allowances, expressed as a percentage of total labour costs (the sum of the gross wage and social security contributions paid by the employer). It is calculated for specific types of tax payers in terms of household composition and income level expressed as % of average wage. Data on tax wedges can be consulted in the 'Tax and benefit database' by ECFIN https://europa.eu/economy_finance/db_indicators/tab/

(1) The second earner average tax wedge measures how much extra personal income tax (PIT) plus employee and employer social security contributions (SSCs) the family will have to pay as a result of the second earner entering employment, as a proportion of the second earner's gross earnings plus the employer SSCs due on the second earner's income. For a more detailed discussion see OECD (2016), "Taxing Wages 2016", OECD Publishing, Paris. http://dx.doi.org/10.1787/tax_wages-2016-en

(*) EU-27 simple average as there is no aggregated EU-27 value.

Source: European Commission.

Spain is doing well on the digitalisation of the tax administration, which can help reduce tax arrears as well as cut compliance costs. Outstanding tax arrears have declined slightly by 0.5 pps. to 9.1% of total net revenue. This is significantly below the EU27 average of 31.8%, though that average is inflated by very large values in a few Member States. The Annual Report on Taxation 2021 highlights scope for improvement in the rate of tax return e-filing. ([54]) The VAT gap (an indicator of the effectiveness of VAT enforcement and compliance) has increased slightly by 0.6 pps. to 6.9%, which is still below the EU-wide gap of 10.5%. Furthermore, the average forward-looking effective corporate income tax rates were considerably above the EU average in 2020.

([54]) European Commission, Directorate-General for Taxation and Customs Union, Annual Report on Taxation 2021 : review of taxation policies in the EU Member States, Publications Office, 2021, https://data.europa.eu/doi/10.2778/294944, see section 2.1.4 Improving tax administration of the Annual Report on Taxation 2021 for further details

