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CORRIGENDUM

This document corrects document SWD(2022) 624 final of 23.05.2022.

Correction of minor errors in Annex 17.

The text shall read as follows:

COMMISSION STAFF WORKING DOCUMENT

2022 Country Report - Romania

Accompanying the document

Recommendation for a COUNCIL RECOMMENDATION

on the 2022 National Reform Programme of Romania and delivering a Council opinion on the 2022 Convergence Programme of Romania

{COM(2022) 624 final} - {SWD(2022) 640 final}

European Commission

Romania

2022 Country Report

ECONOMIC AND EMPLOYMENT SNAPSHOT

Romania is catching up despite some vulnerabilities

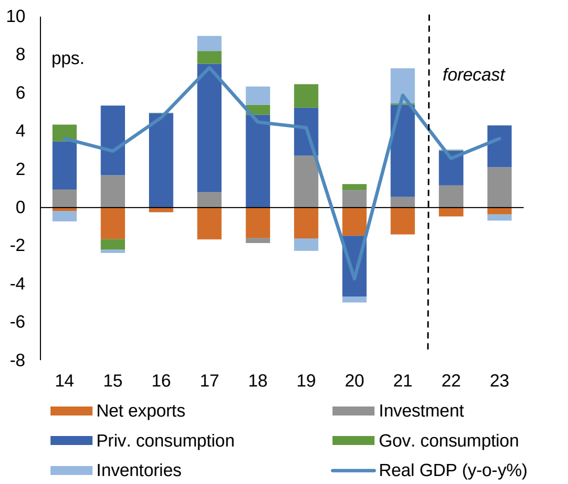
Romania's economy was catching up fast before the pandemic, but not in a fully sustainable way. In 2019, GDP per capita was 70% of the EU average (see Annex 15), up from 56.5% in 2015. Over the same period, the real growth rate was more than double that of the EU average. However, growth was demand-driven and boosted by expansionary fiscal policy, which resulted in growing current account deficits and macroeconomic imbalances.

Regional disparities remain high, driven by labour productivity, investment and employment gaps between the capital and the rest of regions. In 2018, productivity was below the EU average (at 69%) and it varied extensively between regions, from 133% of the EU average in the Bucharest-Ilfov capital region to 39% in Nord-Est, the least developed region of the country. The less developed regions lack key assets such as transport infrastructure, highly skilled workers and have low levels of employment in high-technology sectors and R&D expenditure.

In 2021, economic activity recovered the losses of the COVID-19 crisis. Real GDP grew at 5.9% due to strong private consumption (i.e. household spending) and investment. Despite weak international demand for Romanian goods and services and supply chain disruptions, exports continued growing, though not as fast as imports and the current account deficit widened further. Lockdown measures and rising inflation, especially rising energy prices, affected private consumption in the second half of 2021.

Economic prospects are subdued. Due to a slowdown in late 2021 and aggravated by Russia's invasion of Ukraine in 2022, real GDP is projected to just grow above 2% in 2022 and 2023 (see Graph 1.1), mainly supported by investments from several EU funds, including the Recovery and Resilience Facility (RRF). Exports and imports are set to grow at a lower pace due to supply-side bottlenecks and shortages, with the current account deficit to remain broadly unchanged.

Graph 1.1: **GDP growth and demand-side components**



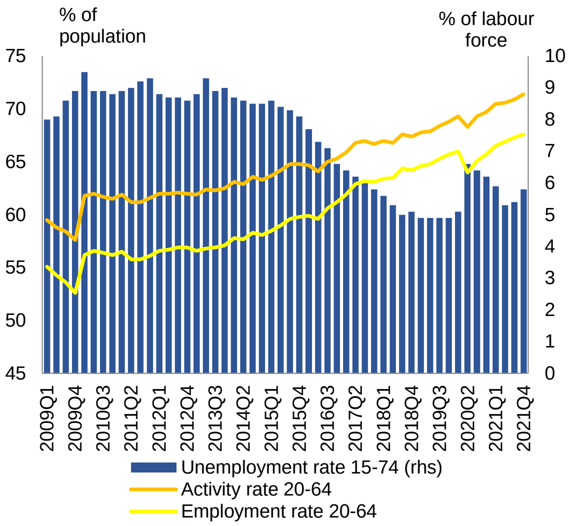
Source: European Commission

Prices are expected to rise, more markedly than before. After a mild increase in 2020, the inflation rate reached 4.1% in 2021 and is set to climb higher in 2022, as high energy prices will affect other goods and services, in line with global trends. Stronger expected wage dynamics could feed-back into inflation. The government has adopted emergency measures to cut energy bills by capping prices and reimbursing suppliers for the difference with real market prices. As reimbursements take long, smaller suppliers may face liquidity constraints.

The fiscal deficit declined somewhat, but remains a concern. Past ad hoc pension and wage increases coupled with low public revenues [1] (see Annex 18), led to large deficits already before the crisis. In 2021 the deficit was 7.1% of GDP, down from 9.3% in 2020. Additional spending to fight the pandemic and offset increases in energy prices prevented a lower deficit, which is projected to decline somewhat by 2023 due to growth recovery and increased revenue collection, supported by the recovery and resilience plan (RRP). However, to go below 3% by 2024, in line with the June 2021 Council recommendation, will remain a challenge without corrective measures. The large structural primary deficit set for 2023, the increasing government debt, its sensitivity to macro-fiscal shocks, and the uncertainty around baseline debt projections point to substantial and moderate fiscal challenges over the medium and long term respectively [2]. Fiscal deficits also contributed to a negative current account balance and higher public debt, with costlier financing. Romania currently has the highest bond yield spread in the EU and its debt is just at investment-grade level.

The labour market performed well despite the COVID-19 pandemic, but key challenges remain. The employment rate continued to grow, from 65.2% in 2020 to 67.1% in 2021 (see Graph 1.2). SURE [3] supporting measures are also a contributing factor. Still, employment rates of the young and older people, Roma, women and the low-skilled remain far below the EU averages, while the disability employment gap increased to 30.4pps. The gender employment gap is high and has been widening (see Annex 12). The unemployment rate fell to 5.6% in 2021 [4], down from 6.1% in 2020 but is still above pre-crisis levels. The Commission's 2022 Spring Forecast estimates that it will decrease to 5.5% in 2022 and to 5.3% in 2023, on the back of a subdued growth.

Graph 1.2: **Activity, employment and unemployment rates**



Source: European Commission

Wage growth is set to rebound but poverty and in-work poverty remain a challenge. The pandemic caused wage growth to level out. Yet in 2021, nominal and real wage [5] growth rebounded to 5.7% and 0.3% respectively. In early 2021, the government raised the minimum gross salary to RON 2 300 (EUR 466) and approved an increase to RON 2 550 (EUR 515) as from January 2022. On the other hand, public wages were frozen in 2021, after increasing 37.5% over the past 4 years. Stronger growth is forecast for 2022 in overall nominal wages of up to 8.3%, but due to high inflation is set to be negative in real terms -1.1% (2022 Spring Forecast). In-work poverty remains high, driven by occasional or part-time work, self-employment and informality (i.e. undeclared work). The share of people at risk of poverty remains high (see Annex 12).

Challenges persist in several areas

Romania's business sector has long-standing structural weaknesses. Insufficiently developed and outdated transport infrastructure makes it difficult to transport merchandise within and outside the

(1) Government revenues in Romania are less than 30% of GDP, compared with and EU average of 40%. Property and capital are taxed at a low rate compared to labour.

(2) Fiscal Sustainability Report 2021.

(3) Council Implementing Decision (EU) 2020/1355: http://data.europa.eu/eli/dec_impl/2020/1355/oj

(4) Eurostat Labour Force Survey main indicators adjusted series

(5) Proxied by nominal and real (GDP deflator) compensation per employee.

country, and deepen territorial disparities. Excessive red tape coupled with an at times inefficient public administration and unpredictable legislative framework (see Annex 11) are detrimental to the business environment and limit investment opportunities, especially for domestic companies. There is significant scope for the correct use of corporate governance principles in state-owned enterprises in key sectors such as energy, transport and local public utilities, as discretionary board appointments limit their efficiency and effectiveness.

Adverse demographics put pressure on the labour market and the training and education system. Current trends point to an 8.8% reduction in the workforce in 2030 compared to today ([6]). This will require higher productivity levels and an increase in the employment rate, notably of women, Roma, young and older people, persons with disabilities and those with a low educational attainment. Still, the skills of the workforce remain insufficiently aligned with the needs of the labour market Skills shortages and mismatches, and a weak education and training system negatively affect prospects. The capacity of the Public Employment Services to provide integrated and targeted support, including upskilling and reskilling, remains limited.

Social and health services remain insufficient, including access to long-term care. Lack of human resources and administrative capacity at local level are among the factors affecting the availability of integrated services and progress in the deinstitutionalisation of adults with disabilities. The deinstitutionalisation process for children continues, as established, with the objective of being finalized as soon as possible. Disparities in access to healthcare are lingering, with 11% of the population uninsured and an uneven distribution of the workforce across the country. Home care coverage is among the lowest in the EU (see Annex 12).

The phasing out of coal-fired power production requires a major increase in renewable energy production capacity. The Decarbonisation Law and investments to increase the renewable energy production are essential. Ensuring a just transition to green energy sources should remain a priority for the affected regions and communities. Also, any obstacles to solar and wind energy investments should be removed.

Closing illegal and substandard landfills along with rehabilitation measures can protect health and the environment. Irregular and substandard landfills and fly tipping operate in Romania and present serious risks for human health and the environment. Landfills also lack infrastructure capacities, as do the counties where they are located.

Significant investments and reforms in digital policy could close existing gaps. In the digital public administration various public IT systems are not interoperable; e-government services are scarce and where they exist uptake is low. While overall broadband connectivity has been significantly improving (see Annex 8), parts of the country are still not connected to fixed very high capacity networks broadband. Basic digital skills are lacking and the number of ICT specialists is insufficient. Finally, Romanian enterprises do not take full advantage of digital technologies such as electronic information sharing, social media, big data and cloud.

Romania is making progress on most of the UN's Sustainable Development Goals (SDGs), but challenges remain. Poverty and deprivation are decreasing and basic health outcomes improving (see Annex 1). Still, poor quality and low expenditure in research, development and innovation (R&D&I) affect industrial capabilities. Some concerns remain on the rule of law: the effectiveness of justice system is deteriorating (especially for administrative cases – see Annex 11) and the perception of corruption remains high. Significant progress is needed on 3 SDGs: gender equality, quality of education and

([6]) In 2021, population aged 15-64 numbered 12.5 million, and it is set to decrease to 10 million by 2040 (Assuming as baseline Eurostat's demographic projections).

responsible consumption and production, as action has been limited in recent years.

Russia's invasion of Ukraine has clouded the economic outlook

Russia's invasion of Ukraine is expected to negatively impact Romania's economy. The direct negative effects of the invasion are likely to be limited due to Romania's small overall trade linkages to Russia and Ukraine. Nonetheless, the indirect effects could sizeable.

The impact on energy and commodity prices has wider implications. Given Russia's and Ukraine's importance as suppliers of oil, gas and commodities (food and non-food) in global markets, prices have increased significantly. Romania produces the majority of its gas domestically but imports almost 20% of total gas consumption, which is heavily dependent on a Russian pipeline via Ukraine. At the same time, Russian crude oil imports are the primary input for the large refining industry, which then re-exports finished oil products. As a consequence, inflation is set to increase further, dampening private consumption in spite of the exceptional measures to cushion households and SMEs from the impact of electricity and gas bills that were introduced.

Specific sectors are particularly exposed. Some important Romanian industries (such as automotive and machineries) and the construction sector are particularly vulnerable to energy imports, energy price movements and raw material needs, including rubber, steel, iron, lumber and phosphate rock, a primary input in fertilizer and chemical industry.

Romania is a frontline country in this humanitarian and geopolitical crisis. Romania is hosting a large number of displaced persons from Ukraine, although the majority eventually leave to other EU countries. Addressing their needs will require the mobilisation of additional resources in the healthcare and social systems, which came under great strain during the pandemic, but also in education. In the medium to long run, integration in the labour market of individuals deciding to stay in Romania could bring about an increase in active population and boost potential output. Romania will benefit from the exceptional flexibilities provided in the framework of the Cohesion's Action for Refugees in Europe (CARE) initiative and from additional pre-financing under the Recovery Assistance for Cohesion and the Territories of Europe (REACT-EU) programme to urgently address reception and integration needs for those fleeing Ukraine as a result of the Russian invasion.

THE RECOVERY AND RESILIENCE PLAN IS UNDERWAY

The Romanian recovery and resilience plan (RRP) includes important measures aimed at accelerating the twin green and digital transition and reinforcing economic and social resilience. It includes EUR 14.2 billion in grants and EUR 14.9 billion in loans to support the implementation by 2026 of crucial reforms and investments (see Annex 2).

Green transition

Romania's plan will contribute to the green transition. Reforms include regulatory changes to incentivise zero-emission road transport, improve road safety and encourage the modal shift to railways and inland waterways. Significant investments are planned in zero-emissions and upgraded railway rolling stock, for the modernisation and renewal of railway infrastructure and for the development of the underground transport network in Bucharest and Cluj-Napoca.

A strong boost to the energy efficiency of private and public buildings is a key priority of the plan. The investments to upgrade the current stock of both private and public buildings (including historic buildings) will have a clear impact across the country. Building renovations will be carried out by local authorities and aim not only at energy efficiency improvements but also at seismic consolidation works where needed. Together with the setting-up of a National Digital Building Register, the creation of certification programmes and a pool of professionals in energy efficiency renovations in historic buildings will create major spill-over effects.

The deployment of renewables is expected to increase in view of the country's commitment to phasing out coal and lignite power production. The plan envisages to phase out coal and lignite-fired power production by 2032, which is crucial for the decarbonisation of the energy sector, supporting the transition to green sources of energy production (see Annex 5). The Decarbonisation Law expected by June 2022 will set out a concrete timeline for coal and lignite phase out across the country production sites and commit to concrete targets for green energy production. Significant investments supported by the plan and the Just Transition Fund will help to address the social and employment impact of the green transition (see Annex 6).

Digitalisation of the public administration

The plan intends to modernise the public administration by addressing fragmentation and lack of interoperability, and by removing unnecessary bureaucratic barriers. On the Digital Economy and Society Index, Romania ranked last in the digital public services dimension in past years (see Annex 8). The plan puts forward an ambitious set of reforms and investments and allocate of over EUR 3 billion to that end. It focuses on introducing an interoperability law and on developing and implementing a unitary framework for a government cloud system connecting up to 30 public institutions. The digitalisation of the public administration also follows a sectorial approach through measures related to e-health, digitalisation of the justice system, environment, employment and social protection and the implementation of e-forms for public procurement. The rollout of the e-identification scheme for a large part of the population will facilitate the public's access to a range of electronic services.

Fiscal and pension reform

The plan includes a comprehensive set of reforms and investments to address key tax challenges. These cover, among others, reforms of the tax administration, the tax system, the government budgetary framework, and an expenditure review to support Romania in exiting the excessive deficit procedure by 2024.

To ensure fiscal sustainability and correct inequities, the pension system reform is a central element of the plan. New legislation, entering into force in Q1 2023, will adapt the current pension system to an ageing population and strengthen the contributory principle. The reform will reduce possibilities for early retirement, provide incentives for postponing retirement, revise special pensions, and increase the adequacy of minimum and lower pensions. It will also introduce a new calculation formula and indexation rule and ensure the financial viability of Pillar II (i.e. the mandatory private pension scheme) of the pension system. The new legislation will help maintain total gross public pension expenditure (including all existing public pension schemes) stable at 9.4% of GDP in the long term (2022-2070), incorporating a brake mechanism if the expenditure cap is exceeded. The reform will also contribute to the modernisation of the pension system, by introducing digital applications and services.

Education and social policies

The RRP will support education and skills development, allocating 12.4% of the overall budget to such measures. Measures include the implementation of various reforms outlined in the Educated Romania project, which envisages an in-depth restructuring of the education and training system by 2030. Other reforms and investments cover early childhood education, reduction of early school leaving, increasing the quality of vocational education and training, and improving educational infrastructure. Measures will also support digital skills development for students and teachers.

The plan also tackles poverty and inequality in Romania, which is among the highest in the EU, thereby contributing to implement the European Pillar of Social Rights. The social reforms aim to support children, persons with disabilities and older people as well as the formalisation of domestic work. The minimum inclusion income reform intends to improve the efficiency of social assistance benefits by extending coverage, increasing adequacy and improving the incentives to take up employment. The national long-term-care strategy should help address the needs of an ageing society. The deinstitutionalisation of persons with disabilities should accelerate their integration into the community. The plan also envisages establishing a new mechanism for minimum-wage setting, based on objective criteria, and the consultation of social partners.

Health resilience

The pandemic exposed the fragility of the healthcare system. The plan will use EUR 2.85 billion to increase health coverage and the quality of health services. A new Agency for the Development of Health Infrastructure (ANDIS) should oversee the construction of and manage some of the 25 hospitals envisaged in the plan. Marginalised communities will be prioritised and many of the newly built or renovated family-doctor practices, integrated community centres and outpatient care units will be located in regions with the greatest needs. Through the plan, Romania will advance on the overdue upgrade of the national health infrastructure to help ensure social cohesion and an increased access to healthcare (see Annex 14).

Public administration

The plan aims to increase the independence, quality and efficiency of the justice system, as well as the capacity, transparency and effectiveness of the public administration. Better coordination and monitoring of policy and legislative initiatives at the central level will provide companies and individuals with a more coherent and transparent regulatory framework. The plan aims to increase the independence, quality and efficiency of the justice system and improve its ability to investigate and prosecute corruption offences, which is crucial to safeguard the financial interests of the EU. The public procurement system will be modernised. Reforms of the corporate governance of state-owned enterprises will increase their profitability and level the playing field.

Research, development and innovation (R&D&I)

The plan envisages several measures to improve the R&D&I system. It supports the integration of research organisations into the European Research Area, and their capacity to access European funds for R&D&I, as well as grant schemes aiming at attracting and rewarding talent. It also provides a framework to streamline R&D&I governance, reform the research career, and enhance cooperation between business and research. To that end, it asks for support from the2021-2022 Horizon Europe Policy Support Facility to implement the implementation of the forthcoming recommendations by the 2021-2022 Horizon Europe Policy Support Facility.

Box 2.1: Key deliverables under the recovery and resilience plan 2022-23

- Decarbonisation law
- Decommissioning of coal-fired power-production capacity
- Adoption of the National Road Safety Strategy
- Adoption of the 2021-2026 National Cybersecurity Strategy
- Adoption of a new social dialogue law
- Start of implementation of the national programme to reduce early school leaving
- 750 educational establishments with high risk of drop-out will receive grants to support students transitioning from lower to upper secondary education
- Establishment of the National Agency for Infrastructure Development in Health (ANDIS)

FURTHER PRIORITIES AHEAD

Beyond the challenges addressed by the RRP, as outlined above, Romania faces additional challenges not sufficiently covered in the plan. More effort is needed to enhance the innovativeness and competitiveness of the private sector across regions, tackle increasing inequalities and extend activation measures, and strengthen local fiscal capacity. Addressing these challenges will also help to make further progress in achieving the SDG related to quality education (SDG 4), gender equality (SDG 5), decent work and economic growth (SDG 8), sustainable development (SDG 9), reduced inequalities (SDG 10), and domestic capacity for tax collection (SDG 17) (see Annex 1). EU funds can contribute significantly to addressing these challenges, but strong administrative capacity will be needed to ensure they are used effectively.

