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2023 Country Report – Latvia

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Recommendation for a COUNCIL RECOMMENDATION

on the 2023 National Reform Programme of Latvia and delivering a Council opinion on the Stability Programme of Latvia

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European Commission

Latvia

2023 Country Report



ECONOMIC AND EMPLOYMENT SNAPSHOT

Latvia's economic resilience tested by Russia's invasion of Ukraine

In 2022, economic growth was caught in the crosswinds of post-COVID recovery and surging inflation. The start of the year saw strong GDP growth driven by consumption. However, Russia's unprovoked invasion of Ukraine in February 2022 precipitated a surge in energy prices and broader inflation in the second half of the year. The resulting fall in household disposable incomes and a slowdown in real consumption took the wind out of the economy's sails. Rising prices and interest rates are set to shape economic growth. In 2023, GDP is forecast to grow at a sluggish pace. A pick-up in EU-funded investment activity and a decline in inflation are expected to boost growth in the second half of 2023 and lead to growth at a somewhat brisker pace in 2024. In addition to the support from the Recovery and Resilience Facility (see Section 2), Latvia benefits from a significant amount of EU cohesion funds from 2021 to 2027 (EUR 4.2 billion, representing around 1.4% of GDP annually on average).

Structurally, the Latvian economy is on a sound footing, but its public debt has increased. The Latvian economy was well prepared to withstand the shock delivered by COVID-19 crisis – its public finances were on a solid footing and the government had little difficulty in funding the COVID-19 related support measures. The cost of this has been an increase in public debt by some 10 percentage points (see Section 3). However, at 40.8% of GDP, public debt remains among the lowest in the EU. Similarly, apart from some temporary disruptions to income, businesses and households weathered the crisis well – there wasn't a noticeable increase in bankruptcies or late loan payments. However, employment has not yet recovered to its pre-crisis peak since the recovery in construction and trade has been lagging behind other countries.

The main economic impact of Russia's unprovoked invasion of Ukraine has been rising energy prices and, as a result consumer price inflation more broadly. Latvia's energy price inflation reached 48.8% and consumer inflation peaked reached 17.2%. The inflation surge has substantially reduced household disposable income as wage growth only averaged around 9% in 2022. Latvia has also borne direct fiscal costs, related to helping households and companies with higher energy prices, support to refugees or increased defence expenditure. Goods exports to Russia have so far not declined substantially; however, exports of services have declined significantly.

The energy price surge has hit Latvia's economy harder than most other EU countries. This is due to Latvia's high reliance on natural gas for electricity generation and heating as well as the comparatively low prices it paid for natural gas before the surge. Its energy inflation at 48.8%, significantly exceeded the 36.9% reached in the euro area. Furthermore, with energy products comprising a larger share of Latvia's consumer spending, its impact on consumer price inflation was bigger than in other countries. Besides the energy price shock, the supply of metal and timber products and fertiliser, which were - previously imported from Russia and Belarus, was disrupted, leading to a spike in their prices and affecting the agriculture and construction sectors in particular.

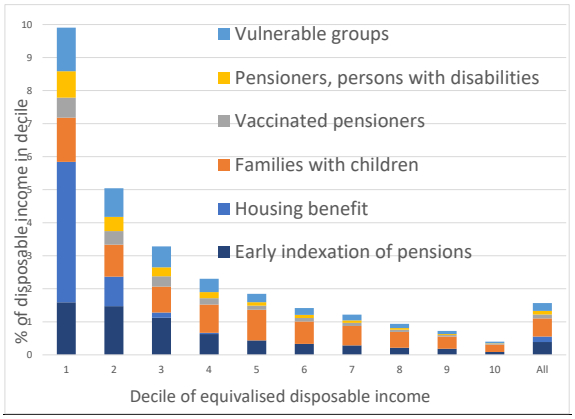
Latvia has been selected for an in-depth review to assess risks related to deteriorating price competitiveness linked to the build-up of wage and price inflation differentials with its trading

partners, strong house price growth as well as widening of the current account. **([1])** The gap between Latvia's real wage growth and productivity growth has consistently expanded over the past decade, resulting in notable divergence between real wages and productivity, raising concerns about its cost competitiveness. Moreover, the recent energy price shock hit Latvia particularly hard, leading to a significant divergence in inflation with the euro area countries, adding further concerns about its price competitiveness. While inflation is expected to abate, the pressure on wages stemming from the declining labour supply is expected to persist over the medium term and would need to be matched by productivity gains to avoid a loss of price competitiveness. The increase of the current account deficit in 2021 and 2022 can be partially attributed to the impact of rising energy prices and increased government borrowing. In the medium term, however, the current account is expected to return close to balance. House price growth, which has been broadly in line with incomes in the past decade, has picked up the pace recently. However, the acceleration in house prices is expected to be temporary as rising interest rates and a fall in real incomes are expected to sap housing demand. Overall, Latvia does not appear to suffer from demand overheating. The structural challenges related to the declining labour supply have been identified as the key risk to price competitiveness that needs to be monitored over the medium term.

Public support measures have helped to protect firms and households

In 2022 and 2023, the government took steps to counter the economic and social consequences of Russia's unprovoked invasion of Ukraine. The government quickly introduced several packages of measures to counter the economic and social impact of the exceptional increases in energy prices. These were part of the emergency policy to protect households and exposed companies, limiting the adverse impact of energy price hikes on disposable incomes and production costs. While in 2022 social support measures helped increase the disposable income of the poorest 20% of households (see Graph 1.1), most of the energy support measures in 2023 are only partially targeted to the most vulnerable people (see Box 1). In addition, the government has also provided crucial support (including access to social benefits, education, housing and language training) to the almost 33,000 people fleeing the war in Ukraine that are hosted by Latvia.

Graph 1.1: **Additional monthly benefits by target groups and types, 2022 social policy changes, by deciles (% change to the baseline)**



Source: European Commission, Joint Research Centre, calculation based on the EUROMOD model version I5.0+

Addressing the remaining socio-economic and environmental challenges as a basis for sustainable growth

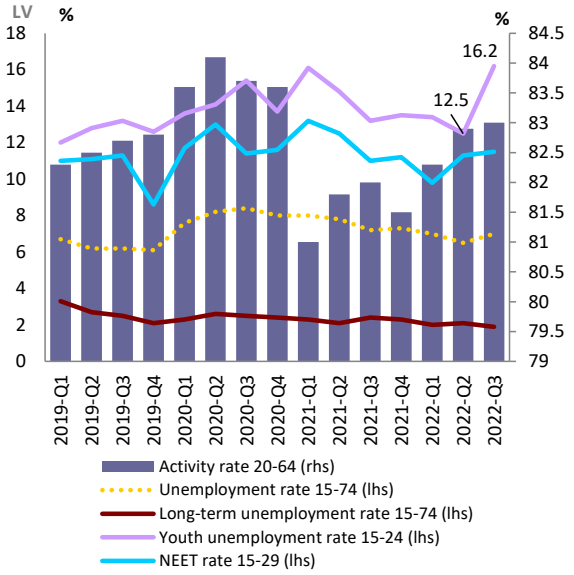
Latvia's GDP per capita is significantly below the EU average and the pace of convergence is slowing. In 2021, Latvia's GDP per capita was 72% of the EU average, which is 6 pps higher than 5 years before. However, its income is significantly below the level of its Baltic peers – both Estonia's and Lithuania's income was 89% of the EU average in 2021 and they had improved by 12

([1]) European Commission (2023), In-Depth Review for Latvia, Commission staff working document (COM(2023) 636 final).

and 13 pps, respectively compared to 2016 ([2]). Latvia's productivity growth has been solid and firmly above the EU average over the same period (16.3% vs 1.9%), albeit lower than in Estonia and Lithuania. However, the share of the population in employment has been declining due to ageing and this has dampened the impact of productivity gains on GDP per capita. The key convergence challenges for Latvia are population ageing, with a high share of low-skilled people, poor health outcomes, weak innovation performance and regional disparities. Additionally, in recent years Latvia has endured a structural decline of some of its major export industries: financial services and transport.

The labour market has continued to recover, but there was a substantial fall in real wages in 2022. The unemployment rate continued to fall (6.9% in 2022) as the employment rate (77% in 2022) has returned to its pre-pandemic level. Overall, the labour market shows a solid performance (see Graph 1.2), but challenges remain in aligning employment conditions across different regions and skill levels. Unemployment is higher for younger people, people with a low level of skills and those living in rural areas. Despite the performance of the labour market and the increases in nominal pay (+9.0%), real wages fell substantially in 2022 due to high inflation. On the other hand, the real minimum wage slightly increased in January 2023 compared to January 2022 (+2.1%) due to a 24% increase in the nominal minimum wage. Scaling up adult education could alleviate labour shortages and encourage more people into employment. In addition, it would contribute to the 2030 national target of at least 60% of all adults participating in training each year.

Graph 1.2: **Selected labour market indicators**



Source: Eurostat, Labour market survey

Inequality and poverty remain high, linked to a poor redistribution of income through the tax and benefit system. Latvia's tax revenue as a share of GDP is below the EU average and further declined in 2021. Public spending on social protection remains among the lowest in the EU and is therefore less effective at reducing poverty and inequality than in other EU countries (see Annex 14). The labour tax system is less progressive than the EU average, with median and low-income earners exposed to a higher tax burden than the EU average (see Annex 19). Despite some improvements in the adequacy of social benefits, social transfers are among the least effective in reducing poverty in the EU, as reflected in the social scoreboard accompanying the European Pillar of Social Rights (see Annex 14).

The social protection and inclusion of the most vulnerable people is hindered by the limited services offered. The shortage of social workers limits the provision of social services, and the range of services offered varies between municipalities. The proportion of the Latvian population reporting unmet needs for medical care was among the highest in the EU, both before and during the COVID-19 pandemic, with people in lower income groups disproportionately affected. Latvia's long-term care system is underdeveloped, and

([2]) Expressed in Purchasing Power Standards

progress in transitioning from institutional to community-based care has been limited. There is a high level of housing deprivation and overcrowding, while access to social housing is limited as the stock is small and often of poor quality.

Latvia has succeeded in diversifying away from fossil fuels imported from Russia. In July 2022, Latvia banned imports of Russian natural gas from 1 January 2023. Despite Latvia's high share of renewable energy, the potential of wind and solar power is underused because installed generation capacities lag significantly behind its Baltic neighbours. The government has removed some of the barriers to the development of onshore wind power. Further efforts could be made in greening electricity generation and heating. The grid also needs to be further developed to enable a greater uptake of renewable energy.

Latvia is showing slow progress in its position on the Sustainable Development Goals (SDG) scoreboard (see Annex 1). Latvia performs well on several SDG indicators on environmental sustainability. The share of renewable energy is among the highest of all EU countries, but it still needs to catch up on the circular material use rate and climate action. The score for climate action (SDG 13) has worsened because of the considerable increase in emissions from land use and forestry between 2016 and 2021. Latvia still lags behind the EU average in several areas related to fairness (SDG 1, 3, 5, 8 and 16). The pandemic and energy crises have also had a negative effect on income inequality, which remains higher than the EU average. The outcome has worsened as a result of the increased gap between urban and rural areas as regards the risk of poverty or social exclusion. This is also closely linked to poor health outcomes and the limited impact of social transfers in reducing poverty. The performance on SDG indicators on productivity (SDG 4, 8 and 9) has been affected by the level of digital skills, which is lower than the EU average and gross domestic expenditure on R&D.

Box 1:

Energy policy response in Latvia

Latvia has adopted several support measures to cushion the impact of energy price inflation on households and businesses. The Commission's 2023 Spring Economic Forecast projects the country's gross budgetary costs to amount to 1.0% of GDP in 2023. Most measures do not fully preserve the price signal and only partially target the most vulnerable. These measures have been announced as temporary and are expected to expire after the first half of 2023.

The measures include: (i) temporary and differentiated cost compensation above a certain price threshold for heating (based on the energy source used) and a fixed tariff for households for the first 100 kWh of electricity per month; (ii) two measures providing additional monthly benefits to vulnerable households e.g. retired people, persons with disabilities, survivors, people and families on a low-income, large families and families with a child with disabilities; (iii) suspension of the electricity system service tariff for companies and, for all legal persons, reimbursement of 50% of the cost of electricity above a certain price level.

Latvia has reported to the Commission that it has no companies that fall within the scope of Chapter III of Council Regulation (EU) 2022/1854 on an emergency intervention to address high energy prices.

Latvenergo, the state-owned energy company, bought approximately 2 TWh of liquified natural gas ([3]) in February 2022, after receiving a mandate from the government. Following amendments to the Energy Law in April 2022, the reserves of natural gas to ensure security of national energy supply have been created in amount of approximately 2 TWh in the second half of the year. Latvia also launched several energy saving measures, targeting the public sector and multi-apartment buildings in particular.

([3]) Announcement on gas procurement and the impact of the current situation - Latvenergo

THE RECOVERY AND RESILIENCE PLAN IS UNDERWAY

Latvia's recovery and resilience plan (RRP) aims to address the key challenges related to the green and digital transition, regional and social inequalities, healthcare, economic transformation and rule of law. It consists of 24 reforms and 61 investments that are supported by EUR 1.8 billion in grants, representing 5.58% of Latvia's GDP in 2021 (see Annex 3 for more details). The Commission disbursed EUR 231 million on 7 October 2022, based on the satisfactory fulfilment of the first nine milestones of the RRP. The second payment request is due in 2023 and will cover 49 milestones and targets.

The implementation of Latvia's recovery and resilience plan is well underway. Latvia submitted one payment request, corresponding to 9 milestones in the plan and resulting in an overall disbursement of EUR 201 million. As a result of objective circumstances related to increases in the prices of energy and construction materials, and supply chain constraints as a result of Russia's aggression against Ukraine, Latvia intends to submit modifications to the plan, as well as a REPowerEU chapter to accelerate the decarbonisation of the economy and reduce dependence on fossil fuels.

The following, more detailed review of measures being implemented under the RRP in no way implies formal Commission approval or rejection of any payment requests.

Supporting the green and digital transition

On the green transition, Latvia has adopted several regulations to contribute to the greening of the Riga Metropolitan Transport System, in particular by electrifying sections of the railway and by developing the cycling infrastructure. These investments are to be completed by 2026. In 2022, Latvia launched a series of energy efficiency support programmes for businesses, multi-apartment buildings and municipal buildings and infrastructure. The modernisation of the electricity transmission and distribution networks is also underway, with notification to beneficiaries of the award of contracts for projects. Moreover, to contribute to climate change adaptation and a better prevention of fires, the Latvian government has approved a report on the implementation of its disaster risk management system.

Reforms and investments that support the digital transition include the digitalisation of public administration, basic and advanced digital skills, the digital transformation of businesses and improving broadband infrastructure. As part of the first payment request, procedures were set up to carry out remote learning in schools and technical requirements for connected and automated driving were adopted to further develop the broadband infrastructure. In 2022, Latvia established a framework for the unified governance of ICT development activities in the public administration and has adopted regulations to support the digital transformation of processes and services in the public administration. National higher education standards have been amended to establish the results that must be achieved in acquiring

digital skills. Reforms and investments that address the low level of digital skills (see Annex 10) are set out in the Latvian RRP, starting with the development of a common framework to assess basic digital skills.

Improving social and territorial cohesion

Latvia has made progress in improving social and territorial cohesion. The fulfilment of a first set of milestones has helped Latvia to advance the reform that aims to reduce social and regional inequalities, as well as to improve the quality of long-term care. One of the achievements in improving social equality has been the adoption of the minimum income reform – a flagship measure in the Latvian RRP. This new reform will ensure that, from July 2023, the minimum income threshold is not less than 20% of the median income and that it is revised annually. A new rental law balancing the rights of tenants and landlords has also entered into force. Additionally, Latvia has launched programmes to improve accessibility for people with disabilities to public buildings, social-care facilities and individual homes. In 2022, to reduce regional disparities, Latvia adopted various support programmes for the construction of low-rent housing and the development of industrial parks and enlisted at least 20 education institutions in improving the school network.

Fostering research, development and innovation

In its RRP, Latvia has set out measures to boost its research and innovation potential by reforming its innovation and higher education systems. The reform of higher education aims to improve governance, the accreditation mechanism and funding principles for the sector. In 2022, Latvia adopted legislative changes to reform the governance of higher education. In 2023, Latvia has announced calls for consolidation grants to higher education institutions, which will help improve the capacity of these institutions by concentrating the financial and human resources. The plan also provides for pilot projects on the reform of doctoral programmes and academic career paths. The reform of higher education is planned to be completed by 2026. On the innovation governance side, Latvia aims to improve collaboration and linkages between sectors and better integrate the entire value chain of innovation. To achieve this, it will redefine the tasks of the parties concerned, write a new innovation strategy and set objectives that the parties will have to achieve. The reform is coupled with a EUR 109 million innovation fund that will be used to fund businesses' innovation activities. The new innovation system is planned to begin operating in 2023.

Improving the resilience, accessibility and quality of healthcare

In the area of healthcare, the RRP aims to address challenges in resilience, access, quality and integration across different levels of care. Since 2022, reforms have been underway in several directions, such as preparing a digital health strategy and guidelines for integrated healthcare and for epidemiological safety. A comprehensive healthcare workforce strategy is expected to be adopted in 2023 and a new remuneration model for healthcare staff by 2024. A study on the quality and availability of non-hospital outpatient care, to evaluate and improve the system, is expected to begin in 2023. The RRP also provides for investments in public health research, the health infrastructure of university and regional hospitals and the infrastructure providing outpatient healthcare.

Box 1: **Key deliverables under the recovery and resilience plan in 2023-2024:**

- Greening of the Riga metropolitan area thanks to a coordinated approach on passenger transport
- Entry into force of the minimum income support system
- Beginning of construction of low-rent housing
- Adoption of a human resources development strategy in healthcare
- Creation of five innovation clusters
- Adoption of a plan to modernise public administration
- Creating a methodology to reduce the shadow economy by implementing the national research programme 'Reducing the shadow economy to ensure the sustainable development of the country'

Increasing the effectiveness of public administration and the judicial system

In the area of rule of law, the RRP consists of four subparts that address key challenges in tax compliance, law enforcement dealing with economic crime, public administration, and public procurement. The objectives of this component are to: (i) reduce the shadow economy and foster a fairer business environment, (ii) improve the quality and efficiency of the judicial system, particularly in fighting economic crime; (iii) modernise the public administration; (iv) improve the quality, efficiency, and integrity of public procurement. In 2023, it is expected that a plan to modernise the public administration and a concept report on the Single Service Centre, which will be responsible for central processing and execution of certain functions e.g., financial accounting and human resources, will be adopted. Both measures will provide a further boost to increasing the efficiency, transparency, and accountability of the public administration.

Further strides have been taken in the area of public procurement. As part of the first set of milestones already completed, the regulatory framework for improving the competition environment and reducing the risk of corruption in public procurement has been adopted. Moreover, the quality of procurement has been further improved by adopting criteria for identifying risky market sectors.

FURTHER PRIORITIES AHEAD

Beyond those tackled in the RRP, Latvia faces additional challenges. Latvia's tax revenue as a share of GDP is significantly below the EU average. Public expenditure on healthcare and social protection are low compared to the EU average, hampering timely and equal access to healthcare and the provision of adequate social assistance. While improvements have been made, limited access to finance is holding back growth and innovation in SMEs. This is further exacerbated by labour shortages and skills mismatches. Socio-economic disparities between urban and rural areas remain significant. In the current geopolitical context, Latvia could benefit from greater efforts to use energy and natural resources more efficiently and sustainably. Addressing these challenges will also help to make further progress in achieving those SDGs where Latvia currently shows room for further improvement, namely No poverty (SDG1), Good health and well-being (SDG3), Reduced inequalities (SDG10), and Climate action (SDG13) (See Annex 1).

Improving tax compliance to ensure more resources for underfunded public services

Latvia's tax revenue as a share of GDP remains significantly below the EU average, limiting the funding for public services. The main issues in the area of public finances remain unchanged and have only been addressed to a limited extent by the 2023 budget. In 2021, the share of tax revenues decreased to 30.4% of GDP, the lowest level in the last three years. In the taxation fields less detrimental to growth, in particular capital and property, Latvia still collects lower revenues than the EU average ([4]). In addition, cadastral reform for property taxation to reflect current market values, is still pending. Meanwhile, the relatively low revenue from labour taxation, despite relatively high tax rates, suggests that there is potential to increase revenue from labour taxes through policy measures to ensure better tax compliance. The budget in 2023, and those of previous years, have to some extent addressed the long-standing issue of the underfunding of public services, in particular healthcare and social care ([5]). However, a medium-term approach to increasing state funding is needed to ensure tangible structural change in these areas.

A public spending review has become a systematic part of the budget preparation process, but this has a rather limited effect on government finances. With the aim of improving the effectiveness of public spending, an annual expenditure review has been carried out since 2016. In 2017-2023, spending reviews have generated annual savings amounting to 2.1% ([6]). However, the current practice is to return most savings to the line ministries involved in the review process, to finance their internal priorities. Therefore, the process somewhat lacks a strategic approach with an impact on government finances. A better approach would be to redirect funding to a limited number of public services that have been systematically underfunded.

([4]) In 2021 overall tax revenue from capital and in particular corporate income were the lowest in the EU.

([5]) In 2023 Budget, 33% of available fiscal space (excluding fiscal space foreseen for external and internal security) was dedicated to healthcare and social care measures. Source : https://www.fm.gov.lv/lv/budzets2023#atbalstitie-prioritarie-pasakumi; Commission calculations.

([6]) The ratio of annual savings generated by the expenditure review to basic state budget expenditure (less EU funds), average of 2017-2023.

The new government has committed to carry out an overarching medium-term tax reform. In January 2023, the government held the first round of discussions with social partners on the proposals for the new tax policy guidelines for 2024-2027. The main aims of the reform are to strengthen the competitiveness of Latvia's economy, including improving labour taxation, reducing poverty and income inequality and helping to reduce the size of the shadow economy, while making the tax system simpler and ensuring government spending needs.

While data from surveys show that the shadow economy is growing, indicators on indirect tax compliance point to some improvements. The shadow economy was estimated at 26.6% of GDP in 2021 ([7]), the highest level recorded since 2012. The most important component of Latvia's shadow economy in 2021 was underreporting of salaries, accounting for 46.2% of the total shadow economy. The construction sector has the highest share of the shadow economy. Surveys of company owners and managers indicate that efforts to reduce the shadow economy are stagnating. However, in 2021 outstanding tax arrears and the VAT gap ([8]) remained well below the EU average. According to data from the state revenue service ([9]), the loss of personal income tax revenue and social security contributions from undeclared wages remains high, despite small annual improvements, including during the COVID-19 pandemic. In addition, the analysis of state revenue service on taxpayer segmentation ([10]) finds that there is potential to improve tax compliance in Latvia, as around 40% of taxpayers are assessed as having considerable tax compliance risks.

([7]) Sauka & Putnins (2022).

([8]) An estimate of the overall difference between the expected revenue from value added tax and the amount actually collected.

([9]) State revenue service presentation on undeclared wages and tax gaps, August 2021 https://www.vid.gov.lv/lv/media/2207/download?attachment.

([10]) Methodology of grouping taxpayers in clusters based on their behavior models in the context of their tax compliance. Source: SRS unpublished documents, November 2022.

Making the use of energy and natural resources more efficient and sustainable and reducing reliance on fossil fuels

Latvia has ensured its independence from Russian fossil fuels following the parliament's decision in July 2022 to ban Russian natural gas from 1 January 2023. Domestic gas suppliers have been able to find alternative sources of natural gas thanks to imports of liquified natural gas from the Lithuanian Klaipeda LNG terminal and the new Finnish LNG terminal in Inkoo. While energy prices have decreased, uncertainty remains regarding next winter, which requires continued efforts to structurally reduce gas demand. Reducing Latvia's reliance on fossil fuels is an essential part of ensuring security of supply.

Latvia has had a slow roll out of renewable energy sources to generate electricity. Latvia enjoys one of the highest shares of renewable energy in the EU (42.1% in 2021). However, this share stagnated from 2020 to 2021 and hydropower alone accounted for 90% of all renewable installed electricity capacity in the country. Latvia would benefit from accelerating its efforts in the uptake of wind and solar power, which is the most viable and long-term solution to increase the share of renewables. The Latvian RRP already includes measures to remove regulatory barriers to the deployment of onshore wind energy, in particular by facilitating the administrative procedures for wind parks in state forests, which are expected to be constructed by 2026. At the end of 2022, Latvia put in place simplified rules for creating 'green corridors' for the deployment of wind and solar farms The new rules shorten the environmental impact assessment procedure by six months (see Annex 7). However, further efforts could be made to speed up the deployment of renewable energy

for electricity generation, heating and cooling. This could involve modernising the electricity grid, facilitating the integration of decentralised renewable electricity generation and establishing a framework and incentives to promote energy communities.

Further progress in completing the synchronisation with European electricity networks will help ensure security of supply. The Latvian energy network, like other Baltic states, remains exposed as its electricity grid is synchronised with the BRELL power grid (under the control of Russia and Belarus). Work to synchronise the electricity grids of the Baltic countries with the EU network, to secure networks and the electricity supply, is making progress but remains to be completed. Completing Latvia's grid would also add transmission capacity so that an increasing share of offshore and onshore renewables could be integrated into the grid. The region's energy security can also be improved by ensuring that energy interconnections have sufficient capacity. To that end, cooperation with Lithuania and Estonia is necessary.

Latvia would also benefit from more ambitious energy efficiency measures to decarbonise its building stock, as well as transport and industry. The RRP already contains several measures supporting energy efficiency in businesses and multi-apartment, municipal and public buildings. Achieving the ambitious targets in Latvia's 2020 long-term renovation strategy will be key to improving the energy performance of the national building stock and thereby, to tapping into its great potential for energy efficiency. Additional measures, including financing and support measures, could also be put in place.

Improving access to finance for SMEs

Credit growth remains subpar and rising interest rates are expected to dampen it further. In 2022, lending to companies grew by 10.6% compared to close to zero growth in 2021. The pick-up in lending is related to te- the extension of credit lines to energy companies, however the Bank of Latvia believes that the acceleration in lending will prove temporary. Lending to households grew by 4.8% in 2022, down from a 6.5% increase the year before and below the growth rate of nominal GDP. Credit growth is expected to slow amid tightening lending conditions, as already shown by the falling number of loan applications at the end of 2022. The vast majority of business and household borrowers pay interest at a variable rate on existing loans, which means that rising rates will quickly translate into higher costs of servicing debt. However, according to the Bank of Latvia's analysis, the banks' conservative lending policies have ensured that business borrowers are generally able to absorb an increase in interest payments rather comfortably. At the same time, around 12% of household borrowers could suffer financially strain because of the rising interest rates.

Several structural issues explain the weak growth in lending over the long term. SMEs in Latvia find it more difficult to get credit than those in other euro area countries. According to the banking sector, the main obstacles are their higher credit risk and prevalence of businesses operating in the shadow economy. However, surveys of businesses point to other barriers to lending: burdensome paperwork, stringent collateral requirements and the high cost of credit. Latvian borrowers pay some of the highest interest rates in the euro area ([11]). The banking sector explains that this is due to the high costs associated with low loan recovery rates, while the Bank of Latvia suggests that high interest rates may be due to the lack of competition in the banking sector. The recent increase in interest rates has widened the Latvian banks' spread between lending rates and deposit rates, with the latter having barely changed. This development possibly adds further concern about the lack of competition in Latvia's banking sector.