Table A19.1:**Key economic and financial indicators**

	2004-07	2008-12	2013-18	2019	2020	2021	forecast 2022	forecast 2023
Real GDP (y-o-y)	3.6	-1.3	2.0	2.1	-10.8	5.1	4.0	3.4
Potential growth (y-o-y)	3.6	1.2	0.3	1.0	0.2	0.5	1.2	1.3
Private consumption (y-o-y)	3.9	-2.0	1.5	1.0	-12.0	4.6	0.8	3.8
Public consumption (y-o-y)	5.7	1.4	0.6	2.0	3.3	3.1	-0.5	0.4
Gross fixed capital formation (y-o-y)	5.7	-8.5	3.4	4.5	-9.5	4.3	8.3	5.8
Exports of goods and services (y-o-y)	4.6	1.0	4.3	2.5	-20.1	14.7	13.6	4.6
Imports of goods and services (y-o-y)	8.3	-5.2	4.1	1.2	-15.2	13.9	8.3	4.8
Contribution to GDP growth:								
Domestic demand (y-o-y)	4.9	-3.0	1.6	1.8	-8.2	4.1	2.0	3.4
Inventories (y-o-y)	0.0	-0.2	0.2	-0.2	-0.5	0.5	0.0	0.0
Net exports (y-o-y)	-1.3	1.8	0.2	0.5	-2.2	0.5	2.0	0.0
Contribution to potential GDP growth:								
Total Labour (hours) (y-o-y)	1.6	0.1	-0.1	0.5	0.1	0.1	0.6	0.5
Capital accumulation (y-o-y)	1.7	0.7	0.3	0.5	0.3	0.3	0.5	0.6
Total factor productivity (y-o-y)	0.3	0.4	0.2	0.0	-0.1	0.0	0.1	0.2
Output gap	3.4	-4.3	-4.2	2.1	-9.1	-4.9	-2.2	-0.2
Unemployment rate	9.2	19.1	20.8	14.1	15.5	14.8	13.4	13.0
GDP deflator (y-o-y)	3.8	0.5	0.6	1.3	1.1	2.2	3.7	2.4
Harmonised index of consumer prices (HICP, y-o-y)	3.2	2.3	0.7	0.8	-0.3	3.0	6.3	1.8
Nominal compensation per employee (y-o-y)	3.2	2.0	0.6	2.3	-1.4	2.9	3.3	3.5
Labour productivity (real, hours worked, y-o-y)	0.6	1.7	0.6	0.2	-0.3	-1.8	0.5	1.7
Unit labour costs (ULC, whole economy, y-o-y)	3.4	0.4	0.0	3.0	6.1	0.2	2.1	1.2
Real unit labour costs (y-o-y)	-0.5	-0.1	-0.6	1.7	4.9	-2.0	-1.5	-1.1
Real effective exchange rate (ULC, y-o-y)	2.4	-1.7	-0.5	-0.1	.	.	.	.
Real effective exchange rate (HICP, y-o-y)	1.2	-0.5	0.2	-1.6	0.7	0.7	.	.
Net savings rate of households (net saving as percentage of net disposable income)	3.1	4.6	2.6	4.2	10.8	.	.	.
Private credit flow, consolidated (% of GDP)	27.1	-0.7	-3.1	1.1	4.4	2.4	.	.
Private sector debt, consolidated (% of GDP)	166.6	198.3	153.5	128.6	146.5	138.3	.	.
of which household debt, consolidated (% of GDP)	73.5	83.2	67.3	56.9	62.4	58.4	.	.
of which non-financial corporate debt, consolidated (% of GDP)	93.1	115.1	86.2	71.7	84.1	79.8	.	.
Gross non-performing debt (% of total debt instruments and total loans and advances) (2)	.	4.4	5.3	2.7	2.5	.	.	.
Corporations, net lending (+) or net borrowing (-) (% of GDP)	-3.9	5.9	6.4	3.7	6.1	7.2	7.2	7.3
Corporations, gross operating surplus (% of GDP)	20.4	23.8	23.9	23.6	22.0	22.7	23.9	24.6
Households, net lending (+) or net borrowing (-) (% of GDP)	-4.5	-0.2	1.0	1.7	6.1	1.6	0.5	0.3
Deflated house price index (y-o-y)	9.7	-8.2	1.2	4.1	2.2	.	.	.
Residential investment (% of GDP)	11.3	6.9	4.5	5.9	6.0	5.4	.	.
Current account balance (% of GDP), balance of payments	-7.8	-3.9	2.3	2.1	0.8	0.9	1.8	2.1
Trade balance (% of GDP), balance of payments	-5.0	-0.9	3.4	2.9	1.5	1.5	.	.
Terms of trade of goods and services (y-o-y)	0.5	-0.9	0.1	-0.5	2.2	-1.2	-4.0	0.8
Capital account balance (% of GDP)	0.6	0.4	0.4	0.3	0.4	0.9	.	.
Net international investment position (% of GDP)	-70.5	-91.3	-88.1	-75.0	-84.9	-70.0	.	.
NENDI - NIIP excluding non-defaultable instruments (% of GDP) (1)	-39.5	-71.8	-62.7	-46.8	-52.4	-40.0	.	.
IIP liabilities excluding non-defaultable instruments (% of GDP) (1)	121.0	155.2	157.3	159.9	187.5	181.1	.	.
Export performance vs. advanced countries (% change over 5 years)	7.8	-4.4	-0.8	0.8	-6.4	.	.	.
Export market share, goods and services (y-o-y)	-2.7	-3.8	1.4	-0.8	-10.3	4.3	8.6	0.4
Net FDI flows (% of GDP)	4.0	0.1	0.6	0.5	1.7	-0.8	.	.
General government balance (% of GDP)	1.3	-9.3	-4.8	-3.1	-10.3	-6.9	-4.9	-4.4
Structural budget balance (% of GDP)	.	.	-2.0	-3.9	-4.3	-3.8	-3.5	-4.3
General government gross debt (% of GDP)	40.7	62.7	102.3	98.3	120.0	118.4	115.1	113.7

(1) NIIP excluding direct investment and portfolio equity shares

(2) domestic banking groups and stand-alone banks, EU and non-EU foreign-controlled subsidiaries and EU and non-EU foreign-controlled branches.

Source: Eurostat and ECB as of 2 May 2022, where available; European Commission for forecast figures (Spring forecast 2022)

This annex assesses fiscal sustainability risks for Spain over the short, medium and long term. It follows the same multi-dimensional approach as the 2021 Fiscal Sustainability Report, updated on the basis of the Commission 2022 spring forecast.

Table 1 presents the baseline debt projections. It shows the projected government debt and its breakdown into the primary balance, the snowball effect (the combined impact of interest payments and nominal GDP growth on the debt dynamics) and the stock-flow adjustment. These projections assume that no new fiscal policy measures are taken after 2023, and include the expected positive impact of investments under Next Generation EU.