Enhancing innovation capacity and competitiveness

Productivity in Romania has been growing significantly, but there is ample scope for catching up with the rest of the EU. Over the past 20 years, labour productivity has been increasing more than in the rest of the EU (7.6% per year, on average), but Romania is still lagging behind (see Graph 3.1 and Annex 10). In particular SMEs, the backbone of the economy, have an average productivity three times lower than the EU average. While SMEs benefiting from large foreign direct investments are more sophisticated and innovative and have been contributing to the country's productivity growth, those without foreign support often remain undercapitalised, not well integrated in global value chains and struggle to absorb technology. They need a different ecosystem to be able to thrive.

Romania needs a competitive business environment. The main ingredients for a successful productive system are there, but they need to be integrate better. This requires fostering interaction between foreign-owned enterprises and inward-oriented companies, forging partnerships between science and industry, making markets for professions more competitive, and facilitating access to finance.

Romania struggles with innovation and firms' capacity to absorb technology remains limited. Gross expenditure in R&D is the lowest in the EU (see Annex 9). At company level, business expenditure in R&D is significantly lower than the average in the rest of the EU. Foreign-owned firms display higher capacity to adapt to new technologies, compared to their domestic peers. The relative number of tech start-ups and high-growth tech enterprises (often drivers of innovation) is lower than in other Member States.

Momentum for innovation is growing, but is concentrated in a few regions. The information and communications technology sector is booming, but mostly in the Bucuresti-Illfov, West and the North-West regions. Innovation hubs are emerging. For example, private and public actors in the North-East region, together with the regional development agency, created a successful community of entrepreneurs to mentor start-uppers and nurture entrepreneurship. However, such initiatives remain sporadic and there is a lack of strategic vision for the start-up ecosystem. Finally, outside of the large centres, research institutes are gradually losing the capacity (already scarce) to generate policy- or business-relevant research.

Graph 3.1: **Productivity growth and gap in Romania**

Source: European Commission

Science-industry partnerships, though still uncommon, can help narrow innovation gaps. Through these partnerships, companies can address critical issues affecting central business areas and core technologies, improve their access to advanced machinery and skilled scientists, and update their management practices and capabilities. However, Romania struggles to forge such partnerships. There is little support for entrepreneurial activities for academics (funding is irregular and limited) and companies often do not have innovation goals or strategies on how to achieve them.

Romania already uses elements to facilitate knowledge transfer, but has to complement them. Technology transfer entities were created to connect researchers and companies interested in applying the results of research projects, and to develop intellectual properties for academic staff. Despite a slight increase in funding for public-private partnerships and technology transfer activities, these entities remain underfunded and seem to operate without a clear strategic direction. Technology transfer offices within universities are still small, their personnel is largely not trained and there is no common structure to coordinate and steer their activities ([7]).

([7]) EC (2017)

Successful knowledge transfer and absorption requires research output closer targeted to industry needs. Research institutes cannot always provide that output, in part because of the highly fragmented research landscape. In 2018, a majority of state universities had less than 10 000 students and one-third had less than 5 000 students ([8]). Universities and research centres could serve business communities more effectively if they explored synergies and pooled resources, without breaking their ties with local industry.

Competitive firms need well-functioning markets for professional services. Some of these services like lawyers, notaries and accountants are essential to day-to-day business operations. They enable companies (especially small ones) to outsource supporting tasks and focus on their core business, thereby increasing productivity. Open and competitive services markets with low barriers to entry are therefore essential to Romania's competitiveness.

Some markets for professional services remain highly restricted. Lawyers need two licences to operate (one issued by the professional body and another by the state authority) and face stringent entry requirements. Their conduct (price setting, advertising and interprofessional cooperation) is also regulated more strictly than in most EU countries. In some circumstances, notaries have been colluding on their tariffs because of price controls ([9]). Accountants and tax advisors must be member of the respective chambers and are subject to numerous minimum education and training requirements, on top of the mandatory professional exams. The Romanian Competition Council is actively encouraging the removal of excessive red tape and barriers to markets for services - especially notaries and, more recently, accountants.

([8]) OECD-EC (2019)

([9]) WB (2020), OECD (2022) and the European Commission Staff Working Document (SWD(2021)185) accompanying the Communication on taking stock of and updating the reform recommendations for regulation in professional services of 2017.

Reassessing barriers to entry could be beneficial. Identifying requirements that can effectively guarantee a minimum quality standard, while scrapping those that are excessively discriminatory, could support competition and benefit consumers – and companies alike.

Poor access to finance is another crucial factor undermining the competitiveness of Romanian companies. On the supply side, large banks dominate the financial sector and require high credit standards. On the demand side, a large share of companies is either undercapitalised or has an equity below the regulatory minimum. Start-ups often face unstable revenue and collateral. Poor financial education among enterprises (and citizens) is another key obstacle to the development of financial markets. As a consequence, financial intermediation remains low, especially for domestic companies in non-metropolitan areas ([10]).

Financial intermediation needs to adapt to market characteristics. Incentives to attract business angels, and private equity and venture capital funds, which are currently not widespread (see Annex 10), could help diversify the financial sector. Microcredit, though currently scattered and fragmented, can encourage entrepreneurship, especially in remote areas ([11]). Finally, the National Development Bank, to be set up under the RRP, is expected to facilitate access to finance for SMEs and to encourage the incubation and acceleration of start-ups.

Improving access to social services, including active labour market policies, and education for disadvantaged groups

Certain societal groups face severe poverty. Romania has one of the highest shares of people at risk of poverty or social exclusion in the EU. The ratio between the top and bottom 20% of the income distribution (S80/S20) remains among the highest in the EU in 2020. Disadvantaged groups such as undeclared workers, the self-employed in agriculture, Roma, persons with disabilities, older people and the homeless are among the worst affected and are facing a level of risk above the EU average. For the Roma population in particular, initiatives for effective integration into the labour market and for effective coverage by public services are limited. Child poverty increased from 40% in 2019 to 41.5% in 2020 and remains among the highest in the EU. Energy poverty of vulnerable households is high with limited support to help them tackle the impact of increased energy prices. The Romanian authorities adopted a legal framework for the protection of vulnerable consumers (Law No 226/2021) which brings additional support for those at risk due to the energy price increases. Tackling these challenges is key for Romania to contribute to achieving the 2030 EU headline target on poverty reduction.

Access to essential and social services remains insufficient, with significant rural-urban and regional disparities. Social transfers have a very low impact on poverty reduction (15.8% in 2020 compared to the EU average of 32.4%). The "minimum inclusion income" reform under the RRP to improve the efficiency of the current social assistance benefits is expected to be progressively rolled out from 2022.

The activation measures provided by the public employment services (PES), including upskilling and re-skilling, remain limited. The proportion of PES clients benefiting from training is declining, as are activity rates**.** The overall participation in activation measures remains among the lowest in the EU. In 2019, only around 8% of the people registered as unemployed benefitted from activation measures and even less benefited from trainings. Support for the unemployed consists primarily of employment subsidies. The share of adults participating in learning activities, at 4.9% in 2021, is among the lowest in the EU, and only 28% have at least basic digital skills (compared to the EU

([10]) OECD (2022)

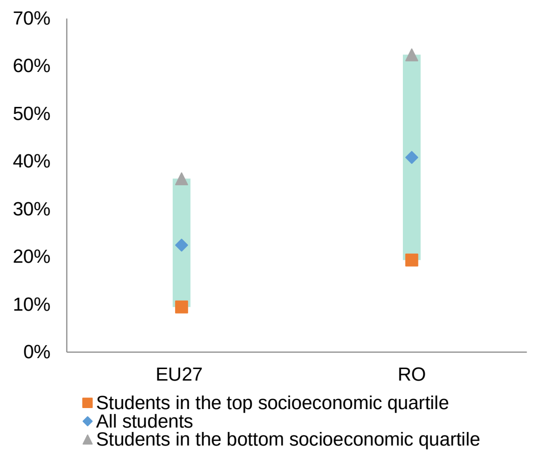
([11]) OECD (2022)

average of 54% in 2021). Consequently, labour shortages and skills mismatches persist ([12]). Targeted measures (e.g., upskilling and reskilling) are clearly needed, including substantially increasing the capacity of PES to provide individualised pathways and integrated approaches. Cooperation with social partners and other relevant actors is crucial for delivering results. The quality and scope of social dialogue remains limited and social partners are rarely involved in defining reforms or policy developments.

Educational outcomes are low overall, but particularly among disadvantaged groups. Lack of basic skills, measured by the PISA test, is high across the board, even among students from advantaged socio-economic backgrounds, and points to structural challenges hampering the quality of education. Still, the gap in low achievement between students from the upper and the lower socio-economic quartile is one of the widest in the EU (see Graph 3.2), suggesting a strong connection between socio-economic status and educational outcomes. Furthermore, disadvantaged students tend to concentrate in certain schools, leading to segregation. More than 50% of Roma children aged 6-15 attend schools where the majority of students are Roma ([13]). Socio-economic status also affects students' expectations of their future achievements ([14]). Measures to improve equity in education and provide support services to disadvantaged students remain weak.

Rural-urban disparities in education persist. More than 40% of Romania's primary and lower secondary-aged children attend schools in rural areas, which have lower educational outcomes. In 2021, 37% of eighth-graders from schools in rural areas who sat the national evaluation did not obtain the minimum pass mark (11% in urban schools). The state of educational infrastructure in rural areas is worse than in urban settings, including buildings, laboratories, and internet connections.

Graph 3.2: **Low achievement in reading by socioeconomic status**



Source: European Commission

Disparities in access to good quality education have widened during the pandemic. Romania is experiencing one of the highest rates of early school leaving in the EU (15.3% in 2021, compared to an EU average of 9.7%). Between 2020 and 2021, the rate has remained relatively stable. However, the effects of the COVID-19 crisis could worsen the risk of early school leaving, which is already particularly affecting those from disadvantaged groups, including Roma and those in rural areas. The crisis therefore creates further risks to educational outcomes and inequalities, due to the extended school closures and the difficulties for many students to access and effectively engage in remote learning, particularly disadvantaged groups.

Teachers continue to face considerable challenges. While some important steps have already been taken to strengthen the teaching profession, initial and continuous teacher education is not sufficiently aligned with classroom needs, and supporting improvements on practical-experience is still largely needed. Attracting highly qualified teachers and support specialists to disadvantaged schools also remains a challenge.

([12]) Approximately 36% of workers do not work in the field of their studies, leading the EU mismatch (EU average 28.6%).

([13]) Roma Survey 2021, EU Agency for Fundamental rights (Forthcoming)

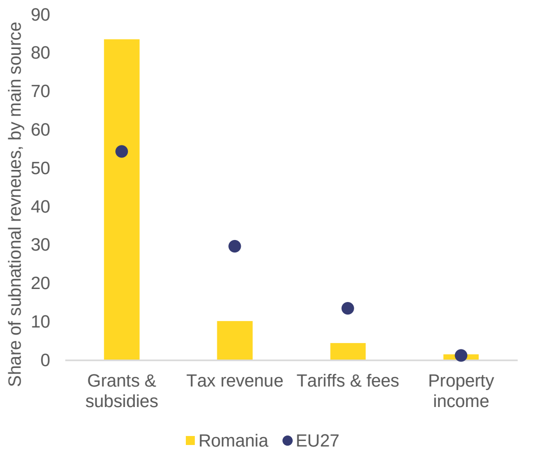
([14]) Among 15 year-olds sitting the PISA test in 2018, only 33% in the poorest quartile expect to pursue higher education, compared to 87.3% among more advantaged students.

Improving quality and equity in education remains as a challenge. Romania is still among the worst performers in the EU in meeting the targets set out in the European Education Area strategic framework (see Annex 13). Further measures are therefore needed to address some of the serious and longstanding challenges in the country's education sector.

Strengthening local capacity

Local authorities in Romania have limited own resources. Since 1990, the central government has decentralised responsibilities to local governments providing them with sources of revenues, which remain very low compared to other Member States. Subnational expenditure needs are covered disproportionally by usually earmarked transfers from the central government (See Graph 3.3). The scope of their use is therefore limited and outside local administrations' control ([15]).

Graph 3.3: **Subnational revenues by source**



Source: European Commission

This fiscal set-up does not empower local authorities. In fact, it makes them act like spending agents on behalf of the central government, rather than independent administrative units. Local direct investments as a share of subnational expenditure is one of the highest in the EU, but is mostly financed through the transferred state budget. Absence of ownership, coupled with management deficiencies, eventually results into poor quality local services and infrastructure. At the same time, the unpredictable distribution of equalisation grants undermines local authorities' capacity to plan ahead. Providing local authorities with their own tax instruments and tax base could enhance accountability and ownership at local level, improving public services.

The completion of the cadastre would broaden the property tax base and increase local authorities' own revenues. Around 42% of real estate properties in Romania are registered in the integrated IT system for the cadastre and land book. Taxes on buildings and on land are the main source of own resources for local authorities, which enjoy some discretion in setting rates within an allowable range set out in the tax code. Revenues from property tax remain small (see Annex 18). This is partly due to the weak link between recurrent taxes on immovable property and housing values ([16]).

Energy-related challenges due to the geopolitical situation should encourage European security of supply

Given the current geopolitical situation, Romania faces energy-related challenges. Fossil fuels still make up a large share of the energy mix (70% of the energy mix, and oil and natural gas accounts for nearly 60%), while the share of renewable power remains limited (20%). Romania is the second largest gas producer in the EU, serving mostly the domestic market, but still imports gas from Russia during winter times. According to 2020 data, Russian imports of natural gas was 45% of total gas imports for Romania. ([17]) In order

([15]) SNG-WOFI (2018)

([16]) OECD (2022)

([17]) Eurostat (2020), share of Russian imports over total imports of natural gas. Total imports include intra-EU trade.

to reduce dependency on fossil fuels and to ensure a stable gas supply, Romania needs to further diversify its energy mix, improve its energy efficiency and increase interconnection capacity. Moreover, off-shore gas discoveries in the Black Sea could reduce Romania's dependency on Russian natural gas and allow the country to challenge Russia's dominance of the regional energy market with exports. In addition, Romania is planning to further invest in nuclear power.

Romania has committed to phase out most of its coal-fired generation capacity (85%) by 2025 and to fully phasing out coal by 2032. To achieve this ambitious target, the RRF and other EU funds, such as the Modernisation Fund, include significant decarbonisation investments in the installation of new renewable energy capacity. However, the green transition and the steep forecasted increase in energy consumption will require significant upgrades in energy transmission networks and speeding up the deployment of green infrastructure investment. Infrastructure to ensure security of supply is of utmost importance. To further support the climate and energy transition, other sources of funding could be used such as the EU ETS revenues.

Romania has an electricity interconnection capacity lower than 10%, which could be increased via projects with neighbouring countries. To increase its renewable energy share, the country's RRP includes significant investments and major reform projects that will take some years to be fully implemented as well as new projects to support the production of hydrogen. Regarding gas, Russian imports come via Ukraine. Romania is connected to other countries, for example Hungary and Bulgaria, but no alternative routes or LNG exists for now.

The old building stock requires energy renovation works to increase energy efficiency. Measures should focus on substantially increasing energy performance so as to rapidly lower energy demand. While the Romanian RRP envisages the renovation of 2.4 million m^2 and 4.4 million m^2 for public and residential buildings, respectively, this surface area only accounts for a fraction of the country's building stock. A better management of energy consumption of fossil fuel units in industry and heating system can foster further energy consumption savings, benefitting both citizens and companies alike.

Research and innovation will be essential for the energy transition. Beyond the uptake of existing technologies, research and innovation is critical for delivering novel and disruptive renewable energy technologies and energy storage solutions to underpin the transition. Suitable financial allocations, coupled with clearly articulated research and innovation objectives and funding targets are instrumental.

KEY FINDINGS

Romania's recovery and resilience plan includes measures to address a series of structural challenges through:

- Reforms aimed at boosting tax collection, improving public expenditure management and increasing fiscal sustainability of the public pension system, while increasing its fairness.
- Promotion of zero-emission road transport and modal shift to more sustainable transport modes, such as railways and inland waterways; modernisation and renewal of railways infrastructure and support to public transport, to improve sustainability and air quality.
- Commitment to phase out coal and lignite-fired power production by 2032 and to concrete targets for renewable energy production.
- Digitalisation of public administration and public services, including the creation of a government cloud.
- Reform of the pension system and of the minimum wage.

Beyond the reforms and investments in the RRP, Romania would benefit from:

- Making the market of services to businesses more open and competitive. Remove unnecessary regulatory barriers to access certain professions, notably notaries, architects and accountants.
- Improving the relationship between scientific research and the industry by creating appropriate research and development partnerships.
- Addressing the regional disparities in access to social services, in particular in rural areas.
- Improving the situation of vulnerable groups by enhancing skills and providing more effective activation measures, including by significantly strengthening the capacity of the Public Employment Services to provide targeted and integrated support. Increase attractiveness of professional and adult training. Fostering equal opportunities in the education system by enhancing the quality and inclusiveness, in particular for Roma of both early childhood education and the school system. Reduce the imbalance of schooling quality between urban and rural areas.
- Putting an end to the excessive deficit situation by 2024 at the latest, by means of a budgetary consolidation with the objective to secure a lasting correction on the excessive deficit, while being geared towards enhancing the quality of the public finances and reinforcing the growth potential of the economy.
- Reduce overall reliance on fossil fuels and diversify imports of fossil fuels, speed up the deployment of green infrastructure investment, upgrade energy transmission grids, frontload investment in interconnection with neighbouring countries to increase security of supply and increase pace and ambition of renovations to advance energy efficiency of building stock and decarbonisation of industry.

ANNEXES

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This annex assesses Romania'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 ([18]) is based on the EU SDG indicator set, developed to monitor progress on SDGs in an EU context.

While Romania performs very well or is improving on several SDG indicators related to *environmental sustainability* (SDGs 2, 9, 6, 11, 12, 13 and 15), it still needs to catch up (SDG 12) or to maintain its progress (SDG 7) on others. On responsible consumption and production, Romania has been performing poorly. Its circular material use rate is declining while the EU as a whole has progressed substantially (1.3% vs12.8% in in 2020). The material footprint of the Romanian economy has also significantly increased (almost by a third) since 2015 while it remained stable in the EU. Performance on other indicators linked to climate action, life on land and the sustainability of cities and communities has been more positive. The RRP will further help Romania to address its current challenges notably with strong reforms to support the circular economy and improve waste management but also with flagship reforms on the phasing out of coal and the decarbonisation of road transport.