Easing the credit supply constraints requires both general improvements in the business environment and targeted

([11]) Bank of Latvia, 2021

policy measures. Latvia has made substantial efforts to improve its insolvency procedure through several reforms since 2018, including by setting up an economic court (the RRP finances training for judges in the economic court). Despite this, the loan recovery rates remain low. Only a small share of businesses that follow an insolvency procedure get restructured ([12]). Improving the insolvency process to achieve a high rate of business restructuring and, eventually, higher loan recovery rates, would reduce banks' perceived risks and hence encourage lending. Although it has been increasing, private investment is still lower than in neighbouring countries. Results from the 2022 EIB Investment Survey suggest that private investment is negatively affected by a high degree of economic uncertainty, business regulations, a lack of skilled staff and labour market regulations. In 2022, three quarters of Latvian firms perceived business regulations to be a long-term obstacle to investment, much higher than their Baltic neighbours (Estonia, 34%; Lithuania, 47%) (see Annex 12). To ensure that financing is available for viable businesses, targeted state-sponsored loan and guarantee schemes for strategically important investments, linked to innovation or the green transition, could be considered.

Improving access to education and training to address the needs of employers

Latvia faces skills mismatches with shortages of medium- and high-level skills, against the backdrop of a declining labour supply. The working-age population is set to decline due to negative natural growth, resulting in labour shortages. The job vacancy rate increased on a year-on-year basis by 0.2 percentage points to 2.8% in Q3-2022. This is coupled with uneven regional growth resulting in a concentration of jobs and job opportunities in the centres of economic activity. There are also significant disparities between the unemployment rates according to a person's skill level: low-skilled - 16.6%, medium-skilled - 7.4% and high-skilled – 4.5% in Q3-2022 (see Annex 14). In addition, the youth unemployment rate (for those aged 15-24) is 2.3 times higher than the overall unemployment rate in Latvia. There is a low rate of participation in active labour market policy measures, coupled with insufficient training opportunities to meet the needs of employers.

The increasing skills shortages could be alleviated by upskilling and reskilling measures. In the medium to long term, the demand for employees with medium-level and higher education qualifications in science, technology, engineering and mathematics is set to increase, while the demand for low-skilled workers is on the decline ([13]). Adult learning could play a significant role in upskilling and reskilling to reduce the skills mismatches. However, despite some increase, the participation rate remains low, in particular by people with low skill levels (see Annex 14).

In the context of the green transition, labour shortages in key sectors have increased in recent years, linked to a lack of relevant skills and creating bottlenecks in the transition to a net-zero economy. In 2022, labour shortages were reported in 25 occupations that required specific skills or knowledge for the green transition, including building and related electricians, mechanical engineers, and installers and repairers of power lines ([14]). The job vacancy rate increased in key sectors, such as construction (from 1.2% in 2015 to 3.5% in

([12]) OECD, 2022

([13]) Ministry of Economics (2022), Informative report on the mid-term and long-term forecasts on the labour market.

([14]) Data on shortages is based on European Labour Authority (2023), EURES Report on labour shortages and surpluses 2022. National authorities report through a questionnaire, based on administrative data and other sources as submitted by the EURES National Coordination Offices (definitions of shortages differ, thus data is not comparable across countries and covers a wide variety of sectors). Skills and knowledge requirements are based on the ESCO (European Skills Competences and Occupations) taxonomy on skills for the green transition (for occupations at ISCO 4-digit level of which there are 436 in total). Examples are identified based on their ESCO "greenness" score and relevant sector.

2021) and manufacturing (from 2.2% in 2015 to 3.7% in 2021), with only manufacturing above the EU average of 1.9% in 2021 ([15]). In 2022, labour shortages were reported as a factor constraining production in industry (for by 22.6% of firms) and construction (for 28.7% of firms) ([16]). Upskilling and reskilling for the green transition, including for the people most affected, and promoting inclusive labour markets are essential policies to accelerate the transition to net zero and ensure its fairness (see Annex 8).

Regional inequality in access to quality education remains the main challenge in Latvia's education sector. Since the school network is still too big for Latvia's small population of school-age children, many schools struggle to hire teachers as they cannot offer competitive salaries based on a full-time workload. Latvia's teachers are among the oldest in the EU and it is proving difficult to renew an increasingly ageing teaching workforce (see Annex 15). Moreover, the learning outcomes in schools in small towns and in rural areas are on average lower than in Riga. Similarly, the rate of students who leave school early is higher in rural areas.

Tackling poverty and income inequality

The high levels of poverty and income inequality are increasing on the back of challenges brought by the pandemic and high inflation. Income distribution is more unequal in Latvia than in the EU on average. The income of the richest 20% of the population was more than 6 times higher than the poorest 20%. Latvia had one of the highest percentages of people at risk of poverty and social exclusion in 2021, which stood at 26.1% compared to 21.7% in the EU. The the risk of poverty for people aged 65+ was the highest in the EU (44.6%) (see Annex 14). Single-parent households and persons with disabilities are particularly vulnerable to poverty. The risk of poverty and social exclusion is also higher in rural areas than in more urbanised areas (see Annex 17). It is important to further accelerate efforts to improve living standards in the regions to bring them up to the same level as the capital.

Improving the adequacy of social assistance and access to services remains a challenge. The provision of social assistance and services for vulnerable groups, including access to adequate social housing, poses a challenge. The impact of social transfers (excluding pensions) on poverty is substantially less than the EU average (see Annex 14)**.** Additionally, pensions are among the lowest in the EU compared to wages, as the aggregate replacement ratio (the pension as a proportion of income from employment) in 2021 was 0.42 in Latvia, compared to 0.58 in the EU. The minimum income reform supported by the RRP has been a positive step in improving the quality of life of the most vulnerable people. However, other areas of the social protection system, including services, could also be improved, to reduce poverty and income inequality.

Latvia's housing stock is outdated and of poor quality, which has a negative social impact. The share of people living in in an overcrowded household (41.3% vs 17% in the EU, 2021) and severe housing deprivation (11.5% vs 4.3% in the EU, 2020) are among the highest in the EU, however the newly drafted housing strategy does not address social housing and homelessness. The arrival of refugees fleeing Russian aggression in Ukraine has made the housing situation even more challenging as local authorities struggle to provide adequate housing even for temporary stays. Increased housing benefits and RRP investments in low-rent housing will assist low-income households, but the poor quality and limited availability in municipalities of existing social housing for vulnerable groups still poses a challenge. The social housing stock in Latvia is one of the smallest among OECD countries and accounts for only 2% of the total housing stock ([17]). Households across all income levels are affected, but the problem especially affects vulnerable groups.

([15]) Eurostat (JVS_A_RATE_R2).

([16]) European Business and Consumer Survey.

([17]) OECD (2022): Social renting housing stock.

There is insufficient long-term funding to address the problem of access to housing.

Providing adequate resources for healthcare and long-term care

A substantial share of the Latvian population cannot access the healthcare they need. The proportion of the Latvian population reporting unmet needs for medical care was among the highest in the EU, both before and during the COVID-19 pandemic (4.0% in Latvia in 2021 compared to 2.0% across the EU), with lower income groups disproportionately affected (see Annex 14).

The health system in Latvia is underfunded. Health expenditure in Latvia is among the lowest in the EU and only 63.6% of it was publicly funded in 2020. Inadequate financial resources for healthcare result in the annual quota system for provision of healthcare services, which in turn leads to long waiting times and a high level of unmet need for medical care. The lack of financial resources also limits the range of care offered, and the publicly funded health services and goods covered nearly always require additional payment from the user. Consequently, the share of out-of-pocket spending on healthcare is high in Latvia (31.9% in 2020, more than twice the overall level in the EU of 14.4%). In recent years, public financing for health has been increasing and, according to the latest available data, the levels of unmet need for healthcare and of out-of-pocket spending for healthcare have dropped slightly. However, this positive trend is at risk as according to the medium-term budgetary plans ([18]) the public spending on healthcare as share of GDP is set to decrease. This is mainly due to the temporary COVID-19 support being gradually phased out, lower additional allocations compared to the needs of the health sector and the lack of sustainable financing plans.

The persistent shortages of health professionals are an obstacle to providing healthcare. The number of practising doctors per 1 000 inhabitants is below the EU average. The number of practising nurses per 1 000 inhabitants is one of the lowest in the EU and has declined in recent years. The shortages of health workers are more acute in areas outside Riga (see Annex 16). Scaling up measures to attract more students to pursue a career in the health sector and measures to foster recruitment, retention and a geographical balance of health professionals are needed.

The ageing of the population will generate increased demand for long-term care, emphasising the urgency to improve the relatively weak long-term care system. It is estimated that the share of potentially dependent people of all ages in the total population will increase from 31.7% in 2019 to 41.2% in 2030 and to 56.7% in 2050. The share of the population with severe difficulties in personal care or household activities and who therefore need long-term care is above the EU average. Public spending on long-term care, however, is among the lowest in the EU (see Annex 14). This results in limited access to long-term care, a lack of quality assurance and understaffing. The number of employees in formal long-term care is insufficient, with the majority being women, facing difficult working conditions and low wages. For instance, in 2022, the average salary for social work amounted to 66% of the average gross earnings in the country ([19]). Moreover, the responsibilities for long-term care are fragmented between the health and social care sectors. Progress in the transition from institutional to community-based care, despite being addressed in part by the RRP and other EU funds, is limited.

([18]) The 2023 Stability Programme of Latvia foresaw that at the no-policy change scenario government expenditure for health function would decline from 5.6% of GDP in 2022 to 3.6% in 2026.

([19]) Average monthly wages and salaries by kind of activity (in euro) | Official Statistics Portal of Latvia.

KEY FINDINGS

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

- greening the Riga Metropolitan Transport System, launching energy efficiency support programmes for the renovation of businesses and multi-apartment and municipal buildings, modernising electricity transmission and distribution networks, as well as climate change adaption;

- digitalising the public sector and businesses, improving basic and advanced digital skills and connectivity, and improving broadband infrastructure;

- reducing social and regional inequality including by raising the minimum income, increasing the provision of affordable housing and improving accessibility to public buildings, social-care facilities and individual homes, improving the school network and developing industrial parks;

- improving the resilience, accessibility and quality of healthcare, including by developing integrated healthcare and improving epidemiological safety by investing in university and regional hospitals and outpatient clinics;

- reforming the governance and funding of research and innovation, and boosting the quality and international competitiveness of higher education;

- improving tax compliance, strengthening law enforcement dealing with economic crime, improving the efficiency of the public administration and the quality of public procurement.

Latvia should continue the steady implementation of its recovery and resilience plan and swiftly finalise the REPowerEU chapter with a view to rapidly starting its implementation.

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

- increasing the low level of tax revenue as a share of GDP, including by broadening the taxation of property and capital and further improving tax compliance, to allow adequate financing of healthcare and social protection services;

- reducing poverty and income inequality by strengthening social assistance, pensions and services to vulnerable groups, including access to social housing and long-term care, and individual needs-based social services;

- making it easier for SMEs to access finance by improving the business environment and developing targeted guarantee schemes for strategically important investments, linked to the green transition or regional development;

- boosting efforts to address labour shortages and skills mismatches through upskilling and reskilling measures, including for people with a low level of skills, to meet employers' needs, and promote the skills needed for the green transition;

- reducing overall reliance on fossil fuels and diversifying the energy mix by accelerating the deployment of renewables, in particular onshore and offshore wind as well as solar energy; advancing energy efficiency measures; improving the electricity grid, the interconnection capacity and continuing the timely synchronisation with the EU electricity grid.

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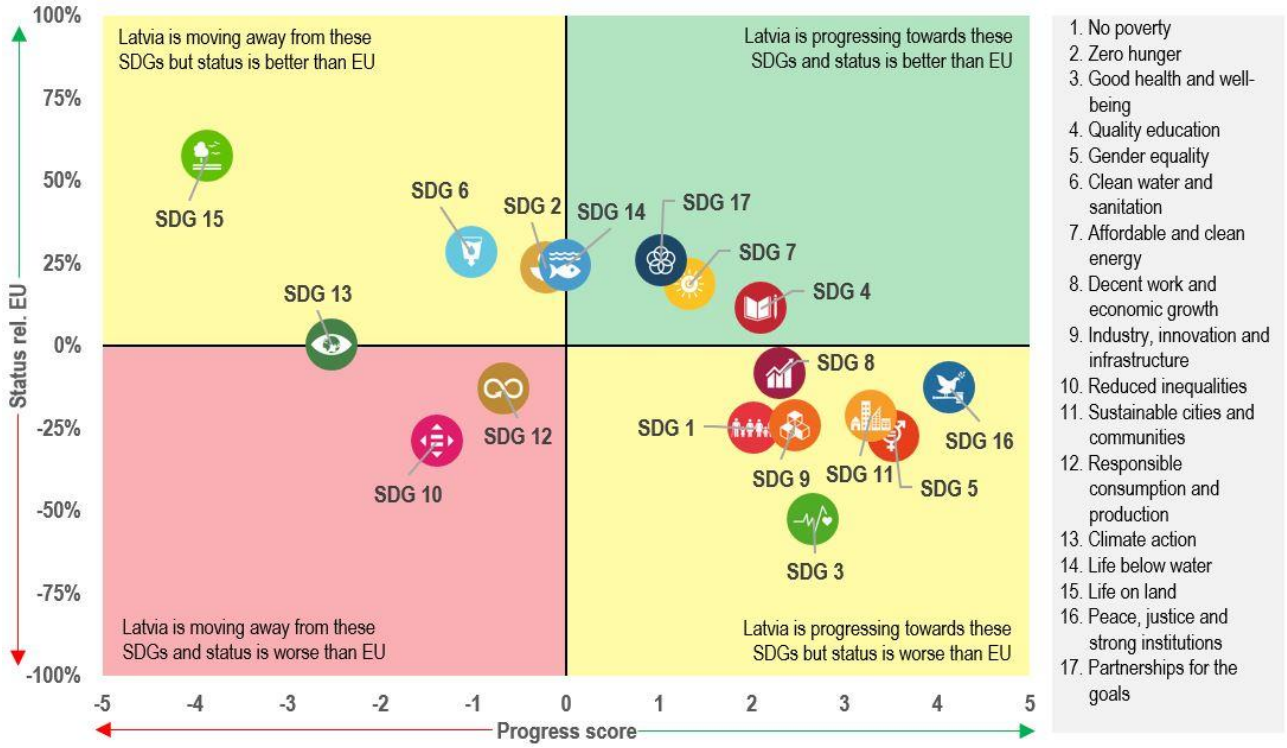
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ANNEX 1: SUSTAINABLE DEVELOPMENT GOALS

This Annex assesses Latvia'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 and the environmental crisis, while ensuring that no one is left behind. The EU and its Member States are committed to this historic global framework agreement and to playing an active role in maximising progress on the SDGs. The graph below is based on the EU SDG indicator set developed to monitor progress on the SDGs in an EU context.

While Latvia performs well (SDGs 7 and 14) or is improving (SDGs 11) on several SDG indicators related to *environmental sustainability*, it is moving away from SDGs 12, 13 and 15. Addressing SDG 7 (Affordable and clean energy) in particular, Latvia has achieved progress on its share of renewable energy in total energy consumption, which increased from 37.1% in 2015 to 42.1% in 2020, and was well above the EU average (21.8% in 2021). However, from 2020 to 2021 there has been no increase in electricity generation capacity from renewable sources (for more details, see Annexes 6 and 7). Addressing SDG 12 (Responsible consumption and production), the Circular material use rate worsened from 6.5% in 2016 to 6.2% in 2021 and is significantly below the EU average of 11.7%. Latvia's recovery and resilience plan (RRP) includes measures to address some of the energy-related challenges, namely in Component 1 (Climate change and environmental sustainability). While progressing towards achieving SDG 11 (Sustainable cities and communities), Latvia needs to catch up with the EU average in particular on the recycling rate of municipal waste44.1% compared to the EU average of49.6% in 2021) and on reducing road traffic deaths (7.8% compared with the EU

Graph A1.1: **Progress towards the SDGs in Latvia in the last 5 years**



For detailed datasets on the various SDGs, see the annual Eurostat report 'Sustainable development in the European Union'; for details on extensive country-specific data on the short-term progress of Member States: Key findings – Sustainable development indicators – Eurostat (europa.eu). The status of each SDG in a country is the aggregation of all indicators for the specific goal compared to the EU average. A high status does not mean that a country is close to reaching a specific SDG, but signals that it is doing better than the EU on average. The progress score is an absolute measure based on the indicator trends over the past 5 years. The calculation does not take into account any target values as most EU policy targets are only valid for the aggregate EU level. Depending on data availability for each goal, not all 17 SDGs are shown for each country.

Source: Eurostat, latest update of early April 2023, except for the EU Labour Force Survey (LFS) indicators released on 27 April 2023. Data mainly refer to 2016-2021 or 2017-2022.

average of 4.5% in 2021). On achieving SDG 12 (Responsible consumption and production), Latvia is moving away from the SDG, for instance, the per capita generation of waste has increased between 2016 and 2020 (from 975 to 1501 kg) and needs to catch up with the EU average in particular on the circular material use rate (6.2% compared to the EU average of 11.7% in 2021). While there is no progress on SDG 14, the indicators do better than the EU average. For instance, the percentage of the marine protected areas was 15.8% in 2021 as compared to the EU average of 12.1%.

While Latvia is improving on several SDG indicators related to *fairness* (SDGs 1, 3, 4, 5, 7, 8), it still needs to catch up with the EU average and is moving away from SDG 10 (Reduced inequalities) and 2 (Zero hunger). Latvia is still underperforming compared to the EU average on some indicators related to poverty (SDG 1). This concerns in particular the severe housing deprivation rate (11.5% compared with the EU average of 4.3% in 2020) and people at risk of income poverty after social transfers (23.4% compared with the EU average of 16.8% in 2021). However, there have been some positive developments in recent years. Latvia reduced the risk of poverty or social exclusion from 28.2% in 2016 to 26.1% in 2021, but it remains above the EU average of 21.7%. Unmet health needs have reduced over the years, even if they are still high (4.0% in 2021) and above the EU average (2.0% in 2021). Similarly, for indicators related to zero hunger (SDG 2), Latvia is also underperforming. Unhealthy life choices lead to higher obesity, which increased from 21.3% in 2014 to 23.0% of adults in 2019, above the EU average of 16.5%. Latvia is still underperforming compared to the EU average on SDG 10 (Reduced inequalities): the urban-rural gap for risk of poverty or social exclusion accounts for 9.2% compared to the EU average of 0.6% in 2021, while purchasing power adjusted GDP per capita was 74% in 2022 compared to the EU index = 100. At the same time, Latvia has improved on several fairness-related indicators such as the long-term unemployment rate (SDG 8; 2% in 2022 compared to 3.6% in 2017 and the EU average of 2.4% in 2022) and early leavers from education and training (SDG 4; 6.7% in 2022 compared to 8.6% in 2017 and the EU average of 9.6% in 2022). RRP Component 3 (Reducing inequalities) includes measures to reduce regional disparities as well as improve the social safety net and encourage social integration and inclusion in Latvia. Component 4 (Healthcare) aims to contribute to the accessibility, efficiency and resilience of Latvia's health system.

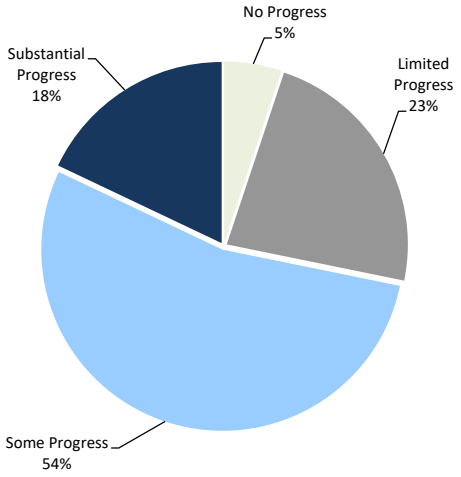
Latvia performs well or is improving on SDG indicators related to *productivity* (SDGs 4, 8, 9) but needs to catch up with EU average on SDG 9. The share of households with a high-speed internet connection was 90.7% in 2021, which is significantly above the EU average (70.2%). Latvia has low, albeit slowly increasing gross domestic expenditure on R&D (0.69% of GDP in 2021 compared to the EU average of 2.26%). Strengthening digital skills remains a challenge as only around half of people have at least basic digital skills (50.8% in 2021 compared to the EU average of 53.9%). Reforms and investment under RRP Component 2 (Digital transformation) focus on further developing digital infrastructure and equipment and improving digital skills at all levels.

Latvia is improving on the SDG indicators related to *macroeconomic stability* (SDGs 8, 16 and 17). It has improved on SDG 8 (Decent work and economic growth) and SDG 16 (Peace, justice and strong institutions). In recent years, Latvia's real GDP per capita increased from EUR 11 590 in 2017 to EUR 13 320 in 2022 (EU average EUR 28 820 in 2022). It had a very similar investment share of GDP compared to the EU average (22.3% of GDP compared to 22.4% for the EU in 2021). Latvia's performance on the quality of its institutions, including trust in institutions, is below the EU average but improving (SDG 16). The percentage of the population with confidence in the European Parliament remained the same in 2022 as in 2017 (47% against EU 50% in 2022). The measures included in Component 5 (Rule of law) aim to increase the transparency and integrity of public administration through training on general skills like ethics, integrity and anti-corruption.

As the SDGs form an overarching framework, any links to relevant SDGs are either explained or depicted with icons in the other Annexes.

The Commission has assessed the 2019-2022 country-specific recommendations (CSRs) ([38]) addressed to Latvia as part of the European Semester. These recommendations concern a wide range of policy areas that are related to 14 of the 17 Sustainable Development Goals (see Annexes 1 and 3). The assessment considers the policy action taken by Latvia to date ([39]) and the commitments in its recovery and resilience plan (RRP) ([40]). At this stage of RRP implementation, 72% of the CSRs focusing on structural issues from 2019-2022 have recorded at least 'some progress', while 23% recorded 'limited progress' (see Graph A2.1). As the RRP is implemented further, considerable progress in addressing structural CSRs is expected in the years to come.

Graph A2.1: **Latvia's progress on the 2019-2022 CSRs (2023 European Semester)**



Source: European Commission.

([38]) 2022 CSRs: EUR-Lex - 32022H0901(14) - EN - EUR-Lex (europa.eu)
2021 CSRs: EUR-Lex - 32021H0729(14) - EN - EUR-Lex (europa.eu)
2020 CSRs: EUR-Lex - 32020H0826(14) - EN - EUR-Lex (europa.eu)
2019 CSRs: EUR-Lex - 32019H0905(14) - EN - EUR-Lex (europa.eu)

([39]) Including policy action reported in the national reform programme and in Recovery and Resilience Facility (RRF) reporting (twice a year reporting on progress in implementing milestones and targets and resulting from the payment requests assessment).

([40]) 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 considers the degree of implementation of the measures included in the RRP and of those carried out outside of the RRP at the time of assessment. Measures laid down in the Annex of the adopted Council Implementing Decision on approving the assessment of the RRP, which are not yet adopted or implemented but considered credibly announced, in line with the CSR assessment methodology, warrant 'limited progress'. Once implemented, these measures can lead to 'some/substantial progress or full implementation', depending on their relevance.

Table A2.1:**Summary table on 2019-2022 CSRs**

Latvia	Assessment in May 2023	RRP coverage of CSRs until 2026**	Relevant SDGs
2019 CSR 1	**Some progress**		
Ensure that the nominal growth rate of net primary government expenditure does not exceed 3,5 % in 2020, corresponding to an annual structural adjustment of 0,5 % of GDP.	No longer relevant	Not applicable	SDG 8, 16
Reduce taxation for low-income earners by shifting it to other sources, particularly capital and property, and by improving tax compliance.	Some progress	Relevant RRP measures being planned as of 2022, 2023 and 2026.	SDG 8, 10, 12, 16
Ensure effective supervision and the enforcement of the anti-money laundering framework.	Substantial progress	Relevant RRP measures implemented as of 2021. Relevant RRP measures being planned as of 2022, 2024 and 2025.	SDG 8, 16
2019 CSR 2	**Some progress**		
Address social exclusion notably by improving the adequacy of minimum income benefits, minimum old-age pensions and income support for people with disabilities.	Some progress	Relevant RRP measures implemented as of 2021. Relevant RRP measures being planned as of 2022.	SDG 1, 2, 8, 10
Increase the quality and efficiency of education and training in particular of low-skilled workers and jobseekers, including by strengthening the participation in vocational education and training and adult learning.	Some progress	Relevant RRP measures implemented as of 2021. Relevant RRP measures being planned as of 2022, 2023, 2024 and 2026.	SDG 4
Increase the accessibility, quality and cost-effectiveness of the healthcare system.	Limited progress	Relevant RRP measures being planned as of 2022, 2023 and 2024.	SDG 3
2019 CSR 3	**Some progress**		
Focus investment-related economic policy on innovation,	Limited progress	Relevant RRP measures being planned as of 2022, 2023 and 2024.	SDG 9, 10, 11
the provision of affordable housing,	Limited progress	Relevant RRP measures implemented as of 2021.	SDG 1, 2, 8, 10, 11
transport, in particular on its sustainability,	Some progress	Relevant RRP measures being planned as of 2022, 2023 and 2026.	SDG 10, 11
resource efficiency and energy efficiency, energy interconnections	Some progress	Relevant RRP measures being planned as of 2022 and 2023.	SDG 6, 7, 9, 10, 11, 12, 13
and digital infrastructure, taking into account regional disparities.	Some progress	Relevant RRP measures implemented as of 2021. Relevant RRP measures being planned as of 2022, 2023, 2024, 2025 and 2026.	SDG 9, 10, 11
2019 CSR 4	**Some progress**		
Strengthen the accountability and efficiency of the public sector, in particular with regard to local authorities and State-owned and municipal enterprises and the conflict of interest regime.	Some progress	Relevant RRP measures implemented as of 2021. Relevant RRP measures being planned as of 2022, 2023, 2024, 2025 and 2026.	SDG 9, 16
2020 CSR 1	**Limited progress**		
Take all necessary measures, in line with the general escape clause of the Stability and Growth Pact, to effectively address the COVID-19 pandemic, sustain the economy and support the ensuing recovery. When economic conditions allow, pursue fiscal policies aimed at achieving prudent medium-term fiscal positions and ensuring debt sustainability, while enhancing investment.	Not relevant anymore	Not applicable	SDG 8, 16
Strengthen the resilience and accessibility of the health system including by providing additional human and financial resources.	Limited progress	Relevant RRP measures being planned as of 2022, 2023 and 2024.	SDG 3
2020 CSR 2	**Some progress**		
Provide adequate income support to the groups most affected by the crisis	Some progress	Relevant RRP measures implemented as of 2021.	SDG 1, 2, 10
and strengthen the social safety net.	Some progress	Relevant RRP measures implemented as of 2021. Relevant RRP measures being planned as of 2022.	SDG 1, 2, 10
Mitigate the employment impact of the crisis, including through flexible working arrangements,	Some progress		SDG 8
active labour market measures and skills.	Some progress	Relevant RRP measures implemented as of 2021. Relevant RRP measures being planned as of 2022, 2023, 2024 and 2026.	SDG 4, 8
2020 CSR 3	**Some progress**		
Ensure access to liquidity support by firms and in particular small and medium-sized enterprises	Substantial progress		SDG 8, 9
Front-load mature public investment projects	Some progress	Relevant RRP measure being planned as of 2022.	SDG 8, 16
and promote private investment to foster the economic recovery.	Some progress	Relevant RRP measures being planned as of 2022, 2023 and 2024.	SDG 8, 9
Focus investment on the green and digital transition, in particular on research and innovation,	Limited progress	Relevant RRP measures being planned as of 2022, 2023 and 2026.	SDG 9
clean and efficient production and use of energy,	Some progress	Relevant RRP measures being planned as of 2022 and 2023.	SDG 7, 9, 13
sustainable transport	Some progress	Relevant RRP measures being planned as of 2022, 2023 and 2026.	SDG 11
and digital infrastructures.	Some progress	Relevant RRP measures implemented as of 2021. Relevant RRP measures being planned as of 2022, 2023, 2024, 2025 and 2026.	SDG 9

(Continued on the next page)

Table (continued)

2020 CSR 4	**Substantial progress**		
Continue progress on the anti-money-laundering framework.	Substantial progress	Relevant RRP measures implemented as of 2021. Relevant RRP measures being planned as of 2022, 2023, 2024 and 2025.	SDG 8, 16
2021 CSR 1	**Some progress**		
In 2022, maintain a supportive fiscal stance, including the impulse provided by the Recovery and Resilience Facility, and preserve nationally financed investment. Keep the growth of nationally financed current expenditure under control.	Some progress	Not applicable	SDG 8, 16
When economic conditions allow, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions and ensuring fiscal sustainability in the medium term.	Substantial progress	Not applicable	SDG 8, 16
At the same time, enhance investment to boost growth potential. Pay particular attention to the composition of public finances, on both the revenue and expenditure sides of the budget, and to the quality of budgetary measures, in order to ensure a sustainable and inclusive recovery. Prioritise sustainable and growth-enhancing investment, in particular investment supporting the green and digital transition.	Substantial progress	Not applicable	SDG 8, 16
Give priority to fiscal structural reforms that will help provide financing for public policy priorities and contribute to the long-term sustainability of public finances, including, where relevant, by strengthening the coverage, adequacy, and sustainability of health and social protection systems for all.	Limited progress	Not applicable	SDG 8, 16
2022 CSR 1	**Some progress**		
In 2023, ensure that the growth of nationally financed primary current expenditure is in line with an overall neutral policy stance, taking into account continued temporary and targeted support to households and firms most vulnerable to energy price hikes and to people fleeing Ukraine. Stand ready to adjust current spending to the evolving situation.	No progress	Not applicable	SDG 8, 16
Expand public investment for the green and digital transitions, and for energy security taking into account the REPowerEU initiative, including by making use of the Recovery and Resilience Facility and other Union funds.	Substantial progress	Not applicable	SDG 8, 16
Pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions.	Substantial progress	Not applicable	SDG 8, 16
Broaden taxation, including of property and capital,	No progress		SDG 8, 10, 12
and strengthen the adequacy of healthcare	Limited progress	Relevant RRP measures planned as of 2022, 2023 and 2024.	SDG 3
and social protection to reduce inequality.	Some progress	Relevant RRP measures implemented as of 2021. Relevant RRP measures being planned as of 2022, 2023, 2024, 2025.	SDG 1, 2, 10
2022 CSR 2			
Proceed with the implementation of its recovery and resilience plan, in line with the milestones and targets included in the Council Implementing Decision of 13 July 2021.	RRP implementation is monitored by assessing RRP payment requests and analysing reports published twice a year on the achievement of the milestones and targets. These are to be reflected in the country reports.		
Submit the 2021–2027 cohesion policy programming documents with a view to finalising their negotiations with the Commission and subsequently starting their implementation.	Progress on the cohesion policy programming documents is monitored under the EU cohesion policy.		
2022 CSR 3	**Limited progress**		
Improve access to finance for small and medium-sized enterprises through public lending and guarantee schemes aimed at facilitating investments of strategic importance, in particular the green transition and regional development.	Limited progress		SDG 8, 9
2022 CSR 4	**Some progress**		
Reduce overall reliance on fossil fuels and diversify imports of fossil fuels	Some progress	Relevant RRP measures being planned as of 2022, 2023, 2024, 2026.	SDG 7, 9, 13
by accelerating the deployment of renewables,	Some progress	Relevant RRP measures being planned as of 2022, 2024.	SDG 7, 9, 13
ensuring sufficient interconnection capacity, diversifying energy supplies and routes	Some progress		SDG 7, 9, 13
and reducing overall energy consumption through ambitious energy efficiency measures.	Limited progress	Relevant RRP measures being planned as of 2022, 2023, 2024, 2026.	SDG 7

Note:

* See footnote ([39]).