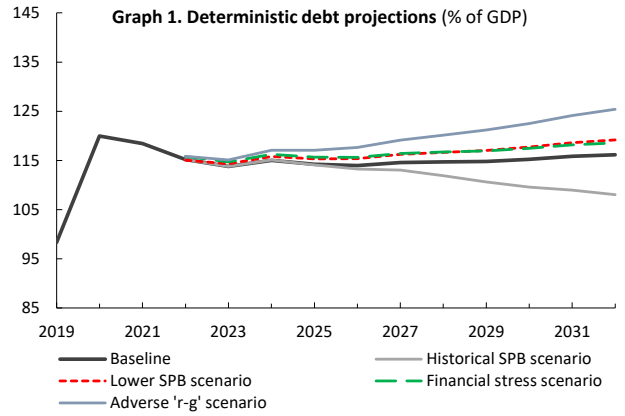
Graph 1 shows four alternative scenarios around the baseline, to illustrate the impact of changes in assumptions. The 'historical SPB' scenario assumes that the structural primary balance (SPB) gradually returns to its past average level. In the 'lower SPB' scenario, the SPB is permanently weaker than in the baseline. The 'adverse interest-growth rate' scenario assumes a less favourable snowball effect than in the baseline. In the 'financial stress' scenario, the country temporarily faces higher market interest rates in 2022.

Graph 2 shows the outcome of the stochastic projections. These projections show the impact on debt of 2 000 different shocks affecting the government's budgetary position, economic growth, interest rates and exchange rates. The cone covers 80% of all the simulated debt paths, therefore excluding tail events.

Table 2 shows the S1 and S2 fiscal sustainability indicators and their main drivers. S1 measures the consolidation effort needed to bring debt to 60% of GDP in 15 years. S2 measures the consolidation effort required to stabilise debt over an infinite horizon. The *initial budgetary position* measures the effort required to cover future interest payments, the *ageing costs* component accounts for the need to absorb the

Table A20.1:**Debt sustainability analysis for Spain**

Table 1. Baseline debt projections	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Gross debt ratio (% of GDP)	**98.3**	**120.0**	**118.4**	**115.2**	**113.8**	**115.0**	**114.2**	**114.0**	**114.6**	**114.7**	**114.8**	**115.2**	**115.8**	**116.1**
Change in debt	-2.2	21.6	-1.5	-3.2	-1.4	1.2	-0.8	-0.3	0.6	0.1	0.1	0.4	0.6	0.3
of which														
Primary deficit	*0.8*	*8.0*	*4.7*	*2.9*	*2.4*	*2.5*	*1.9*	*1.7*	*1.8*	*1.8*	*1.8*	*1.7*	*1.8*	*1.8*
Snowball effect	*-1.0*	*13.0*	*-6.1*	*-6.6*	*-4.3*	*-1.2*	*-2.7*	*-1.9*	*-1.2*	*-1.7*	*-1.6*	*-1.3*	*-1.2*	*-1.5*
Stock-flow adjustment	*-1.9*	*0.6*	*-0.1*	*0.5*	*0.5*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Gross financing needs (% of GDP)	16.0	27.0	23.6	21.9	21.3	21.1	20.4	20.1	20.4	20.4	20.4	20.5	20.6	20.8



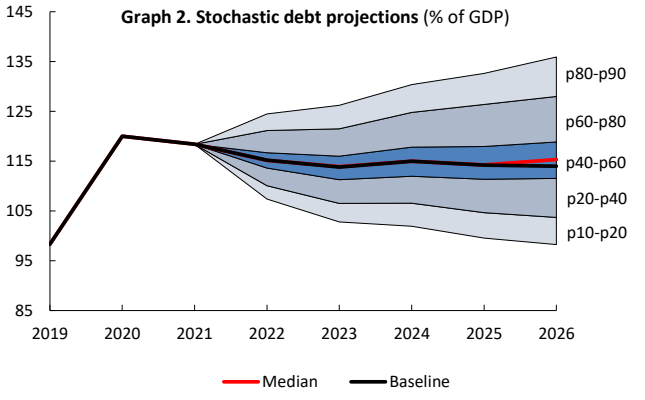


Table 2. Breakdown of the S1 and S2 sustainability gap indicators

		S1	S2
Overall index (pps. of GDP)		**5.2**	**1.9**
of which			
Initial budgetary position		1.5	2.7
Debt requirement		4.0	
Ageing costs		-0.3	-0.8
of which	*Pensions*	*-0.5*	*-2.2*
	Health care	*0.4*	*1.2*
	Long-term care	*0.1*	*0.6*
	Others	*-0.4*	*-0.4*

Source: European Commission

projected change in ageing-related public expenditure such as pensions, health care and long-term care, and the *debt requirement* measures the additional adjustment needed to reach the 60% of GDP debt target.