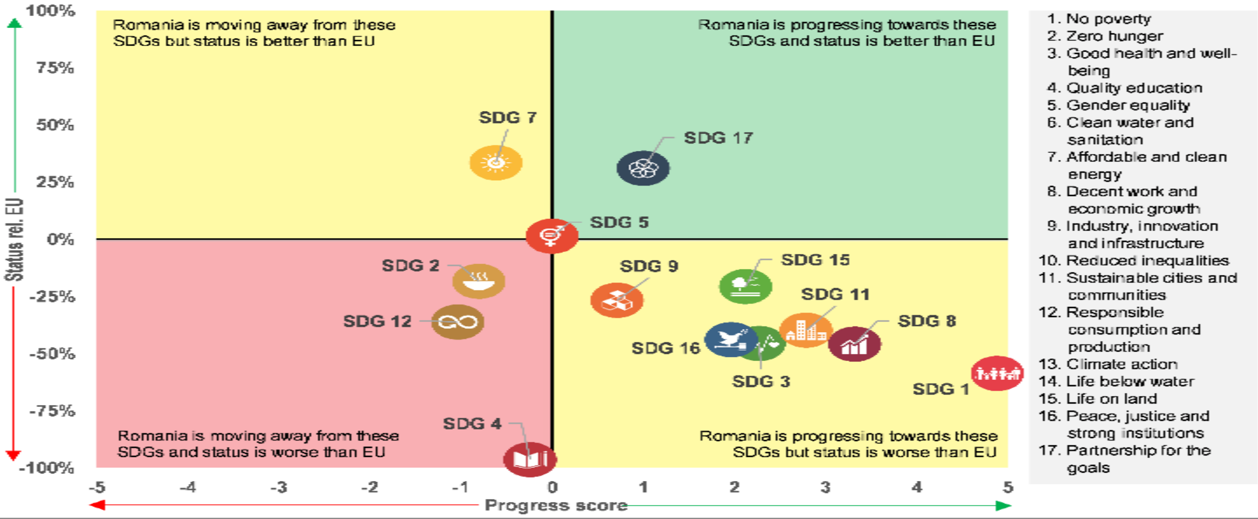
While Romania is improving on most SDG indicators related to *fairness* (SDGs 1, 2, 3, 8 and 10), it still needs to catch up on others (SDGs 4 and 5). Poverty and deprivation decreased and basic health outcomes improved in general between 2015 and 2020. However, Romania's track record on gender equality is concerning as women's participation in the labour market remains low: the gender employment gap increased from 17.7 pps to 19.3 pps between 2015 and 2020 while it remained stable at around 11 pps during the same period in the EU. Romania also needs to catch up on the quality of education as participation in early childhood education decreased by 6.6% between 2014 and 2019 (against a stable EU trend). Measures in the RRP to digitalise education and a system of grants to reduce the drop-out rate will help to address these challenges.

Romania is improving on some indicators related to *productivity* (SDGs 8 and 9) but needs to catch up on others (SDG 4). Romania has performed well, halving its long-term unemployment rate between 2015 and 2020 bringing it to below the EU average in 2020 (1.5% vs 2.4%). However, it also shows low and stable public expenditure on R&D (0.47% in 2020 vs an EU average of 2.32%) which affects industrial capabilities and its patent production. Tertiary educational achievement (at 24.9% in 2020) is also declining in contrast with the general growth in the EU over the past 5 years. To address challenges linked to productivity, the RRP plans to upgrade and digitalise university infrastructure, giving grants for IT laboratories and smart hubs and developing open educational resources.

Romania is improving on SDG indicators related to growth and employment (SDG 8) but weaknesses on rule of law and corruption perception persist (SDG 16). GDP per capita has progressed somewhat faster than the EU average (by 21% vs 1.7%), as has the employment rate. The situation is mixed regarding institutions and there are continued concerns about respect for the rule of law. The percentage of the population reporting crime or violence fell by a third between 2015 and 2020 and at 8.8% and is lower than the EU average (11% in 2021). The RRP is expected to increase the effectiveness of the judicial system and the fight against corruption and to contribute to improving trust in public administration.

([18]) For detailed datasets on the various SDGs see the annual ESTAT report 'Sustainable development in the European Union', https://ec.europa.eu/eurostat/web/products-statistical-books/-/KS-03-21-096; Extensive country specific data on the short-term progress of Member States can be found here: https://ec.europa.eu/eurostat/product?code=KS-09-22-019.

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



For detailed datasets on the various SDGs see the annual ESTAT report 'Sustainable development in the European Union', https://ec.europa.eu/eurostat/web/products-statistical-books/-/KS-03-21-096; 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.

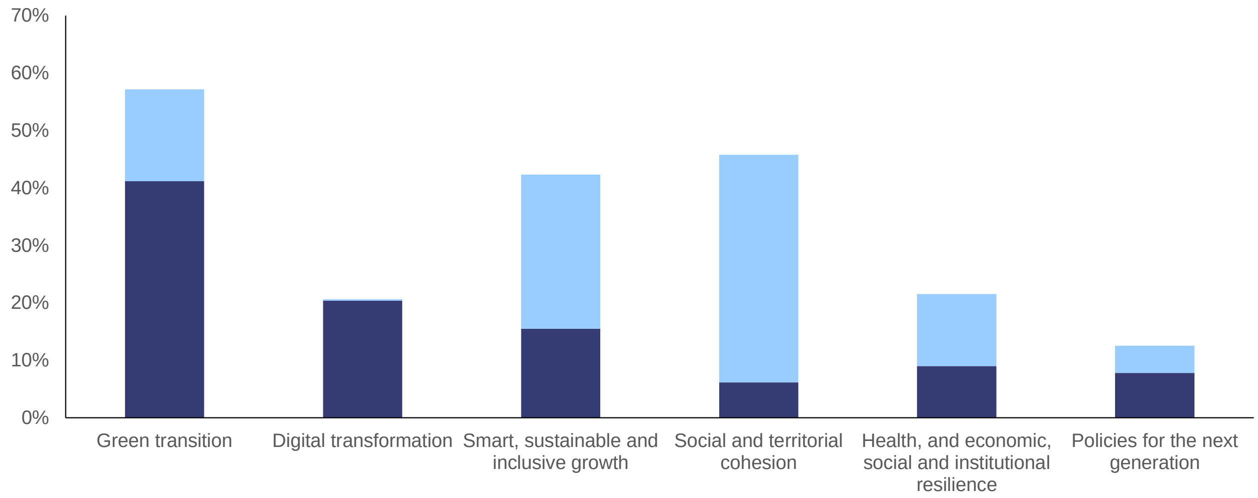
The Recovery and Resilience Facility (RRF) is the centrepiece of the EU's efforts to support its recovery from the COVID-19 pandemic, fast forward the twin transition and strengthen resilience against future shocks. Romania submitted its recovery and resilience plan (RRP) on 31 May 2021. The Commission's positive assessment on 28 September 2021 and the Council's approval on 29 October 2021 paved the way for disbursing EUR 14.2 billion in grants and EUR 14.9 billion in loans under the RRF in 2021-2026. The financing and the loan agreements were signed on 25 November 2021 and 15 December 2021 respectively. The key elements of the Romanian RRP are set out in Table A2.1. The share of funds contributing to each of the RRF's six policy pillars is outlined in graph A2.1.

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

Total allocation	EUR 14.2 billion in grants (6.5% of 2019 GDP) and EUR 14.9 billion in loans
Investments and Reforms	122 investments and 64 reforms
Total number of Milestones and Targets	507
Estimated macro economic impact (1)	Raise GDP by 1.8%-2.9% by 2026 (0.2% in spillover effects)
Pre-financing disbursed	EUR 1.8 billion in grants (December 2021) and EUR 1.9 billion in loans (January 2022)
First instalment	Romania did not yet submit a first payment request

(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 2022.

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



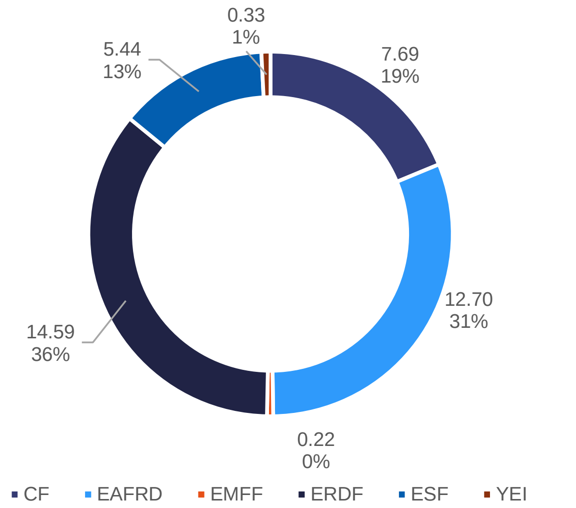
(1) Each measure contributes towards two policy areas of the six pillars, therefore the total contribution to all pillars displayed on this chart amounts to 200% of the estimated cost of the 22 RRPs approved in 2021. The bottom part represents the amount of the primary pillar, the top part the amount of the secondary pillar.
Source: RRF Scoreboard
https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/country_overview.html

The 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.

In 2021-2027, EU cohesion policy funds ([19]) will support long-term development objectives in Romania by investing EUR 32.45 billion ([20]), including EUR 2,139.7 million from the Just Transition Fund to alleviate the socio-economic impacts of the green transition in the most vulnerable regions. The 2021-2027 cohesion policy funds partnership agreements and programmes take into account 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, Romania will benefit from EUR 15.1 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.

In 2014-2020, the European Structural and Investment Funds for Romania are set to invest EUR 34.76 billion ([21]) from the EU budget. The total investment including national financing amounts to EUR 40.97 billion (Graph A3.1), representing around 3.09% of GDP for 2014-2020 and 58.03% of public investment ([22]). By 31 December 2021, 128% of the total was allocated to specific projects and 54% was reported as spent, leaving EUR 18.76 billion to be spent by the end of 2023 ([23]). Of the 11 objectives the most relevant ones for cohesion policy funding in Romania are network infrastructure in transport and energy, environment protection and resource efficiency, sustainable and quality employment and social inclusion and low carbon economy (in total EUR 19.05 billion). By the end of 2020, cohesion policy investments had supported to more than 4 500 firms and helped improve the water supply of more than 300 000 people and the energy efficiency of more than 33 000 households. European Social Fund (ESF) policy investments supported more than 120 000 unemployed and inactive people, provided 56 000 vulnerable people with integrated services and 480 000 people benefited from preventive healthcare services and trained more than 41 000 teachers, in particular to address the needs of vulnerable groups. In addition, more than 17 million food and hygiene packages were distributed to socially vulnerable people.

Graph A3.1: **ESIF 2014-2020 Total budget by fund (EUR billion, % of total)**



(1) ESIF includes cohesion policy funds (ERDF, ESF+, CF, Interreg), 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 for 2014-2020 must be spent by 2023 at the latest (by 2025 for EAFRD).
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.

Cohesion policy funds are already substantially contributing to the Sustainable Development Goals (SDGs) objectives. In

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

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

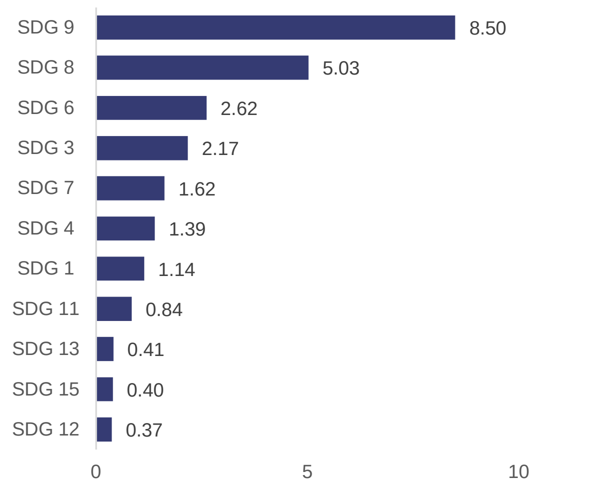
([21]) ESIF includes cohesion policy funds (ERDF, ESF+, CF, Interreg) and European Agricultural Fund for Rural Development (EAFRD) and European Maritime and Fisheries Fund (EMFF). According to the 'N+3 rule', the funds committed for the years 2014-2020 must be spent by 2023 at latest (by 2025 for EAFRD). 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.

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

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

Romania, cohesion policy funds (Graph A3.2) support 11 of the 17 SDGs with up to 93% of the expenditure contributing to the attainment of the goals.

Graph A3.2: **Cohesion policy contribution to the SDGs (EUR billion)**



(1) SDG 1 No poverty, SDG 3 Good health and well being, SDG 4 Quality education, SDG 6 Clean water and sanitation, SDG 7 Affordable and clean energy, SDG 8 Decent work and economic growth, SDG 9 Industry, innovation, infrastructure, SDG 11 Sustainable cities and communities, SDG 12 Responsible consumption and production, SDG 13 Climate action, SDG 15 Life on land
Source: European Commission, DG REGIO.

The REACT-EU instrument (Recovery Assistance for Cohesion and the Territories of Europe) under NextGenerationEU provided EUR 1 540 million of additional funding to 2014-2020 cohesion policy allocations for Romania to ensure a balanced recovery, boost convergence and provide vital support to regions following the coronavirus outbreak. REACT-EU provided support in Romania to SMEs in the form of working capital and productive investments. It contributed to the short-time work schemes, reinforced the health care system, strengthened education, training and skills development, promoted energy efficiency and reduced material deprivation with direct food delivery.

The Coronavirus Response Investment Initiative ([24]) provided the first EU emergency support to Romania for the COVID-19 pandemic. It introduced extraordinary flexibility enabling Romania to re-allocate resources for immediate public health needs (470 million) and to support businesses (550 million). For instance, Romania redirected fund to purchase protective equipment and healthcare material, reinforce healthcare staff, provide working capital for SMEs, support digitalisation of the education system through purchase of IT equipment and provide subsidies for technical unemployment. Romania also benefited from the temporary 100% EU financing of cohesion policy measures, with approximately EUR 463 million in 2021 through 100% co-financing.

Romania 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 Romania in September 2020 for a maximum of EUR 4.099 billion, 73% of which was disbursed by 2 May 2022. SURE is estimated to have supported approximately 15% of workers and 10% of firms for at least one month in 2020 and 2% of workers and 1% of firms in 2021, primarily in accommodation and food services, professional, scientific and technical activities, and construction. Romania is estimated to have saved a total of EUR 0.85 billion on interest payments as a result of SURE's lower interest rates.

The Commission provides tailored expertise to Romania under the Technical Support Instrument. As of 2022 Romania receives help with building its capacity to implement specific reforms and investments in the RRP, for instance for enhancing policy coherence, transparency and coordination at the centre of the government. New technical support projects will contribute, among others, to enhance gender mainstreaming in public policy and the budgetary processes. The country will benefit from additional RR-related technical support, to develop a national hydrogen strategy and action plan and to set up and run a corporate governance mechanism in state-owned enterprises.

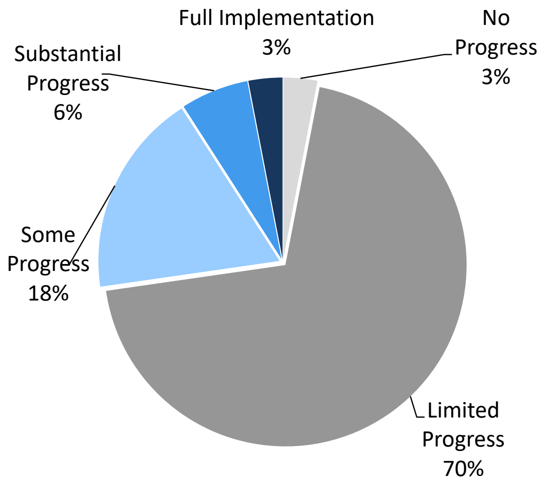
Romania also benefits from other EU programmes such as the Connecting Europe Facility, which allocated EUR 985.3 million to specific projects on strategic transport networks, and Horizon 2020, which allocated EU funding of EUR 299.8 million.

([24]) 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) ([25]) **addressed to Romania in the context of the European Semester**. The assessment takes into account the policy action taken by Romania to date ([26]), as well as the commitments in the Recovery and Resilience Plan (RRP) ([27]). At this early stage of the RRP implementation, overall 27% of the CSRs focusing on structural issues in 2019 and 2020 have recorded at least "some progress", while 73% recorded "limited" or "no progress" (see Graph A4.1). Considerable additional progress in addressing structural CSRs is expected in the years to come with the further implementation of the RRP.

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



Source: European Commission

([25]) 2021 CSRs: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021H0729%2823%29&qid=1627675454457
2020 CSRs: EUR-Lex - 32020H0826(23) - EN - EUR-Lex (europa.eu)
2019 CSRs: EUR-Lex - 32019H0905(23) - EN - EUR-Lex (europa.eu)

([26]) 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).

([27]) 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. 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.

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

Romania	Assessment in May 2022*	RRP coverage of CSRs until 2026
2019 CSR1	**Limited Progress**	
Ensure compliance with the Council recommendation of 14 June 2019 with a view to correcting the significant deviation from the adjustment path toward the medium-term budgetary objective.	Not relevant anymore	Not applicable
Ensure the full application of the fiscal framework.	No Progress	
Strengthen tax compliance and collection.	Limited Progress	Relevant RRP measures planned as of 2022
2019 CSR 2	Some Progress	
Safeguard financial stability and the robustness of the banking sector.	Substantial Progress	
Ensure the sustainability of the public pension system and	Limited Progress	Relevant RRP measures being implemented as of 2021 and planned as of 2022 and 2023
the long-term viability of the second pillar pension funds.	Some Progress	
2019 CSR 3	**Limited Progress**	
Improve the quality and inclusiveness of education, in particular for Roma and other disadvantaged groups.	Limited Progress	Relevant RRP measures being implemented as of 2021 and planned as of 2022
Improve skills, including digital, notably by increasing the labour market relevance of vocational education and training and higher education.	Limited Progress	Relevant RRP measures planned as of 2022
Increase the coverage and quality of social services and	Limited Progress	Relevant RRP measures planned as of 2022
complete the minimum inclusion income reform.	Limited Progress	Relevant RRP measures planned as of 2022
Improve the functioning of social dialogue.	Limited Progress	Relevant RRP measures planned as of 2022
Ensure minimum wage setting based on objective criteria, consistent with job creation and competitiveness.	Limited Progress	Relevant RRP measures planned in 2024
Improve access to and cost-efficiency of healthcare, including through the shift to outpatient care.	Limited Progress	Relevant RRP measures being implemented as of 2021 and planned as of 2022 and 2023
2019 CSR4	**Some Progress**	
Focus investment-related economic policy on transport, notably on its sustainability, low carbon energy and energy efficiency, environmental infrastructure as well as innovation, taking into account regional disparities.	Some Progress	Relevant RRP measures being implemented as of 2021 and planned as of 2022 and 2023
Improve preparation and prioritisation of large projects and accelerate their implementation.	Some Progress	Relevant RRP measures being implemented as of 2021 and planned as of 2022 and 2023
Improve the efficiency of public procurement and ensure full and sustainable implementation of the national public procurement strategy.	Some Progress	Relevant RRP measures planned as of 2023
2019 CSR 5	**Limited Progress**	
Ensure that legilsative initiatives do not undermine legal certainty by improving the quality and predictability of decision-making, including by appropriate stakeholder consultations, effective impact assessments and streamlined administrative procedures.	Limited Progress	Relevant RRP measures being implemented as of 2021 and planned as of 2022
Strengthen the corporate governance of state-owned enterprises.	Limited Progress	Relevant RRP measures being implemented as of 2021 and planned as of 2022 and 2023
2020 CSR1	**Limited Progress**	
Pursue fiscal policies in line with the Council's recommendation of 3 April 2020, while taking all necessary measures to effectively address the pandemic, sustain the economy and support the ensuing recovery.	Not relevant anymore	Not applicable
Avoid the implementation of permanent measures that would endanger fiscal sustainability.	Limited Progress	Relevant RRP measures being implemented as of 2021 and planned as of 2022
Strengthen the resilience of the health system, including in the areas of health workers and medical products, and improve access to health services.	Limited Progress	Relevant RRP measures being implemented as of 2021 and planned as of 2022
2020 CSR2	**Limited Progress**	
Provide adequate income replacement and	Substantial Progress	
extend social protection measures and	Limited Progress	Relevant RRP measures planned as of 2022
extend access to essential services for all.	Limited Progress	Relevant RRP measures being implemented as of 2021 and planned as of 2022 and 2023
Mitigate the employment impact of the crisis by developing flexible working arrangements and activation measures.	Limited Progress	Relevant RRP measures planned as of 2024
Strengthen skills and digital learning and	Limited Progress	Relevant RRP measures planned as of 2022
ensure equal access to education.	Limited Progress	Relevant RRP measures being implemented as of 2021 and planned as of 2022 and 2023

(Continued on the next page)

Table (continued)

2020 CSR 3	**Limited Progress**	
Ensure liquidity support to the economy benefiting businesses and households, particularly small and medium-sized enterprises and the self-employed.	Full Implementation	Relevant RRP measures being implemented as of 2021 and planned as of 2022
Front-load mature public investment projects and	Limited Progress	Relevant RRP measures planned as of 2022 and 2023
promote private investment to foster the economic recovery.	Some Progress	Relevant RRP measures being implemented as of 2021 and planned as of 2022
Focus investment on the green and digital transition, in particular on sustainable transport,	Limited Progress	Relevant RRP measures being implemented as of 2021 and planned as of 2022
digital service infrastructure,	Limited Progress	Relevant RRP measures being implemented as of 2021 and planned as of 2022 and 2023
clean and efficient production and use of energy and environmental infrastructure, including in the coal regions.	Limited Progress	Relevant RRP measures being implemented as of 2021 and planned as of 2022 and 2023
2020 CSR 4	**Limited Progress**	
Improve the quality and effectiveness of public administration and	Some Progress	Relevant RRP measures planned as of 2022 and 2023
improve the predictability of decision-making, including through an adequate involvement of social partners.	Limited Progress	Relevant RRP measures being implemented as of 2021 and planned as of 2022
2021 CSR1	**Limited Progress**	
Pursue fiscal policies in line with the Council Recommendation of 18 June 2021 with a view to bringing an end to the situation of an excessive government deficit in Romania.	Limited progress	Not applicable

* See footnote 27.