** RRP measures included in this table contribute to the implementation of CSRs. Nevertheless, additional measures outside the RRP are necessary to fully implement CSRs and address their underlying challenges. Measures indicated as 'being implemented' are only those included in the RRF payment requests submitted and positively assessed by the European Commission.

Source: European Commission

The Recovery and Resilience Facility (RRF) is the centrepiece of the EU's efforts to help it recover from the COVID-19 pandemic, speed up the twin transition and strengthen resilience against future shocks. The RRF also contributes to implementation of the SDGs and helps to address the Country Specific Recommendations (see Annex 2). Latvia submitted its current recovery and resilience plan (RRP) on 30 April 2021. The Commission's positive assessment on 22 June 2021 and Council's approval on 13 July 2021 paved the way for disbursing EUR 1.8 billion in grants under the RRF over the 2021-2026 period.

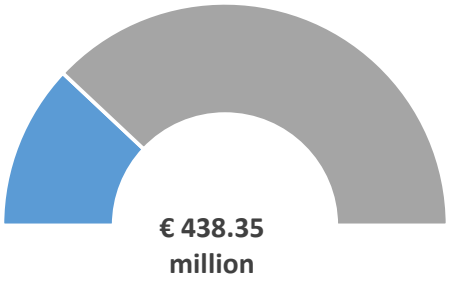
Table A3.1:**Key elements of Latvia's RRP**

	Current RRP
Scope	Initial plan
CID adoption date (date of submission)	13 July 2021
Total allocation	EUR 1.8 billion in grants (5.6% of 2021 GDP) and EUR 0 billion in loans
Investments and reforms	61 investments and 24 reforms
Total number of milestones and targets	214

Source: RRF Scoreboard

Since the entry into force of the RRF Regulation and the assessment of the national recovery and resilience plans, geopolitical and economic developments have caused major disruptions across the EU. In order to effectively address these disruptions, the (adjusted) RRF Regulation allows Member States to amend their recovery and resilience plan for a variety of reasons. In line with article 11(2) of the RRF, the maximum financial contribution for Latvia was moreover updated on 30 June 2022 to an amount of EUR 1.8 billion in grants. No revision of the plan was submitted at the time of publication of this country report.

Graph A3.1: **Total grants disbursed under the RRF**



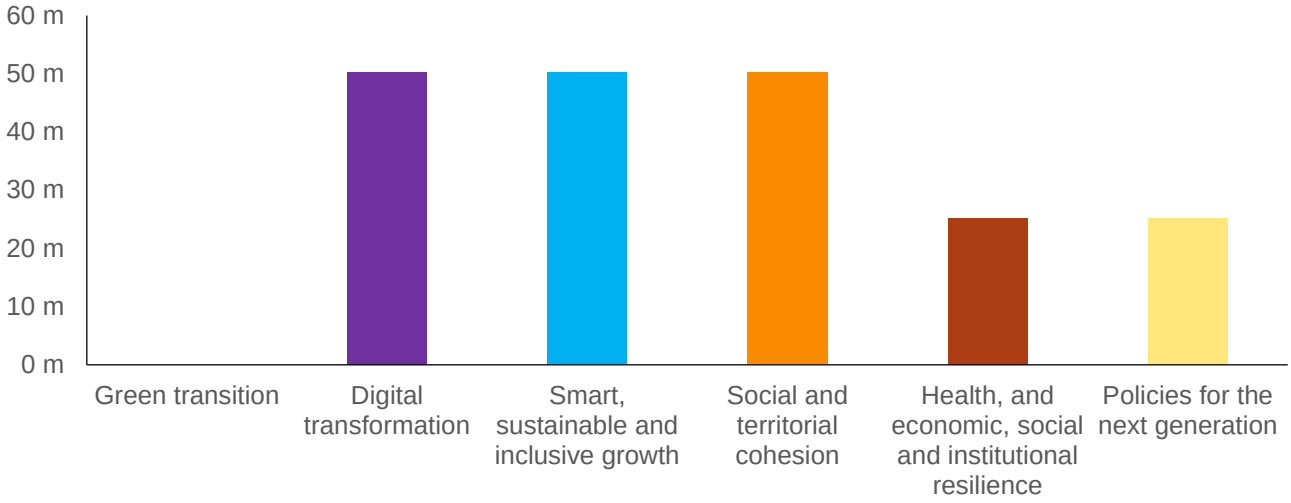
Note: This graph displays the amount of grants disbursed so far under the RRF. Grants are non-repayable financial contributions. The total amount of grants given to each Member State is determined by an allocation key and the total estimated cost of the respective RRP.
Source: RRF Scoreboard

Latvia's progress in implementing its plan is published in the Recovery and Resilience Scoreboard ([23]). The Scoreboard also gives an overview of the progress made in implementing the RRF as a whole, in a transparent manner. The graphs in this Annex show the current state of play of the milestones and targets to be reached by Latvia and subsequently assessed as satisfactorily fulfilled by the Commission.

EUR 438.4 million has so far been disbursed to Latvia under the RRF. The Commission disbursed EUR 237.4 million to Latvia in pre-financing on 9 October 2021, equivalent to 13% of the initial financial allocation. Latvia's first payment request was positively assessed by the Commission, taking into account the opinion of the Economic and Financial Committee, leading to EUR 201 million being disbursed in financial support (net of pre-financing) on 7 October 2022. The related 9 milestones cover reforms in minimum income support system, broadband infrastructure, educational institutions' infrastructure and remote learning. Other areas covered are public procurement, the prevention of money laundering and terrorist financing, as well as the construction of low-rent dwellings.

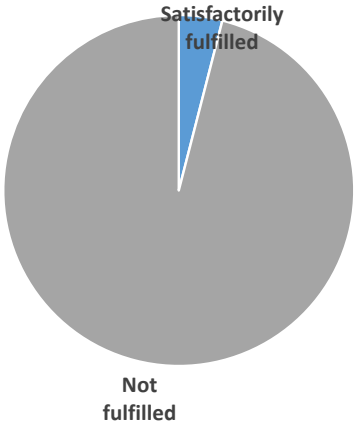
([23]) https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/country_overview.html

Graph A3.2: **Disbursement per pillar**



Note: Each disbursement reflects progress in the implementation of the RRF, across the six policy pillars. This graph displays how disbursements under the RRF (excluding pre-financing) relate to the pillars. The amounts were calculated by linking the milestones and targets covered by a given disbursement to the pillar tagging (primary and secondary) of their respective measures.
Source: RRF Scoreboard

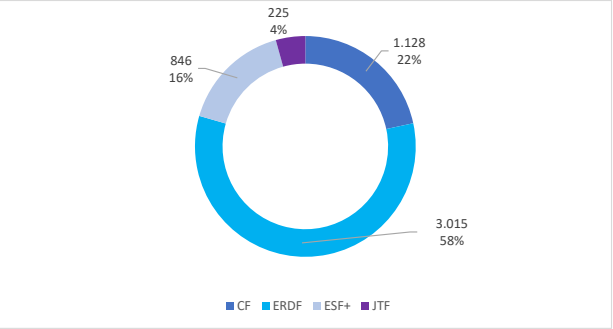
Graph A3.3: **Fulfilment status of milestones and targets**



Note: This graph displays the share of satisfactorily fulfilled milestones and targets. A milestone or target is satisfactorily fulfilled once a Member State has provided evidence to the Commission that it has reached the milestone or target and the Commission has assessed it positively in an implementing decision.
Source: RRF Scoreboard

The EU budget of over EUR 1.2 trillion for 2021-2027 is geared towards implementing the EU's main priorities. Cohesion policy investment amounts to EUR 392 billion across the EU and represents almost a third of the overall EU budget, including around EUR 48 billion invested in line with REPowerEU objectives.

Graph A4.1: **Cohesion policy funds 2021-2027 in Latvia: budget by fund**

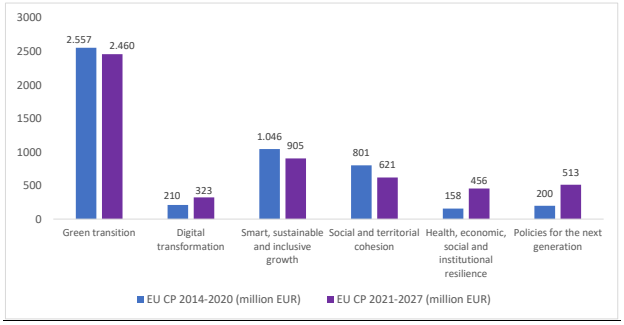


(1) million EUR in current prices, % of total; (total amount including EU and national co-financing)
Source: European Commission, Cohesion Open Data

In 2021-2027, in Latvia, cohesion policy funds ([24]) will invest EUR 2.5 billion in the green transition and EUR 323 million in the digital transformation as part of the country's total allocation of EUR 5 billion. In particular, almost EUR 1 billion of European Regional Development Fund (ERDF) funding will boost R&D, innovation and digitalisation, in line with regional smart strategies. Support (grants, financial instruments and non-financial support) will be provided to more than 3 700 companies, with a focus on ecosystems. As decreasing energy consumption is a priority in 2021-2027, nearly EUR 466 million will be allocated to energy efficiency investment projects leading to a minimum of 30% of primary energy savings. The Cohesion Fund is expected to support a major shift to green and sustainable transport. A key challenge is to ensure sustainable and long performing investments that are energy and cost efficient. The Just Transition Fund (JTF) will enable further economic diversification, help create jobs in the areas most affected by the energy transition, and support the up- and reskilling of workers. Latvia plans to support 3 950 workers and to secure more than EUR 41 million in private investment to supplement JTF funding. Under the European Social Fund Plus (ESF+), Latvia allocates almost EUR 250 million to education and skills, of which nearly EUR 52 million was dedicated to up- and reskilling adults. Latvia will also pilot skills funds to leverage private sustainable investment in adult learning. More than EUR 360 million will used for improving access to employment and social services, with a focus on vulnerable groups.

Of the investments mentioned above, EUR 518 million will be invested in line with REPowerEU objectives. This is on top of the EUR 487 million dedicated to REPowerEU under the 2014-2020 budget**.** EUR 473 million (2021-2027) and EUR 391 million (2014-2020) is for improving energy efficiency; and EUR 45 million (2021-2027) and EUR 95 million (2014-2020) is for renewable energy and low-carbon R&I.

Graph A4.2: **Synergy between Cohesion policy funds and RRF pillars in Latvia**



(1) million EUR in current prices (total amount, including EU and national co-financing)
Source: European Commission

In 2014-2020, cohesion policy funds made EUR 4.6 billion available to Latvia ([25]), with an absorption of 76% ([26]). Including national financing, the total investment amounted to EUR 5.4 billion - around 2.8% of GDP for 2014-2020.

Latvia continues to benefit from cohesion policy flexibility to support economic recovery, step up convergence and provide vital support to regions following the COVID-

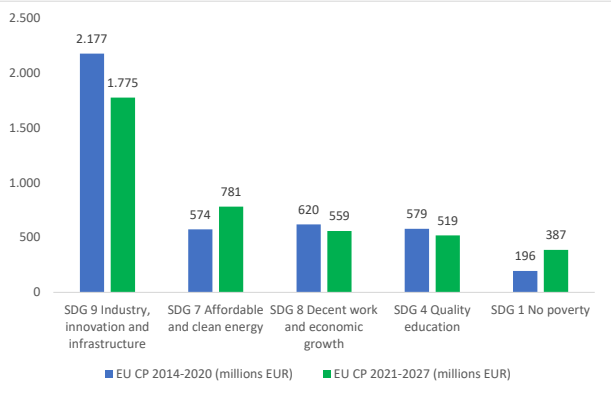
([24]) European Regional Development Fund (ERDF), Cohesion Fund (CF), European Social Fund+ (ESF+), Just Transition Fund (JTF), excluding Interreg programmes. The total amount includes national and EU contributions. Data source: Cohesion Open Data.

([25]) Cohesion policy funds include the ERDF, ESF, CF and the Youth Employment Initiative (YEI). ETC programmes are excluded here. According to the 'N+3 rule', the funds committed for 2014-2020 must be spent by 2023. REACT-EU is included in all figures. Total amount including EU and national co-financing. Data source: Cohesion Open Data.

([26]) 2014-2020 Cohesion policy EU payments by MS is updated daily on Cohesion Open Data.

19 pandemic. The Recovery Assistance for Cohesion and the Territories of Europe instrument (REACT-EU) ([27]) under NextGenerationEU provides EUR 230 million on top of the 2014-2020 cohesion policy allocation for Latvia. REACT-EU supported the sectors most affected by the COVID-19 pandemic, providing health equipment and infrastructure and creating 454 additional beds for patients, and providing IT equipment and remote solutions for 474 educational institutions. In addition, almost EUR 8 million was allocated to the operational programme of the Fund for European Aid to the Most Deprived (FEAMD). With SAFE (Supporting Affordable Energy), the 2014-2020 cohesion policy funds may also be mobilised to support vulnerable households, jobs and companies particularly affected by high energy prices.

Graph A4.3: **Cohesion policy funds contribution to the SDGs in 2014-2020 and 2021-2027 in Latvia**



(1) 5 largest contributions to SDGs in million (EUR) current prices

Source: European Commission

In both 2014-2020 and 2021-2027, cohesion policy funds have contributed substantially to the Sustainable Development Goals (SDGs). In 2021-2027, these funds support 11 of the 17 SDGs, notably SDG 9 'Industry, innovation and infrastructure' and SDG 7 'Affordable and clean energy' ([28]).

Other EU funds make significant resources available for Latvia. The common agricultural policy (CAP) made EUR 3.4 billion available in 2014-2022 and will continue to support Latvia with EUR 2.4 billion in 2023-2027. The two CAP Funds (European Agricultural Guarantee Fund and European Agricultural Fund for Rural Development), contribute to the European Green Deal while ensuring long-term food security. They promote social, environmental and economic sustainability and innovation in agriculture and rural areas, in coordination with other EU funds. The European Maritime and Fisheries Fund made EUR 140 million available to Latvia in 2014-2020 and the European Maritime, Fisheries and Aquaculture Fund allocates EUR 139 million in 2021-2027.

Latvia also benefits from other EU programmes, notably the Connecting Europe Facility, which under CEF 2 (2021-2027) has so far allocated EU funding of EUR 144.1 million to four specific projects on strategic transport networks. Similarly, Horizon Europe has so far allocated nearly EUR 23 million to Latvian R&I on top of the EUR 117 million earmarked under the previous programme (Horizon 2020). The Public Sector Loan Facility set up under the Just Transition Mechanism makes EUR 14.5 million of grant support from the Commission available for projects located in Latvia for 2021-2027, which will be combined with loans from the EIB to support investments by public sector entities in just transition regions.

Latvia received support under the European instrument for temporary support to mitigate unemployment risks in an emergency (SURE) to finance short-time work schemes and other similar measures, including ancillary health-related measures, to mitigate the impact of COVID-19. The Council granted financial assistance to Latvia of EUR 472 million in loans, which supported around 6% of workers and 7% of firms in 2020, and around 9% of workers and 12% of firms in 2021.

The Technical Support Instrument (TSI) supports Latvia in designing and implementing growth-enhancing reforms, including those set out in its recovery and resilience plan (RRP). Latvia has received significant support since 2017. Examples ([29]) include support to strengthen access to justice, to improve the academic careers model and to foster coordination in cancer care and screening.

([27]) REACT-EU allocation on Cohesion Open Data.

([28]) Other EU funds contribute to the implementation of the SDGs, in 2014-2022 this includes both the European Agricultural Fund for Rural Development (EARDF) and the European Maritime and Fisheries Fund (EMFF).

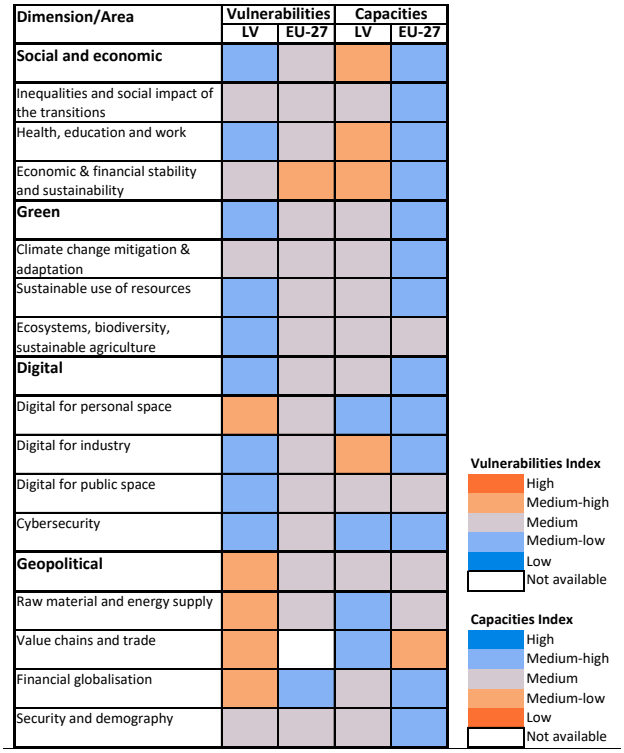
([29]) Country factsheets on reform support are available here.

This Annex illustrates Latvia's relative resilience capacities and vulnerabilities using the Commission's resilience dashboards (RDB) ([30]). Comprising a set of 124 quantitative indicators, the RDB provide broad indications of Member States' ability to make progress across four interrelated dimensions: social and economic, green, digital, and geopolitical. The indicators show vulnerabilities ([31]) and capacities ([32]) that can become increasingly relevant, both to navigate ongoing transitions and to cope with potential future shocks. To this end, the RDB help to identify areas that need further efforts to build stronger and more resilient economies and societies. They are summarised in Table A5.1 as synthetic resilience indices, which illustrate the overall relative situation for each of the four dimensions and their underlying areas for Latvia and the EU-27 ([33]).

According to the set of resilience indicators under the RDB, Latvia generally displays a similar level of vulnerabilities compared to the EU average. Latvia shows medium-low vulnerabilities in the social and economic, green and digital dimensions of the RDB, and medium-high vulnerabilities in the geopolitical dimension. It has higher vulnerabilities then the EU average in the areas of digitalisation of personal space, 'raw material and energy supply' and 'financial globalisation'. Latvia has relatively low vulnerabilities in relation to 'sustainable use of resources', 'ecosystems, biodiversity and sustainable agriculture', 'cybersecurity', and 'industry and public space digitalisation'.

Compared to the EU average, Latvia shows an overall lower level of capacities across all RDB indicators. It has medium-low resilience capacities across the social and economic dimension of the RDB and medium capacities in the digital, green and geopolitical dimensions. Latvia shows stronger capacities than the EU average in the areas 'raw material and energy supply' and 'value chains and trade'. There is room for improving capacities compared to the EU in all areas of the social and economic dimension (particularly, in the area 'health, education and work' regarding standardised preventable and treatable mortality, and healthy life years in absolute value at birth), 'climate change mitigation and adaptation', 'sustainable use of resources', industry digitalisation, 'financial globalisation' and 'security and demography'.

Table A5.1:**Resilience indices summarising the situation across RDB dimensions and areas**



Data are for 2021, and EU-27 refers to the value for the EU as a whole. Data underlying EU-27 vulnerabilities in the area 'value chains and trade' are not available as they comprise partner concentration measures that are not comparable with Member States' level values.
Source: JRC Resilience Dashboards - European Commission

([30]) For details see https://ec.europa.eu/info/strategy/strategic-planning/strategic-foresight/2020-strategic-foresight-report/resilience-dashboards_en; see also 2020 Strategic Foresight Report (COM(2020) 493).

([31]) Vulnerabilities describe features that can exacerbate the negative impact of crises and transitions, or obstacles that may hinder the achievement of long-term strategic goals.

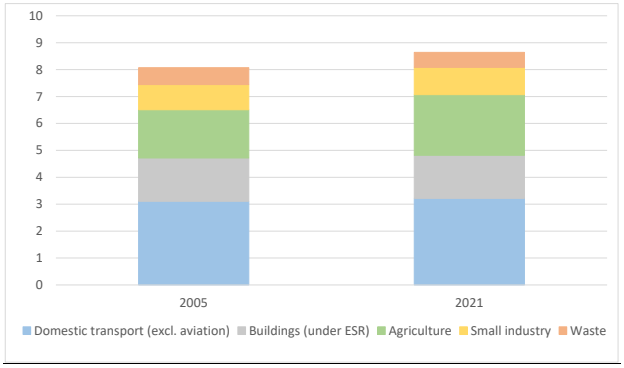
([32]) Capacities refer to enablers or abilities to cope with crises and structural changes and to manage the transitions.

([33]) This Annex is linked to Annex 1 on SDGs, Annex 6 on the green deal, Annex 8 on the fair transition to climate neutrality, Annex 9 on resource productivity, efficiency and circularity, Annex 10 on the digital transition and Annex 14 on the European pillar of social rights.

Latvia's green transition requires continued action on several aspects including deploying and integrating renewable energy sources, energy efficiency in buildings, and sustainable transport. Implementation of the European Green Deal is underway in Latvia; this Annex provides a snapshot of the key areas involved ([34]).

Latvia has not yet defined all the climate policy measures it needs to reach its new 2030 climate target for the effort sharing sectors ([35]). Data for 2021 on greenhouse gas emissions in these sectors are expected to show that Latvia generated less than its annual emission allocations ([36]). Current policies in Latvia are projected to reduce these emissions by 10% relative to 2005 levels in 2030. This is more than sufficient to reach the effort sharing target before the target was raised to meet the EU's 55% objective. The additional measures tabled would bring a sharper reduction in emissions, by 15%, but this would not be sufficient to reach the new target, 17% ([37]). In its recovery and resilience plan (RRP), Latvia has allocated 37.6 % of its Recovery and Resilience Facility (RRF) grants to key reforms and investments to attain climate objectives. Investments are allocated to sustainable transport, energy efficiency in public and private buildings, renewable energy, modernisation of the grid network and climate adaptation measures ([38]).

Graph A6.1: **Thematic – greenhouse gas emissions from the effort sharing sectors in Mt CO2eq, 2005-2021**



Source: European Environmental Agency.

The capacity of Latvia's land use sector for net carbon removals remains low. Latvia's net removals from its land use, land use change and forestry (LULUCF) sector had large annual fluctuations since 2017. Greenhouse gas emissions in the land use sector are comparatively high from cropland and grassland, indicating large emissions from soils with high organic content as well as diminishing forest stocks. Latvia projects a trend towards net emissions instead of enhancing removals from the land use sector by 2030. It's 2030 target for the LULUCF sector implies to remove 644 kt CO2eq (see Table A6.1) ([39]).

Imported fossil fuels still play a substantial role in Latvia's energy mix. In 2021, renewable energy accounted for 44% of Latvia's energy mix while oil and oil products accounted for 34% (see Graph A6.2). The share of natural gas in the energy mix in 2021 was 22%. In 2021, renewable energy sources accounted for 64% of the electricity mix. Natural gas accounted for the remaining 36% of the electricity mix.

([34]) The overview in this Annex is complemented by the information provided in Annex 7 on energy security and affordability, Annex 8 on the fair transition to climate neutrality and environmental sustainability, Annex 9 on resource productivity, efficiency and circularity, Annex 11 on innovation, and Annex 19 on taxation.

([35]) Member States' greenhouse gas emission targets for 2030 ('effort sharing targets') were increased by Regulation (EU) 2023/857 (the Effort Sharing Regulation) amending Regulation (EU) 2018/842, aligning the action in the concerned sectors with the objective to reach EU-level, economy-wide greenhouse gas emission reductions of at least 55% relative to 1990 levels. The Regulation sets national targets for sectors outside the current EU Emissions Trading System, notably: buildings (heating and cooling), road transport, agriculture, waste, and small industry. Emissions covered by the EU ETS and the Effort Sharing Regulation are complemented by net removals in the land use sector, regulated by Regulation (EU) 2018/841 (the Land Use, Land Use Change and Forestry (LULUCF) Regulation) amended by Regulation (EU) 2023/839.