Finally, the heat map presents the overall fiscal sustainability risk classification (Table A20.2**).** The *short-term risk category* is based on the S0 indicator, an early-detection indicator of fiscal stress in the upcoming year. The *medium-term risk category* is derived from the debt sustainability analysis (DSA) and the S1 indicator. The DSA assesses risks to sustainability based on several criteria: the projected debt level in 10 years' time, the debt trajectory ('peak year'), the plausibility of fiscal assumptions and room for tighter positions if needed ('fiscal consolidation space'), the probability of debt not stabilising in the next 5 years and the size of uncertainty. The *long-term risk category* is based on the S2 indicator and the DSA.

Overall, short-term risks to fiscal sustainability are low. The Commission's early-detection indicator (S0) does not signal major short-term fiscal risks (Table A20.2).

Medium-term risks to fiscal sustainability are high. Both elements of the Commission's medium-term analysis lead to this conclusion. First, the debt sustainability analysis (DSA) shows that government debt, is projected to remain at a high level (around 116% of GDP in 2032) in the baseline (Table 1). This debt path is also sensitive to possible shocks to fiscal, macroeconomic and financial variables, as illustrated by alternative scenarios and stochastic simulations, most pointing to high risks (Tables A20.1 and A20.2). Moreover, the sustainability gap indicator S1 signals that an adjustment of 5.2 pps. of GDP of the structural primary balance would be needed to reduce debt to 60% of GDP in 15 years' time (Table 2). Overall, the high risk reflects the currently large deficit and high debt, and sensitivity to adverse shocks.

Long-term risks to fiscal sustainability are medium. Over the long term, the sustainability gap indicator S2 (at 1.9 pps. of GDP) points to low risks, while the DSA points to substantial vulnerabilities, leading to the overall medium risk assessment. The S2 indicator suggests that, to stabilise debt over the long term, it will be necessary to address the unfavourable initial budgetary position and future budgetary pressures stemming from population ageing related to health care and long-term care expenditure (Table 2).

Table A20.2:**Heat map of fiscal sustainability risks for Spain**

Short term	Medium term										Long term	
				Debt sustainability analysis (DSA)								
					Deterministic scenarios							
Overall (S0)	Overall (S1+DSA)	S1	Overall		Baseline	Historical SPB	Lower SPB	Adverse 'r-g'	Financial stress	Stochastic projections	S2	Overall (S2+DSA)
LOW	HIGH	HIGH	HIGH	Overall	MEDIUM	MEDIUM	HIGH	HIGH	HIGH	HIGH	LOW	MEDIUM
				Debt level (2032), % GDP	116	108	119	125	119			
				Debt peak year	2021	2021	2032	2032	2032			
				Fiscal consolidation space	89%	72%	90%	89%	89%			
				Probability of debt ratio exceeding in 2026 its 2021 level						41%		
				Difference between 90th and 10th percentiles (pps. GDP)						38		

(1) *Debt level* in 2032: green: below 60% of GDP, yellow: between 60% and 90%, red: above 90%. (2) The *debt peak year* indicates whether debt is projected to increase overall over the next decade. Green: debt peaks early; yellow: peak towards the middle of the projection period; red: late peak. (3) *Fiscal consolidation space* measures the share of past fiscal positions in the country that were more stringent than the one assumed in the baseline. Green: high value, i.e. the assumed fiscal position is plausible by historical standards and leaves room for corrective measures if needed; yellow: intermediate; red: low. (4) *Probability of the debt ratio exceeding in 2026 its 2021 level*: green: low probability, yellow: intermediate, red: high (also reflecting the initial debt level). (5) The *difference between the 90th and 10th percentiles* measures uncertainty, based on the debt distribution under 2000 different shocks. Green, yellow and red cells indicate increasing uncertainty.

Source: European Commission (for further details on the Commission's multi-dimensional approach, see the 2021 Fiscal Sustainability Report).