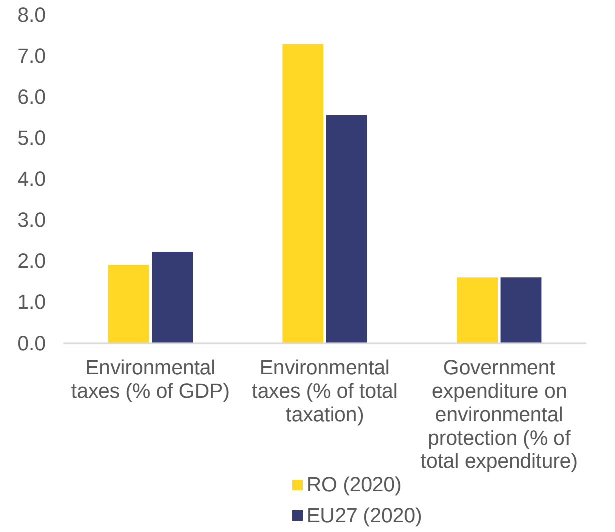
Source: European Commission

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 Romania 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.

Romania significantly reduced its greenhouse gas (GHG) emissions in previous decades but more efforts will be needed to achieve the new ambitions set out in the EU climate law. The country's total greenhouse gas emissions (save land use) have decreased considerably since 1990. Emissions per capita are lower than the EU average but the emissions intensity of the economy is still twice as high as the EU average. In 2020, emissions in sectors not covered by the EU emissions trading system (ETS) were lower than the 2020 target of limiting the increase to +19% compared to 2005. However, Romania is not likely to reach its current 2030 target for non-ETS emissions of -2% even with additional measures. Moreover, to reach the proposed ESR target under the Fit for 55 package of -12.7% will require considerable additional efforts. Under current land management practices, Romania is projected to see decreasing net removals by 2030. In its recovery and resilience plan (RRP), Romania earmarks 41% of its allocation for climate objectives and outlines crucial reforms and investments to accelerate the transition to a more sustainable, low-carbon and climate-resilient economy.

Romania has increased investment in environmental protection and decreased fossil fuel subsidies, but there is still a long way to go given the absorption and capacity issues. Progress on environmental tax collection is mixed (Graph A5.1). Environmental policy developments in Romania are mainly driven by EU directives and Regulations, and the relevant EU rules are generally transposed on time. Implementation remains the main challenge, with practical application proving to be difficult. Romania's tax revenues are above the EU average in terms of the share of total tax revenues, but below the EU average as share of GDP. Environmental taxation is largely driven by energy taxes, with a smaller proportion attributed to transport and pollution taxes. Fossil fuel subsidies have been steadily decreasing since 2016. Meanwhile, the climate risk to public finances due to uninsured assets is considered low-medium, with a significant share of uninsured climatological losses (see Annex 18).

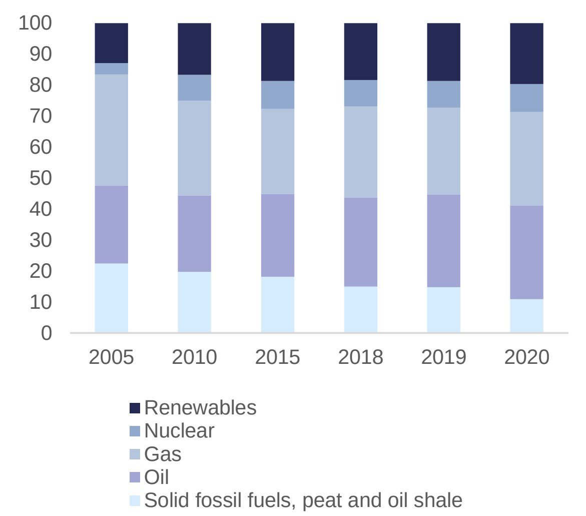
Graph A5.1: **Fiscal aspects of the green transition Taxation and government expenditure on environmental protection**



Source: Eurostat

Romania is still largely reliant on fossil fuels in 2020 (Graph A5.2). Gross inland consumption is mainly driven by coal, lignite, oil and natural gas, which accounts for nearly 71% in the energy mix. Nuclear accounts for 9% of the energy mix, renewables for around 20%. Both are planned to increase, while the share of fossil fuels is expected to decline over time. In its RRP, Romania plans to phase out coal and lignite power by 2032 and further deploy renewables and hydrogen. The setting-up of additional renewable energy capacities until 2030 of approximately 6.9 GW compared to 2020 is planned. For this to happen, the reforms in the energy market and permitting included in the RRP are essential.

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

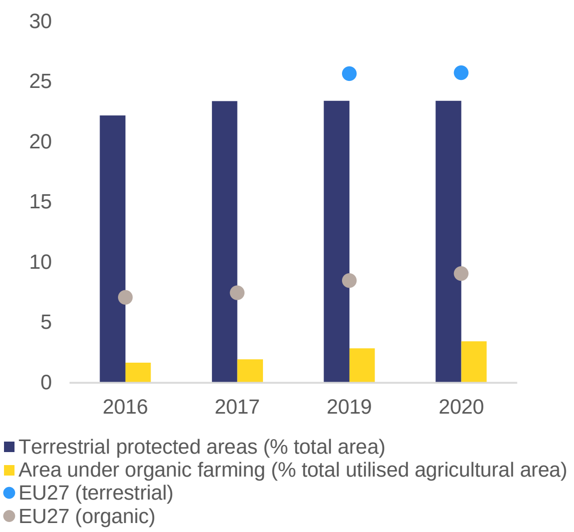


(1) The energy mix is based on gross inland consumption, and excludes heat and electricity. The share of renewables includes biofuels and non-renewable waste
Source: Eurostat.

In biodiversity and ecosystem health, Romania presents a mixed picture (Graph A5.3). The country performs above the EU average on the share of Natura 2000 terrestrial protected areas but below the EU average on utilised agricultural area under organic farming. Around 68% of the habitats and 46% of species were in good conservation status. On birds, about 19% of breeding species showed short-term increasing or stable population trends while for the wintering species the share stood at 15%. The share of habitats and species in good conservation status seems to have increased between the two last reporting periods, however figures provided are not necessarily directly comparable because changes in Romania's conservation status may be due to changes in methods or better data rather than reflecting genuine changes. Agriculture put by far the greatest pressure on habitats while for species the main sources pf pressure were the development, construction and use of infrastructure and the extraction and cultivation of living resources. Progress has been made on adopting management plans for Natura 2000 sites but a number are still missing, and the management of the sites is not always effective. Forests cover 32.46% of Romania's territory.

In terms of pollution, air quality in Romania continues to be a severe concern. Emissions of key air pollutants have decreased significantly in Romania in recent years. In 2020, exceedances above air quality standards were registered for nitrogen dioxide in three air quality zones and for particulate matter (PM_{10}) in four zones. Furthermore, for several air quality zones the targets on ozone concentration have not been met. Persistent breaches of air quality requirements, which have severe negative effects on health and the environment, are being followed up by the Commission through infringement procedures. Romania has failed to submit the latest air pollutant emission projections required under the National Emission Reduction Commitments Directive. Furthermore Romania it the only Member State that has not submitted its National Air Pollution Control Programme on the reduction of national emissions of certain atmospheric pollutants. On nitrates pollution of ground water, the situation seems to have slightly improved. However, Romania has eutrophication issues and some polluted hotspots. Romania designated all its territory as sensitive areas and decided that agglomerations over 10 000 p.e. discharging into sensitive areas must apply biological treatment with nitrogen and phosphorus removal.

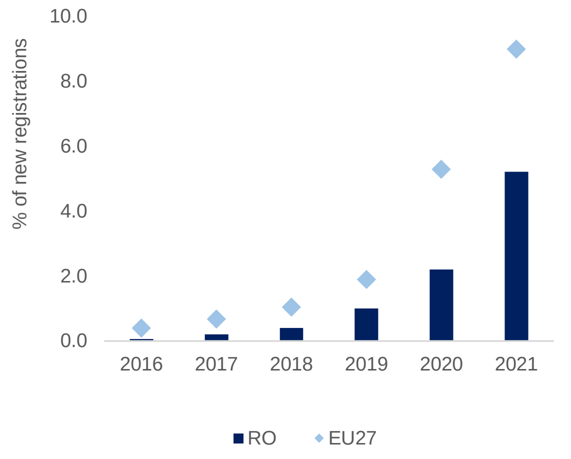
Graph A5.3: **Terrestrial protected areas and organic farming**



(1) 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).

On mobility, the share of zero-emission vehicles in new car registration has substantially increased over recent years but is still half the EU average (Graph A5.4). The density of public charging points is above EU average; its accelerated expansion is vital to the further development of electromobility. While only slightly more than a third of the overall rail network in Romania is electrified, the share reaches 98% for the Romanian part of the TEN-T network, where most of the traffic is concentrated.

Graph A5.4: **Mobility Share of zero emission vehicles**



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

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

						Target	Distance		'Fit for 55' Target	Distance	
			2005	2019	2020	2030	WEM	WAM	2030	WEM	WAM
Progress to policy targets	Non-ETS GHG emission reduction target [(1)]	MTCO2 eq; %; pp [(2)]	79.4	0%	0%	-2%	-1	1	-13%	-12	-10

			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)]	%	18%	25%	24%	24%	24%	24%	31%
	Energy efficiency: primary energy consumption [(1)]	Mtoe	36.1	30.7	32.5	32.6	32.1	30.9	32.3
	Energy efficiency: final energy consumption [(1)]	Mtoe	24.6	22.2	23.3	23.6	23.9	23.5	25.7

			ROMANIA						EU		
			2015	2016	2017	2018	2019	2020	2018	2019	2020
Fiscal and financial indicators	Environmental taxes (% of GDP)	% of GDP	2.5	2.4	1.9	2.0	2.1	1.9	2.4	2.4	2.2
	Environmental taxes (% of total taxation)	% of taxation [(3)]	8.8	9.3	7.8	7.6	8.1	7.3	6.0	5.9	5.6
	Government expenditure on environmental protection	% of total exp.	2.65	1.76	1.49	2.10	2.00	1.61	1.66	1.70	1.61
	Investment in environmental protection	% of GDP [(4)]	1.03	0.36	0.24	0.34	0.31	-	0.42	0.38	0.41
	Fossil fuel subsidies	EUR2020bn	0.94	1.17	1.10	1.08	0.80	-	56.87	55.70	-
	Climate protection gap [(5)]	score 1-4	1.7 out of 4 (slight decrease from historical level of 1.8). This is a low/medium risk category (4 being a high risk).								
Climate	Net GHG emissions	1990 = 100	47	46	44	44	43	41	79	76	69
	GHG emissions intensity of the economy	kg/EUR'10	0.82	0.77	0.74	0.71	0.66	0.65	0.32	0.31	0.30
	Energy intensity of the economy	kgoe/EUR'10	0.22	0.21	0.21	0.20	0.19	0.19	0.12	0.11	0.11
Energy	Final energy consumption (FEC)	2015=100	100.0	101.8	106.8	108.0	109.3	107.7	103.5	102.9	94.6
	FEC in residential building sector	2015=100	100.0	100.5	104.8	105.4	105.1	108.6	101.9	101.3	101.3
	FEC in services building sector	2015=100	100.0	102.5	105.5	112.2	111.4	104.1	102.4	100.1	94.4
Pollution	Smog-precursor emission intensity (to GDP) [(4)]	tonne/EUR'10 [(6)]	2.87	2.49	2.28	2.21	2.17	-	0.99	0.93	-
	Years of life lost caused due to air pollution by PM2.5	per 100.000 inh.	1367	1277	1518	1522	1261	-	863	762	-
	Years of life lost due to air pollution by NO2	per 100.000 inh.	71	141	212	211	215	-	120	99	-
	Nitrate in ground water	mg NO3/litre	-	-	-	-	-	-	21.7	20.7	-
Biodiversity	Terrestrial protected areas	% of total	-	22.2	23.4	-	23.4	23.4	-	25.7	25.7
	Marine protected areas	% of total	-	21.4	-	-	21.5	-	-	10.7	-
	Organic farming	% of total utilised agricultural area	1.8	1.7	1.9	2.4	2.9	3.5	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	3.7	4.8	6.9	13.0	11.0	5.0

			2015	2016	2017	2018	2019	2020	2018	2019	2020
Mobility	GHG emissions intensity of transport (to GVA) [(7)]	kg/EUR'10	0.46	0.42	0.42	0.41	0.42	0.45	0.89	0.87	0.83
	Share of zero emission vehicles [(8)]	% in new registrations	0.0	0.1	0.2	0.4	1.0	2.3	1.0	1.9	5.4
	Number of plug-in electric vehicles per charging point		3	5	6	12	11	15	8	8	12
	Share of electrified railways	%	37.4	37.4	37.4	37.4	37.4	-	55.6	56.0	-
	Congestion (average number of hours spent in road congestion per year by a representative commuting driver)		32.0	31.8	31.9	30.5	32.4	-	28.9	28.8	-

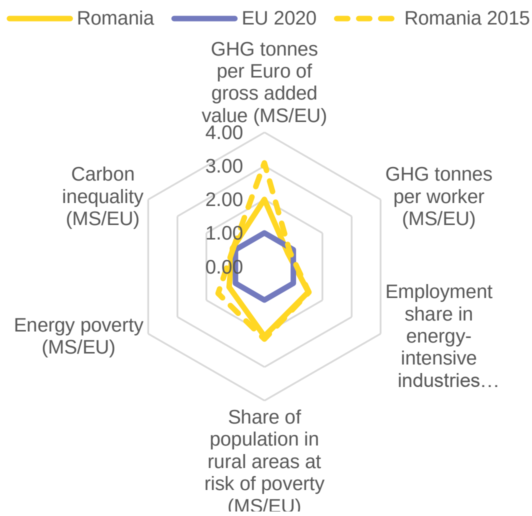
			Year	RO	EU
Digital	Share of smart meters in total metering points [(9)] - electricity	% of total	2018	4.8	35.8
	Share of smart meters in total metering points [(9)] - gas	% of total	2018	0.0	13.1
	ICT used for environmental sustainability [(10)]	%	2021	67.9	65.9

(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. Romania's green transition takes place in a challenging social setting, with a carbon-intensive economy in need of transformation. But, the green economy can also provide jobs and growth opportunities, and the redistribution measures of energy taxes is likely to greatly benefit low-income households.

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



(1) Numbers are the normalised indicator performance relative to the EU27 average
Source: Eurostat, World inequality database

The Romania's recovery and resilience plan (RRP) sets out key elements for a fair green transition. Investments will be made to integrate energy-efficiency technologies into educational infrastructure, including in disadvantaged areas. This includes building a network of "green schools" (ensuring a balance between rural and urban areas) and 10 integrated campuses for vocational education and training. Investments in social infrastructure, including for people with disabilities and day centres for children at risk, will also aim at improving energy efficiency and reducing greenhouse gas emissions.

Several European Funds will contribute to facilitating the green transition while mitigating its overall impact. The European Social Fund Plus (ESF+) will facilitate the transition to a greener economy, through investments in education and training to build a workforce more resilient to changes in demand for skills. The Just Transition Fund (EUR 2.14 billion; current prices) will help mitigate the social, employment, economic and environmental impact of the transition in six Romanian counties.

The social impact of energy poverty is partially addressed in Romania's integrated national energy and climate plan. Published in April 2020, it provides for the creation of a new institution to monitor energy poverty and draw up a national strategy to fight it. The plan also considers the impact of the green transition on employment, in particular in the mining and coal regions of Hunedoara and Gorj (both within the scope of the Just Transition Fund) ([28]). These two counties employ 90% of Romania's entire mining work force, with 18 600, jobs depending directly on coal extraction or coal fired energy production represents 18 600, with another 10 000 indirectly depending on coal. Hunedoara and Gorj represent some 90% of greenhouse gas (GHG) emissions caused by Romania's coal fired power plants, or approximately 30% of all Romanian GHG emissions stemming from mining and manufacturing.

Moving away from fossil fuel extraction and use is likely to put jobs at risk. In the counties of Dolj, Galați, Prahova and Mureş a significant share of the work force is employed in fossil fuel power and heat generation or energy-intensive manufacturing and heavy industry (chemicals, metal processing cement, fertilisers, etc.). These counties generate approximately 35% of Romanian's GHG emissions stemming from mining and manufacturing. Additional investments are envisaged to soften the impact of the green transition and coal phase-out in the region, aiming providing workers with new skills and work prospects. The forthcoming territorial just transition plan for Romania will include substantial investments in these counties.

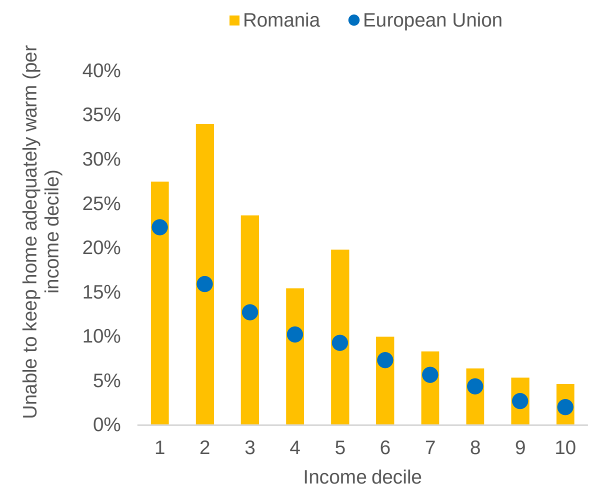
The economy has reduced its carbon footprint and though key energy-intensive sectors remain sizeable, the green economy has strong potential to grow and contribute to job creation. The greenhouse gas (GHG) emissions intensity of the Romanian economy decreased markedly between 2015 and 2020 (in

([28]) European Commission's Assesment of the final national energy and climate plan of Romania (SWD(2020)922).

terms of gross value added) but is still double the EU average. The average carbon footprint per worker of 10.94 tonnes of GHG emissions is decreasing and stands below the EU average (13.61; see Graph A6.1). Romania's energy-intensive industries, including metals, chemicals and paper ([29]), provide jobs for 4.7% of the total employed workforce, for which up- and reskilling could be particularly important (see Annex 15). In Romania, the metal, chemical, cement, and fertiliser sectors are transforming, while coal/lignite and fossil fuel based energy production sectors are in decline ([30]) implying potential job losses in affected industries. The environmental goods and services sector provides jobs to a comparatively limited share of the employed population (1.9% vs. 2.2% in the EU) ([31]) and wind (especially in the South-East coastal region) and solar energy potential as well as energy efficiency improvements offer further opportunities for green jobs ([32]). There is a risk that the transition will give rise to labour shortages in the greening sector of energy production ([33]).