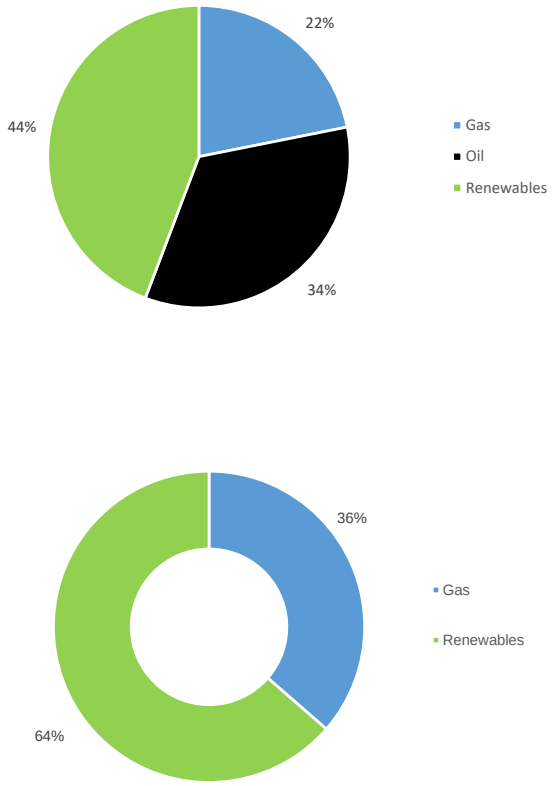
([36]) Latvia's annual emission allocations for 2021 were some 10.7 Mt CO_2eq, and its approximated 2021 emissions were at 8.6 Mt (see European Commission, *Accelerating the transition to climate neutrality for Europe's security and prosperity: EU Climate Action Progress Report 2022*, SWD(2022)343).

([37]) See the information on the distance to the 2030 climate policy target in Table A6.1. Existing and additional measures as of 15 March 2022.

([38]) For example, investments in clean transport in the Riga metropolitan area covering railways, trams, electric buses and cycling lanes, and in energy efficiency of private and public buildings and businesses..

([39]) This value is indicative and will be updated in 2025 (as mandated by Regulation (EU) 2023/839.

Graph A6.2: **Energy mix (top) and Electricity mix (bottom), 2021**



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: Eurosta
Source:

Increasing the pace at which renewable energy is deployed is crucial to decarbonising Latvia's economy. Latvia´s NECP sets a 50% target of renewable sources in gross final energy consumption by 2030, which was considered as adequate. Latvia will need to increase its renewable energy target in the updated NECP, to reflect the more ambitious EU climate and energy targets in the Fit for 55 Package and in the REPowerEU Plan. However, the progress has remained stagnant in 2021, as renewables accounted for 42.1% of gross final energy consumption, the same as in 2020. Latvia has great potential for decarbonising, particularly in its transport and building sectors and shifting towards renewable energy sources, notably by accelerating its deployment of wind and solar energy. Latvia's RRP contains investments and reforms to support diversification away from fossil fuels. A significant share of the investments is allocated to greening Riga's metropolitan area transport system and to sustainable public transport. The reforms included in the plan aim to improve the regulatory framework to enable onshore wind energy to be deployed and reduce legal uncertainty for investments. The Latvian RRP also contains investments related to modernising electricity transmission and distribution networks that will enable the uptake of renewables in Latvia's electricity mix.

Latvia's energy efficiency targets for 2030 will need to be strengthened. Latvia's NECP targets for primary and final energy consumption (PEC and FEC) were considered modest in ambition in the 2020 Commission assessment. Based on the energy consumption trajectory for 2018-2021, Latvia is expected to be on track to meet its 2030 target for PEC and FEC, as these were notified in its NECP ([40]). Latvia needs to advance in energy efficiency measures in building and transport sectors, as well as industry. Rapidly aging residential building stock alone accounted for 30% of the final energy consumption in the country ([41]). According to its 2020 long-term renovation strategy (LTRS), which includes an indicative milestone for 2030, Latvia aims to renovate 30% of multi-apartment buildings (8 100 buildings) with 4 860 buildings identified as a priority. Latvia also aims to renovate 500 000 m^2 of public buildings at a renovation rate of 3% per year for up to 2030 ([42]). The Latvian RRP includes concrete measures to improve the energy efficiency of the national building stock through specific renovation measures for public and private buildings. It also envisages investments to stimulate energy efficiency in the industrial sector. But for ambitious goals of the LTRS to be met, additional financing and support measures need to be put in place by Latvia. Also, incentives to facilitate energy performance contracting in public buildings and expansion of the energy efficiency obligation scheme in end-use sectors.

In Latvia, green mobility shows potential for progress. The market for zero-emission passenger cars is slowly developing. The share of new registrations of zero-emission vehicles

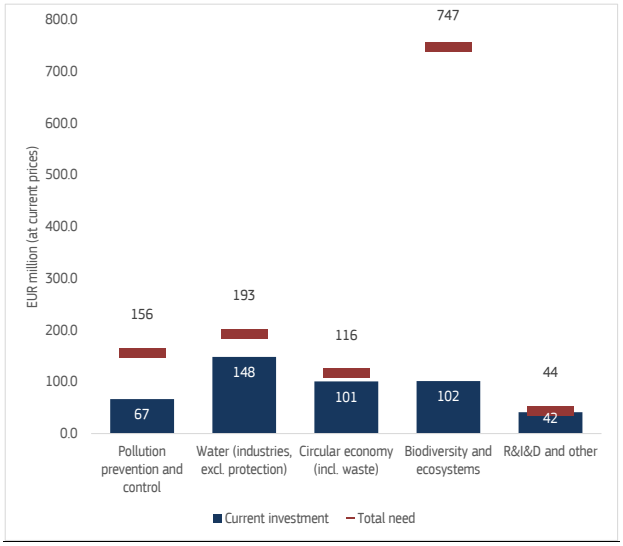
([40]) After the conclusion of the negotiations for a recast EED, the ambition of both the EU and national targets as well as of the national measures for energy efficiency to meet these targets is expected to increase.

([41]) Latvia's National Energy and Climate Action Plan 2021-2030

([42]) Latvia´s Long-term strategy for the renovation of buildings.

remains much lower than the EU average ([43]). Latvia's RRP supports connection points for electric vehicles. At 13.5 %, the electrification of the railway network is comparatively low ([44]). Individual transport exacerbates seasonal problems with air pollution, leading to significant health and economic costs in the capital.

Graph A6.3: **Thematic – environmental investment needs and current investment, p.a. 2014-2020**



Source: European Commission.

Latvia would benefit from investing more in environmental protection, notably in measures protecting biodiversity and addressing pollution. Between 2014 and 2020, environmental investment needs ([45]) were estimated to be at least EUR 1.3 billion while investment stood at about EUR 500 million, leaving a gap of at least EUR 800 million per year (see Graph A6.3) ([46]). Latvia has not designated enough sites for inclusion in its land-based EU Natura 2000 network, currently covering 11.5% of its territory ([47]). It performs very poorly compared to the rest of the EU in the conservation status of its habitats protected under EU legislation; less than 10% have a favourable status (against the EU average of 16%). Around 90% of the forests and grasslands protected under EU legislation have a bad or poor status: A comprehensive approach to ecosystem services is yet missing in Latvia, and it has not yet dedicated sufficient resources to protecting nature.

Climate change is affecting many sectors in Latvia ([48]), with adaptation challenges particularly in the coastal region. Between 1980 and 2020, economic losses from weather- and climate-related events in Latvia amounted to almost EUR 1 billion ([49]). Currently some sectors have benefited from climate change (e.g., lower heating costs, extended crop growing season). However, rising precipitation increases flood hazards. Extreme weather events like heatwaves are projected to occur more often. The most climate sensitive sectors are agriculture, infrastructure, energy, and transport. The decline of biodiversity and ecosystem services due to climate change poses a threat to the preservation and sustainable development of Latvia's natural capital, although data are often insufficient. Shifting away from monocultures in forestry and agriculture, and monitoring invasive species and pests is key to protecting Latvia's ecosystems ([50]). Latvia's national plan for climate adaptation until 2030 was adopted in 2018. It aims at integrating climate resilience goals into all sectors of the economy ([51]). Progress is planned to be evaluated periodically. Latvia's RRP includes a pillar on climate adaptation, consisting of fire and flood prevention measures ([52]).

Latvia provides fossil fuel and other environmentally harmful subsidies that could be considered for reform, while ensuring food and energy security and mitigating

([43]) In 2022, the share of battery electric vehicles in Latvia was at 4.6%, against the EU average of 12%. Source: European Alternative Fuels Observatory.

([44]) The EU average is 56.6 %. Source: EU Transport in Figures. Statistical Pocketbook 2022.

([45]) Environmental objectives include pollution prevention and control, water management and industries, circular economy and waste, biodiversity and ecosystems (European Commission, 2022, Environmental Implementation Review, country report Latvia).

([46]) When also accounting for needs estimated at EU level only (e.g., water protection, higher circularity, biodiversity strategy).

([47]) In 2021, Latvia had 18.2% terrestrial protected areas (Natura 2000 and nationally designated areas), against the EU average of 26.4% (European Environment Agency, 2023, Natura 2000 Barometer).

([48]) European Environmental Agency, Advancing towards climate resilience in Europe, forthcoming.

([49]) European Environmental Agency, Economic losses from climate-related extremes in Europe, published on 3 February 2022.

([50]) Source: European Environmental Agency, Climate-Adapt, overview of climate pressures Latvia.

([51]) Latvia's national plan for climate adaptation 2030.

([52]) Latvia's recovery and resilience plan.

social effects. Environmentally harmful subsidies have been identified, via an initial assessment, in the agriculture, forestry and fishing, electricity, gas, steam and air conditioning, transportation and storage, manufacturing and other services sectors. Examples of such subsidies include the excise duty exemptions on diesel used for agricultural, fishing, aquaculture and navigation purposes, the reimbursement of excise duty on diesel used in freight and other categories of passenger transport or the refund scheme for energy-intensive industry under conditions ([53]). A mapping of all environmentally harmful subsidies by Latvia would help prioritise candidates for reform.

([53]) Fossil fuel figures in EUR of 2021 from the 2022 State of the Energy Union report. Initial assessment of environmentally harmful subsidies done by the Commission in the 2022 toolbox for reforming environmentally harmful subsidies in Europe, using OECD definitions, and based on the following datasets: OECD Agriculture Policy Monitoring and Evaluations; OECD Policy Instruments for the Environment (PINE) Database; OECD Statistical Database for Fossil Fuels Support; IMF country-level energy subsidy estimates. Annex 4 of the toolbox contains detailed examples of subsidies on the candidates for reform.

Table A6.1: **Indicators tracking progress on the European Green Deal from a macroeconomic perspective**

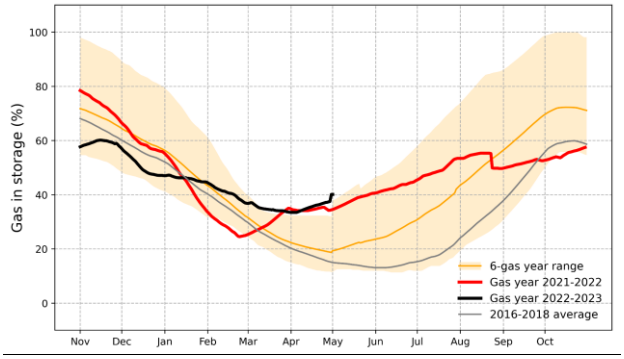
									'Fit for 55' 2030 target/value	'Fit for 55' Distance WEM	'Fit for 55' Distance WAM
			2005	2017	2018	2019	2020	2021			
Progress to policy targets	Greenhouse gas emission reductions in effort sharing sectors [1]	Mt CO_2eq; %; pp	8.5	8%	7%	1%	-1%	-	-17.0%	-7	-2
	Net carbon removals from LULUCF [2]	kt CO_2eq	-5,965	-3,110	-614	-2,293	801	2,394	-644	n/a	n/a
			2005	2017	2018	2019	2020	2021	National contribution to 2030 EU target		
	Share of energy from renewable sources in gross final consumption of energy [3]	%	32%	39%	40%	41%	42%	42%	50%		
	Energy efficiency: primary energy consumption [3]	Mtoe	4.5	4.5	4.7	4.6	4.3	4.5	4.1		
	Energy efficiency: final energy consumption [3]	Mtoe	4.0	4.0	4.2	4.1	3.9	4.1	3.6		
			Latvia						EU		
			2016	2017	2018	2019	2020	2021	2019	2020	2021
Fiscal and financial indicators	Environmental taxes (% of GDP)	% of GDP	3.6	3.5	3.4	2.9	3.0	2.7	2.4	2.2	2.2
	Environmental taxes (% of total taxation) [4]	% of taxation	11.7	11.2	10.9	9.6	9.8	9.0	5.9	5.6	5.5
	Government expenditure on environmental protection	% of total exp.	1.4	1.4	1.5	1.5	1.3	1.3	1.7	1.6	1.6
	Investment in environmental protection [5]	% of GDP	0.3	0.3	0.3	0.4	-	-	0.4	0.4	0.4
	Fossil fuel subsidies [6]	EUR2021bn	0.2	0.2	0.1	0.1	0.1	-	53.0	50.0	-
	Climate protection gap [7]	score 1-4					0.9	1.4			1.5
Climate	Net greenhouse gas emissions	1990 = 100	43.0	43.0	43.0	45.0	41.0	42.0	76.0	69.0	72.0
	Greenhouse gas emission intensity of the economy	kg/EUR'10	0.57	0.56	0.56	0.55	0.52	-	0.31	0.30	0.26
	Energy intensity of the economy	kgoe/EUR'10	0.20	0.20	0.20	0.19	-	-	0.11	0.11	-
Energy	Final energy consumption (FEC)	2015=100	100.9	106.0	110.3	107.7	101.8	107.1	102.9	94.6	-
	FEC in residential building sector	2015=100	103.4	108.1	111.3	107.5	100.9	108.8	101.3	101.3	106.8
	FEC in services building sector	2015=100	101.1	103.5	101.0	97.0	93.9	102.5	100.1	94.4	100.7
Pollution	Smog-precursor emission intensity (to GDP) [8]	tonne/EUR'10	2.7	2.6	2.5	2.5	2.3	-	0.9	0.9	-
	Years of life lost due to air pollution by PM2.5	per 100.000 inh.	728.9	525.6	846.0	594.5	479.1	-	581.6	544.5	-
	Years of life lost due to air pollution by NO_2	per 100.000 inh.	117.9	98.2	119.5	77.4	59.4		309.6	218.8	-
	Nitrates in ground water	mg NO_3/litre	-	-	-	-	-	-	21.0	20.8	-
Biodiversity	Land protected areas	% of total	11.4	18.1	-	18.2	18.2	18.2	26.2	26.4	26.4
	Marine protected areas	% of total	15.8	-	-	15.8	-	15.8	10.7	-	12.1
	Organic farming	% of total utilised agricultural area	13.4	13.9	14.5	14.8	14.8	15.3	8.5	9.1	-
			2017	2018	2019	2020	2021	2022	2020	2021	2022
Mobility	Share of zero-emission vehicles [9]	% in new registrations	0.4	0.8	0.6	2.1	2.9	4.5	5.4	8.9	10.7
	Number of AC/DC recharging points (AFIR categorisation)		-	-	-	384	480	609	188626	330028	432518
	Share of electrified railways	%	13.5	13.5	13.5	13.5	13.5	13.5	56.6	n/a	56.6
	Hours of congestion per commuting driver per year		21.8	19.8	20.3	20.3	n/a	n/a	28.7	n/a	n/a

Sources: (1) Historical and projected emissions, as well as Member States' climate policy targets and 2005 base year emissions under the Effort Sharing Decision (for 2020) are measured in global warming potential (GWP) values from the 4th Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC). Member States' climate policy targets and 2005 base year emissions under the Effort Sharing Regulation (for 2030) are in GWP values from the 5th Assessment Report (AR5). The table above shows the base year emissions 2005 under the Effort Sharing Decision, using AR4 GWP values. Emissions for 2017-2021 are expressed in percentage change from 2005 base year emissions, with AR4 GWP values. 2021 data are preliminary. The table shows the 2030 target under Regulation (EU) 2023/857 that aligns it with the EU's 55% objective, in percentage change from 2005 base year emissions (AR5 GWP). Distance to target is the gap between Member States' 2030 target (with AR5 GWP values) and projected emissions with existing measures (WEM) and with additional measures (WAM) (with AR4 GWP values), in percentage change from the 2005 base year emissions. Due to the difference in global warming potential values, the distance to target is only illustrative. The measures included reflect the state of play as of 2022.
(2) Net removals are expressed in negative figures, net emissions in positive figures. Reported data are from the 2023 greenhouse gas inventory submission. 2030 value of net greenhouse gas removals as in Regulation (EU) 2023/839 amending Regulation (EU) 2018/841 (LULUCF Regulation) – Annex IIa, kilotons of CO2 equivalent, based on 2020 submissions.
(3) Renewable energy and energy efficiency targets and national contributions are in line with the methodology established under Regulation (EU) 2018/1999 (Governance Regulation).
(4) Percentage of total revenue from taxes and social contributions (excluding imputed social contributions). Revenue from the EU Emissions Trading System is included in environmental tax revenue.
(5) Expenditure on gross fixed capital formation for the production of environmental protection services (abatement and prevention of pollution) covering government, industry, and specialised providers.
(6) European Commission, Study on energy subsidies and other government interventions in the European Union, 2022 edition.
(7) The climate protection gap refers to the share of non-insured economic losses caused by climate-related disasters. This indicator is based on modelling of the current risk from floods, wildfires and windstorms as well as earthquakes, and an estimation of the current insurance penetration rate. The indicator does not provide information on the split between the private/public costs of climate-related disasters. A score of 0 means no protection gap, while a score of 4 corresponds to a very high gap (EIOPA, 2022).
(8) Sulphur oxides (SO2 equivalent), ammonia, particulates < 10 µm, nitrogen oxides in total economy (divided by GDP).
(9) Battery electric vehicles (BEV) and fuel cell electric vehicles (FCEV).

In 2022, Latvia succeeded in diversifying away from Russian gas, which in the past served as the single gas suppliers to the country. Latvia has demonstrated a slow uptake of electricity generation from renewable sources, requiring it to step up its clean energy transition. This Annex ([54]) sets out actions carried out by Latvia to achieve the REPowerEU objectives, including through the implementation of its recovery and resilience plan, in order to improve energy security and affordability while accelerating the clean energy transition, and contributing to enhancing the EU's competitiveness in the clean energy sector ([55]).

A strategic decision adopted by the Latvian Parliament in July 2022 to ban purchases of Russian natural gas as of January 2023 prompted domestic gas suppliers to find alternative sources of natural gas supply. Latvia does not own an LNG facility, but it imports natural gas from the Lithuanian Klaipeda LNG terminal and can access the Finnish LNG terminal located in the port of Inkoo, which started operations in January 2023. The completion of several gas interconnections in the context of the implementation of the Baltic Energy Market Interconnection Plan (BEMIP) have helped to ensure market integration and decreased dependence on Russian gas in a region historically dependent on a single supplier. Those are the enhancements of the gas interconnections with Estonia and Lithuania, in conjunction with other key Projects of Common Interest (PCIs) in the region such as the Gas Interconnection between Poland and Lithuania, the Baltic Pipe between Denmark and Poland, the Balticconnector between Finland and Estonia, the Klaipeda LNG terminal in Lithuania and the Świnoujście LNG terminal in Poland. The Inčukalns underground storage facility (24.1 TWh) is undergoing enhancement works expected to be completed by 2025. It is the only such facility in the Baltic countries and has a key role in ensuring its security of supply. Latvia's gas storage capacity greatly exceeds its national consumption. For that reason, based on the Gas Storage Regulation ([56]), Latvia's filling target and intermediate targets shall be reduced to 35% of its average annual gas consumption over the previous 5 years. Latvia. Latvia fulfilled its gas storage obligations last winter, reaching 57.7% by 1 November 2022 (around 38 percentage points above its legal obligation), and ended the heating season with a filling gas storage at 35.3% by 15 April 2023 (see Graph A7.1) ([57]).

Graph A7.1: **Underground storage levels in Latvia**



Source: JRC calculation based on AGSI+ Transparency Platform, 2022 (Last update 1 May 20232

The security of supply of the gas system and electricity system are closely interlinked. In 2021, electricity generated from natural gas accounted for more than a third of the electricity mix (see Annex 6). According to preliminary Eurostat information, gas-fired electricity generation in Latvia fell by 857 GWh, or 42%, in 2022 compared to 2021 ([58]). This was a key driver behind the observed gas demand reduction in Latvia. Over the period August 2022 – March 2023, gas consumption has been reduced by 30%, compared to the previous 5-years average. In effort to ensure energy savings, Latvia has rolled-out programmes to increase energy efficiency in buildings, including in combination with small scale renewable installations such as heat pumps and

([54]) It is complemented by Annex 6 as the European Green Deal focuses on the clean energy transition, by Annex 8 on the actions taken to mitigate energy poverty and protect the most vulnerable ones, by Annex 9 as the transition to a circular economy will unlock significant energy and resource savings, further strengthening energy security and affordability, and by Annex 12 on industry and single market complementing ongoing efforts under the European Green Deal and REPowerEU.

([55]) in line with the Green Deal Industrial Plan COM(2023) 62 final, and the proposed Net-Zero Industry Act COM(2023) 161 final

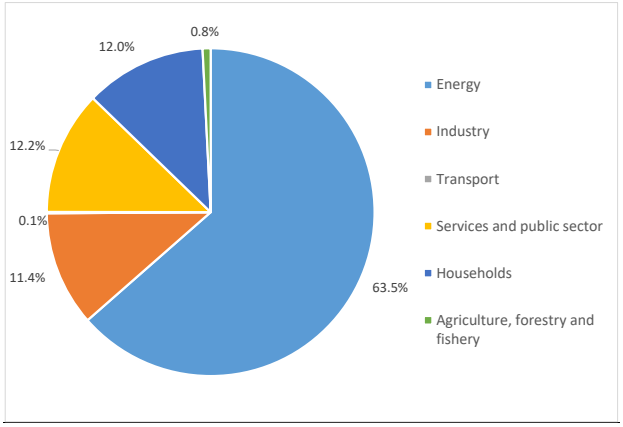
([56]) Regulation (EU) 2022/1032 of the European Parliament and of the Council of 29 June 2022 amending Regulations (EU) 2017/1938 and (EC) No 715/2009 with regard to gas storage.

([57]) Commission Implementing Regulation (EU) 2022/2301 of 23 November 2022 setting the filling trajectory with intermediary targets for 2023 for each Member State with underground gas storage facilities on its territory and directly interconnected to its market area.

([58]) EUROSTAT: Net electricity generation by type of fuel - monthly data (nrg_cb_pem)

solar panels. The government has also set out a plan to incentivise the switch from fossil fuels to biogas or biomethane from the agricultural waste. However, Latvia still needs to create the legal framework for bio-methane production, in particular by establishing a system of sustainability certificates in line with the requirements of the Renewable Energy Directive, including for connecting the producers to the natural gas grid. Additional efforts of Latvia in energy efficiency would also contribute to further reduce the country's dependency from fossil fuels. Latvia is carrying out a low number of checks on products covered by ecodesing and energy labelling. This generates concerns with respect to the level playing field among economic operators and uncertainty as to the compliance levels of the concerned products, and therefore possible missed energy and CO2 savings ([59]).

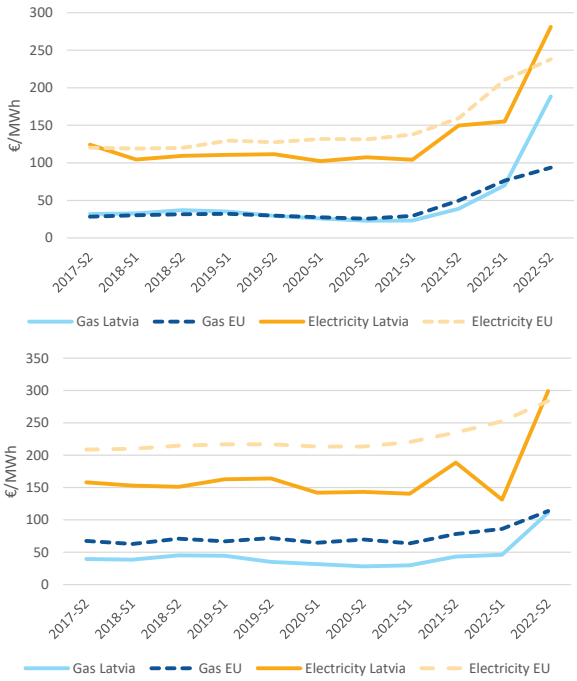
Graph A7.2: **Share of gas consumption per sector, 2021**



Source: Eurostat

To accommodate the higher uptake of renewable electricity, further investments to modernise the electricity grid are required, as well as investments in flexibility services, such as demand response and energy storage. As part of its recovery and resilience plan, Latvia will carry out investments in modernising its distribution grids to enable uptake of decentralised renewable energy (see Annex 6). Significant progress has been made in terms of regional market integration between the Baltic and Nordic electricity markets in the framework of BEMIP, with commissioning of the electricity PCIs between Latvia, Estonia and Lithuania and their Nordic neighbours. The project of synchronising the Baltic states' electricity grid with the continental European network is well advanced. It includes several new investments and reinforcements that increase the security of supply for the broader region and add additional transmission capacity so that an increasing share of offshore and onshore renewables can be integrated into the grid. However, the Latvian energy network, like other Baltic states, remains exposed as its electricity grid is synchronised with the BRELL power grid (Belarus and Russia).

Graph A7.3: **Latvia´s retail energy prices for industry (top) and households (bottom)**



(1) On electricity, the band consumption is DC for households and ID for industry
(2) On gas, the band consumption is D2 for households and I4 for industry
Source: Eurostat

Despite the measures introduced by Latvia to mitigate the impact of the energy crisis, Latvian households, small and medium-sized enterprises and industries are still affected by high energy prices. The mandatory procurement component of the electricity bill (a form of support to electricity producers that produce electricity from renewable energy sources) was abolished for all electricity consumers from 1 October 2022, until 30 April 2023. In addition, to shield households from soaring prices, the government decided to cap electricity and gas prices as well as to support households by covering some part of the costs for heating, while for certain legal entities, the costs

([59]) The internet-supported information and communication system for the pan-European market surveillance

of electricity distribution and transmission tariff are compensated from the state budget. Latvian industry, which accounted for 11.4% of the country's gas consumption in 2021, was also hit. Among the different sectors, the largest industrial consumers of natural gas are the food and beverages sector and non-metallic minerals sector (see Annex 12).

Latvia has demonstrated a slow uptake of electricity generation from renewable sources, despite significant untapped potential for wind energy generation. After a three-year long period (from 2019 to 2021) of stagnation during which Latvia did not register an increase in installed capacity for electricity generation from renewable sources, an increase of 142 MW was observed in 2022. The increase was driven mainly by the rise in deployment of solar (49 MW) and onshore wind energy (59 MW) ([60]). In September 2022, the Parliament adopted the Law on Simplified Procedure for the Construction of Energy Supply Structures. This will accelerate the pace of development of renewable energy projects, including wind farms with a capacity of more than 50 MW and solar farms with a capacity of more than 10 MW. In addition, amendments to the Law on Environmental Impact Assessment were also adopted. The new legal framework enables the creation of a green corridor for wind farm facilities in Latvia by reducing the environmental impact assessment procedure by 6 months. Moreover, it allows the government to grant the status of national interest to wind farm facilities. This would allow it to override objections from municipalities and local communities, which has been one of the main reasons for the slow uptake of onshore wind farms. Additionally, Latvia is currently implementing a joint hybrid offshore wind grid project with the capacity of 1 GW, together with Estonia. in January 2023, under the framework of BEMIP, the Baltic Sea member states, including Latvia, endorsed common offshore renewable energy goals for the Baltic Sea: 23 GW for 2030, 35 GW for 2040 and 47 GW for 2050 (out of these, Latvia has committed to 0.4 GW for 2030, with goals still to be updated for 2040 and 2050). Latvia still lacks specific measures to facilitate integration of decentralised RES production and empower customers to participate in electricity market via balancing and flexibility services including demand response and storage in line with Electricity Market Directive. The legal framework for energy communities only currently being developed would greatly contribute to the uptake of decentralised renewable deployment. Furthermore, in its National Energy and Climate Plan, Latvia made pledges to upgrade the existing district heating infrastructure for the use of cooling in buildings, and increase the share of renewables in district heating and transport sectors. Latvia could benefit from linking renovation programmes with the assessment for modernising district heating networks based on RES.

Latvia experienced a downward trend in private research and innovation (R&I) investment and in the number of patent families in Energy Union priorities. Private R&I investment in Energy Union priorities fell from EUR 16.4 million in 2014 (0.07% of GDP) to EUR 6.2 million in 2019 (0.02% of GDP). The number of patent families in Energy Union priorities also decreased from 11.4 per million inhabitants in 2013 to 2.8 per million inhabitants in 2019. On the clean energy value chain, Latvia is among the 10 Member States where 40% of renewable energy jobs are in the manufacturing sector. For the period 2019-2021, Latvia leads the way on solid bioenergy carriers and feedstock with around EUR 1.5 billion followed by Germany with EUR 1.3 billion. It mainly delivers to other Member States. In total the EU has 1.24 million jobs in RES sector in 2022 ([61]) which in relation to total working population in the EU ([62]) means an average of 0.67% of all jobs are in the RES sector while in 2021 Latvia had a total of 16 900 ([63]) people working in the renewable energy sector, which represents 1.9% of all jobs ([64]) and is thus 2 times higher than EU average. Most of these jobs are in Solid Biomass (10 600 or 63%) ([65]). As mentioned earlier, Latvia has significant wind energy potential. However, a transition to clean energy is mineral intensive and will require a substantial supply of many critical minerals (see Annex 5).

([60]) IRENA, Renewable capacity statistics 2023

([61]) https://www.irena.org/Publications/2022/Sep/Renewable-Energy-and-Jobs-Annual-Review-2022

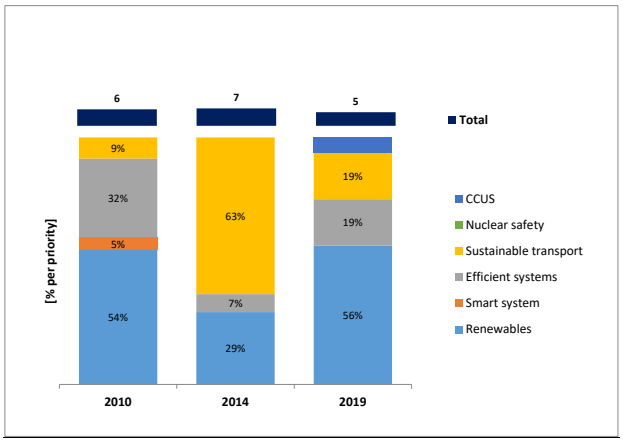
([62]) 189 Million in 2021.

([63]) https://www.irena.org/Data/View-data-by-topic/Benefits/Renewable-Energy-Employment-by-Country

([64]) There are 2 Million people living in Latvia (as of 2021), and 0,86 Million people were employed.

([65]) https://www.irena.org/Publications/2022/Sep/Renewable-Energy-and-Jobs-Annual-Review-2022

Graph A7.4: **Patent families in Energy Union R&I priorities**



Source: JRC SETIS (2022)

Table A7.1:**Key energy indicators**

		LATVIA				EU			
		2018	**2019**	**2020**	**2021**	**2018**	**2019**	**2020**	**2021**
ENERGY DEPENDENCE	**Import Dependency [%]**	44%	44%	45%	38%	58%	61%	57%	56%
	of Solid fossil fuels	91%	111%	90%	93%	44%	44%	36%	37%
	of Oil and petroleum products	98%	100%	106%	94%	95%	97%	97%	92%
	of Natural Gas	99%	100%	100%	100%	83%	90%	84%	83%
	Dependency from Russian Fossil Fuels [%]								
	of Hard Coal	95%	80%	97%	40%	40%	44%	49%	47%
	of Crude Oil	0%	0%	0%	0%	30%	27%	26%	25%
	of Natural Gas	100%	100%	100%	100%	40%	40%	38%	41%

		2015	***2016***	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
ELECTRICITY	**Gross Electricity Production (GWh)**	5,533	6,424	7,531	6,725	6,438	5,725	5,846	-
	Combustible Fuels	3,526	3,767	3,000	4,170	4,174	2,940	2,990	-
	Nuclear	0	0	0	0	0	0	0	-
	Hydro	1,860	2,530	4,381	2,432	2,108	2,603	2,708	-
	Wind	147	128	150	122	154	177	141	-
	Solar	0	0	0	1	3	5	7	-
	Geothermal	0	0	0	0	0	0	0	-
	Other Sources	0	0	0	0	0	0	0	-
	Net Imports of Electricity (GWh)	1,821	1,033	-64	909	1,118	1,626	1,773	-
	As a % of electricity available for final consumption	28%	16%	-1%	14%	17%	24%	26%	-
	Electricity Interconnection (%)	-	-	45.30%	46.13%	53.9%	42.1%	47.2%	82.4%

		2015	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
DIVERSIFICATION OF GAS SUPPLIES	**Gas Consumption (in bcm)**	1.33	1.37	1.30	1.42	1.34	1.10	1.20	0.84
	Gas Imports - by type (in bcm)	1.31	1.13	1.24	1.42	1.36	1.12	1.19	-
	Gas imports - pipeline	1.31	1.13	1.24	1.41	1.35	1.11	1.19	-
	Gas imports - LNG	0.00	0.00	0.00	0.00	0.00	0.01	0.01	-
	Gas Imports - by main source supplier (in bcm) (1)								
	Russia	1.31	1.13	1.24	1.42	1.36	1.12	1.19	-

		2019	**2020**	**2021**	**2022**
	LNG Terminals				
	Number of LNG Terminals (2)	0	0	0	0
	LNG Storage capacity (m3 LNG)	0	0	0	0
	Underground Storage				
	Number of storage facilities	1	1	1	1
	Operational Storage Capacity (bcm)	2.5	2.2	2.2	2.5

		2019	**2020**	**2021**	**2022**
CLEAN ENERGY	**VC investments in climate tech start-ups and scale-ups (EUR Mln) (3)**				
	as a % of total VC investments in Latvia	n.a.	n.a.	n.a.	n.a.
	Research & Innovation spending in Energy Union R&i priorites				
	Public R&I (EUR mln)	n.a.	n.a.	n.a.	n.a.
	Public R&I (% GDP)	n.a.	n.a.	n.a.	n.a.
	Private R&I (EUR mln)	6.3	n.a.	n.a.	n.a.
	Private R&I (% GDP)	0.02%	n.a.	n.a.	n.a.

(1) The ranking of the main suppliers is based on the latest available figures (for 2021)
(2) FSRU included
(3) Venture Capital investments include Venture Capital deals (all stages) and Private Equity Growth/Expansion deals (for companies that have previously been part of the portfolio of a VC investment firm).

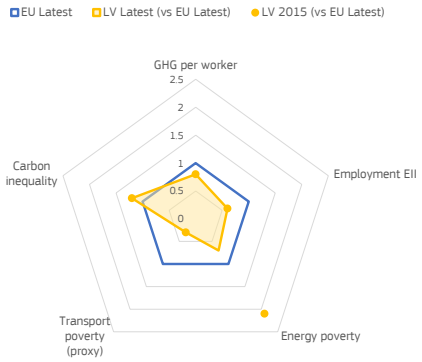
Source: Source: Eurostat, Gas Infrastructure Europe (Storage and LNG Transparency Platform), JRC SETIS (2022), JRC elaboration based on PitchBook data (06/2022)

This Annex monitors Latvia's progress in ensuring a fair transition towards climate neutrality and environmental sustainability, notably for workers and households in vulnerable situations. The number of jobs in the green economy has not risen in Latvia. Upskilling and reskilling measures will promote smooth labour market transitions, ensure a fair green transition in line with the Council Recommendation ([66]), and the implementation of REPowerEU. Latvia's recovery and resilience plan (RRP) envisages investment in the energy efficiency of public and residential buildings. ([67]), complementing the territorial just transition plan and action supported by the wider reskilling and upskilling actions supported by the European Social Fund Plus (ESF+)".

Employment in Latvia's sectors that are most affected by the green transition remains low but stable, while employment in the green economy is not expanding. The greenhouse gas (GHG) emissions intensity of Latvia's workforce declined slightly from 11.5 to 11.2 tonnes per worker between 2015 and 2021, and is below the EU average of 13.7 tonnes (see Graph A8.1 and Table A8.1). Overall, employment in Latvia's energy-intensive industries (EII) represented a stable share of 1.7% of total employment in 2020 (same value as in 2015) vs 3.0% in the EU. Nonetheless, employment in mining and quarrying decreased by 7.2% since 2015 (to around 3 000 workers). In addition, total jobs in the environmental goods and services sector also shrank by 1.3% (to 26 933) during 2015-19 (EU: 8.3%), reaching 3% of total employment, close to the EU average (see Annex 9 for circular jobs specifically). The overall job vacancy rate is at 2.8%, and at 3.2% in the construction sector (vs 4.0% in EU) ([68]), which is key for the green transition.

The green transition requires upskilling and reskilling in declining and transforming sectors. Skills are key for smooth labour market transitions and preserving jobs in transforming sectors. In Latvia, 37% of citizens believe they do not have the necessary skills to contribute to the green transition (EU: 38%) ([69]). To address this challenge, the ESF+ will invest in developing more structural upskilling and reskilling ecosystems and flexible learning pathways in Latvia, with an indicative amount of EUR 4.8 million to support green skills training specifically. A further EUR 9.8 million will be invested in educational system to improve green skills and the green economy. Additionally, to mitigate the social impact of the peat sector's transition in the most affected areas, the Just Transition Fund will contribute EUR 16.9 million EUR for reskilling and upskilling affected workers. This investment will help equip workers with skills that correspond to labour market needs. It will also develop a sustainable and socially responsible support framework for adult learning and support the acquisition of advanced digital skills.

Graph A8.1: **Fair transition challenges in Latvia**



Source: Eurostat, EMPL-JRC GD-AMEDI/AMEDI+ projects and World Inequality Database (see Table A8.1).

Energy poverty indicators have been improving and remain below the EU average in the recent years, but the spike in energy prices can aggravate the situation. The share of the population unable to keep their homes adequately warm declined from 14.5% (in 2015) to 4.9% in 2021 ([70]). In particular, 12.4% of the population at risk of poverty (EU: 16.4%) and 4.5% of lower middle-income households (in income deciles 4-5) were affected in 2021 (EU: 8.2% in 2021). Before energy price hikes, an estimated 45.1% of the total population and 82% of the

([66]) Council Recommendation of 16 June 2022 on ensuring a fair transition towards climate neutrality (2022/C 243/04) covers employment, skills, tax-benefit and social protection systems, essential services and housing.

([67]) See 2022 Country Report (Annex 6)

([68]) Eurostat (JVS_A_RATE_R2)

([69]) Special Eurobarometer 527. Fairness perceptions of the green transition (May – June 2022).

([70]) Energy poverty is a multi-dimensional concept. The indicator used focuses on an outcome of energy poverty. Further indicators are available at the Energy Poverty Advisory Hub.

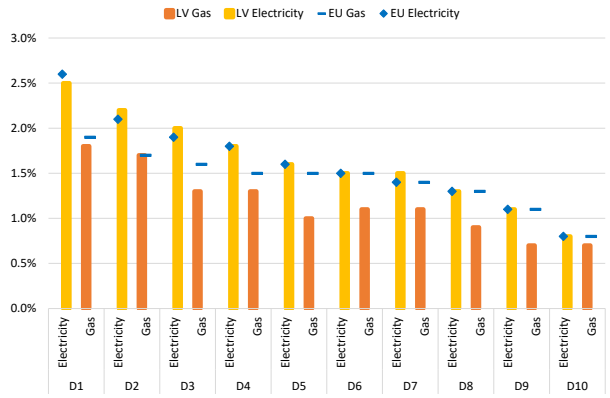
Table A8.1:**Key indicators for a fair transition in Latvia**

Indicator	Description	LV 2015	LV Latest	EU Latest
GHG per worker	Greenhouse gas emissions per worker - CO2 equivalent tonnes	11.5	11.2 (2021)	13.7 (2021)
Employment EII	Employment share in energy-intensive industries, including mining and quarrying (NACE B), chemicals (C20), minerals (C23), metals (C24), automotive (C29) - %	1.7	1.7 (2020)	3 (2020)
Energy poverty	Share of the total population living in a household unable to keep its home adequately warm - %	14.5	4.9 (2021)	6.9 (2021)
Transport poverty (proxy)	Estimated share of the AROP population that spends over 6% of expenditure on fuels for personal transport - %	10.1	10.8 (2023)	37.1 (2023)
Carbon inequality	Average emissions per capita of top 10% of emitters vs bottom 50% of emitters	6.1	5.8 (2020)	5 (2020)

Source: Eurostat (env_ac_ainah_r2, nama_10_a64_e, ilc_mdes01), EU Labour Force Survey (break in time series in 2021), EMPL-JRC GD-AMEDI/AMEDI+ projects and World Inequality Database (WID).

(expenditure-based) at-risk-of-poverty (AROP) population had residential expenditure on electricity, gas, and other fuels ([71]) above 10% of their household budget (estimated EU average of 26.9% and 48.2%, respectively).

Graph A8.2: **Distributional impacts of energy prices due to rising energy expenditure (2021-2023)**



Mean change of energy expenditure as a percentage (%) of total expenditure per income decile (D) due to observed price changes (August 2021 – January 2023 relative to the 18 months prior), excl. policy support and behavioural responses. ***Source:*** EMPL-JRC GD-AMEDI/AMEDI+ projects, based on Household Budget Survey 2015 and Eurostat inflation data for CP0451 and CP0452.

The increased energy prices in 2021-2023 negatively affect households' budgets, in particular for low-income groups. As a result of energy price changes during the August 2021 to January 2023 period relative to the 18 months prior (cf. Annex 7), in the absence of policy support and behavioural responses, the share of individuals living in households which spend more than 10% of their budget on energy would have increased by 22.3 pps for the whole population and by 12.5 pps among the (expenditure-based) AROP population, while the EU-level would have increased by 16.4 pps and 19.1 pps, respectively ([72]). Expenditure shares on energy of low and lower-middle income groups would have increased the most in line with EU patterns, as shown in Graph A8.2. Among the (expenditure-based) AROP population, the share of individuals living in households with budget shares for private transport fuels ([73]) above 6% would have increased less than the EU average (0.6 pps vs 5.3 pps), reaching 10.8% in January 2023 (well below the EU average of 37.1%) due to the increase in transport fuel prices.

Access to public transport displays an urban-rural divide. Citizens perceive public transport to be relatively available (64% vs 55% in the EU), affordable (61% vs 54%) and of good quality (69% vs 60%). As regards these perceptions, rural areas in Latvia perform worse than urban areas in all three indicators, yet still better when compared to rural areas in the EU overall ([74]). The average carbon footprint of the top 10% of emitters among the population in Latvia is about 5.8 times higher than that of the bottom 50% (see Graph A8.1), i.e. slightly more pronounced than the EU average (5.0 times). In Latvia, the average levels of air pollution in 2020 stood below the EU average (9.1 vs 11.2 µg/m PM2.5), with 31% of the population living in regions exposed to critical levels of air pollution ([75])leading to significant health impacts, in particular on vulnerable groups, and 833 premature deaths annually ([76]).

([71]) Products defined according to the European Classification of Individual Consumption according to Purpose (ECOICOP): CP045.

([72]) EMPL-JRC GD-AMEDI/AMEDI+ ; see details in the related technical brief.

([73]) ECOICOP: CP0722.

([74]) EU (rural): 46%, 48% and 56% respectively. Special Eurobarometer 527.

([75]) Two times higher than the recommendations in the WHO Air Quality Guidelines (annual exposure of 5µg/m3)

([76]) EEA- Air Quality Health Risk Assessment

ANNEX 9: RESOURCE PRODUCTIVITY, EFFICIENCY AND CIRCULARITY

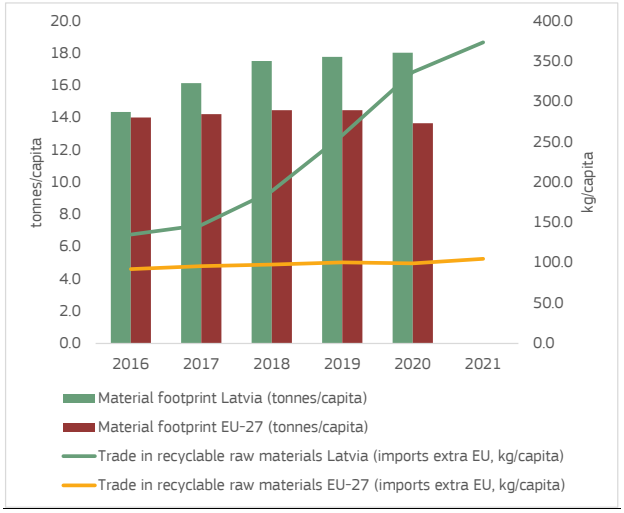
The circular economy transition is key to delivering on the EU's climate and environmental goals and provides large socio-economic benefits. It spurs job growth, innovation and competitiveness and fosters resilience and resource security. The circularity transition of industry, the built environment and agri-food can generate significant environmental improvements (see Annex 6), as they rank among the most resource-intensive systems.

Latvia's circular economy transition is insufficient and needs accelerating to meet the EU's circular economy goals. The EU's 2020 circular economy action plan (CEAP) aims at doubling the circular material use rate between 2020 and 2030. Latvia is still very far from reaching this goal, since in 2021 its circular use of material was 6.2%, or around half of the EU-27 average of 11.7%. This is explained by the fact that products that could be recycled are not produced in Latvia. The CEAP also aims to significantly decrease the EU's material footprint. Latvia's material footprint is considerably above the EU average and is increasing. The labour market benefits of the circular transition are not exploited, with reduced employment in direct circular jobs compared to 2016. As regards health and safety in circular jobs, fatal accidents in waste management and materials recovery are above the average of all economic sectors in Latvia and above the EU average ([77]).

Latvia has adopted a national circular economy action plan, but it lacks targeted actions, funding and implementation. In September 2020, Latvia adopted a circular economy action plan for 2021-2027 that is rather general and could be strengthened with more detailed and targeted actions, funding and implementation. Latvia is doing well with green public procurement, as this constituted 26.7% of all public procurement in 2021 in financial terms. Green public procurement can help drive the demand for sustainable products that meet reparability and recyclability standards.

Moving towards a circular economy requires further improvements in waste management. Latvia's municipal waste recycling rate significantly increased from 25.2% in 2016 to 44.1% in 2021, mainly due to the inclusion of waste exported for recycling in the statistics for recycled waste. Latvia missed the EU target for recycling 50% of municipal waste by 2020 and is assessed to be at risk of missing the EU's 55% recycling target by 2025. Although the landfilling rate decreased from 64.3% in 2016 to 52.5% in 2021, Latvia continues to rely heavily on landfilling, with a rate which is more than double the EU average (23%). While its waste management reform and introduction of the deposit system for plastic and glass bottles in 2022 should increase its recycling performance, further improvements in separate collection, in particular from apartment buildings and for biowaste, are needed for the country's economy to become more circular.

Graph A9.1: **Trend in material use**

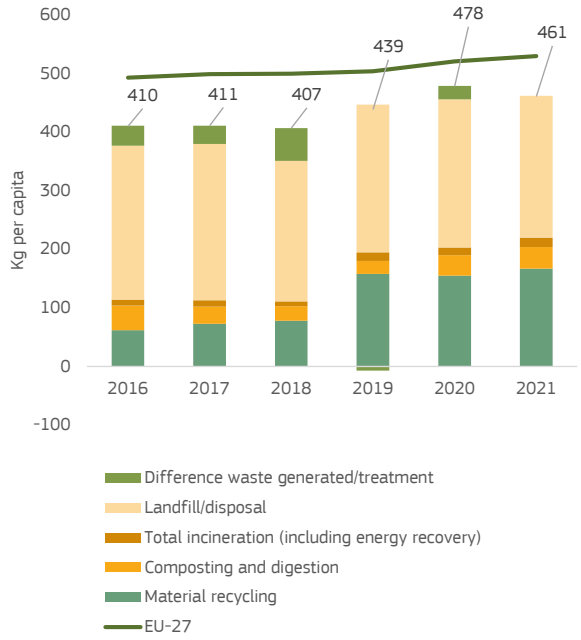


Source: Eurostat

The industrial system is increasingly circular. The economy, including industry, is twice less efficient at using materials than the EU average, with a resource productivity of 1.6 purchasing power standard per kilogramme vs 2.3 for the EU (see Annex 5). Latvia's resource productivity is at the same level as in 2016, indicating significant potential to boost the use of secondary raw materials. Latvia's material import dependency was over 33% in 2021. According to Latvia's 2020-2027 action plan for transition to the circular economy, one of the key obstacles for the development of the circular economy in Latvia is the lack of cross-sectoral coordination and insufficient promotion of circular economy ideas.

([77]) Eurostat [HSW_N2_02] for NACE Rev. 2 sector E38; 7.02 fatal accidents p. 100 000 employed in 2018-2020 vs 2.84 for all sectors in LV; 6.33 in the EU-27 for sector E38

Graph A9.2: **Treatment of municipal waste**



Source: Eurostat

The built environment system has scope for renovation and wider use of secondary raw materials. The recovery rate of construction and demolition waste has increased and is above the EU average (99% vs 89%). Latvia's national waste management plan for 2021-2028 includes end-of-waste criteria for construction and demolition waste. Soil sealing progressed between 2016 and 2018 at a faster rate than the EU average. There is scope for increasing the share of secondary raw materials used in construction.

The agri-food system could accelerate its shift towards circularity. Latvia's composting and anaerobic digestion per head has decreased since 2016 and stood at 37 kg per head in 2021, which is below the EU average of 83 kg per head. With Getliņi anaerobic digestion tunnels operating since 2022, it is possible to increase it considerably. There remains scope for using more efficient farming techniques and spreading good practices to enable the shift towards circularity (see Annex 6). Latvia's national waste management plan for 2021-2028 includes end-of-waste criteria for biodegradable waste and waste oils.

There remains a financing gap in the circular economy, including waste management. Additional investments will be required to address growing needs. The financing gap was estimated at EUR 15 million per year between 2014 and 2020. Over this period, investment needs were estimated to be at least EUR 116 million per year while investment baselines were EUR 101 million per year (see Annex 6). Investment areas such as eco-design, repair, reuse and remanufacturing as well as the uptake of new business models will be necessary to reach the EU's circularity objectives. Latvia is already using funds from the ERDF, but further investments are needed.

Table A9.1:**Overall and systemic indicators on circularity**

AREA	2016	2017	2018	2019	2020	2021	EU-27	Latest year EU-27
Overall state of the circular economy								
Material footprint (tonnes/capita)	14.4	16.2	17.5	17.8	18.0	-	13.7	2020
YoY growth in persons employed in the circular economy (%)[1]	1.0	-2.4	-5.7	-4.1	-	-	2.9	2019
Water exploitation index plus (WEI+) (%)	0.3	0.2	0.3	0.4	-	-	3.6	2019
Industry								
Resource productivity (purchasing power standard (PPS) per kilogram)	1.6	1.5	1.4	1.5	1.5	1.6	2.3	2021
Circular material use rate (%)[2]	6.5	5.4	4.7	4.3	5.1	6.2	11.7	2021
Recycling rate (% of municipal waste)	25.2	24.8	25.2	41.0	39.7	44.1	49.6	2021
Built environment								
Recovery rate from construction and demolition waste (%)[3]	98.0	-	97.0	-	99.0	-	89.0	2020
Soil sealing index (base year = 2006)[4]	103.3	-	109.5	-	-	-	108.3	2018
Agri-food								
Food waste (kg per capita)[5]	-	-	-	-	145.0	-	131.0	2020
Composting and digestion (kg per capita)	42.0	29.0	25.0	22.0	35.0	37.0	100.0	2021

(1) Persons employed in the circular economy only tracks direct jobs in selected sub-sectors of NACE codes E, C, G and S; (2) the circular material use rate measures the share of material recovered and fed back into the economy in overall material use; (3) the recovery rate of construction and demolition waste includes waste which is prepared for reuse, recycled or subject to material recovery, including through backfilling operations; (4) soil sealing: 2016 column refers to 2015 data; (5) food waste includes primary production, processing and manufacturing, retail and distribution, restaurants and food services, and households.
Source: Eurostat, European Environment Agency

Digital transformation is key to ensuring a resilient and competitive economy. In line with the Digital Decade Policy Programme, and in particular with the targets in that Programme for digital transformation by 2030, this Annex describes Latvia's performance on digital skills, digital infrastructure/connectivity and the digitalisation of businesses and public services. Where relevant, it makes reference to progress on implementing the Recovery and Resilience Plan (RRP). Latvia allocates 21% of its total RRP budget to digital (EUR 0.4 billion) ([78]).

The Digital Decade Policy Programme sets out a pathway for Europe's successful digital transformation by 2030. The Programme provides a framework for assessing the EU's and Member States' digital transformation, notably via the Digital Economy and Society Index (DESI). It also provides a way for the EU and its Member States to work together, including via multi-country projects, to accelerate progress towards the Digital Decade digital targets and general objectives ([79]). More generally, several aspects of digital transformation are particularly relevant in the current context. In 2023, the European Year of Skills, building the appropriate skillset to make full use of the opportunities that digital transformation offers is a priority. A digitally skilled population increases the development and adoption of digital technologies and leads to productivity gains ([80]). Digital technologies, infrastructure and tools all play a role in the fundamental transformation needed to adapt the energy system to the current structural challenges ([81]).

Tackling the digital skills gap remains one of Latvia's key digital challenges. Latvia is below the EU average in basic digital skills, with almost half of its population still lacking basic digital skills. The country is above the EU average when it comes to ICT graduates and female ICT specialists but the shortage of digital skills and ICT specialists is a key obstacle to more widespread use of digital solutions by the private sector in Latvia. In 2022, 59.2% of companies in Latvia reported hard-to-fill vacancies for jobs requiring ICT skills.

Despite its excellent performance in very high capacity network coverage, Latvia needs to boost 5G deployment. Latvia performs above the EU average on very high capacity network (VHCN) coverage and has already allocated a radio spectrum for 5G, but limited commercial 5G services are available to businesses and individuals ([82]). As of mid-2022, 5G coverage has reached 42% of populated areas in Latvia, which is considerably lower than the EU average of 81%. The 3.4-3.8 GHz spectrum band, which is crucial for enabling advanced applications requiring large bandwidth, has reached 21% coverage in Latvia by mid-202. As first steps in implementing its RRF measures on broadband infrastructure development, Latvia has adopted a technical requirement for connected and automated driving and a common model for the development of last-mile connectivity. Several other activities are ongoing to support the development of industrial and innovative applications of 5G technologies.

Digitalisation of businesses remains an issue for Latvia. Latvia is well below the EU average in all categories. Around half of small and medium-sized firms have at least basic digital intensity, compared to an EU average of 69%. The take up of big data, AI and cloud services remain well below the EU average.

Latvia performs well on digital public services. Latvia scores above the EU average as far as digital public services for citizens are concerned, and close to the EU average for digital public services for businesses. Its share of e-government users exceeds moreover the EU average. The Latvian RRP includes measures that are expected to further contribute to the digitalisation of public processes and services, among others in view of the 2030 Digital Decade targets. Regarding online access to medical records Latvia scores 78 out of 100, above EU average, and continues to take measures to

([78]) The share of financial allocations that contribute to digital objectives has been calculated using Annex VII of the RRF Regulation.

([79]) The Digital Decade targets as measured by DESI indicators and complementary data sources are integrated to the extent currently available and/or considered particularly relevant in the MS-specific context.

([80]) See for example OECD (2019): OECD Economic Outlook, Digitalisation and productivity: A story of complementarities, OECD Economic Outlook, Volume 2019 Issue 1 | OECD iLibrary (oecd-ilibrary.org).