As for the social dimension of the green transition, ensuring access to essential transport and energy services remains a challenge in Romania. A relatively high and stable share of the rural population is at risk of poverty (38.9% vs. 18.7% in the EU) ([34]). The share of the population being unable to keep their homes adequately warm decreased from 13.1% in 2015 to 10% in 2020, which is above the EU average (8.2%). Lower-income groups are affected most and more than the EU average (see Graph A6.2). A large part of the Roma population lives in substandard settlements and housing, and remains particularly vulnerable to energy poverty. Consumption patterns vary across the population: the average carbon footprint of the top 10% of emitters is about 5.8 times higher than that of the bottom 50% of the population (close to the EU average of 5.3 times).

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



(1) HH050: Ability to keep home adequately warm
(2) HY020: Total disposable housing income
Source: Eurostat (EU SILC survey 2020)

Tax systems are key to ensuring a fair transition towards climate neutrality ([35]). Romania's revenues from total environmental taxes decreased from 2.47% in 2015 to 2.12% in 2019, and declined further to 1.92% in 2020 (2.24% in the EU). The labour tax wedge for low-income earners ([36]) declined from 37.3% to 36.6% between 2015 and 2019 (with a rebound to 37.2% in 2021), compared to 31% in the EU in 2021 (see Annex 18). Redistributive measures accompanying environmental taxation have the potential to foster progressive measures and to have a positive impact on the disposable income of households, with Romania having (among) the strongest potential positive effects on the first income decile ([37]).

([29]) 2020 European Semester: Overview of Investment Guidance on the Just Transition Fund 2021-2027 per Member State (Annex D).

([30]) European Commission's Staff Working Document on the territorial just transition plans (SWD(2021)275).

([31]) 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.

([32]) Asikainen, et al., 2021

([33]) Eurofound (2021)

([34]) Based on Annex 1 of the European Commission's proposal for a Regulation of the European Parliament and of the Council establishing a Social Climate Fund (COM(2021) 568) as a proxy for potential transport challenges in the context of the green transition (e.g. due to vulnerability to fuel prices).

([35]) European Commission's proposal for a Council Recommendation on ensuring a fair transition towards climate neutrality (COM(2021)801).

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

([37]) European Commission's Impact Assessment Report of the proposal for a Council Directive restructuring the Union framework for the taxation of energy products and electricity (recast) (SWD(2021)641 PART 3/3).

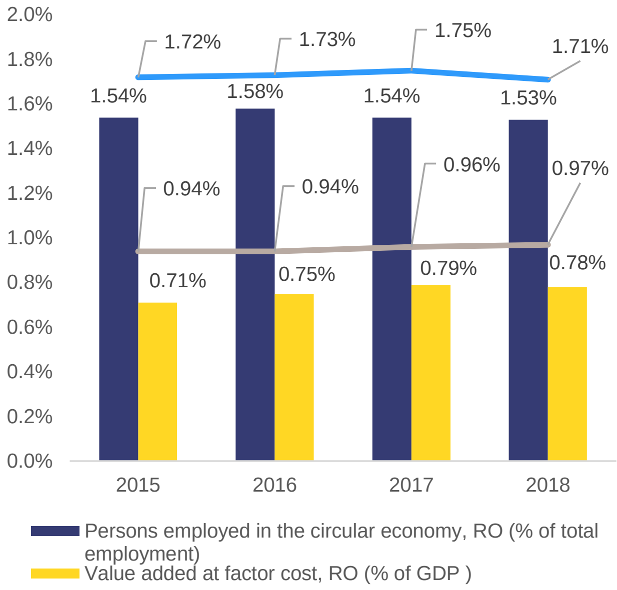
The efficient use of resources is key to ensuring competitiveness and open energy autonomy, while minimizing the environmental impact. The green transition presents a major opportunity for European industry by creating markets for clean technologies and products. It will have an impact across the entire 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.

Romania has not made progress in circular secondary material usage over the past decade. The circular (secondary) use of material decreased between 2015 and 2020 from 1.7% to 1.3%, well below the EU average of 11.3% to 12.8% over the same period. Romania's recovery and resilience plan (RRP) includes investments and reforms to support recycling and improve waste management. It notably includes the adoption of a national strategy for circular economy strategy and an action plan covering the whole life cycle of products, as well as legislation to operationalise a unitary waste management system, the treatment of waste, sanitation services in municipalities and an extension of the packaging producer responsibility scheme.

Resource productivity is far below the EU average. Resource productivity expresses how efficiently the economy uses material resources to produce wealth. Improving resource productivity can help to minimise negative impacts on the environment and reduce dependency on volatile raw material markets. However, Romania's resource productivity is far below the EU average and was actually the lowest in the EU in 2020.

Romania's economic growth is not yet decoupled from the generation of waste. Romania's municipal waste recycling rate is 13.7%, well below the EU average of around 48%, and far below the 2020 and 2025 EU targets of 50% and 55% respectively. The Commission had identified Romania among the countries at risk of missing the 2020 targets. This comparatively low value illustrates the low level of waste management in Romania, as do the high landfilling rates. Romania has the highest landfilling rate in the EU (2018 figure). However, Romania had the lowest rate of municipal waste generation in 2020. The fluctuating GDP and the population decrease over the last decade both had an impact on waste generation.

Graph A7.1: **Circular economy: economic importance and expansion**



Source: Eurostat

Further measures could help Romania improve its environmental technology performance, notably measures on sustainable product design, resource efficient production processes, digital solutions, industrial symbiosis, remanufacturing in key value chains, alternatives to unsustainable extraction of raw materials, and new circular business models. There is also scope to shift reusable and recyclable waste away from landfills and mechanical biological treatments (MBTs), including by making use of the available economic instruments to roll out, adding separate collection facilities. This would help the country achieve the post-2020 recycling targets, particularly for plastics.

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)	2.3	2.3	2.4	2.5	2.7	2.8	2.2	2020
Material Intensity (kg/EUR)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	2020
Circular Material Use Rate (%)	1.7	1.7	1.7	1.5	1.3	1.3	12.8	2020
Material footprint (Tones/capita)	22.6	23.2	21.8	23.7	28.17	-	14.6	2019
Waste								
Waste generation (kg/capita, total waste)	-	9 012	-	10 425	-	-	5 234	2018
Landfilling (% of total waste treated)	-	92.3	-	93.8	-	-	38.5	2018
Recycling rate (% of municipal waste)	13.2	13.4	14	11.1	11.5	13.7	47.8	2020
Hazardous waste (% of municipal waste)	-	0.4	-	0.4	-	-	4.3	2018
Competitiveness								
Gross value added in environmental goods and services sector (% of GDP)	1.8	1.9	1.9	2.0	2.0	-	2.3	2019
Private investment in circular economy (% of GDP)	0.2	0.2	0.2	0.2	-	-	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 [38]. This Annex describes Romania´s DESI performance.

The lack of basic digital skills and ICT specialists are key challenges for Romania. The country scores considerably below EU average in both indicators, as only 28% of people aged between 16 and 74 have at least basic digital skills (54% in the EU as a whole), while 41% have at least digital content creation skills (EU average: 66%). Only 9% of individuals have above-basic digital skills. However, the level of female ICT specialists has improved and scores in the EU's top performing tier.

Digital connectivity is the dimension in which Romania scores best. The country scores above the EU average for very high capacity network (VHCN) (87% compared to 70% EU average). 5G coverage (25%) is however below the EU average and in addition, assignment of 5G spectrum is low (22% compared to the EU average of 56%) [39]. Fast broadband coverage increased to 93%, surpassing the EU average. Strong infrastructure-based competition in Romania, mainly in urban areas, is reflected in the fixed VHCN coverage indicator, while Romania's urban-rural digital gap decreased. Fixed broadband take-up has been increasing slowly but steadily and is above the EU average.

Romania scores very poorly on the integration of digital technologies. The share of SMEs with at least a basic level of digital skills as well as the take-up of advanced technologies like cloud, artificial intelligence and big data remain considerably below the EU average. In particular, only 22% of SMEs have at least a basic level of digital intensity compared to an EU average of 55%.**Digital public services are a key challenge for the country.** Romania scores significantly below EU average on the availability of digital public services for citizens as well as for businesses. Only 17% of Romanian online users engage actively with e-government services, compared with an EU average of 65%. On the indicator for pre-filled forms, Romania's score of 19 is significantly below the EU average of 64.

The large share of digital investments and reforms dedicated to this dimension in the Romanian Recovery and Resilience plan (RRP) presents an opportunity to improve these results. The measures contributing to the achievement of digital objectives account for 20.5% of the financial allocation, and cover all DESI dimensions with a focus on digital infrastructure and the transition to a digitalised economy and society.

(38) T2030 Digital Compass: the European Way for the Digital Decade Communication, COM (2021) 118 final

(39) Source: Communications Committee (COCOM) based on iDATE.

Table A8.1:**Key Digital Economy and Society Index Indicators**

		Romania		EU	EU-top performance
Human capital	**DESI 2020**	**DESI 2021**	**DESI 2022**	**DESI 2022**	**DESI 2022**
At least basic digital skills	**NA**	**NA**	**28%**	**54%**	**79%**
% individuals			2021	2021	2021
ICT specialists	**2.3%**	**2.4%**	**2.6%**	**4.5%**	**8.0%**
% individuals in employment aged 15-74	2019	2020	2021	2021	2021
Female ICT specialists	**24%**	**26%**	**26%**	**19%**	**28%**
% ICT specialists	2019	2020	2021	2021	2021
Connectivity					
Fixed Very High Capacity Network (VHCN) coverage	**68%**	**76%**	**87%**	**70%**	**100%**
% households	2019	2020	2021	2021	2021
5G coverage *	**NA**	**12%**	**25%**	**66%**	**100%**
% populated areas		2020	2021	2021	2021
Integration of digital technology					
SMEs with at least a basic level of digital intensity	**NA**	**NA**	**22%**	**55%**	**86%**
% SMEs			2021	2021	2021
Big data	**11%**	**5%**	**5%**	**14%**	**31%**
% enterprises	2018	2020	2020	2020	2020
Cloud	**NA**	**NA**	**11%**	**34%**	**69%**
% enterprises			2021	2021	2021
Artificial Intelligence	**NA**	**NA**	**1%**	**8%**	**24%**
% enterprises			2021	2021	2021
Digital public services					
Digital public services for citizens	**NA**	**NA**	**44**	**75**	**100**
Score (0 to 100)			2021	2021	2021
Digital public services for businesses	**NA**	**NA**	**42**	**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.

The present annex provides a general overview on the performance of the Romania research and innovation system.

Romania is an emerging innovation performer according to the 2021 edition of the European Innovation Scoreboard ([40]), and has the weakest innovation performance in the EU. After a peak of 0.5% of GDP in 2017 total R&D intensity decreased to 0.47% of GDP in 2020, remaining remarkably below the target of 2% initially set for 2020. In 2018, Romania filled 70 international patent applications (a common indicator of innovation capacity), compared to the EU average of 2 046). With a score of 71, Romania ranked 24th on the 2021 Eco-Innovation Scoreboard, highlighting the need to boost its eco-innovation activities. Romania performs well below the EU average on all five components of the 2021 Eco-Innovation Index (eco-innovation inputs, eco-innovation activities, eco-innovation outputs, resource efficiency outcomes and socio-economic outfits).

At company level, innovation capacity is also limited. Business expenditure on R&D in Romania amounts to only 0.28% of GDP, compared to the EU average of 1.53%. The number of tech start-ups per million inhabitants is also far below the EU average (3.5 vs. 24) ([41]). Similarly, the share of high growth tech enterprises in 2019 was still very low compared to the EU average (4.9% vs. 18.3%).

Romania has not been able to improve the performance of its public research system or address its chronic underfunding in the last decade. Since 2011, public R&D intensity has been declining from 0.32% of GDP to 0.19% of GDP in 2020, well below the EU average. The chronic underfunding of the public science base has resulted in a critically low number of researchers, with the lowest relative share in the EU. In addition, the number of new graduates in science and engineering halved between 2009 and 2019, and poor working conditions and career prospects for researchers have further accelerated human resources shortages for science and innovation. To address these structural challenges, Romania's recovery and resilience plan (RRP) sets out a comprehensive reform package to streamline the governance of the national R&I system and to make the necessary first steps to reform the research career.

Public-private cooperation remains a challenge and hampers the country's innovation performance. Although the percentage share of GDP available as Venture Capital in Romania is among the lowest in the EU, business spending on R&D has doubled since 2013, mostly driven by large companies. In parallel, public support for business R&D has decreased over the last decade. Universities, public research institutions and businesses lack adequate incentives to seek collaborations with each other. Romania also performs below the EU average on public-private scientific co-publications as a share of total publications. Although the RRP will address some bottlenecks in science–business cooperation, the measures focus on reforming the regulatory framework and lack a holistic approach.

([40]) 2021 European Innovation Scoreboard, Country profile: Romania https://ec.europa.eu/docsroom/documents/45932/attachments/1/translations/en/renditions/native

([41]) OECD (2022)

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

Romania	**2010**	**2015**	**2018**	**2019**	**2020**	**Compound annual growth 2010-20**	**EU average**
Key indicators							
R&D Intensity (GERD as % of GDP)	0.46	0.49	0.5	0.48	*0.47*	-0.6	*2.32*
Public expenditure on R&D as % of GDP	0.28	0.27	0.20	0.20	*0.19*	-5.5	*0.78*
Business enterprise expenditure on R&D (BERD) as % of GDP	0.18	0.21	0.30	0.28	*0.28*	4.9	*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	3.0	3.2	4.7	:	:	5.6	9.9
PCT patent applications per billion GDP (in PPS)	0.1	0.3	0.2	0	0	8.6	3.5
Academia-business cooperation							
Public-private scientific co-publications as % of total publications	4.4	4.7	5.4	5.7	5.7	2.8	9.05
Human capital and skills availability							
New graduates in science & engineering per thousand pop. aged 25-34	18.4	11.2	11.2	11.9	:	-4.7	16.3
Public support for business enterprise expenditure on R&D (BERD)							
Total public sector support for BERD as % of GDP	0.057	0.045	:	0.018	:	-8.5	0.196
Green innovation							
Share of environment-related patents in total patent applications filed under PCT (%)	12,9	6,4	11	:	:	-2,0	12.8
Finance for innovation and Economic renewal							
Venture Capital (market statistics) as % of GDP	0.013	0.002	0.002	0.005	0.005	-8.3	0.054
Employment in fast-growing enterprises in 50% most innovative sectors	2.1	2.6	2.8	2	:	0	5.5

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

Productivity growth is a critical driver of economic prosperity, well-being and convergence over the long run. 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.

Romania's labour productivity has been increasing, but is still below the EU average. Although output per employee has been increasing over the past 20 years, it is still 24.8% below the EU27 average (and output per hour is 35.8% below the EU average). There is ample room to catch up. The total factor productivity decreased in 2020-2021 compared with 2019, but is expected to pick up in 2022.

Access to finance is a constraint to doing business ([42]). On SMEs' access to finance through loans and grants, Romania scored below the EU27 average in 2020 (0.25 vs 0.56). It performed even worse on equity finance (0.06 vs 0.18). Business angels, and private equity and venture capital funds are not yet widespread ([43]). Furthermore, the situation for equity finance has deteriorated significantly since 2017. To enhance liquidity for companies and SMEs, Romania's recovery and resilience plan (RRP) includes a substantial financial package, including equity (EUR 1.25 billion).

Companies also face regulatory barriers and excessive red tape. Procedures to set up a company, close it and report on labour market obligations will be streamlined, simplified and digitalised. The RRP will tackle these issues, thereby improving the business environment and dynamics in Romania. The RRP will also increase the transparency, competition and the efficiency of the public procurement processes (see Annex 11). Late payments remain a concern.

Certain markets for services face excessive red tape. Lawyers need two licenses to operate and face stringent entry requirements. Accountants and tax advisors must be member of the respective chambers and are subject to numerous minimum education and training requirements, on top of mandatory professional examinations. Architects, civil engineers and tourist guides face similar excessive regulatory restrictions.

Unfair competition may stem from weak surveillance of the market including for non-food products. The number of inspections for such goods is very low in Romania (the third lowest in the EU), due to limited resources. Responsibility for market surveillance of non-food products is spread over more than a dozen authorities, posing coordination and prioritisation challenges. Cooperation with the customs authorities can help reduce the volume of non-compliant products imported from outside the EU.

Romania is well integrated in the single market overall, but further progress is needed especially on professional services. 22% of Romania's labour force can be considered to be working in regulated professions, slightly higher than the EU average of 21% ([44]). Several professions (accountants/tax advisers, tourist guides, architects and civil engineers) face significantly more restriction than the EU average.

The overall economy was resilient to disruptions in the global supply chain, but not all sectors were equal. Sectors such as the automotive industry had to reduce production due to disruptions in supplies such as semiconductors.

([42]) SMEs, start-ups, scale-ups and entrepreneurship - September 2020 - - Eurobarometer survey (europa.eu)

([43]) Romania has the lowest Venture Capital investments as a share of GDP in the EU: 0,005% in 2020 (Kraemer-Eis, Botsari, Gvetadze, Lang, & Torfs, 2021). These investments are mostly concentrated on ICT, business and consumer services (Flachenecker, et al., 2020).