([81]) The need and possible actions for a digitalisation of the energy system are laid out in the Communication 'Digitalisation the energy system – EU action plan' (COM(2022)552.

([82]) There have been deployments since the data was collected. In 2021

Table A10.1:**Key Digital Decade targets monitored by DESI indicators**

	Latvia			EU	Digital Decade target by 2030 (EU)
	DESI 2021	DESI 2022	DESI 2023	DESI 2023	
Digital skills					
At least basic digital skills	**NA**	**51%**	**51%**	**54%**	**80%**
% individuals		2021	2021	2021	2030
ICT specialists ([1])	**3.6%**	**3.8%**	**3.8%**	**4.5%**	**20 million**
% individuals in employment aged 15-74	2020	2021	2021	2021	2030
Digital infrastructure/connectivity					
Fixed Very High Capacity Network (VHCN) coverage	**88%**	**91%**	**92%**	**73%**	**100%**
% households	2020	2021	2022	2022	2030
Fibre to the Premises (FTTP) coverage ([2])	**88%**	**89%**	**91%**	**56%**	**-**
% households	2020	2021	2022	2022	2030
Overall 5G coverage	**0%**	**0%**	**42%**	**81%**	**100%**
% populated areas	2020	2021	2022	2022	2030
5G coverage on the 3.4-3.8 GHz spectrum band	**NA**	**NA**	**21%**	**41%**	**-**
% populated areas			2022	2022	2030
Digitalisation of businesses					
SMEs with at least a basic level of digital intensity	**NA**	**NA**	**52%**	**69%**	**90%**
% SMEs			2022	2022	2030
Big data ([3])	**9%**	**9%**	**9%**	**14%**	**75%**
% enterprises	2020	2020	2020	2020	2030
Cloud ([3])	**NA**	**22%**	**22%**	**34%**	**75%**
% enterprises		2021	2021	2021	2030
Artificial Intelligence ([3])	**NA**	**4%**	**4%**	**8%**	**75%**
% enterprises		2021	2021	2021	2030
Digitalisation of public services					
Digital public services for citizens	**NA**	**87**	**87**	**77**	**100**
Score (0 to 100)		2021	2022	2022	2030
Digital public services for businesses	**NA**	**86**	**86**	**84**	**100**
Score (0 to 100)		2021	2022	2022	2030
Access to e-health records	**NA**	**NA**	**78**	**71**	**100**
Score (0 to 100)			2023	2023	2030

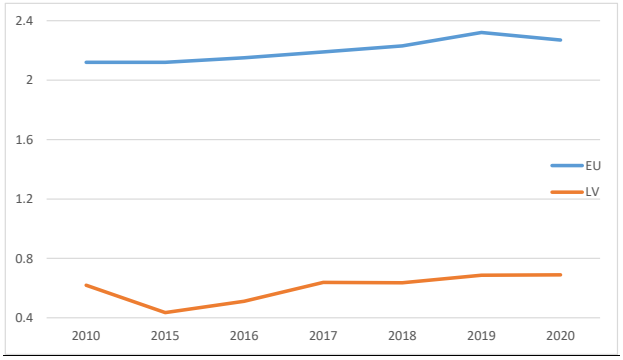
(1) The 20 million target represents about 10% of total employment.
(2) The Fibre to the Premises coverage indicator is included separately as its evaluation will also be monitored separately and taken into consideration when interpreting VHCN coverage data in the Digital Decade.
(3) At least 75 % of Union enterprises have taken up one or more of the following, in line with their business operations: (i) cloud computing services; (ii) big data; (iii) artificial intelligence.

Source: Digital Economy and Society Index

improve services in this area. When it comes to electronic identification (eID), Latvia has a scheme that is notified under the eIDAS Regulation and already available to 39% of the public. It is also involved in various cross border projects, such as the 'Nordic-Baltic eID Project' (NOBID) which aims to harmonise various eID solutions in eight Nordic and Baltic countries in order to ensure cross-border access to digital services in the region.

This Annex provides a general overview of the performance of Latvia's research and innovation system, which is essential to deliver the twin green and digital transition.

Graph A11.1: **R&D intensity as % of GDP 2010-2022**



Source: Eurostat, 2022

Latvia is an 'emerging innovation performer' and its performance dropped in 2021. According to the 2022 edition of the European Innovation Scoreboard ([83]), the country's improving trends in the previous years have reversed and Latvia is falling further behind the European average. The main reasons for the deterioration are a decline in 'firm R&D investment' and 'government support for business innovation'.

R&D intensity ([84]) grew to 0.69% ([85]) of GDP in 2021 but remains significantly below the EU average of 2.26%. Most R&D spending comes from public sources but both public and business R&D expenditure remain very low (0.46% and 0.23% of GDP compared to the EU average of 0.76% and 1.49% respectively) ([86]). Notably, with private R&D spending at less than 20% of EU average, Latvia ranks last among Member states on that measure. The Latvian recovery and resilience plan (RRP) includes almost EUR 200 million in research and innovation (R&I) investment over 2022-2025, which will support public R&D spending. Among others, the RRP investment will support public health research and the creation of innovation clusters. Over 6 years, RRP investments will add around 0.1% of GDP to Latvia's annual R&D spending ([87]). In its cohesion programme, Latvia allocated EUR 342 million to R&I for the 2021-2027 period, corresponding to a further 0.1% of GDP increase in annual R&D expenditure. Therefore, a significant commitment from the national budget is needed to achieve Latvia's target for R&D spending of 1.5% of GDP by 2027 ([88]).

The lack of human capital is holding back research and innovation performance. The number of doctoral graduates ([89]) and of science, technology, engineering and mathematics (STEM) graduates ([90]) continues to fall. This hinders efforts to address the low number of researchers in the public and private sector, which has slowly been increasing but which remain substantially below the EU average ([91]). These indicators are lagging behind the targets set out in the national development plan ([87]). The higher education reforms set out in the Latvian RRP aim to make academic careers more attractive and increase the talent pool. However, increased financing for research is crucial to boosting the number of doctoral graduates and the attractiveness of research careers.

The quality of R&I outputs remains low. Latvia performs below the EU average in the main indicators for the quality of the R&I system. Only 3.1% of publications were among the top cited publications in 2019 and only 51.3% of publications were international co-publications in 2021 ([92]). Moreover, Latvia's participation in

([83]) 2022 European Innovation Scoreboard, Country profile, Latvia: https://ec.europa.eu/assets/rtd/eis/2022/ec_rtd_eis-country-profile-lv.pdf. The EIS provides a comparative analysis of innovation performance in EU countries, including the relative strengths and weaknesses of their national innovation systems (also compared to the EU average).

([84]) Defined as gross domestic expenditure on R&D as a percentage of GDP

([85]) Source: Eurostat.

([86]) EU average of business R&D expenditure in 2021 was 1.53% of GDP (Source: Eurostat).

([87]) EUR 200 million divided by 6 divided by EUR 33 696 million, Latvia's 2021 GDP in current prices.

([88]) National Development Plan of Latvia for 2021-2027: https://www.pkc.gov.lv/sites/default/files/inline-files/NAP2027__ENG.pdf.

([89]) 120 doctoral graduates in 2020, source: OECD Economic Surveys: Latvia 2022 https://www.oecd-ilibrary.org/economics/oecd-economic-surveys-latvia-2022_c0113448-en.

([90]) 8.4 per thousand population, source Eurostat.

([91]) 0.9 and 3.5 researchers employed by business and the public sector per thousand population respectively. EU averages are 4.0 and 5.31 - source: Eurostat.

([92]) EU averages 9.8% and 55.4% respectively Source: Science-Metrix.

Table A11.1:**Key innovation indicators**

Latvia	2010	2015	2019	2020	2021	EU average (1)
Key indicators						
R&D intensity (GERD as % of GDP)	0.61	0.62	0.64	0.69	0.69	2.27
Public expenditure on R&D as % of GDP	0.38	0.47	0.47	0.47	0.46	0.76
Business enterprise expenditure on R&D (BERD) as % of GDP	0.22	0.15	0.17	0.21	0.23	1.49
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	1.65	3.70	3.08	:	:	9.79
Patent Cooperation Treaty patent applications per billion GDP (in PPS)	0.48	0.85	0.73	:	:	3.28
Academia-business cooperation						
Public-private scientific co-publications as % of total publications	5.36	6.49	7.40	7.18	8.77	7.14
Public expenditure on R&D financed by business enterprise (national) as % of GDP	0.050	0.051	0.030	:	:	0.054
Human capital and skills availability						
New graduates in science & engineering per thousand pop. aged 25-34	13.1	9.7	8.8	8.4	:	16.0
Public support for business enterprise expenditure on R&D (BERD)						
Total public sector support for BERD as % of GDP	:	0.07	0.03	:	:	0.19
R&D tax incentives: foregone revenues as % of GDP	0.000	0.002	0.000	:	:	0.10
Green innovation						
Share of environment-related patents in total patent applications filed under the Patent Cooperation Treaty (%)	0.0	6.6	26.7	:	:	13.3
Finance for innovation and economic renewal						
Venture capital (market statistics) as % of GDP	0.016	0.022	0.012	0.014	0.020	0.074
Employment in fast-growing enterprises in 50% most innovative sectors	3.25	5.22	4.62	:	:	5.50

(1) EU average for the latest available year with the highest number of country data
Source: Eurostat, OECD, DG JRC, Science Metrix (Scopus database and EPO's Patent Statistical database), Invest Europe

Horizon ([93]) calls is below the EU average ([94]). In addition to the underfunding and lack of researchers, the fragmentation of the R&I ecosystem is also a cause of the low performance ([95]). The RRP addresses this through R&I governance reform and investments.

The low level of available financing is holding back the growth of innovative small and medium-sized enterprises (SMEs). Bank loans for SMEs have tight requirements and venture capital investment (0.02% of GDP in 2021) ([96]) is increasing only slowly, limiting options for financing deep tech innovation at the scale-up stage (see also Annex 12). This has resulted in a low share of employment in high-growth enterprises (13.23%) ([97]). The commercialisation of research has also been lagging behind with just 0.7 Patent Cooperation Treaty patent applications per billion GDP ([98]). As there are no RRP measures addressing the capital market, additional measures would help to provide alternative financing tools for SMEs and revitalise Latvia's capital market.

([93]) Horizon Europe and its predecessor Horizon 2020 are the EU's main research and innovation funding programmes.

([94]) Source: Horizon dashboard https://europa.eu/!CYQhfb.

([95]) Policy Support Facility Report 2020 https://europa.eu/!mHt4Fd.

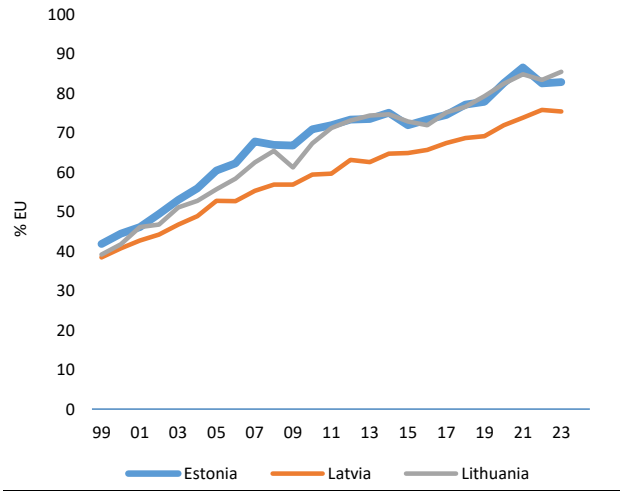
([96]) Source: Invest Europe May 2022.

([97]) SEU average 15.90% - source: Eurostat.

([98]) SEU average 3.3 – source: OECD.

Productivity growth in Latvia is increasing but a gap still remains. Over the past two decades, productivity in Latvia grew rapidly as the economy converged with its European counterparts. While the catch-up is still ongoing, Latvia's labour productivity rate has begun to slow down, maintaining a productivity gap with its Baltic peers and the rest of the EU (Graph A12.1). In 2021, Latvia's labour productivity as a percentage of the EU average stood at 73%, trailing both Estonia (84%) and Lithuania (85%). This could be partly attributable to its economic structure which is dominated by low and medium-low tech firms (see below). Modernisation of export activities and boosting R&D and innovation from their low base have been specifically highlighted as measures to close the productivity gap ([99]).

Graph A12.1: **Hourly productivity in PPS (% of EU)**



Source: Eurostat

Latvia's positive start to the first half of the year was curtailed by Russia's war of aggression against Ukraine, impacting trade links and business operations. Whilst its trade links with Russia are more than modest, Latvia is well integrated into the Single Market, with its average total of trade with other EU countries accounting for almost half Latvia's GDP in 2021. Before the invasion, Russian goods accounted for roughly 6% of total imports, with 13% of Latvian goods destined for Russia. Most exports to Russia (approximately 60%) included agricultural and food products, machinery and mechanical appliances and electrical equipment. As Russia was a large re-export market for goods, the impact on the domestic economy was most directly felt by the logistics, transport, and wholesale markets, which had initially benefited as firms began stockpiling inputs. The number of firms who reported materials shortages in industry grew by 2 percentage points in 2022, but this was still below the EU average (23% compared to 47%). However, disruptions to imports increased supply bottlenecks and pushed up prices for key inputs and raw materials, such as fertiliser for agriculture, wood, iron and steel for construction and manufacturing and gas for energy intensive industries (see Annex 7).

The secondary impacts on demand and energy prices are more pronounced. Industrial production has steadily declined since Russia's invasion of Ukraine due to soaring producer prices, which have risen exponentially since 2021. By the end of 2022, industrial producer prices were 51% percent higher on average compared to the previous year. Although inputs may be acquired from alternative sources, business reorientation, coupled with historical inflation costs, will have a significant impact on output, in particular in the construction and manufacturing sectors. While specific sectors are particularly vulnerable to supply side shocks caused by the Russian invasion, rising energy prices have affected all businesses. Despite being positive in early 2022 due to Latvia's emergence from the pandemic, business sentiment declined by 11 percentage points by the end of 2022.

Latvian businesses are suffering from systematic late payment. In 2022, it took businesses an average of 55 days to receive payment from other businesses (B2B), and 63 days from the public sector. The gap between the terms offered to businesses and the actual payment gap is one of the largest in the EU. On average, there is a gap of 16 days for B2B payments, and 14 days for payments from the public sector. In 2019, there was an average gap of only 2 days and 4 days respectively. Businesses fear that the problem of late payments will increase; 62% of Latvian respondents are more concerned than ever about debtor's abilities to pay on time (up from 57% in 2021). With one of the highest inflation rates in the euro area, late payments degrade Latvian business purchasing power, exacerbating the problem. Improved sustainability performance was the most cited

([99]) OECD Economic Surveys: Latvia 2022

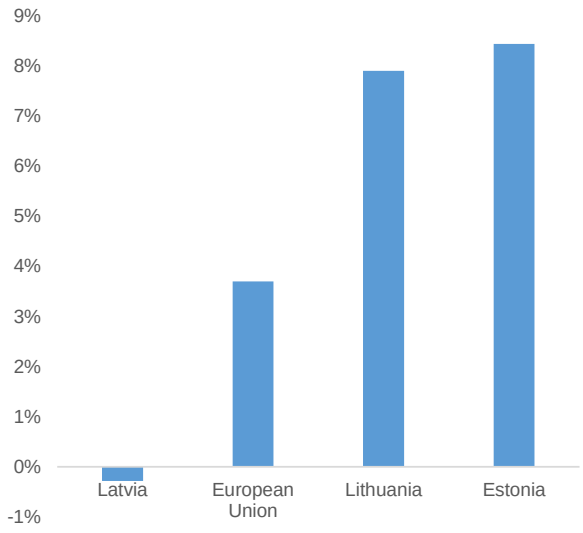
benefit from faster payments (70% of respondents) ([100]).

While improvements have been made, high barriers to finance remain a challenge for SMEs. Despite increasing its position in the EIF Access to Finance Index from 26th place in 2020 to 23rd in 2021, the perception of financing barriers among SMEs increased by 4.1%. Latvia's improved score can be attributed to an increase in the percentage of SMEs applying for loans and a more than twofold increase in the percentage of SMEs using grants or subsidised bank loans. Nevertheless, Latvia ranks third in the share of finance-constrained firms in the EU, and has the highest percentage of firms in the EU (30%) who report that they have invested too little over the past three years ([101]). Factors that explain Latvia's poor access to finance include persistently high interest rates, high collateral costs and the corporate credit gap, which has contracted by 20% over the past six years (see Annex 18) ([102]).

Skills shortages are a big constraint to long-term growth. With high job vacancy rates and unemployment above the EU average, Latvia's labour market shows signs of potential mismatches between the availability of skills and those sought by employers. In the short term, there is a shortage of high-skilled labour coupled with a demographic decrease in the number of individuals entering the labour market, declining by roughly 15,000 per annum. Firms in the industry sector report below average shortages in labour compared to other EU member states (23% vs 28%). Nevertheless, according to the 2022 EIB investment survey, 89% of Latvian firms cite the lack of availability of skilled staff as a barrier to investment. Sectors with the highest vacancy rate in 2021 include manufacturing (3.7%) and construction (3.5%) ([103]). Latvia imposes prior checks on 45 qualifications for temporary and occasional services compared to its Baltic neighbours (Estonia, 5; Lithuania, 11) ([104]) and despite making improvements, the regulatory restrictiveness for civil engineers and patent and trade mark agents remains higher than the EU average ([105]). This increases the administrative burden for professionals and reduces the flexibility of the market.

Productivity among SMEs is waning and the digital and green transitions are lagging. The bulk of the Latvian economy consists of SMEs who account for 69.7% of value added, well above the EU average (51.8%). When it comes to knowledge intensity, 67% of enterprises are involved in low-tech manufacturing and less knowledge-intensive services. SME productivity is held back by Latvia's low investment in research and development as reflected by its consistently low score in the European Innovation Scoreboard (see Annex 9). Latvian SMEs lag behind their counterparts for a basic level of digital intensity, ranking 23rd, with only 14% of SMEs selling online compared to 18% in the EU (see Annex 10). While the acceleration of the green transition has become more prominent since Russia's invasion of Ukraine, only 15% of SMEs indicate that they have a concrete strategy in place to reduce their carbon footprint and become climate neutral or negative, with 63% of SMEs offering neither green products nor services (versus a 54% EU average) ([106]).

Graph A12.2: **Average net private investment as a % of GDP, 2018-22**



Source: AMECO

Improving the business environment remains integral for boosting investment. Total

([100])Intrum Report 2022

([101])EIB Investment Survey 2022

([102])IMF 2022

([103])Central Statistic Bureau Latvia

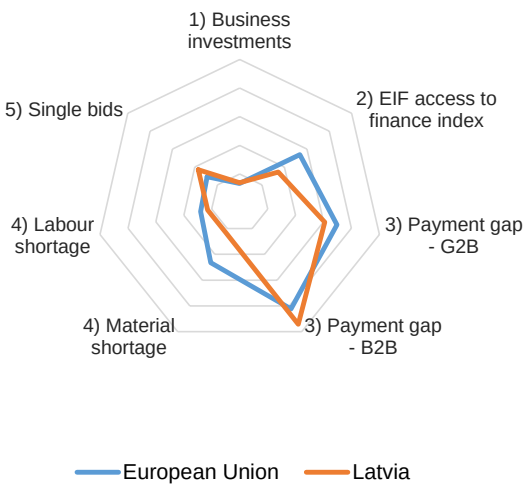
([104])SMET Report 2021 - 2022

([105])Communication on updating the reform recommendations for regulation in professional services, COM(2021)385

([106])Flash Eurobarometer 2287 / FL498 SMEs, green markets and resource efficiency

investment as a percentage of GDP has hovered above 20% since 2017, accounting for 22% in 2021 (compared to 29% in Estonia and 21% in Lithuania). Government investment has been well above the EU average, accounting for almost one-fifth of total investment in the economy. Net levels of public investment are equal to 1.3% of GDP over the past five years compared to 0.4% in the EU. On this, public procurement can be improved, as the percentage of single bids has increased significantly (from 25% in 2020 to 37% in 2022). However, levels of net private investment have consistently remained one of the lowest in the EU, amounting to -0.28% compared to an EU average of 3.7% over the past five years (Graph A12.2). Although it has been increasing, private investment is still lower than before the great financial crisis. Results from the 2022 EIB Investment Survey suggest that private investment is negatively affected by high uncertainty, business regulations, availability of skilled staff and labour market regulations. In 2022, 75% of Latvian firms perceived business regulations to be a long-term obstacle to investment, much higher than their Baltic neighbours (Estonia, 34%; Lithuania, 47%) and one of the highest percentages in the EU. The Single Market Scoreboard shows that the burden of government regulation and administrative requirements has increased by almost 30% since 2018.

Graph A12.3: **Business environment and productivity drivers**



1) % of GDP, 2021 Eurostat; **2)** composite indicator, 2021 European Investment Fund access to finance index; **3)** average payment delay in number of days, 2022 Intrum; **4)** % of firms in manufacturing facing constraints, 2022 European Commission business consumer survey; **5)** proportion of contracts awarded with a single bidder, 2022 Single Market Scoreboard

Source:

Table A12.1:**Industry and the Single Market**

	POLICY AREA	INDICATOR NAME	2018	2019	2020	2021	2022	EU27 average (*)
HEADLINE INDICATORS	Economic Structure	Net private investment, level of private capital stock, net of depreciation, % GDP [1]	-1	0.6	-0.6	-0.6	0.2	**3.7**
		Net public investment, level of public capital stock, net of depreciation, % GDP [1]	1.7	1.1	1.5	1.5	0.7	**0.4**
		Real labour productivity per person in industry (% yoy)[2]	-0.7	2.9	8.7	2.9	-1.8	**1.4**
	Cost competitive-ness	Nominal unit labour cost in industry (% yoy)[2]	9.5	4.9	-5.8	7.2	10.9	**2.9**
RESILIENCE	Shortages	Material shortage (industry), firms facing constraints, % [3]	12	7	8	16	23	**47**
		Labour shortage using survey data (industry), firms facing constraints, % [3]	20	26	12	21	23	**28**
		Vacancy rate (business economy)[4]	2.5	3.2	2	2.7	2.6	**3.1**
	Strategic dependencies	Concentration in selected raw materials, Import concentration index based on a basket of critical raw materials [5]	0.19	0.17	0.16	0.16	0.17	**0.18**
		Installed renewables electricity capacity, % of total electricity produced [6]	57	57.3	57.2	57.3	n.a.	**50.9**
SINGLE MARKET	Single Market integration	EU trade integration, % [7]	42.2	42.0	41.8	46.3	53.5	**45.8**
	Restrictions	EEA Services Trade Restrictiveness Index [8]	0.05	0.05	0.05	0.05	0.05	**0.05**
	Public procurement	Single bids, % of total contractors [9]	31	32	25	26	37	**29**
BUSINESS ENVIRONMENT - SMEs	Investment obstacles	Impact of regulation on long-term investment, % of firms reporting business regulation as major obstacle [10]	52.9	43.4	34.7	50.3	45.3	**29.6**
	Business demography	Bankruptcies, Index (2015=100)[11]	n.a.	n.a.	n.a.	30.7	37	**86.8**
		Business registrations, Index (2015=100) [11]	n.a.	n.a.	n.a.	43.9	42.2	**121.2**
	Late payments	Payment gap - corporates B2B, difference in days between offered and actual payment [12]	-2	2	16	12	16	**13**
		Payment gap - public sector, difference in days between offered and actual payment [12]	-4	4	19	11	14	**15**
		Share of SMEs experiencing late payments in past 6 months, % [13]	n.a.	56.5	36.5	36.5	38.1	**43**
	Access to finance	EIF Access to finance index - Loan, Composite: SME external financing over last 6 months, index values between 0 and 1 [14]	0.22	0.39	0.17	0.4	n.a.	**0.46**
		EIF Access to finance index - Equity, Composite: VC/GDP, IPO/GDP, SMEs using equity, index values between 0 and 1 [14]	0.14	0.16	0.14	0.14	n.a.	**0.23**

(*) Last available year

Source: (1) AMECO, (2) Eurostat, (3) ECFIN BCS, (4) Eurostat, (5) COMEXT and Commission calculations, (6) Eurostat, (7) Eurostat, (8) OECD, (9) Single Market Scoreboard, (10) EIB survey, (11) Eurostat: (12) Intrum, (13) SAFE Survey, (14) EIF SME Access to Finance Index.

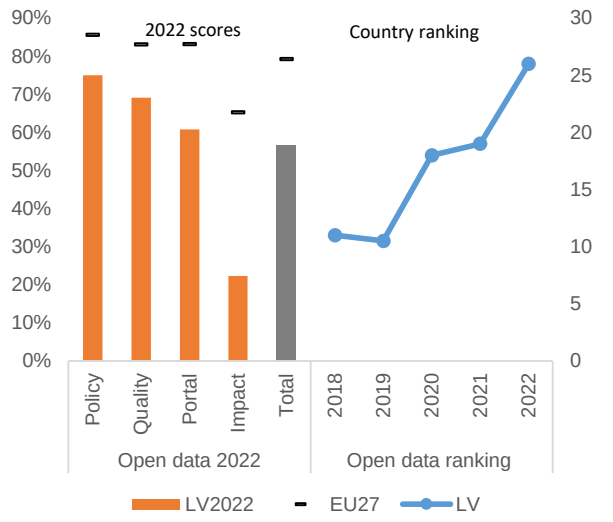
This Annex outlines the performance of Latvia's public administration, which is essential for providing services and carrying out reforms. The Latvian public administration ranks as less effective than the EU average, with a downward trend for the second year in a row, reaching its lowest level since 2013 ([107]). This could be a result of the management of the COVID-19 pandemic and the implementation of major governance reforms such as municipal amalgamation.

Latvia's civil service is relatively young and skilled. The ratio of staff who are between 25 and 49 to those aged 50 to 64 is well above the EU average and makes the administration one of the youngest in the EU. Gender parity in the public administration has nearly been reached at the general and the senior levels. The share of public administration employees with higher education is well above the EU average, as is the participation rate of employees in adult learning. Further investment in training is planned under the recovery and resilience plan to improve the capacities of the public administration.

Latvia outperforms the EU average in almost all digitalisation indicators. The overall level of digitalisation is medium-high (Latvia: 84%, EU: 71%) and digital services offered widespread (Latvia: 84%, EU: 68%). Latvia outperforms the EU average in the provision of digital services for most life events apart from a few domains such as the user-friendliness of services for 'studying' and 'health'. The share of e-government users is higher than the EU average but has remained stable since 2017 despite increasing digitalisation and an increase in the number and types of services offered digitally. This could, in part, be explained by factors such as a lower level of digital skills (Latvia: 44%, EU: 48%) ([108]), which are high on the reform agenda and well represented in the digital transformation guidelines ([109]).

The justice system is in overall functioning efficiently. The average length of proceedings generally improved in 2021, with a notable decrease at first instance in civil and commercial cases. The quality of the justice system is overall good and is being further improved. The level of digitalisation of courts and the prosecution services is high. No *systemic* deficiency has been reported on judicial independency ([110]).

Graph A13.1: **Latvia. Open government data maturity indicator: 2022 scores (% of the total maximum score) (lhs); country ranking, overall score (rhs)**



(1) Right hand side chart: low values denote a good performance

Source: Open Data Maturity | data.europa.eu

Latvia is performing well in several aspects of policymaking. It performs well on regulatory impact assessments for both primary and secondary legislation, despite a relatively weak score on methodology. It ranks above the EU average on stakeholder engagement in the development of new laws (Latvia: 2.28, EU: 2.21). However, Latvia scores poorly on *ex post* evaluation, which is due to a relatively poor performance on the methodology, oversight, and transparency dimensions (Graph A13.2). Nevertheless, Latvia's performance on the OECD regulatory governance and policy indicators improved in 2017-2021, mainly thanks to a more systematic engagement of stakeholders in the process ([111]). Further improvements are planned under the recovery and resilience plan, such as centralising the support functions in the public

([107])Worldwide Governance Indicators, 2021.

([108])E-government benchmark report, 2022.

([109])Digital Transformation Guidelines for 2021-2027 (https://www.varam.gov.lv/lv/digitalas-transformacijas-pamatnostadnes-2021-2027gadam).

([110])For more detailed analysis of the performance of the justice system in Latvia, see the 2023 EU Justice Scoreboard (forthcoming) and the country chapter for Latvia of the 2023 Rule of Law Report (forthcoming).

([111])OECD, iREG indicators, 2022.

Table A13.1: **Public administration indicators**

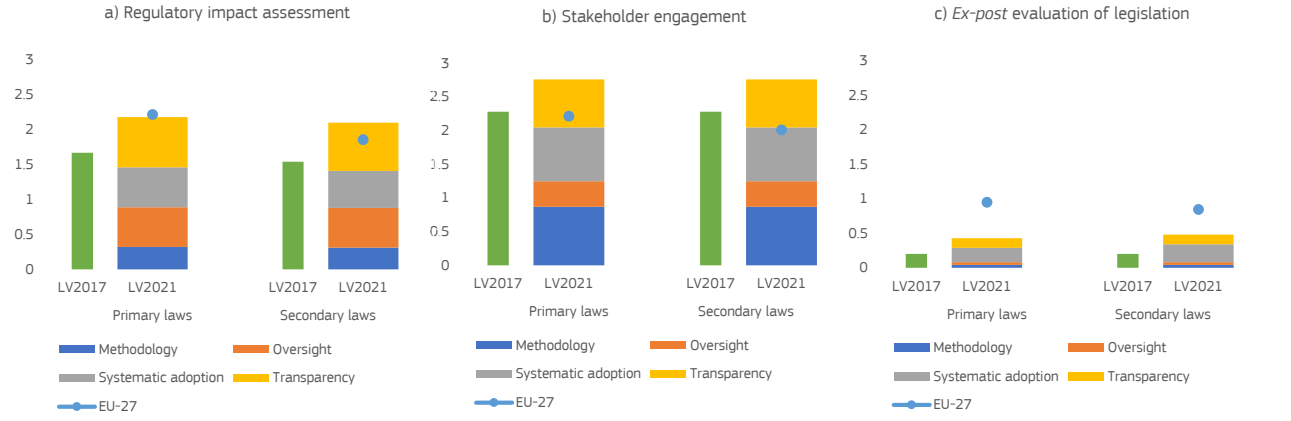
LV	Indicator ([1])	2017	2018	2019	2020	2021	2022	EU-27([2])
E-government and open government data								
1	Share of individuals who used the internet within the last year to interact with public authorities (%)	83.2	77.5	80.2	85.2	84.0	n/a	64.8
2	E-government benchmark overall score ([3])	n/a	n/a	n/a	81.7	80.2	81.7	72.9
3	Open data and portal maturity index	n/a	0.7	0.7	0.8	0.8	0.6	0.8
Educational attainment level, adult learning, gender parity and ageing								
4	Share of public administration employees with tertiary education (levels 5-8, %)	69.6	70.1	71.9	73.0	75.2 (b)	76.8	52.0
5	Participation rate of public administration employees in adult learning (%)	13.9	13.5	15.8	11.8	18.3 (b)	20.1	16.9
6	Gender parity in senior civil service positions ([4])	6.6	4.8	3.4	8.2	10.0	3.2	11.0
7	Ratio of 25-49 to 50-64 year olds in NACE sector O	2.7	2.6	2.7	2.5	2.4 (b)	2.6	1.5
Public financial management								
8	Medium term budgetary framework index	0.8	0.8	0.8	0.9	0.9	n/a	0.7
9	Strength of fiscal rules index	1.2	1.2	1.2	1.2	1.2	n/a	1.5
Evidence-based policy making								
10	Regulatory governance	1.36	n/a	n/a	n/a	1.79	n/a	1.7

([1]) High values denote a good performance, except for indicator # 6. ([2]) 2022 value. If not available, the 2021 value is shown. ([3]) 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. ([4]) Defined as the absolute value of the difference between the percentage of men and women in senior civil service positions.
Flags: (b) break in time series; (d) definition differs; (u) low reliability.
Source: ICT use survey, Eurostat (# 1); E-government benchmark report (# 2); Open data maturity report (# 3); Labour Force Survey, Eurostat (# 4, 5, 7), European Institute for Gender Equality (# 6); Fiscal Governance Database (# 8, 9); OECD Indicators of Regulatory Policy and Governance (# 10).

administration, and the public modernisation plan 2023-2027.

Latvia is relatively less advanced in the provision of open data. Over the past 3 years, Latvia's performance has fallen behind the other EU-27 countries (Graph A13.1), thus reducing the potential for publicly available information to hold institutions accountable to citizens. The gap is particularly apparent in the impact dimension, which evaluates the methods used by Member States to map datasets that are reused, and the benefits they generate for government, society, the environment, and the economy.

Graph A13.2: **Latvia. a) Regulatory impact assessment, b) Stakeholder engagement and c) Ex post evaluation of legislation**



Source: Indicators of Regulatory Policy and Governance Surveys 2017 and 2021, (http://oe.cd/ireg).

ANNEX 14: 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. This Annex provides an overview of Latvia's progress in implementing the Pillar's 20 principles and EU headline and national targets for 2030 on employment, skills and poverty reduction.

In 2022, the Latvian labour market continued its recovery despite economic activity slowing. The employment rate (20-64 age group) improved by 1.7 percentage points (pps) to 77.0% in 2022, reaching almost the same level as before the pandemic. Additionally, in 2022, Latvia had an activity rate of 82.7%, which was higher than the EU average of 79.4%. The unemployment rate decreased from 7.6% in 2021 to 6.9% in 2022. Despite the progress on key indicators, the active labour market policy (ALMP) system suffers from low activation support, and the cooperation and coordination between the main players supplying effective ALMP support remains a challenge. The European Social Fund Plus (ESF+) will invest approximately EUR 130 million in employment measures. An additional EUR 28.7 million from the Recovery and Resilience Facility (RRF) will support ALMPs, including the development of a digital skills assessment tool. The rate of young people not in employment, education or training (NEETs) remains around the EU average (11.3% in 2022). In this area, individualised support for NEETs was provided under the European Social Fund Youth Guarantee projects in the 2014-2020 programming period. The ESF+ will continue to support NEETs through mentorships, municipal services and training opportunities. Overall, Latvia is moving in the right direction towards the national target for 2030 of at least 80% of people aged 20-64 in employment.

Labour shortages and skills mismatches are on the rise again. The decline in the working-age population, caused by an ageing population, continues to be a major challenge in Latvia. This is causing labour shortages although industry and services report less shortages than before. The effect of ageing is particularly felt in the social, care, health, and agricultural sectors where wages are relatively low, which discourages new workers from entering the labour force. For instance, the average salary for social work activities in 2022 was 66% of the country's average gross earnings. Ongoing inflation and wage pressures contribute to labour shortages as they make it difficult for employers to retain employees.

Table A14.1:**Social Scoreboard for Latvia**

Poliy area	Headline indicator	
Equal opportunities and access to the labour market	Early leavers from education and training (% of population aged 18-24, 2022)	6.7
	Share of individuals who have basic or above basic overall digital skills (% of population aged 16-74, 2021)	50.8
	Youth NEET rate (% of population aged 15-29, 2022)	11.3
	Gender employment gap (percentage points, 2022)	3.1
	Income quintile ratio (S80/S20, 2021)	6.63
Dynamic labour markets and fair working conditions	Employment rate (% of population aged 20-64, 2022)	77
	Unemployment rate (% of active population aged 15-74, 2022)	6.9
	Long term unemployment (% of active population aged 15-74, 2022)	2
	GDHI per capita growth (2008=100, 2021)	131.59
Social protection and inclusion	At risk of poverty or social exclusion rate (% of total population, 2021)	26.1
	At risk of poverty or social exclusion rate for children (% of population aged 0-17, 2021)	20.1
	Impact of social transfers (other than pensions) on poverty reduction (% reduction of AROP, 2021)	23.53
	Disability employment gap (percentage points, 2021)	16.6
	Housing cost overburden (% of total population, 2021)	4.9
	Children aged less than 3 years in formal childcare (% of population under 3-years-old, 2021)	31
	Self-reported unmet need for medical care (% of population 16+, 2021)	4

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

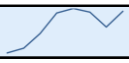
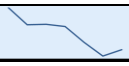
Update of 27 April 2023. Members States are classified on the Social Scoreboard according to a statistical methodology agreed with the EMCO and SPC Committees. It looks jointly at levels and changes of the indicators in comparison with the respective EU averages and classifies Member States in seven categories. For methodological details, please consult the Joint Employment Report 2023; Due to changes in the definition of the individuals' level of digital skills in 2021, exceptionally only levels are used in the assessment of this indicator. NEET: neither in employment nor in education and training; GDHI: gross disposable household income.
Source: Eurostat

The inflow of people fleeing Ukraine has had a limited impact on the Latvian labour market; it has helped meet short-term labour shortages in low-skilled employment, but the impact in the longer-term is still unclear. The unemployment rates of workers with different skill levels indicate notable disparities: low-skilled – 14%, medium-skilled – 7.6% and high-skilled – 4.3% in Q4-2022. In 2021, the share of the population with basic digital skills was 50.8% compared to the EU average of 53.9%, and the participation rate at adult learning activities reached 8.6%, still

remaining below EU average. The figures remained significantly lower for medium-skilled and unemployed people in 2021 at 10.7% and 7.1% respectively.. Adequate upskilling and reskilling measures, while including social partners and other stakeholders in designing training programmes, must be taken in the coming years to maintain a qualified labour force. The Latvian recovery and resilience plan provides for investment to support this, e.g. a pilot project on individual learning accounts and an initiative to provide basic digital skills to at least 50 000 people. These investments are expected to contribute to achieving the national target for participation in adult training of at least 60.0% per year by 2030.

Improving the adequacy of and access to social assistance and services remains a challenge. In Latvia, the share of people at risk of poverty and social exclusion (AROPE) in 2021 was among the highest (26.1% compared to 21.7% in the EU). It also recorded the highest at-risk-of-poverty rate for those aged 65 years and over in 2021 (44.6% compared to 16.8% in the EU). Pensions are among the lowest in the EU compared to work incomes. Single-parent households are particularly vulnerable to poverty, as shown by the rate rising from 30.6% in 2020 to 37.5% in 2021. In addition, single-female households are significantly more vulnerable to poverty (60.3% in 2021) than single-male households (39.9% in 2021). The AROPE rate for persons with disabilities is also one of the highest in the EU (41.2% compared to 29.7% in the EU), and the available support for persons with disabilities shows low adequacy. Income inequality is high and widening (the income quintile share ratio amounted to 6.63 in 2021 vs 4.97 in the EU). Latvia will raise the frequency of the review and indexation of key social transfers from July 2023 on. This measure aims to provide more adequate assistance in response to the quickly changing socio-economic environment. The impact of social transfers on reducing poverty is substantially below the EU average. Additionally, the social assistance system is strained. The already under-resourced sector must manage an increased number of social benefit recipients due to the current socio-economic pressures. Latvia needs a long-term strategy to tackle the social workers shortage. The ESF+ will support approximately 70 000 of the most deprived persons (including displaced people from Ukraine) through material assistance and food support, thus contributing to the 2030 national poverty reduction target.

Table A14.2:**Situation of Latvia on 2030 employment, skills and poverty reduction targets**

Indicators	Latest data	Trend (2015-2022)	National target by 2030	EU target by 2030
Employment (%)	77.0 (2022)		80.0	78
Adult learning[1] (%)	39.0 (2016)		60.0	60
Poverty reduction[2] (thousands)	-18 (2021)		-95	-15 000

(1) Adult Education Survey, adults in learning in the past 12 months (2) Number of persons at risk of poverty or social exclusion (AROPE), reference year 2019
Source: Eurostat, DG EMPL

Access to affordable housing for vulnerable people and the poor quality of the existing municipal social housing stock still poses a challenge. Latvian households have experienced a significant increase in energy costs (22.2 pps in November 2022 year-on-year) and an overall increase in the cost of living. This has put a strain on disposable income and living standards, particularly in lower-income groups (see Annex 8). Temporary support measures are providing some relief, but they do not address the underlying issues, such as insufficient support for vulnerable people to access affordable housing and poor quality of the existing municipal social housing stock. The inflow of people fleeing Ukraine has made the housing situation worse as local authorities struggle to provide adequate housing even for temporary stays. The newly drafted housing strategy does not address social housing and homelessness, and RRF investments for the low-rent housing will cover the challenge only partially.

Latvia's long-term care system remains underdeveloped, and progress in the transition from institutional to community-based care has been limited. The share of potentially dependent people of all age groups in the total population is estimated to increase from 31.7% in 2019 to 41.2% in 2030 and to 56.7% in 2050. Latvia had one of the lowest levels of public spending on long-term care in the EU at 0.4% of GDP in 2020. Despite considerable investments from the EU Cohesion policy funds, the transition from institutional to community-based care has been slower than expected, with 11 523 people still living in long-term care institutions in 2021. Significant out-of-pocket payments for healthcare

(31.9%, compared to the EU average of 14.4% in 2020) and home care have been recorded. Latvia needs to foster cooperation between the healthcare and social care sectors in long-term care policy setting and management and ensure a comprehensive approach for integrated long-term care, including the transition from institutional to community-based care.

This Annex outlines the main challenges for Latvia's education and training system in light of the EU-level targets and other contextual indicators under the European Education Area strategic framework, based on the 2022 Education and Training Monitor.

Latvia's education system produces comparatively good results in terms of basic skills and is broadly equitable. At 9.2%, the proportion of young people simultaneously lacking sufficient skills in reading, maths and science, as measured by the Programme for International Student Assessment (PISA) in 2018, is lower than the EU average (13%). Socio-economic status exerts a comparatively limited influence on educational performance: 15.2% of students from a low socio-economic background are underperforming, as opposed to 23.5% in the EU as a whole. The gap between underperforming students from a low socio-economic background and those from a high socio-economic background is also smaller than the EU average (11.3 pps vs 19.3 pps), according to PISA 2018

Regional inequalities in terms of access to quality education and a fragmented education system remain the main challenges in Latvia's education sector. Since the school network is still too big for Latvia's small population of school-age children, many schools struggle to hire teachers as they cannot offer a full-time workload. Learning outcomes in schools in small towns and in rural areas are on average lower than in Riga. In the latest round of PISA (2018), larger urban schools continued to perform much better than smaller rural ones, with a difference of 52 score points in reading, roughly equivalent to over a year of schooling.

The proportion of early leavers from education and training (ELET) is well below the EU average and shows a marked reduction in gender disparities. In 2022, the rate of 18-24-olds not having completed upper secondary education and not being anymore involved in education or training was 6.7%, below both the EU average of 9.6% and the EU-level target of 9% by 2030. Early school leaving is considerably higher in rural areas (10.1% vs EU 10%) than in cities (6.1% vs EU 8.7%), reflecting geographical disparities in learning outcomes. Men are more than twice as likely than women to be early school leavers (9.3% as compared to 4%). The resulting gender gap is considerably higher than the EU average (5.3 pps and 3.1 pps respectively).

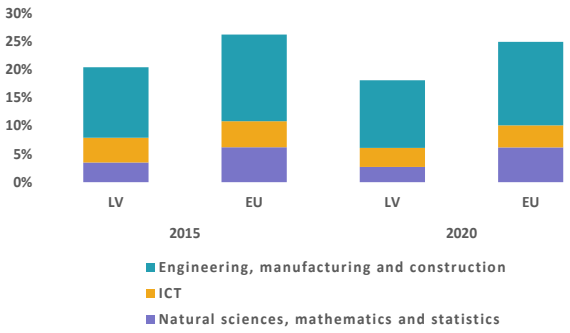
Renewing an increasingly ageing teaching workforce is proving difficult. Latvia's teachers are among the oldest in the EU. In 2020, over half (52.5%) of all schoolteachers were 50 or older, and only 21.4% were under 40, as compared with EU averages of 39.2% and 29.5% respectively. Low statutory salaries and long working hours contribute to making teaching unattractive to young graduates, particularly those with qualifications in science, technology, engineering and mathematics (STEM). Several measures aim at attracting new teachers, such as the new teacher training programme 'Teaching force' that aims to attract professionals from other fields to become teachers. Their long-term success will depend on the system's capacity to retain teachers by increasing the attractiveness of the profession.

The government continues its efforts to consolidate the school network. To encourage municipalities to cooperate, the government approved a new financing principle for schools (based on the number of students per municipality, and no longer on the number of students in each given school), combined with new minimum quality criteria for schools to continue to receive state funding. The quality criteria include school accreditation (quality assurance) results and each school's centralised testing results, calculated as an index based on the number of students in each age group in the municipality. This is expected to encourage municipalities, as founders of educational institutions, to optimise the school network and to improve teacher/student ratios.

Latvia's schools welcomed many displaced children and teachers from Ukraine. By the end of the 2021/22 school year, Latvian schools had accommodated more than 4 000 Ukrainian children, over half of them in Riga. Ukrainian teachers with appropriate qualifications were invited to apply for positions to teach Ukrainian students. Latvia's National Education Centre has set up a database of Ukrainian teachers in Latvia.

The proportion of young adults with a tertiary educational qualification is high and growing, but the share of STEM graduates remains comparatively low. In 2022, 45.9% of Latvian 25-34-year-olds had a tertiary educational qualification, well above the EU average of 42% and up from 45.4% in 2021.

Graph A15.1: **STEM tertiary graduates as a proportion of total graduates in 2015 and 2020 (%)**



Source: Eurostat

This means that Latvia has already reached the EU-level target of 45% by 2030. In a less positive development, only 19.3% of all graduates had a STEM qualification in 2020, slightly fewer than in 2015 (20.5%) and well below the EU average of 24.9%. At 6%, the share was particularly low for women (against an EU average of just over 8%). However, though the share of ICT graduates appears to be stagnating, Latvia still fares better than the EU average, with 4.6% against 3.9%. Its share of female ICT specialists stands at 23%, against 19% at EU level (see Annex 10). In 2019, women accounted for 23% of new entrants to engineering, manufacturing and construction and 90% of new entrants to the field of education, a sector traditionally dominated by women (OECD, 2021). The government has been promoting STEM subjects by gradually increasing the proportion of publicly financed study places in STEM fields and reducing it in social sciences, to steer demand towards study fields linked to high added-value economic sectors.

Latvia is reforming its higher education system to reduce fragmentation and improve quality in the framework of its national recovery and resilience plan. The new governance model for higher education institutions introduced in 2021, which includes setting up supervisory boards, is being implemented with support from EU structural funds. In addition, the Recovery and Resilience Facility will be used to develop higher education institutions' research capacity and to consolidate the higher education sector.

Table A15.1:**EU-level targets and other contextual indicators under the European Education Area strategic framework**

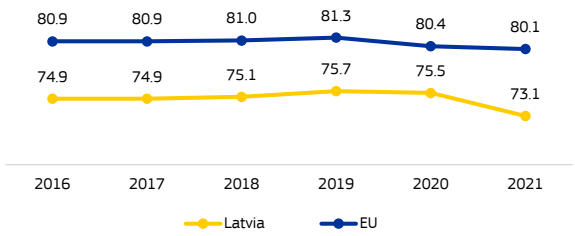
				2015		2022	
Indicator			**Target**	**Latvia**	**EU27**	**Latvia**	**EU27**
[1]Participation in early childhood education (age 3+)			**96%**	**93.0%**	**91.9%**	**94.0%** [2020]	**93.0%** [2020]
[2]Low achieving 15-year-olds in:		**Reading**	**< 15%**	**17.7%**	**20.0%**	**22.4%** [2018]	**22.5%** [2018]
		Mathematics	**< 15%**	**21.4%**	**22.3%**	**17.3%** [2018]	**22.9%** [2018]
		Science	**< 15%**	**17.2%**	**21.1%**	**18.5%** [2018]	**22.3%** [2018]
Early leavers from education and training (age 18-24)	**[3]Total**		**< 9 %**	**9.9%**	**11.0%**	**6.7%**	**9.6%**
	[3] By gender	*Men*		13.4%	12.5%	9.3%	11.1%
		Women		6.2%	9.4%	4.0% [u]	8.0%
	[4] By degree of urbanisation	*Cities*		6.9%	9.6%	: [u]	8.6%
		Rural areas		12.1%	12.2%	9.0%	10.0%
	[5] By country of birth	*Native*		10.0%	10.0%	6.8%	8.3%
		EU-born		: [u]	20.7%	: [u]	20.3%
		Non EU-born		: [u]	23.4%	: [u]	22.1%
[6]Equity indicator (percentage points)				:	:	**11.3** [2018]	**19.3** [2018]
[7]Exposure of VET graduates to work based learning	**Total**		**≥ 60% (2025)**	:	:	: [u]	**60.1%**
Tertiary educational attainment (age 25-34)	**[8]Total**		**45%**	**39.9%**	**36.5%**	**45.9%**	**42.0%**
	[8] By gender	*Men*		26.0%	31.2%	35.2%	36.5%
		Women		54.4%	41.8%	57.1%	47.6%
	[9] By degree of urbanisation	*Cities*		49.6%	46.2%	58.2%	52.2%
		Rural areas		31.9%	26.9%	33.5%	30.2%
	[10] By country of birth	*Native*		39.1%	37.7%	44.8%	43.0%
		EU-born		79.9% [u]	32.7%	: [u]	39.5%
		Non EU-born		55.8%	27.0%	74.0%	35.7%
[11]Share of school teachers (ISCED 1-3) who are 50 years or over				45.4%	38.3%	52.5% [2020]	39.2% [2020]

Source: (1,3,4,5,7,8,9,10,11) = Eurostat; 2 = OECD (PISA); 6 = European Commission (Joint Research Centre). Notes: Data is not yet available for the remaining EU-level targets under the European Education Area strategic framework, covering underachievement in digital skills and participation of adults in learning. The equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status.

A healthy population and an effective, accessible and resilient health system are prerequisites for a sustainable economy and society. This Annex provides a snapshot of population health and the health system in Latvia.

Life expectancy in Latvia remains among the lowest in the EU, having dropped by 2.4 years in 2021 compared to 2020 due to the COVID-19 pandemic. This reflects the much higher COVID-19 mortality in 2021, which increased by almost sixfold compared to 2020 ([112]). Latvia's mortality rate from treatable causes is the fourth highest in the EU. At the same time, mortality in the economically active age groups as a share of total mortality is among the highest in the EU. In 2020, diseases of the circulatory system ("cardiovascular diseases") and cancer were the leading causes of death. Cancer screening rates are low, reflected in a cancer mortality rate higher than the one across the EU.

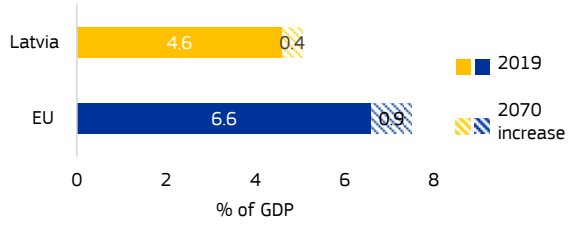
Graph A16.1: **Life expectancy at birth, years**



Source: Eurostat

Health expenditure in Latvia is among the lowest in the EU and only 63.6% of it was publicly funded in 2020. Spending per capita is below the respective EU average for outpatient care, inpatient care, pharmaceuticals and medical devices. In 2020, total healthcare spending increased to 7.5% of GDP, up from 6.6% in 2019. This is in line with the upward trend in all Member States in 2020. In Latvia, this increase is mainly attributable to higher spending per capita. However, as a share of total public spending, health spending in 2020 remained relatively stable at around 11.2%. Based on the age profile of the Latvian population, public expenditure on health is projected to increase by 0.4 percentage points (pps) of GDP by 2070 (compared to 0.9 pps for the EU overall). Currently, population ageing in Latvia does not pose significant long-term fiscal sustainability concerns.

Graph A16.2: **Projected increase in public expenditure on healthcare over 2019-2070**



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

In 2020, spending on prevention in Latvia amounted to 3.1% of total spending on healthcare, compared to 3.4% for the EU overall. Between 2019 and 2020, spending on prevention in Latvia increased by 31%, compared to a 26% increase for the EU overall. Across the EU, this increase was primarily driven by spending on disease detection, surveillance, control and response programmes as part of the public health response to COVID-19. In 2020, Latvia reported the highest proportional increase of all Member States in spending on healthy condition monitoring programmes.

Latvia faces shortages and an uneven distribution of health workers. The number of practising nurses per 1 000 inhabitants (4.2 in 2020) is one of the lowest in the EU, about half the EU average, and has even declined in recent years (down from 4.6 in 2017). Latvia's State Audit Office has estimated that the health sector requires at least 3 500 additional nurses ([113]). The shortages of health workers are more pronounced in areas outside Riga, where, for example, the density of practising doctors is much lower. Working conditions are an important issue, with low remuneration being a deterrent to entering the profession, in particular for nurses. To increase the capacity of the health workforce during the COVID-19 pandemic, overtime was allowed as an exception and bonuses were introduced for health workers dealing with COVID-19.

([112])Based on data provided directly by Member States to ECDC under the European Surveillance System (data current as of 13 April 2023).

([113])State Audit Office (2019). *Human Resources in Healthcare*. Summary available at: https://www.lrvk.gov.lv/en/audit-summaries/audit-summaries/human-resources-in-healthcare.

Table A16.1:**Key health indicators**

	2017	2018	2019	2020	2021	EU average (latest year)
Treatable mortality per 100 000 population (mortality avoidable through optimal quality healthcare)	199.0	196.4	188.6	185.5	NA	91.7 (2020)
Cancer mortality per 100 000 population	297.9	293.9	292.6	296.5	NA	242.2 (2020)
Current expenditure on health, % GDP	6.0	6.2	6.6	7.5	NA	10.9 (2020)
Public share of health expenditure, % of current health expenditure	57.3	59.9	60.1	63.6	NA	81.2 (2020)
Spending on prevention, % of current health expenditure	2.4	2.6	2.6	3.1	NA	3.4 (2020)
Acute care beds per 100 000 population	330	322	309	NA	NA	387.4 (2019)
Doctors per 1 000 population *	3.2	3.3	3.3	3.3	NA	3.9 (2020)
Nurses per 1 000 population *	4.6	4.4	4.4	4.2	NA	8.3 (2020)
Consumption of antibacterials for systemic use in the community, daily defined dose per 1 000 inhabitants per day (total consumption for CY and CZ) **	12.1	11.5	12.0	10.0	10.2	14.5 (2021)

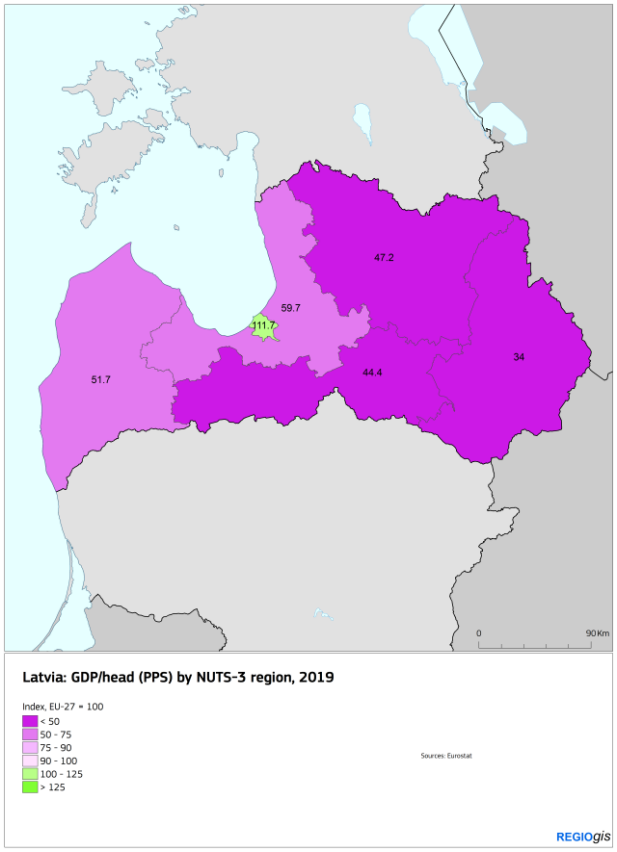
Note: The EU average is weighted for all indicators, except for (*) and (**), for which the EU simple average is used. The simple average for (*) uses data for 2020 or most recent year if former not available. Doctors' density data refer to practising doctors in all countries except EL, PT (licensed to practice) and SK (professionally active). Nurses' density data refer to practising nurses in all countries except FR, PT, SK (professionally active) and EL (nurses working in hospitals only).
Source: Eurostat; except: ** ECDC

Through its recovery and resilience plan (RRP), Latvia plans to invest EUR 181.5 million (9.9% of the RRP's total value) in healthcare. The RRP includes a set of reforms and investments that aim to strengthen the resilience and accessibility of Latvia's health system. Work is under way on a number of reform aspects, such as preparing recommendations for integration of care and for meeting epidemiological requirements, introducing guidelines for oncology treatments and for developing cancer treatment infrastructure, piloting more efficient health service models, and strengthening health workforce management and upskilling. The investments planned in the RRP concern mainly infrastructure improvements in university hospitals, regional hospitals and secondary outpatient settings, to provide integrated health services and reduce the spread of infectious diseases.