([44]) EUR-Lex - 52021SC0185 - EN - EUR-Lex (europa.eu)

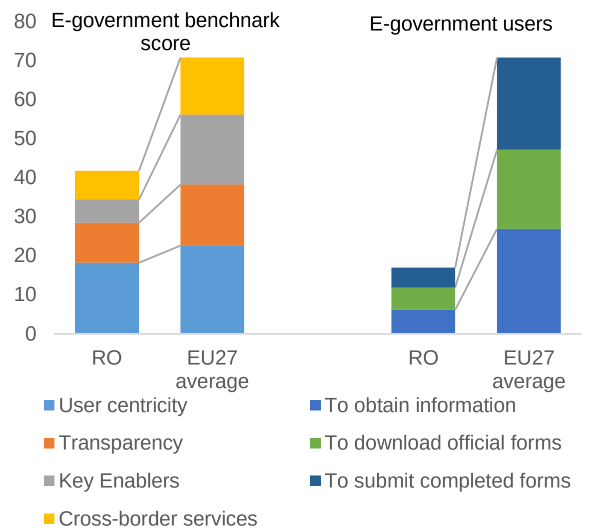
Table A10.1:**Key Single Market and Industry Indicators**

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]				69.21			**62.6%**
	Value added by source (EU)	VA imported from the rest of the EU, % [source: OECD (TiVA), 2018]				19.26			**19.7%**
	Value added by source (extra-EU)	% VA imported from the rest of the world, % [source: OECD (TiVA), 2018]				11.5			**17.6%**
Cost competitiveness	Producer energy price (industry)	Index (2015=100) [source: Eurostat, sts_inppd_a]	145.1	107.2	113.5	104.3	95.9	**51.30%**	**127.3**
		RESILIENCE							
Shortages/supply chain disruptions	Material Shortage using survey data	Average (across sectors) of firms facing constraints, % [source: ECFIN CBS]	5	4	3	3	3	**67%**	**26%**
	Labour Shortage using survey data	Average (across sectors) of firms facing constraints, % [source: ECFIN CBS]	9	8	12	10	6	**50%**	**14%**
	Sectoral producer prices	Average (across sectors), 2021 compared to 2020 and 2019, index [source:Eurostat]						**10.6%**	**5.4%**
Strategic dependencies	Concentration in selected raw materials	Import concentration a basket of critical raw materials, index [source: COMEXT]	0.19	0.18	0.17	0.16	0.16	**19%**	**17%**
	Installed renewables electricity capacity	Share of renewable electricity to total capacity, % [source:Eurostat, nrg_inf_epc]		57.2	56.6	50	49.8	**15%**	
Investment dynamics	Net Private investments	Change in private capital stock, net of depreciation, % GDP [source: Ameco]		7.1	7.3	3.1	4.4	**61.4%**	**2.6%**
	Net Public investments	Change in public capital stock, net of depreciation, % GDP [source: Ameco]		2.6	1.4	0.6	0.6	**333%**	**0.4%**
		SINGLE MARKET							
Single Market integration	Intra-EU trade	Ratio of Intra-EU trade to Extra-EU trade, index [source: Ameco]	3.25	2.82	2.70	2.66	2.67	**22%**	**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])	4				4	**0.00%**	**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]	42.4						**45%**
Compliance - cooperation EC and MS	Transposition - overall	5 sub-indicators, sum of scores [source: Single Market Scoreboard]		On average	On average	On average	Above average		
	Infringements - overall	4 sub-indicators, sum of scores [source: Single Market Scoreboard]		Below average	On average	On average	On 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]	58						**56%**
		BUSINESS ENVIRONMENT - SMEs							
Business demography	Bankruptcies	Index (2015=100) [source: Eurostat, sts_rb_a]		66.8	70.6	59.8	44.7	**49.40%**	**70.1 (2020)**
	Business registrations	Index (2015=100) [source: Eurostat, sts_rb_a]		122.4	147.7	130	141.8	**-13.7%**	**105.6**
Access to finance	Late payments	Share of SMEs experiencing late payments in past 6 months, % [source: SAFE]	52.6	52	53.1	n.a.	n.a.	**-1.0%**	**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]		0.25	0.21	0.27	0.25	**-1.1%**	**0.56 (2020)**
	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]		0.06	0.09	0.08	0.15	**-56.8%**	**0.18 (2020)**
	% of rejected or refused loans	SMEs whose bank loans' applications were refused or rejected, % [source: SAFE]	17.7	22.3	16.5	18.6	18.4	**-3.8%**	**12.4%**
Public procurement	SME contractors	Contractors which are SMEs, % of total [source: Single Market Scoreboard]							**63%**
	SME bids	Bids from SMEs, % of total [source: Single Market Scoreboard]							**70.8%**

Source: See the source for each indicator in the table above (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.

Graph A11.1: **E-government benchmark scores (lhs) and e-government users (rhs)**

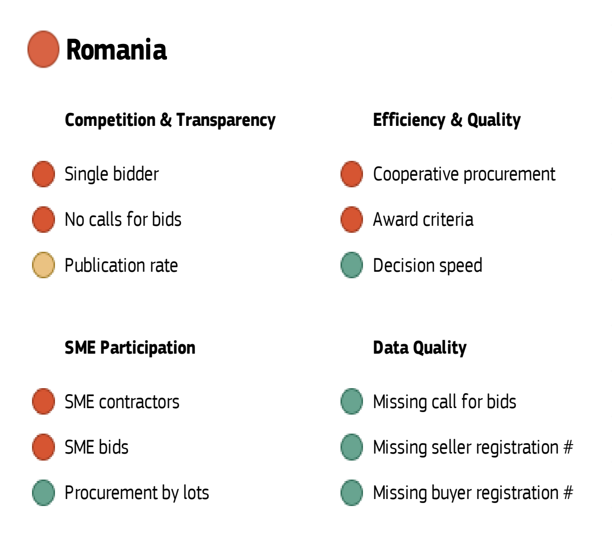


Source: Eurostat (ICT use survey) and E-government benchmark report

The effectiveness of Romania's public administration is ranked substantially below the EU27 average ([45]). The wide range of administrative reforms is advancing slowly. Frequent reorganisations and dismissals at management level hinder institutional stability, the accumulation of administrative capacity, the continuity in reform implementation as well as the consolidation and sustainability of reform outcomes. High fragmentation of competencies and resources continues to affect the delivery of public services, especially at decentralised level and in lagging areas. Decision-making has often been based on government emergency ordinances.

Digital public services in Romania have been slowly improving. The country still scores far below the EU average (41.8 vs 70.9) (Graph A11.1). Only 17% of internet users actively use e-government services (EU average: 70.8%). The Romanian recovery and resilience plan (RRP) envisages reforms and investments for the development of the government cloud and to increase interoperability of the various public institutions' IT&C systems. These are expected to reduce fragmentation, boost interoperability and simplify bureaucratic barriers.

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



(1) 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.

Evidence-based policy-making remains a long-standing structural challenge. Public consultations and stakeholder involvement remain limited as does the use of *ex ante* and *ex post* impact assessments. Policy unpredictability continued in 2021 with a large share of laws adopted in extraordinary proceedings by the government, and a fast-changing body of legislation.

The quality of public procurement in Romania remains a major challenge. In the Single Market Scoreboard, Romania performs below the rest of the EU. Transparency, competition and the efficiency, of procurement processes remain problematic (Graph A11.2).

([45]) Worldwide Governance Indicators, 2021

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

RO	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 (%)	13.0	12.0	15.0	16.0	17.0	70.8
2	2021 e-government benchmark´s overall score (2)	na	na	na	na	41.8	70.9
Open government and independent fiscal institutions							
3	2021 open data maturity index	na	na	na	na	75.5	81.1
4	Scope Index of Fiscal Institutions	69.3	69.3	69.3	69.3	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)	54.2	55.3	56.7	54.9	53.6	55.3
6	Participation rate of public administration employees in adult learning (3)	na	na	1.6	na	7.2	18.6
7	Gender parity in senior civil service positions (4)	3.8	0.8	7.0	8.6	7.8	21.8
8	Share of public sector workers between 55 and 74 years (3)	10.4	10.1	10.7	11.7	12.0	21.3
Public Financial Management							
9	Medium term budgetary framework index	0.80	0.80	0.80	0.80	na	0.72
10	Strength of fiscal rules index	1.9	1.9	2.2	2.2	na	1.5
11	Public procurement composite indicator	-5.3	-7.7	-8.3	-6.3	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	1.39	na	na	na	na	1.6

(1) High values indicate good performance, except 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).

Administrative capacity at all government levels remains a challenge. Coordination of the tasks between the institutions is poor. Programme development is impeded by weak collaboration between central and local administration and heavy political interference. As a result, the objectives and policies of programmes change often and delays occur. Programme management and strategic planning skills are limited, and the participation of civil servants in adult learning is low compared to the EU average. Romania's 2021 RRP includes measures on merit-based recruitment of civil servants.

The justice system is facing efficiency challenges, and there are concerns about judicial independence. The clearance rate for resolving civil, commercial and administrative cases at first instance decreased very slightly (96.7% in 2020 vs 100.2% in 2019 and 103.5% in 2018). The average length of administrative proceedings increased considerably (690 days in 2020 vs 138 days in 2019), and the clearance rate decreased to 48.4% in 2020 (from 100.3% in 2019). The justice systems is losing human resources as the number of newly recruited magistrates does not compensate for the current lack of judicial staff and the increasing number of magistrates retiring [46].

[46] For more detailed analysis of the performance of the justice system in Romania, see the 2022 EU Justice Scoreboard (forthcoming) and the country chapter for Romania 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 Romania´s progress in achieving the goals under the European Pillar of Social Rights.

Social Scoreboard for ROMANIA		
Equal opportunities and access to the labour market	Early leavers from education and training (% of population aged 18-24) (2021)	15.3
	Individuals' level of digital skills (% of population 16-74) (2021)	28.0
	Youth NEET (% of total population aged 15-29) (2021)	20.3
	Gender employment gap (percentage points) (2021)	20.1
	Income quintile ratio (S80/S20) (2020)	6.6
Dynamic labour markets and fair working conditions	Employment rate (% population aged 20-64) (2021)	67.1
	Unemployment rate (% population aged 15-74) (2021)	5.6
	Long term unemployment (% population aged 15-74) (2021)	2.0
	GDHI per capita growth (2008=100) (2020)	
Social protection and inclusion	At risk of poverty or social exclusion (in %) (2020)	35.8
	At risk of poverty or social exclusion for children (in %) (2020)	41.5
	Impact of social transfers (other than pensions) on poverty reduction (% reduction of AROP) (2020)	15.8
	Disability employment gap (ratio) (2020)	30.4
	Housing cost overburden (% of population) (2020)	7.1
	Children aged less than 3 years in formal childcare (% of under 3-years-olds) (2020)	6.8
	Self-reported unmet need for medical care (% of population 16+) (2020)	4.7

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.

Serious labour market challenges persist. While the employment rate increased in recent years (67.1% in 2021, up from 60.3% in 2016), it is still below the EU average of 73.1%. The unemployment rate (5.6% in 2021) is below the EU average (7%) but is still above pre-crisis levels (4.9% in 2019).

The labour market participation of some population groups remains limited. The gender employment gap is among the highest in the EU, at 20.1 pps, and widening, with inactivity among women standing at 44.3% mainly due to the limited availability of and access to early childhood education and care Because of the COVID-19 pandemic, the proportion of children under 3 years old in formal childcare dropped to 6.8% in 2020 (from 14.1% in 2019) and remains significantly below the EU average of 18.5%. Investment in the construction and running of 110 crèches outlined in the recovery and resilience plan (RRP) will help address this challenge. The disability employment gap stood at 30.4 pps in 2020, above the EU average of 24.5 pps. Persons with disabilities still face reduced training opportunities. In 2021, only 41% of the Roma were engaged in any form of paid work. The share of young people not in education, employment or training (NEET) was steadily declining before the pandemic, but remains among the highest in the EU and increased significantly to 20.3% in 2021.

Activation measures provided by the public employment services (PES) do not ensure sufficient coverage and targeted support. Investments outlined in the RRP will support the labour market through the digitalisation of the PES and the introduction of a system to formalise domestic work. EU cohesion policy funds will further support the modernisation of labour market institutions and the transition to more efficient and sustainable activation. Although social partners can play an important role in improving labour market performance, their involvement in policy design and implementation remains limited, as does social dialogue. The RRP plans for the entry into force of a new social dialogue law and a revision of the economic sectors, while the European Social Fund Plus (ESF+) will further strengthen social partners' capacity.

The education and training system faces persistent quality and inclusiveness challenges. Enrolment in early childhood education and care is well below the EU average, and the rate of early leavers from education and training is high and likely to worsen due to the pandemic (see Annex 13), affecting in particular students with disabilities or disadvantaged backgrounds, such as Roma and people living in rural areas. Under the Recovery Assistance for

Cohesion and the Territories of Europe (REACT-EU), Romania financed additional classes to mitigate the impact of COVID-19-related school closures on the most vulnerable pupils. However, there is still a pressing need to improve learning outcomes and reduce inequalities in education.

Insufficient alignment of skills with labour market needs remains a challenge. Romania's RRP aims to improve the labour market relevance of vocational education and training (VET) graduates and higher education. Certain measures will receive ESF+ support, in particular those that aim to help vulnerable students gain access to all levels of education. Levels of digital skills and participation in adult learning remain critically low, with less than one third of people aged 16-74 having at least basic digital skills (EU average 54% in 2021). Based on the latest available data for 2021, participation in adult learning over the past 4 weeks stood at 4.9% (compared to 10.8% in the EU). Strengthening the quality and inclusiveness of education and training will be key if Romania is to achieve the 2030 EU headline targets on skills and employment.

Poverty risks and inequality remain elevated. Romania has one of the highest shares of people at risk of poverty or social exclusion (AROPE) in the EU (35.8% in 2020 vs an EU average of 21.6%). The same is particularly high among people living in rural areas, marginalised communities and vulnerable groups, including the Roma. This is also partly due to the high share of Roma living in municipalities or informal settlements where access to the labour market and public services is severely limited. The child AROPE rate is among the highest in the EU (41.5% vs an EU average of 23.9%) and almost 1 in 3 children experienced severe material and social deprivation in 2020. The share over 65 year-olds and people with disabilities at risk of poverty or social exclusion also remains among the highest in the EU. The impact of social transfers (excluding pensions) on poverty reduction is among the lowest across EU countries, while gaps in access to social protection remain widespread and affect in particular the unemployed and those in non-standard forms of employment.

Social, health, educational and employment services are insufficiently integrated and the deinstitutionalisation process for adults with disabilities is lagging behind. The deinstitutionalisation process for children continues, as established, with the objective of being finalized as soon as possible. Self-reported unmet needs for medical care remains above the EU average, with substantial differences between income groups and regions. Access to long-term care services is insufficient, especially at community level, as is public spending on long-term care. For older people, home care coverage is one of the lowest in the EU and unmet needs for long-term care are significantly higher than the EU average (61.6% in 2019 vs 46.5%). Implementing the minimum inclusion income, minimum wage and pension reforms, investments in child protection and the deinstitutionalisation of people with disabilities, as outlined in Romania's RRP could help the country achieve the 2030 EU headline target on poverty reduction.

This Annex outlines the main challenges for Romania'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. Romania's education and training system struggles with quality and equity challenges that risk to worsen due to the pandemic. Romania lags significantly behind the EU average and the EU-level targets on early childhood education, basic skills, early leavers from education and training, and tertiary education.

Participation in early childhood education and care is low and decreasing. Romania is among the EU Member States where participation rates in early childhood education have declined compared to 2014. The enrolment rate of children between the age of 3 and the starting age of compulsory education is one of the lowest in the EU and significantly below the European average, in particular for Roma children (27%).

The majority of pupils from disadvantaged backgrounds lack basic skills. The share of young people with low basic skills in reading, mathematics and science - as measured by the PISA test – is almost double the EU average. Socio-economically disadvantaged students are disproportionately affected. The performance gap between them and their more advantaged peers is equivalent to 2.5 years of schooling. Digital skills among young people are also low. Learning losses expected due to the pandemic risk to further aggravate the situation. Public expenditure on education is one of the lowest in the EU (3.6% of GDP in 2019, EU-27: 4.7%).

Inequalities are manifested in a large rural-urban divide and for the Roma. Early school leaving remains high, in particular in rural areas (23.2%) and among the Roma, with consequences for their labour market and social inclusion. Disadvantaged pupils are often concentrated in schools in which the quality of education and the learning conditions are poor.

Evidence ([47]) shows that teacher policies face major challenges. With a relatively young teacher population, Romania's ambitions to improve educational outcomes rely largely on its existing teaching force. However, neither initial nor continuous teacher education is sufficiently aligned with classroom needs. Long career progression and low salaries impact on the attractiveness of the teaching profession. The merit-based allowance tends to encourage a narrow focus on tests and academic competitions, rather than supporting equity improvements. Attracting highly qualified teachers to disadvantaged schools and ensuring sufficient support specialists remain challenging.

Participation in higher education is low, resulting in a lack of highly skilled professionals. Persistently high rates of early school leaving, the low passing rate at the baccalaureate exam, as well as the low participation of students from disadvantaged backgrounds contribute to low higher education attainment. The rate is particularly low in rural areas (8.2% vs an EU average of 29.6%). The percentage of STEM graduates (science, technology, engineering and mathematics) is among the highest in the EU (30%), however due to low participation in higher education, the number of graduates ready to enter the labour market is low. Furthermore, the labour market relevance of vocational education and training and of higher education still needs improvement. Emigration has further reduced the number of specialists with a higher education degree. Finally, participation of adults in learning remains limited (see Annex 12).

The reforms and investments outlined in Romania's recovery and resilience plan will help address some of these long-standing challenges. Key reforms focus on improving early childhood education and care, reducing early school leaving, setting up a full professional route for dual education and digitalising education and training. Such reforms will be backed by corresponding investments in infrastructure, equipment and digitalisation, and training programmes, among others.

([47]) See Kitchen, Fordham, Henderson, Looney, & Maghnouj (2017), Educated Romania Report (Presidential Administration, 2021) and OECD (2020).

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

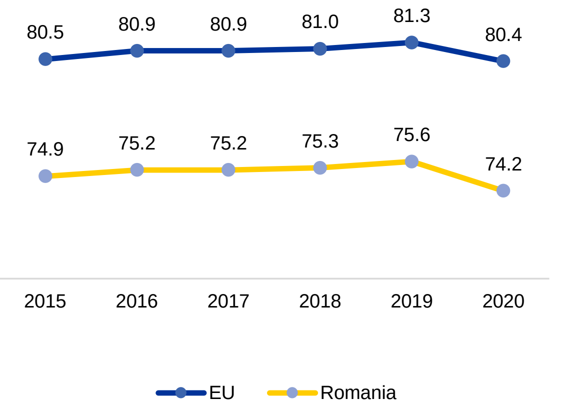
				2015		2021	
Indicator			**Target**	**Romania**	**EU27**	**Romania**	**EU27**
Participation in early childhood education (age 3+)			**96%**	**84.6%**	**91.9%**	**78.6%** [2019]	**92.8%** [2019]
Low achieving 15-year-olds in:		**Reading**	**< 15%**	**38.7%**	**20.4%**	**40.8%** [2018]	**22.5%** [2018]
		Mathematics	**< 15%**	**39.9%**	**22.2%**	**46.6%** [2018]	**22.9%** [2018]
		Science	**< 15%**	**38.5%**	**21.1%**	**43.9%** [2018]	**22.3%** [2018]
Early leavers from education and training (age 18-24)	**Total**		**< 9 %**	**19.1%**	**11.0%**	**15.3%**	**9.7%**
	By gender	*Men*		19.5%	12.5%	15.1%	11.4%
		Women		18.5%	9.4%	15.5%	7.9%
	By degree of urbanisation	*Cities*		5.9%	9.6%	4.5%	8.7%
		Rural areas		27.8%	12.2%	23.2%	10.0%
	By country of birth	*Native*		19.1%	10.0%	15.3%	8.5%
		EU-born		: u	20.7%	: u	21.4%
		Non EU-born		: u	23.4%	: u	21.6%
Tertiary educational attainment (age 25-34)	**Total**		**45% (2025)**	**25.5%**	**36.5%**	**23.3%**	**41.2%**
	By gender	*Men*		22.9%	31.2%	20.6%	35.7%
		Women		28.3%	41.8%	26.2%	46.8%
	By degree of urbanisation	*Cities*		44.7%	46.2%	44.0%	51.4%
		Rural areas		8.6%	26.9%	8.2%	29.6%
	By country of birth	*Native*		25.5%	37.7%	23.2%	42.1%
		EU-born		:	32.7%	59.7%	40.7%
		Non EU-born		: u	27.0%	70.0%	34.7%
Share of school teachers (ISCED 1-3) who are 50 years or over				**28.6%**	**38.3%**	**29.4%** [2019]	**38.9%** [2019]

The 2018 EU average on PISA reading performance does not include ES
b = break in time series, c = confidential, u = low reliability, : = not available
Data are not yet available for the remaining EU-level targets under the European Education Area strategic framework, covering underachievement in digital skills, exposure of vocational education and training graduates to work-based learning and participation of adults in learning.
Source: Eurostat (UOE, LFS); OECD (PISA).

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 Romania.

Life expectancy in Romania is significantly lower than in the EU as a whole (Graph A14.1), and it fell by almost 17 months in 2020 due to COVID-19. As of 17 April 2022, Romania reported 3.17 cumulative COVID-19 deaths per 1 000 inhabitants and 146 confirmed cumulative COVID-19 cases per 1 000 inhabitants. Treatable mortality (rate per 100,000 inhabitants) is more than double the EU average, including deaths from prostate and breast cancer. Also, mortality linked more closely to lifestyle is high, mainly cardiovascular disease, lung cancer and alcohol-related deaths.

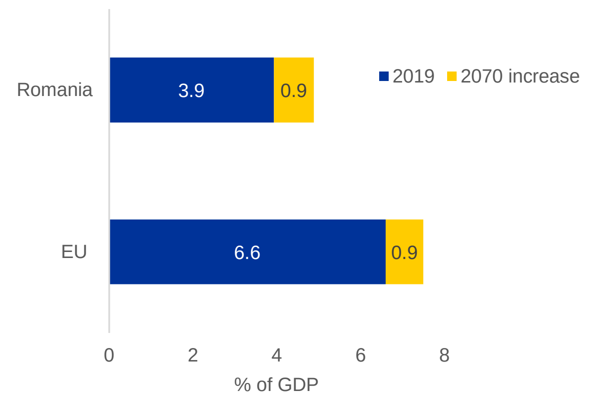
Graph A14.1: **Life expectancy at birth, years**



Source: Eurostat database

Health spending in Romania increased in the last decade but remains the second lowest in the EU. About 44 % of health spending was allocated to the hospital sector (including inpatient and day care services) in 2019, amongst the highest proportion among EU countries. Although the public share of health spending (80% in 2019) is in line with the EU average, direct out-of-pocket payments (18.9% of total health spending) are above the EU average (15.4%). Public expenditure on health is projected to increase by 0.9 percentage points (pps) of GDP by 2070, raising long-term fiscal sustainability concerns (Graph A14.2).

Graph A14.2: **Projected increase in public expenditure on health care over 2019-2070 (AWG reference scenario)**



Source: European Commission/EPC (2021)

Romania faces many challenges in health, including access to quality care, outdated health infrastructure and shortages of healthcare personnel. Primary care and prevention are underdeveloped. The numbers of physicians and nurses per capita are well below the EU averages. Reported unmet needs for medical care are high compared to EU average, with substantial differences between income groups and regions (see Annex 12). High antibiotic consumption raises public health concerns related to antimicrobial resistance.

Through its recovery and resilience plan (RRP), Romania plans to invest EUR 2.85 billion (9.8 % of the total RRP) to modernise its health infrastructure, professionalise healthcare management, improve human resource management in healthcare, digitalise health institutions and develop digital infrastructure for health services, including telemedicine.

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)	208.0	206.0	210.6	208.3		92.1 (2017)
Cancer mortality per 100 000 population	277.3	275.6	273.2	264.0		252.5 (2017)
Current expenditure on health, % GDP	5.0	5.2	5.6	5.7		9.9 (2019)
Public share of health expenditure, % of current health expenditure	78.3	78.7	79.7	80.5		79.5 (2018)
Spending on prevention, % of current health expenditure	1.7	1.8	1.4	1.5		2.8 (2018)
Acute care beds per 100 000 population	516.6	525.3	528.5	533.3		387.4 (2019)
Doctors per 1 000 population *	2.8	2.9	3.0	3.2		3.8 (2018)
Nurses per 1 000 population *	6.7	7.0	7.2	7.5		8.2 (2018)
Consumption of antibacterials for systemic use in the community, daily defined dose per 1 000 inhabitants per day **	24.4	24.5	25.1	24.0	23.8	14.5 (2020)

(1) Doctors' density data refer to practising doctors. Nurses' density data refer to practising nurses. More information: https://ec.europa.eu/health/state-health-eu/country-health-profiles_en
Source: Eurostat database except: * Eurostat database and OECD, ** ECDC.

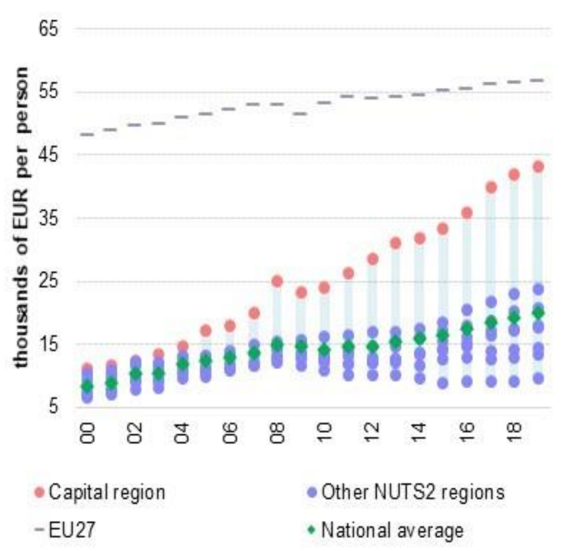
The regional dimension is an important factor when assessing economic and social developments in Member States. Taking into account this dimension enables a well-calibrated and targeted policy response that fosters cohesion and ensures sustainable and resilient economic development across all regions.

Regional disparities remain very high in Romania and are driven by labour productivity, investment and employment gaps between the Bucharest-Ilfov capital region and the rest of the regions. Addressing these gaps and prioritising investment at a regional level would help increase the country's competitiveness and support long-term growth, development and modernisation.

Romanian regions have been catching up with the rest of the EU since Romania's accession but regional disparities persist. In the capital region, GDP per person corresponds to 160% of the EU average, followed by West region with 71%. In the other regions, GDP per person ranges from 44% to 66% of the EU average. The capital region and four other regions grew faster than the EU average, while the three poorest regions saw their GDP per person shrink between 2010 and 2019.

In 2018, productivity in Romania was below the EU average (at 69%) with great variation across regions. Productivity ranges from 133% of the EU average in the capital region of Bucharest-Ilfov to 39% in North-East, which is also the country's least developed region. Productivity growth rates also differed significantly. Between 2010 and 2019, real productivity grew fastest in the capital region (6.36%) and the West region (6.26%). Three other regions saw lower productivity growth, but still above the EU average, while in three other regions productivity shrunk between 2010 and 2019 (Graph A15.1). One factor impeding territorial development is the lack of key assets, such as transport infrastructure and skilled workers, in the less developed regions. In some regions, over 20% of the population aged 18-24 leave school early, and employment in high-technology sectors and R&D expenditure is extremely low.

Graph A15.1: **Real GVA per worker**



Unit: real GVA in MM EUR (2015 prices) by employment in thousands of persons. The light red circle shows the capital city region. The blue circles show the remaining NUTS2 regions. The green diamond shows the national average. The purple line shows the EU27 average.
Source: European Commission

The climate transition affects Romanian regions to varying degrees (Graph A15.2)**.** Although Romania has one of the lowest greenhouse gas (GHG) emissions per capita in the EU, it has some of the highest rates of carbon intensity. Emissions per GDP in 2019 were 430 tCO2/EUR, 13% less than in 2018 but still above the EU average of 263 tCO2/EUR. Three NUTS3 territories, Gorj, Dolj and Hunedoara, are dependent on coal mining and coal energy production. Hunedoara and Gorj account for some 90% of GHG emissions caused by Romania's coal-fired power plants, or approximately 30% of all Romanian GHG emissions stemming from mining and manufacturing. Three NUTS3 territories, Mureş, Prahova, Galați, are dependent on energy intensive high emissions industries. In 2020, 30.6 % of total CO_2 emissions (ETS), approx. 9.98 million tonnes, were the result of industrial activities in Galați, Prahova and Mureş. The transition to a low-carbon economy is expected to increase unemployment and worsen social conditions in the affected regions.

Digital disparities persist between Romanian regions. ICT uptake is low and Romania ranks last in the EU in the 2021 edition of the Digital Economy and Society Index (DESI). For instance, in 2020, only 13% of the population used the internet to interact with public authorities compared with an EU average of 56%. In 2020,

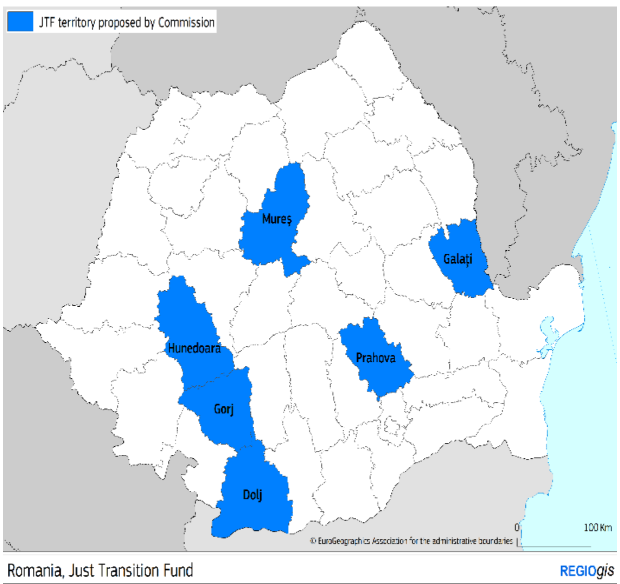
Table A15.1:**Selected indicators at regional level – Romania**

NUTS 2 Region	GDP per head (PPS)	Productivity (GVA (PPS) per person	Real productivity growth	GDP per head growth	Unemployment rate	Population with high educational	Early school leavers	R&D expenditure	CO2 emissions from fossil	Innovation performance
	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 population aged 30-34, 2017-2019	% of population aged 18-24, 2017-2019	% of GDP, 2018	tCO2 equivalent, 2018	RIS regional performance group
European Union	100	100	1.00	1.39	7.1	39.4	10.4	2.19	7.2	
România	70	69	3.05	3.12	5.0	25.6	16.6	0.50		
Nord-Vest	64	61	3.24	3.70	3.8	26.2	14.9	0.22	2.7	Emerging innovator -
Centru	66	76	2.80	2.65	7.1	23.8	20.0	0.31	3.4	Emerging innovator -
Nord-Est (RO)	44	39	-1.91	-1.18	3.0	17.0	20.2	0.19	2.3	Emerging innovator -
Sud-Est	58	64	3.29	3.23	7.4	16.5	21.5	0.09	6.3	Emerging innovator -
Sud - Muntenia	54	58	-0.47	-0.89	5.9	15.8	18.0	0.33	5.6	Emerging innovator -
Bucureşti - Ilfov	160	133	6.36	6.72	4.7	52.4	7.3	1.15	3.8	Emerging innovator +
Sud-Vest Oltenia	54	53	-0.17	-0.62	5.0	19.6	13.4	0.24	8.6	Emerging innovator -
Vest	71	78	6.26	5.49	4.6	21.7	10.8	0.42	4.9	Emerging innovator -

Source: Eurostat, *EDGAR Database

the share rose to almost 30% in Bucharest-Ilfov, while it remained very low in all of the less developed regions, ranging from 10% in North-East and South-Muntenia to 13% in South-West Oltenia.

Graph A15.2: **Territories most affected by climate transition – Romania**



Source: European Commission.

The share of the population at risk of poverty and social exclusion is the highest in the EU with major disparities between the less developed regions (with shares ranging from 19.3% in North-West to 47.1% in North-East) **and the capital region**. Regions with high shares of the workforce concentrated in low productivity sectors experience relatively low salaries and high poverty rates, with a negative impact on social cohesion. The differences in productivity, investment, education and poverty are only partially reflected in the labour market figures. Unemployment in 2020 was low (5% overall) and varied between regions (from 3.0% in North-East to 7.4% in South-East, the only region above the EU average). Despite the overall positive labour market performance, the persistently low population growth and the outward migration of skilled labour generate significant workforce shortages.

All regions in Romania were affected by the COVID-19 pandemic with no clear territorial pattern. The socio-economic consequences seem to have been more severe in some regions, notably the capital region. For instance, while the unemployment rate fell sharply between 2015 and 2019, it then rose by 2.3 pps in the capital region, by 1.8 pps in the Centre region and by around 1.0 pp in the South-East, South-Muntenia and West regions. The share of the population at risk of material deprivation continued to decrease in some regions such as the capital region, South-Muntenia and South-West Oltenia, while it increased in other regions, ranging from a 0.1 pp increase in North-West region to 3.4 pps in the Centre region.

ANNEX 16: KEY FINANCIAL SECTOR DEVELOPMENTS

This Annex provides an overview of key developments in Romania's financial sector. The financial sector remains predominantly bank-based, with an overall low degree of financial intermediation. Total banking sector assets stood at almost 59% of GDP in 2021, of which the five largest banks had a share of 62.4% at the end of 2020, marginally lower than in 2019. The banking sector is foreign owned to a large extent (around 70% of total assets), mostly by euro area banks. The loan-to-deposit ratio has somewhat declined since 2018, mainly due to the strong increase in deposits. The market-funding ratio was rather low at 27.7% in 2020, as bank loans remain the most important form of external financing for most companies.

The banking sector in Romania is stable overall and it weathered the impact of the pandemic relatively well. Banking sector capitalisation has been stable for several years, with the capital adequacy ratio at 22% in Q3-2021, above the EU average and also well above pre-pandemic levels. The results of liquidity and solvency stress tests show that the banking sector is able to manage the main risks that might materialise under a severe macroeconomic scenario. Non-performing loans (NPLs) declined steadily over the last few years and the system-wide NPL ratio stood at 3.7% in Q3-2021 (slightly above the EU average). Despite the increase in loan-loss provisions in 2020, profitability remained resilient and further improved in Q3-2021. The cost-to-income-ratio has also steadily declined on the back of banks' efforts to increase efficiency. Banks in Romania are increasingly offering digital solutions. As regards the non-banking sector, the insurance market continues to be highly concentrated on top insurance undertakings and on types of insurance other than life, , notably motor vehicles segment.

The banking sector's exposure to government debt and to the real estate market remains high. The sovereign-bank nexus remained significant, with local banks' government exposure reaching around 24% of their assets at August 2021, one of the highest shares in the EU. This

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

	2015	2016	2017	2018	2019	2020	2021
Total assets of the banking sector (% of GDP)	57.6	55.6	52.6	51.0	50.0	57.1	58.8
Share (total assets) of the five largest bank (%)	57.4	59.1	59.5	61.6	62.6	62.4	-
Share (total assets) of domestic credit institutions (%)1	9.5	8.6	22.7	25.1	26.4	29.4	30.3
Financial soundness indicators:[1]							
- non-performing loans (% of total loans)	13.4	9.7	6.6	5.0	4.3	3.9	3.7
- capital adequacy ratio (%)	18.9	19.2	19.4	19.7	21.0	23.5	22.0
- return on equity (%)	11.3	10.6	11.7	13.6	12.3	9.0	13.8
NFC credit growth (year-on-year % change)	-	-	7.9	7.7	4.1	7.5	16.6
HH credit growth (year-on-year % change)	-	-	10.5	9.6	5.4	5.1	7.6
Cost-to-income ratio (%)[1]	-57.9	-52.4	54.9	53.5	53.4	51.4	50.5
Loan-to-deposit ratio (%)[1]	67.6	68.2	69.2	71.7	72.0	67.6	69.1
Central bank liquidity as % of liabilities	-	-	-	0.0	0.0	0.1	-
Private sector debt (% of GDP)	58.1	53.8	50.9	47.5	46.7	48.4	-
Gross external debt (% of GDP)[1]							
Gross external debt (% of GDP) - public[1]	19.6	19.1	18.0	17.1	17.8	26.6	25.0
Gross external debt (% of GDP) - private[1]	26.9	28.2	27.9	26.8	27.4	27.9	26.6
Long-term interest rate spread versus Bund (basis points)	297.8	322.9	364.1	429.0	479.2	440.3	399.8
Market funding ratio (%)	28.8	29.5	29.7	27.5	27.2	27.7	-
Green bond issuance (bn EUR)			-	-	-	-	0.4

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

results in an increase of liquid assets and a prudent approach, but also in a non-diversified liquidity reserves and less propensity for lending. The latter however intensified in the course of 2021, mainly in the corporate segment, supported by the guarantees offered by the State. Legislative proposals such as on interest rates capping for mortgage loans may result in tighter lending conditions and thus in some borrowers switching to unregulated and unsupervised solutions.

The Macroeconomic Imbalance Procedure matrix presents the main elements of the in-depth review for Romania in accordance with Article 5 of Regulation (EU) No 1176/2011 on the prevention and correction of macroeconomic imbalances as summarised in the Staff Working Document (SWD (2022)638 final)([48]). For Member States selected in the 2022 Alert Mechanism Report it presents, separately for each source of imbalance and adjustment issue, the main findings regarding the gravity and the evolution of the identified challenges, as well as policy response and gaps.

Romania's economy is facing vulnerabilities related to its competitiveness and particularly to its external balance developments. Increasing fiscal deficits (and non-compliance with the preventive arm of the Stability and Growth Pact) spurring the negative current account balance, pre-dated the COVID-19 crisis and have continued to increase with the pandemic, posing risks to longer-term sustainability via higher entitlements. Government debt has increased significantly, albeit from moderate levels. Currency exposures are significant for government and private sector debts. Cost competitiveness losses accumulated markedly mainly over the second half of the past decade but have eased somewhat in recent years due to more moderate pay rises. Red tape, an inefficient public administration and a volatile legislative framework, further dampen competitiveness and put a burden on investment activity.

Going forward, vulnerabilities are not expected to unwind soon. The current account deficit is expected to remain elevated in the medium term, as the government deficit is forecast to remain sizeable, despite a reduction. Sovereign borrowing costs have increased since early 2021. The expected acceleration in wages amid higher inflation and a tightening labour market could weigh further on cost competitiveness. Nominal depreciation alleviated competitiveness pressures in recent years, but further depreciation could add to inflationary pressures and increase the burden of serving debts in foreign currencies. The financing of the significant external borrowing needs could become more challenging, given the complicated geopolitical context and the outlook of tighter financial conditions.

Recent policy initiatives, including the successful implementation of the RRP, could address some vulnerabilities. Some fiscal consolidation albeit limited has started in 2021. Public sector wages have been frozen since 2021 while future increases in the minimum wage are to be set based on an objective mechanism by 2024, which should help cost competitiveness and net exports. The RRP includes measures that are conducive to improving non-cost competitiveness, such as enhancing transport infrastructure, improving access and quality of education, improving the business environment and supporting innovation. Measures to foster the efficiency of the public administration, financial management and the judiciary, and to address the volatile legislative framework are also part of the RRP ([49]). Additional policy action could complement the RRP implementation in certain areas important for competitiveness and potential growth, such as labour market activation measures, local administrative capacity, and linkages between research institutions and firms.

For those reasons, and more generally on the basis of the elements of the in-depth review undertaken for Romania under Regulation (EU) No 1176/2011 on the prevention and correction of macroeconomic imbalances as summarised in the Staff Working Document (SWD (2022)638 final), **the Commission has considered in its Communication "European Semester – 2022 Spring Package" (COM(2022)600 final) that Romania continues to experience macroeconomic imbalances**.

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

([49]) https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/index.html#:~:text=What%20is%20it%3F,of%20the%20Covid%2D19%20pandemic.

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 balance	The current account deficit deteriorated from a nearly balanced position in 2014 to 5% of GDP in 2020 and 7.0% in 2021. This was mainly due to rising imports, while export market shares continued to grow slowly. The fundamentals of the Romanian economy suggest a close to balance current account. At –46% of GDP in 2021, the NIIP stood below what fundamentals would suggest, but close to prudential levels. Gross external debt slightly increased in 2021 to 58% of GDP, pushed by the government sector, with significant foreign currency exposures.	Current account deficits are forecast at 7.5% of GDP in 2022 and 7.3% in 2023. Thus, the NIIP is set to become more negative. Recently, the current account deficit has been financed again primarily by foreign direct investment, after relying on portfolio investments in 2020. The government sector is a major contributor to the external financing needs. Its borrowing costs have risen since early 2021. Rating agencies kept Romania's government debt at the lowest investment grade.	Before the pandemic, expansionary pro-cyclical fiscal policies fostered a private consumption boom that led to a widening of the current account deficit. Despite some consolidation efforts, the general government deficit remains at 7.1% of GDP in 2021 and is forecast to decrease only marginally by 2023. Without well-specified measures, there is a risk that Romania will not comply with the EDP recommendation of the Council in 2022 and 2023. The implementation of fiscal and pension reforms and tax collection improvements included in the RRP would help improve the public finances.
Competitiveness	Over 2016-2019, unit labour costs (ULCs) growth averaged 8.3%, fuelled by very high nominal wage increases. The pandemic led to more moderated nominal wage growth of 2.6%. In 2021, as the economy rebounded, wage growth increased strongly to 5.7%. The depreciation of the leu exchange rate has softened the appreciation of the unit-labour-cost-based real effective exchange rate. Non-cost factors such as deficient infrastructure, particularly in poorer regions, skill mismatches and low innovation and a cumbersome business environment, fuelled by political and legislative uncertainty, negatively impact Romania's competitiveness.	ULCs are expected to accelerate, from -9% in 2021, to 6.4% and 4.1% in 2022 and 2023 respectively, on the back of wage increases of 8.3% and 7%, and with productivity growth at around 2.3%. This could lead to stronger appreciations of the real exchange rate, leading to potential cost competitiveness losses.	In 2021, the minimum wage increase was moderate, but has increased by 11% in 2022, still well below the average of 22% between 2016-2018. The RRP foresees an objective minimum wage setting mechanism as of 2024. Since 2021, public wages have been frozen. The RRP includes measures to improve competitiveness, such as improving transport infrastructure, education quality, reducing red tape and offering business support. Reforms also aim to attract more talent and to increase innovation in research institutes, strengthen science-industry nexus, increase the transparency and effectiveness of public administration and judiciary. Gaps related to activation measures and local administrative capacity remain.

Source: European Commission

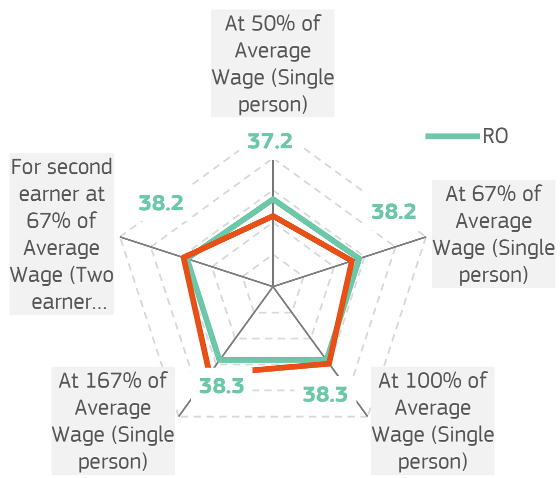
This Annex ([50]) provides an indicator-based overview of Romania's tax system. It includes information on the tax structure, i.e. the types of tax that Romania derives most revenue from, the tax burden for workers, and the progressivity and redistributive effect of the tax system. It also provides information on tax collection and compliance, and on the risks of aggressive tax planning.

Romania's tax revenues are very low in relation to GDP (the second lowest in EU after Ireland, which is in a special situation), and dominated by taxes on consumer goods and services and labour taxes. Romania's government revenues are less than 30% of GDP, significantly lower than the EU average of 40%. In 2021, labour tax revenues as a percentage of GDP were among the lowest in the EU, but still relatively high in the national tax structure because of low property and low capital taxes. Recurrent taxes on immovable property are low compared to the EU average. A flat personal income tax (PIT) rate of 10% is generally in place. However, there are several exceptions to this rule (e.g. the tax rate for dividends, IT and construction sectors exemptions, the tax rate for income from the transfer of immovable property, etc.), that contradict the concept of a flat-rate tax system.

Romania has low taxes that, in addition, are not collected. Tax revenues on consumer goods and services as a percentage of GDP are in line with the EU average but they are often not collected (Romania has the highest VAT gap in the EU since measurements began). Environmental tax revenues are slightly below the EU average, and property taxes are among the lowest in the EU. Romania also has low tax rates on inheritances and the cadastral values, which serve as their tax base, are not updated. Finally, corporate tax rates were considerably below the EU average.

Romania's labour taxes are relatively uniform across wage levels, masking imbalances. The labour tax wedge ([51]) for Romania in 2021 was higher than the EU average for low income levels, and lower than the EU average for higher incomes. The increase in the proportion of workers receiving minimum wage (29% in 2021 up from 8% in 2011) has made matters worse. The tax-benefit system has helped reduce inequalities (as measured by the GINI coefficient) by less than the EU average.

Graph A18.1: **Tax wedge indicators (2021)**



(1) The second earner average tax wedge measures how much extra personal income tax 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: Commission services

([50]) For more data on tax revenues as well as the methodology applied, see EC (2021a) 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 EC (2021b).

([51]) 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/

Table A18.1:**Taxation indicators**

		Romania					EU-27				
		2010	**2018**	**2019**	**2020**	**2021**	**2010**	**2018**	**2019**	**2020**	**2021**
Tax structure	Total taxes (including compulsory actual social contributions) (% of GDP)	26.4	26.8	26.8	27.1		37.9	40.1	41.0	41.3	
	Labour taxes (as % of GDP)	11.0	12.2	12.0	13.0		20.0	20.7	20.7	21.5	
	Consumption taxes (as % of GDP)	11.3	10.1	10.2	10.0		10.8	11.1	11.1	10.8	
	Capital taxes (as % of GDP)	4.1	3.7	3.9	3.3		7.1	8.2	8.1	7.9	
	Total property taxes (as % of GDP)	0.8	0.6	0.7	0.6		1.9	2.2	2.2	2.3	
	Recurrent taxes on immovable property (as % of GDP)	0.7	0.5	0.5	0.5		1.1	1.2	1.2	1.2	
	Environmental taxes as % of GDP	2.1	2.0	2.1	1.9		2.4	2.4	2.4	2.2	
Progressivity & fairness	Tax wedge at 50% of Average Wage (Single person) (*)	42.3	36.0	36.6	37.3	37.2	33.9	32.4	32.0	31.5	31.9
	Tax wedge at 100% of Average Wage (Single person) (*)	44.6	38.3	38.3	38.3	38.3	41.0	40.2	40.1	39.9	39.7
	Corporate Income Tax - Effective Average Tax rates (1) (*)		14.4	14.4	14.4			19.8	19.5	19.3	
	Difference in GINI coefficient before and after taxes and cash social transfers (pensions excluded from social transfers)	6.0	5.0	6.8	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 %) (*)		44.4	43.0				31.9	31.8		
	VAT Gap (% of VTTL)		32.7	34.9				11.2	10.5		
Financial Activity Risk	Dividends, Interests and Royalties (paid and received) as a share of GDP (%)		2.5	2.3	2.1			10.7	10.5		
	FDI flows through SPEs (Special Purpose Entities), % of total FDI flows (in and out)				0.0			47.8	46.2	36.7	

(1) Forward-looking effective tax rate (OECD), (*) EU-27 simple average, as no aggregated EU-27 value.
Source: European Commission and OECD

Romania is making some progress in the digitalisation of the tax administration, which is helping reduce tax arrears and increase collection. Although outstanding tax arrears have declined by 1.4 pps to 43% of total net revenue, they remain consistently higher than the EU-27 average. The VAT gap (an indicator of the effectiveness of VAT enforcement and compliance), already the highest in the EU further deteriorated in 2019. E-filing rates [52] of tax returns increased considerably in recent years, together with the simplifications in VAT and the relatively low level of administration necessary for the flat tax; however, collection and the fiscal predictability should improve.

Romania's recovery and resilience plan (RRP) outlines reforms and investments to digitalise the tax administration. This includes the digitalisation of the National Agency for Fiscal Administration (ANAF), which already started. Ongoing measures to facilitate taxpayers' compliance and tax administration processes include the development of digital services and integrated risk management.

[52] EC (2021c). See section 2.1.4 Improving tax administration for further details.

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

	2004-07	2008-12	2013-18	2019	2020	2021	forecast 2022	2023
Real GDP (y-o-y)	7.6	0.6	4.5	4.2	-3.7	5.9	2.6	3.6
Potential growth (y-o-y)	6.2	2.5	3.5	4.1	3.1	3.4	3.1	3.3
Private consumption (y-o-y)	12.8	-0.1	6.1	3.9	-5.1	7.9	2.9	3.5
Public consumption (y-o-y)	1.9	1.2	1.4	7.3	1.8	0.4	0.1	-0.1
Gross fixed capital formation (y-o-y)	23.6	-3.7	1.1	12.9	4.1	2.3	4.8	8.1
Exports of goods and services (y-o-y)	13.9	7.0	10.4	5.4	-9.4	12.5	4.5	5.2
Imports of goods and services (y-o-y)	27.9	1.3	10.5	8.6	-5.2	14.6	5.0	5.3
Contribution to GDP growth:								
Domestic demand (y-o-y)	15.2	-1.2	4.3	6.5	-2.0	5.5	3.0	4.3
Inventories (y-o-y)	-1.4	0.0	0.4	-0.6	-0.3	1.8	0.1	-0.3
Net exports (y-o-y)	-6.4	1.4	-0.3	-1.6	-1.5	-1.4	-0.5	-0.4
Contribution to potential GDP growth:								
Total Labour (hours) (y-o-y)	-0.8	-1.1	-0.3	-0.5	-0.8	-0.9	-0.5	-0.4
Capital accumulation (y-o-y)	2.1	2.3	1.0	1.7	1.7	1.6	1.6	1.7
Total factor productivity (y-o-y)	4.8	1.3	2.8	2.8	2.3	2.7	2.0	2.0
Output gap	5.0	-0.8	-0.5	2.0	-4.8	-2.5	-3.0	-2.7
Unemployment rate	8.9	8.5	7.4	4.9	6.1	5.6	5.5	5.3
GDP deflator (y-o-y)	13.4	6.1	3.6	6.8	3.9	5.4	9.5	4.9
Harmonised index of consumer prices (HICP, y-o-y)	8.1	5.7	1.4	3.9	2.3	4.1	8.9	5.1
Nominal compensation per employee (y-o-y)	15.8	7.9	9.2	10.9	2.6	5.7	8.3	7.0
Labour productivity (real, hours worked, y-o-y)	7.8	2.8	4.7	3.1	-2.2	14.2	1.5	2.5
Unit labour costs (ULC, whole economy, y-o-y)	7.4	5.2	4.5	6.6	4.7	-9.0	6.4	4.1
Real unit labour costs (y-o-y)	-5.3	-0.8	0.9	-0.2	0.8	-13.7	-2.8	-0.8
Real effective exchange rate (ULC, y-o-y)	9.1	-3.0	3.0	1.5	.	.	.	.
Real effective exchange rate (HICP, y-o-y)	8.5	-2.9	0.3	-0.2	1.3	0.1	.	.
Net savings rate of households (net saving as percentage of net disposable income)	.	.	.	.	.	.	.	.
Private credit flow, consolidated (% of GDP)	14.0	3.0	0.1	2.0	1.3	.	.	.
Private sector debt, consolidated (% of GDP)	43.7	70.7	56.5	46.7	48.4	.	.	.
of which household debt, consolidated (% of GDP)	12.0	21.4	17.2	15.5	16.2	.	.	.
of which non-financial corporate debt, consolidated (% of GDP)	31.8	49.3	39.3	31.3	32.2	.	.	.
Gross non-performing debt (% of total debt instruments and total loans and advances) (2)	1.4	.	10.2	3.3	3.0	.	.	.
Corporations, net lending (+) or net borrowing (-) (% of GDP)	-2.7	8.0	11.7	8.9	8.9	8.3	10.5	10.7
Corporations, gross operating surplus (% of GDP)	26.6	31.7	30.9	29.7	29.4	31.8	34.8	35.5
Households, net lending (+) or net borrowing (-) (% of GDP)	.	.	.	:	-5.6	-8.3	-10.7	-11.7
Deflated house price index (y-o-y)	.	.	0.9	-1.9	2.2	.	.	.
Residential investment (% of GDP)	2.0	2.9	2.4	2.2	2.4	2.6	.	.
Current account balance (% of GDP), balance of payments	-10.3	-6.3	-1.9	-4.9	-5.0	-7.0	-7.4	-7.3
Trade balance (% of GDP), balance of payments	-11.4	-7.5	-1.5	-4.1	-4.3	-5.7	.	.
Terms of trade of goods and services (y-o-y)	7.5	0.9	1.0	1.1	3.3	-0.1	-0.9	-0.5
Capital account balance (% of GDP)	0.5	0.6	2.0	1.3	1.9	2.2	.	.
Net international investment position (% of GDP)	-37.4	-61.7	-52.6	-43.6	-47.9	-45.7	.	.
NENDI - NIIP excluding non-defaultable instruments (% of GDP) (1)	-5.0	-22.2	-10.6	-4.1	-7.1	-6.7	.	.
IIP liabilities excluding non-defaultable instruments (% of GDP) (1)	36.1	57.8	43.7	33.6	42.0	40.6	.	.
Export performance vs. advanced countries (% change over 5 years)	84.1	69.1	24.7	15.6	21.2	.	.	.
Export market share, goods and services (y-o-y)	13.9	2.3	6.3	1.6	2.4	2.3	-0.2	0.9
Net FDI flows (% of GDP)	.	-2.8	.	-2.2	-1.4	-3.0	.	.
General government balance (% of GDP)	-1.7	-6.1	-2.0	-4.3	-9.3	-7.1	-7.5	-6.3
Structural budget balance (% of GDP)	.	.	-1.8	-4.9	-7.8	-6.3	-6.5	-5.4
General government gross debt (% of GDP)	14.8	27.0	36.9	35.3	47.2	48.8	50.9	52.6

(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 Romania 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.

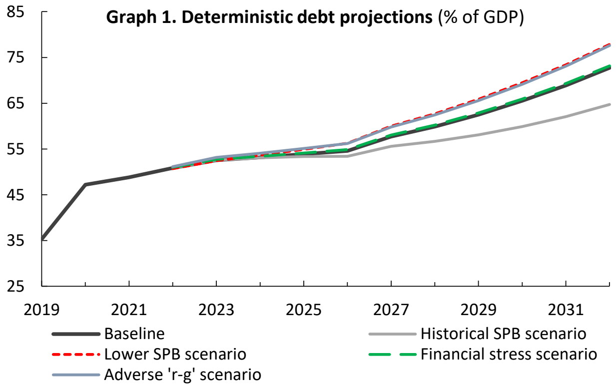
Graph 1 shows four alternative scenarios around the baseline, to illustrate the impact of changes in assumptions. The 'historical SPB' scenario assumes that the structural primary balance (SPB) gradually returns to its past average level. In the 'lower SPB' scenario, the SPB is permanently weaker than 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.

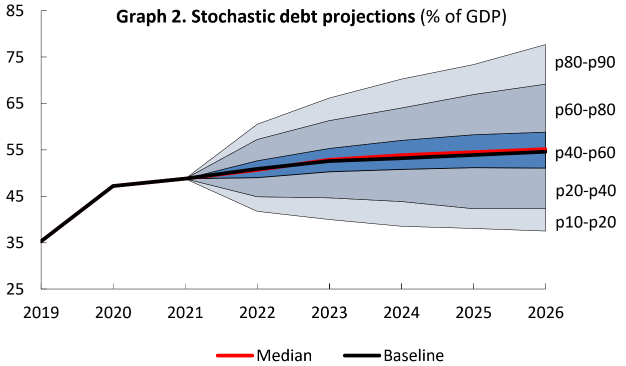
Table 2 shows the S1 and S2 fiscal sustainability indicators and their main drivers. S1 measures the consolidation effort needed to bring debt to 60% of GDP in 15 years. S2 measures the consolidation effort required to stabilise debt over an infinite horizon. The *initial budgetary position* measures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

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

Table 1. Baseline debt projections	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Gross debt ratio (% of GDP)	**35.3**	**47.2**	**48.8**	**50.9**	**52.6**	**53.2**	**53.9**	**54.6**	**57.7**	**59.9**	**62.5**	**65.5**	**68.9**	**72.7**
Change in debt	0.5	11.9	1.6	2.0	1.7	0.6	0.7	0.7	3.1	2.2	2.6	3.0	3.4	3.8
of which														
Primary deficit	*3.2*	*8.0*	*5.7*	*6.0*	*4.7*	*3.8*	*3.3*	*2.9*	*3.4*	*3.5*	*3.5*	*3.5*	*3.7*	*3.8*
Snowball effect	*-2.4*	*1.4*	*-3.5*	*-3.8*	*-2.5*	*-3.2*	*-2.6*	*-2.2*	*-0.3*	*-1.3*	*-0.9*	*-0.5*	*-0.3*	*0.0*
Stock-flow adjustment	*-0.3*	*2.6*	*-0.6*	*-0.1*	*-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)	7.6	15.8	10.2	11.0	10.1	10.2	10.1	10.1	11.2	11.8	12.4	13.1	14.0	14.8



Graph 1. Deterministic debt projections (% of GDP)



Graph 2. Stochastic debt projections (% of GDP)

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

			S1	**S2**
Overall index (pps. of GDP)			**3.5**	**4.3**
of which				
	Initial budgetary position		3.9	4.3
	Debt requirement		-0.5	
	Ageing costs		0.1	0.0
	of which	*Pensions*	*-0.2*	*-1.0*
		Health care	*0.3*	*0.8*
		Long-term care	*0.1*	*0.3*
		Others	*0.0*	*-0.1*

Source: European Commission

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

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	MEDIUM	Overall	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM
				Debt level (2032), % GDP	73	65	78	78	73			
				Debt peak year	2032	2032	2032	2032	2032			
				Fiscal consolidation space	75%	73%	80%	75%	100%			
				Probability of debt ratio exceeding in 2026 its 2021 level						65%		
				Difference between 90th and 10th percentiles (pps. GDP)						40		

(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)

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 short-term fiscal risks (Table A20.2).

Medium-term risks to fiscal sustainability are high. On the one hand, the debt sustainability analysis (DSA) points to medium risks. It shows that government debt, currently at 48.8% of GDP, is projected to continue rising significantly, from around 51% in 2022 to around 73% 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, all pointing to medium risks (Tables A20.1 and A20.2). On the other hand, the sustainability gap indicator S1 points to high risks. It signals that a large consolidation effort of 3.5 pps. of GDP would be needed to bring the debt ratio to 60% of GDP in 15 years' time (Table 2). Overall, the high risk reflects the currently large deficit, rising debt, and sensitivity to adverse shocks.

Long-term risks to fiscal sustainability are medium. Over the long term, both the sustainability gap indicator S2 (at 4.3 pps. of GDP) and the DSA point to medium risks. The S2 indicator suggests that, to stabilise debt over the long term, it will be necessary to address the unfavourable initial budgetary position, while containing increasing health care costs (Table 2).

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