The annex showcases the economic and social regional dynamics in Latvia, providing an update of the situation of economic, social and territorial cohesion in Latvia versus EU averages and the main regional economic recovery challenges.

Latvia's regional outlook continues to be characterised by significant disparities between its capital region (Rīga) and the rest of the country. In 2019, GDP per head (PPS) of the Riga-capital area stood above the EU average at 111.7% while in the other NUTS 3 regions, GDP per head ranged between around 60% in Pierīga and 34% in Latgale in the east of the country (see Map A17.1).

Map A17.1: **GDP per head (in PPS) in Latvia, NUTS3, 2019**



GDP growth and productivity are characterised by huge regional differences. Between 2011 and 2020, GDP per head in Pierīga and Vidzeme grew annually at a rate of 3.98% and 3.45%, respectively. In Latgale, average annual growth of GDP per head in the same period was 2.27%. Productivity, measured as gross value added (pps) per worker, is lower than the EU average (100) in all Latvian regions and varies between 39 in Latgale and 77 in Riga.

Latvian regions undergo rapid depopulation, driven by emigration. In the period between

Table A17.1:**Latvia, selected indicators at regional level**

NUTS 3 Region	GDP per head (PPS)	GDP (mln of PPS)	Productivity (GVA (PPS) per person employed)	Real productivity growth	GDP growth	GDP per head growth	Population growth	Net migration	Transport performance by car
	EU27=100, 2019-2020	2019-2020	Index, EU27 = 100	Average % change of the preceding years, 2011-2020	Average % change of the preceding years, 2011-2020	Average % change of the preceding years, 2011-2020	Average annual change per 1000 residents, 2011 - 2020	Average annual change per 1000 residents, 2011 - 2020	% population within a 1h30 journey / population within 120 km radius, 2018
European Union	100.0	13394141.0	100.0	0.0	1.0	1.0	2.0	2.0	81.5
Latvija	70.0	39922.0	68.0	1.9	2.3	3.3	-9.2	-4.9	66.6
Kurzeme	52.0	3874.0	57.0	2.6	1.1	2.6	-13.9	-8.6	45.7
Latgale	34.0	2754.0	39.0	1.9	0.4	2.3	-18.8	-9.1	61.4
Rīga	112.0	21908.0	77.0	-1.1	2.6	3.2	-7.0	-3.7	80.5
Pierīga	60.0	6975.0	81.0	6.5	3.8	4.0	1.9	2.3	73.9
Vidzeme	47.0	2746.0	53.0	2.9	1.9	3.5	-14.5	-8.7	45.6
Zemgale	44.0	3198.0	56.0	2.9	1.2	2.4	-11.5	-7.0	62.5

Source: EUROSTAT, EDGAR Database

2010 and 2019, the Latvian population decreased with -8.1%. In four regions (Kurzeme, Vidzeme, Zemgale and Latgale), the population fell with >10% since 2011. The biggest loss was observed in Latgale (-16.2%). In Riga the population decreased with -4.9% whereas the population in the surrounding region, Pierīga, slightly increased with 0.5%.

Significant socio-economic differences persist between urban and rural areas. The unemployment rate, the share of young people neither in employment nor in education or training (NEET), the share of early school leavers, and risk of poverty or social exclusion were in 2021 all higher in rural areas than in more urbanised areas (cities, towns and suburbs). People living in urban areas have also a higher educational attainment.

Latvia continues to be characterised by large disparities between urban and rural areas in terms of poverty and social exclusion. In 2021, 31.6% (almost 3 percentage points up compared to 2020) of the rural population was at risk of poverty and social exclusion (AROPE), while the rate was 23.8% in towns and suburbs and 22.4% in cities.

Regional differences are equally evident in Latvia's transport systems performance. The efficiency of the road network for a return trip in a single day (reference year 2018) is high in the capital region (80.5%) and in Pierīga (73.9%) as compared to the EU average, whereas it is lower in the other regions, particularly in Kurzeme and Vidzeme.

Latvia's financial sector is small compared with the EU average, and it continues to shrink. Financial-institution assets are equivalent to 73.6% of GDP. Banks servicing non-residents have substantially downsized their operations following the introduction of stricter anti-money laundering rules. This has led them to transform their business models. As a result, their business volumes and deposits shrunk notably. The financial market in Latvia is relatively concentrated, and there is evidence of market segmentation and relatively high borrowing costs.

Latvia's banking sector is in a good position to weather the current economic slowdown. The sector's resilience is bolstered by very strong capitalisation and asset-quality metrics, with a capital adequacy ratio of 26.7% (the highest in the EU, where the average is 18.6%) and a non-performing-loan ratio of 1.6% as of Q3-2022. Profitability remains high in comparison with banking sectors elsewhere in the EU, reflected in an aggregate return-on-equity ratio of 9.1% as of Q3-2022, above the EU average of 6.1%. Favourable cost-to-income ratios relative to euro-area peers and rising interest rates will support profitability over the medium term, despite the deteriorating economic outlook. Liquidity risks are low, given a very high liquidity-coverage ratio of above 320% in Q3-2022. The leverage ratio in Q3-2022 of 9.5% was well above the 3% required by Basel III standards. Stress tests seem to suggest that Latvian banks that specialise in serving domestic customers are able to withstand shocks. The parent institutions of Latvian banks are well-capitalised and have high credit ratings and good profits. This improves the risk-absorption capacity of the Latvian banking sector. However, Latvia's banking sector is exposed to concentration and spill-over risks due to its integration with the Nordic and Baltic banking systems.

Funding risks remain low as deposits materially exceed loans. Funding of credit institutions has been significantly boosted by: (i) the deposits accrued in credit institutions during the pandemic; and (ii) the ECB's targeted longer-term refinancing operations. Thanks to the strong and stable domestic customer-deposit base (around three quarters of total funding), credit institutions do not need to draw on additional funding from financial markets. This mitigates their exposure to possible global financial stress and capital flight in times of market volatility. It also reduces their reliance on cross-border parent banking groups. At the same time, Latvian banks have reduced their reliance on short-term non-resident deposits to reduce the risk of money laundering in the Latvian banking sector. The share of non-resident deposits stood at 16.4% of total assets of in Q2-2022, down from more than 40% in 2018.

Domestic lending has slightly improved but is generally still weak. Latvia's decade-long credit-less recovery has been unusually protracted. This reflects not only low demand for credit, but also obstacles to credit supply and banks' cautious lending policies, particularly towards small and medium enterprises. As a result, non-financial corporate debt is moderate, at 46% of GDP (37% when considering consolidated data). In 2022, lending to non-financial corporations picked up significantly, which can be partly explained by credit line extension to energy companies. In particular, Latvia registered annual growth of more than 20% in bank loans collateralised by commercial real estate. While the annual growth rate of bank lending to non-financial corporations at the end of Q3-2022 was 8.7%, the year-on-year growth of lending to households remained more moderate at 3.8%. Interest rates in Latvia are still much higher than in most of the euro area, but since the end of 2020 there has been a slight downward trend. Overall household indebtedness was equivalent to 18% of GDP as of Q2-2022, one of the lowest levels in the EU.

Although asset quality has historically been a concern, it has improved in recent years thanks to proactive non-performing loans resolution and reforms to Latvia's insolvency framework. As the purchasing power of borrowers generally improved, and as credit institutions continued to gradually write off bad debts from previous periods, the share of non-performing loans in the loan portfolio fell from 4.6% at the end of March 2021 to 3.7% at the end of March 2022. At the same time, the share of loans that are more than 90 days past due has decreased to 1.6% (from 1.8% a year before). Commercial real estate accounts for more than 30% of total banking non-performing loans in Latvia, partly due to legacy loans left over from the financial crisis.

Table A18.1: **Financial soundness indicators**

	2017	2018	2019	2020	2021	2022	EU	Median
Total assets of the banking sector (% of GDP)	104.9	78.2	74.1	79.5	73.6	71.0	276.8	207.9
Share (total assets) of the five largest banks (%)	73.6	80.9	83.2	87.8	87.4	-	-	68.7
Share (total assets) of domestic credit institutions (%)[1]	48.4	32.9	33.9	34.2	15.2	15.2	-	60.2
NFC credit growth (year-on-year % change)	2.1	3.6	-0.6	-0.7	-1.1	8.7	-	9.1
HH credit growth (year-on-year % change)	0.6	0.7	0.9	0.5	6.5	3.8	-	5.4
Financial soundness indicators:[1]								
- non-performing loans (% of total loans)	5.6	5.3	3.9	4.6	2.1	1.6	1.8	1.8
- capital adequacy ratio (%)	20.6	22.3	23.4	26.8	29.7	26.7	18.6	19.8
- return on equity (%)[2]	7.6	9.2	9.6	5.2	4.5	9.1	6.1	6.6
Cost-to-income ratio (%)[1]	58.4	61.3	62.4	64.5	58.5	51.0	60.6	51.8
Loan-to-deposit ratio (%)[1]	60.6	70.7	70.7	63.5	60.6	67.9	88.6	78.0
Central bank liquidity as % of liabilities	1.0	0.2	0.1	6.2	3.0	2.3	-	2.9
Private sector debt (% of GDP)	75.7	69.8	66.2	64.7	58.0	-	-	120.7
Long-term interest rate spread versus Bund (basis points)	51.7	50.6	59.5	44.8	37.1	113.1	-	93.3
Market funding ratio (%)	13.0	13.8	15.7	16.6	21.3	-	50.8	40.0
Green bonds issued to all bonds (%)	0.2	0.2	0.2	0.2	1.3	1.8	3.9	2.3

1-3	4-10	11-17	18-24	25-27

Colours indicate performance ranking among 27 EU Member States.

(1) Last data: Q3 2022.
(2) Data is annualized.
Source: ECB, Eurostat, S&P Global Capital IQ Pro.

Geopolitical and inflationary pressures risk reducing credit volume, asset quality, and the profitability of financial institutions. The disposable income and purchasing power of households are being eroded by: (i) falling demand; (ii) high inflation; and (iii) market disruptions reinforced by Russia's war against Ukraine. These factors also reduce company profits, which in turn weakens companies' repayment capacity. Debt-service ratios will increase as a result of monetary-policy tightening. Moreover, banks anticipate that they will also tighten their credit standards, and that their lending will become more cautious. Credit risks could emerge due to the very high share of variable-interest loans to both households and non-financial corporations. A majority of new loans have variable-rate terms. To face the greater credit risk that this creates, banks need to hold sufficient capital, manage risk conservatively, and set aside sufficient provisions.

Activity in the real-estate market remains elevated and house prices have seen a prolonged uptrend. Since 2015, housing prices have increased by 72%. At the same time, the supply of new housing is insufficient and decreasing. Further increases in construction costs and disruptions to the supply of building materials will reduce housing supply even more, and will accelerate the already strong rates of house price growth. This will also hinder the completion of commercial properties and the implementation of new projects, and drive up rents in newly built commercial properties. Together with higher interest rates, this may reduce the income of commercial real-estate companies and the value of their properties, which in turn limits their ability to refinance existing debt and take out new loans. An economic downturn may put additional strain on the commercial real estate sector.

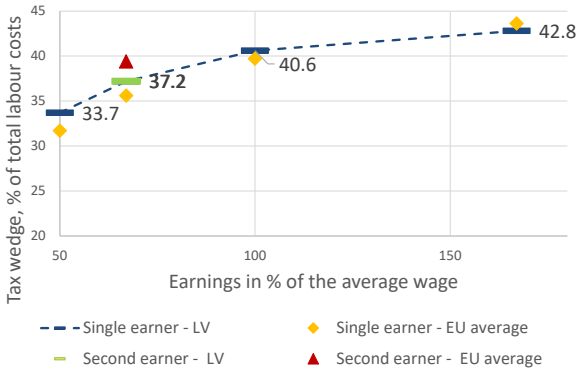
Close monitoring of these developments is warranted, so that macroprudential policy can be re-calibrated accordingly and in a timely manner. After adding to their macroprudential toolkit in mid-2020 with several borrower-based measures, Latvia's financial authorities broadened the scope of these tools to cover credit institutions of other EU countries operating in Latvia with or without local branches. Moreover, to strengthen the resilience to shocks of the so-called other systemically important institutions (O-SIIs), Latvijas Banka asked five O-SIIs to build additional capital buffers (varying between 0.25% for BluOr Bank and 2.0% for Swedbank) that would help to cover potential losses. A risk-weighting measure directly tailored to commercial real estate related vulnerabilities has been introduced via Article 124 of the Capital Requirements Regulation.

Since 1 January 2023, the Financial and Capital Market Commission (FCMC) has been integrated into Latvijas Banka. In accordance with the decision adopted by Latvia's parliament Latvijas Banka has taken over all functions related to the supervision and promotion of the development of the financial and capital market and the functions of the resolution authority.

This Annex provides an indicator-based overview of Latvia's tax system. It includes information on the tax structure (the types of tax that Latvia derives most of its revenue from), the tax burden on workers, and also provides information on tax collection and compliance.

Latvia's tax revenues are relatively low in relation to its GDP. Table A19.1 shows that Latvia's tax revenues as a percentage of GDP were considerably below the EU aggregate in 2021 (at about 30.4% of GDP as compared with 40.6% in the EU). The revenues from labour taxation are below the EU aggregate, while the revenues from consumption taxes and to a lesser extent environmental taxes exceed the EU aggregate as a share of GDP. Revenues from property taxes as a percentage of GDP were below the EU aggregate, but they were higher than in regional peers Lithuania and Estonia. The fact that revenues from capital taxes are much lower than the EU aggregate as a share of GDP suggests potential for additional tax revenue from this source.

Graph A19.1: **Tax wedge for single and second earners as a % of total labour costs, 2022**



Second earner tax wedge assumes first earner at 100% of the average wage and no children. For the methodology of the tax wedge for second earners see OECD (2016) "Taxing Wages 2014-2015"
Source: European Commission

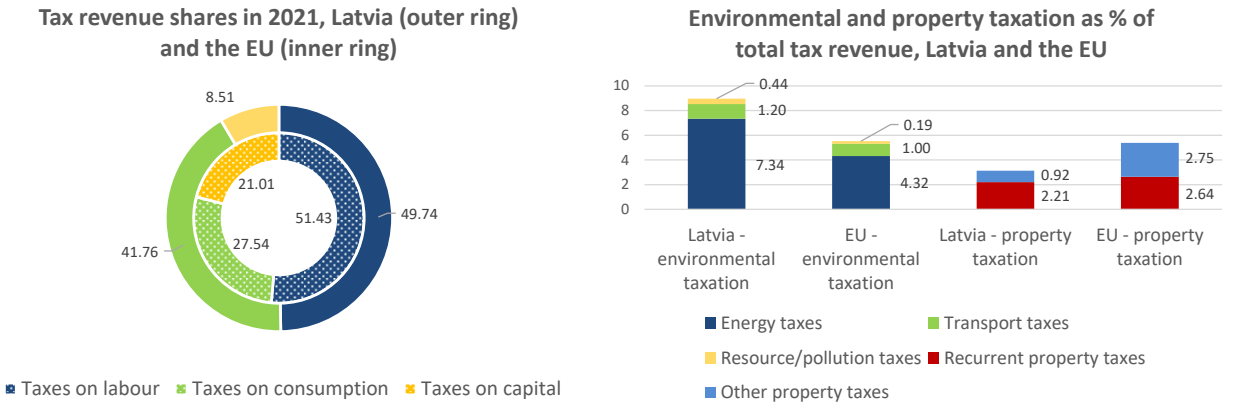
Latvia's labour tax burden is still higher than the EU average for low earners. Graph A19.1 shows that, despite recent reforms (including the lowering of the tax burden on labour and the introduction of some progressivity for personal income tax rates), the labour tax wedge for Latvia in 2022 was higher than the EU average for single people earning less than the average wage. This means that labour taxation in Latvia is less progressive than in the EU on average. The ability of the tax and benefits system to reduce income inequality is also significantly below the EU

Table A19.1:**Taxation indicators**

		Latvia					EU-27				
		2010	2019	2020	2021	2022	2010	2019	2020	2021	2022
Tax structure	Total taxes (including compulsory actual social contributions) (% of GDP)	28.3	30.6	30.8	30.4		37.9	39.9	40.0	40.6	
	Labour taxes (as % of GDP)	14.3	15.0	15.3	15.1		20.0	20.7	21.3	20.9	
	Consumption taxes (as % of GDP)	11.2	13.2	13.1	12.7		10.8	11.1	10.7	11.2	
	Capital taxes (as % of GDP)	2.8	2.4	2.4	2.6		7.1	8.1	8.0	8.5	
	Total property taxes (as % of GDP)	1.0	1.0	1.0	1.0		1.9	2.2	2.2	2.2	
	Recurrent taxes on immovable property (as % of GDP)	0.7	0.7	0.7	0.7		1.1	1.2	1.2	1.1	
	Environmental taxes as % of GDP	3.0	2.9	3.0	2.7		2.4	2.4	2.2	2.2	
Progressivity & fairness	Tax wedge at 50% of average wage (Single person) (*)	42.4	36.7	35.0	35.3	33.7	33.9	32.3	31.9	32.1	31.7
	Tax wedge at 100% of average wage (Single person) (*)	44.0	42.5	42.3	40.5	40.6	41.0	40.1	39.9	39.6	39.7
	Corporate income tax - effective average tax rates (1) (*)		17.0	17.0	17.0			19.5	19.4	19.1	
	Difference in Gini coefficient before and after taxes and cash social transfers (pensions excluded from social transfers) (2) (*)	5.8	5.5	5.4	5.5		8.6	7.7	8.1	7.8	
Tax administration & compliance	Outstanding tax arrears: total year-end tax debt (including debt considered not collectable) / total revenue (in %) (*)		8.7	9.4				31.6	40.7		
	VAT Gap (% of VAT total tax liability, VTTL)		7.2	3.6				11.0	9.1		

(1) Forward-looking effective tax rate (OECD).
(2) A higher value indicates a stronger redistributive impact of taxation.
(*) EU-27 simple average
For more data on tax revenues as well as the methodology applied, see European Commission, Directorate-General for Taxation and Customs Union, *Taxation trends in the European Union: data for the EU Member States, Iceland, Norway and United Kingdom: 2021 edition*, Publications Office of the European Union, 2021, https://data.europa.eu/doi/10.2778/843047 and the *Data on Taxation* webpage, https://ec.europa.eu/taxation_customs/taxation-1/economic-analysis-taxation/data-taxation_en.
For more details on the VAT gap, see European Commission, Directorate-General for Taxation and Customs Union, *VAT gap in the EU: report 2022*, Publications Office of the European Union, 2022, https://data.europa.eu/doi/10.2778/109823.
Source: European Commission, OECD

Graph A19.2: **Tax revenues from different tax types, % of total tax revenue**



Source: European Commission

average (Table A19.1).

The shadow economy remains extensive. Surveys of company owners and managers indicate that Latvia's shadow economy accounted for 26.6% of its GDP in 2021, somewhat higher than in Latvia's Baltic peers.([114]) The biggest component of the shadow economy is undeclared ('envelope') wages (estimated at 46.2% of Latvia's shadow economy). The construction (31.2%) and retail (29.8%) sectors had the highest estimated share of shadow activity in 2016-2021. Tax arrears increased slightly by 0.7 pps to 9.4% of total net revenue in 2020 but were still well below the EU-27 average of 40.7% (even though the EU average is distorted by very high values in some Member States). The VAT gap (the gap between revenues actually collected and the theoretical tax liability) decreased significantly by half to 3.6% in 2020, below the EU-wide gap of 9.1%. Latvia's RRP includes measures to reduce the shadow economy and improve the capacity to fight economic crime as well as measures to strengthen tax and customs administration. Further efforts are also needed to reduce the risks of corruption and conflict of interest in the Latvian State Revenue Service.

([114])Stockholm School of Economics Riga (2022): "Shadow Economy Index for the Baltic Countries", URL: https://www.sseriga.edu/shadow-economy-index-baltic-countries.

Table A20.1:**Key economic and financial indicators**

	2004-07	2008-12	2013-19	2020	2021	2022	forecast 2023	forecast 2024
Real GDP (y-o-y)	10.2	-2.7	2.9	-2.3	4.3	2.8	1.4	2.8
Potential growth (y-o-y)	7.3	-0.3	2.3	2.6	3.0	1.7	1.9	2.1
Private consumption (y-o-y)	12.5	-3.6	2.7	-4.6	8.1	8.1	3.0	2.8
Public consumption (y-o-y)	3.8	-2.7	2.7	2.4	4.4	2.8	0.9	1.3
Gross fixed capital formation (y-o-y)	21.4	-6.9	1.4	-2.6	2.9	0.7	1.7	4.0
Exports of goods and services (y-o-y)	14.5	4.5	3.8	-0.3	5.9	9.1	2.4	2.5
Imports of goods and services (y-o-y)	19.2	-2.2	3.7	-0.3	15.3	11.7	1.5	1.8
Contribution to GDP growth:								
Domestic demand (y-o-y)	14.8	-5.0	2.4	-2.8	6.2	5.4	2.4	2.8
Inventories (y-o-y)	0.3	-1.0	0.4	0.5	3.5	-0.6	-1.2	-0.1
Net exports (y-o-y)	-4.9	2.8	0.0	0.0	-5.4	-2.0	0.5	0.4
Contribution to potential GDP growth:								
Total Labour (hours) (y-o-y)	-0.3	-1.8	-0.4	-0.5	0.3	-0.2	0.1	0.1
Capital accumulation (y-o-y)	3.8	1.3	0.8	0.8	0.9	0.8	0.8	0.9
Total factor productivity (y-o-y)	3.8	0.2	2.0	2.2	1.9	1.0	1.0	1.1
Output gap	6.0	-5.2	1.3	-2.8	-1.6	-0.5	-1.0	-0.3
Unemployment rate	8.8	15.3	9.3	8.1	7.6	6.9	6.8	6.5
GDP deflator (y-o-y)	12.6	2.1	2.0	1.0	6.5	13.1	8.9	2.7
Harmonised index of consumer prices (HICP, y-o-y)	7.4	4.6	1.3	0.1	3.2	17.2	9.3	1.7
HICP excluding energy and unprocessed food (y-o-y)	6.5	3.4	1.6	1.1	2.0	11.3	11.2	3.5
Nominal compensation per employee (y-o-y)	24.4	1.5	7.5	5.0	11.1	9.0	10.8	5.3
Labour productivity (real, hours worked, y-o-y)	8.0	2.5	2.9	3.5	5.4	-2.0	0.8	0.6
Unit labour costs (ULC, whole economy, y-o-y)	15.8	0.2	5.0	4.9	3.8	9.0	9.4	4.1
Real unit labour costs (y-o-y)	2.9	-1.8	2.9	3.9	-2.6	-3.6	0.5	1.3
Real effective exchange rate (ULC, y-o-y)	11.1	-1.8	3.3	0.7	2.7	4.1	3.1	0.5
Real effective exchange rate (HICP, y-o-y)	2.9	1.9	0.6	0.4	0.2	6.4	.	.
Net savings rate of households (net saving as percentage of net disposable income)	-7.7	-2.4	-5.2	6.3	5.9	.	.	.
Private credit flow, consolidated (% of GDP)	27.7	-2.2	0.0	-1.9	0.9	.	.	.
Private sector debt, consolidated (% of GDP)	89.9	115.8	77.3	64.8	58.1	.	.	.
of which household debt, consolidated (% of GDP)	31.5	42.3	23.8	20.3	19.4	.	.	.
of which non-financial corporate debt, consolidated (% of GDP)	58.4	73.5	53.5	44.5	38.7	.	.	.
Gross non-performing debt (% of total debt instruments and total loans and advances) (1)	.	9.9	5.2	3.6	1.7	.	.	.
Corporations, net lending (+) or net borrowing (-) (% of GDP)	-9.4	5.1	3.0	2.5	-2.1	-1.9	2.0	1.4
Corporations, gross operating surplus (% of GDP)	31.0	29.4	27.1	21.7	24.2	25.5	26.3	25.3
Households, net lending (+) or net borrowing (-) (% of GDP)	-4.9	0.8	-0.5	6.1	6.3	1.4	0.3	0.6
Deflated house price index (y-o-y)	17.0	-11.3	4.7	2.7	7.2	-0.2	.	.
Residential investment (% of GDP)	4.5	2.9	2.3	2.6	2.2	1.9	.	.
Current account balance (% of GDP), balance of payments	-16.4	-2.0	-0.4	2.6	-4.2	-6.4	-3.7	-2.9
Trade balance (% of GDP), balance of payments	-17.2	-5.3	-1.5	1.0	-3.4	-5.8	.	.
Terms of trade of goods and services (y-o-y)	1.4	-0.2	0.9	2.8	1.6	-0.4	2.0	0.3
Capital account balance (% of GDP)	1.3	2.2	2.0	1.7	1.4	1.1	.	.
Net international investment position (% of GDP)	-59.7	-77.0	-54.8	-34.2	-27.5	-27.0	.	.
NENDI - NIIP excluding non-defaultable instruments (% of GDP) (2)	-30.1	-37.9	-7.8	14.1	19.0	16.3	.	.
IIP liabilities excluding non-defaultable instruments (% of GDP) (2)	93.3	132.8	122.1	108.0	97.7	90.6	.	.
Export performance vs. advanced countries (% change over 5 years)	102.7	49.7	9.9	20.4	18.5	.	.	.
Export market share, goods and services (y-o-y)	14.1	1.6	1.3	11.8	-1.8	5.0	-0.2	-1.2
Net FDI flows (% of GDP)	-5.1	-2.6	-1.8	-2.1	-2.5	-3.3	.	.
General government balance (% of GDP)	-0.7	-5.6	-0.9	-4.4	-7.1	-4.4	-3.8	-2.7
Structural budget balance (% of GDP)	.	.	-1.4	-3.4	-6.7	-4.2	-3.5	-2.6
General government gross debt (% of GDP)	11.2	38.1	38.8	42.0	43.7	40.8	39.7	40.5

(1) Domestic banking groups and stand-alone banks, EU and non-EU foreign-controlled subsidiaries and EU and non-EU foreign-controlled branches.
(2) Net international investment position (NIIP) excluding direct investment and portfolio equity shares.
Source: Eurostat and ECB as of 2 May 2023, where available; European Commission for forecast figures (Spring forecast 2023).

This Annex assesses fiscal sustainability risks for Latvia over the short, medium and long term. It follows the same multi-dimensional approach as the European Commission's 2022 Debt Sustainability Monitor, updated based on the Commission 2023 spring forecast.

1 - Short-term risks to fiscal sustainability are low overall. The Commission's early-detection indicator (S0) does not signal major short-term fiscal risks (Table A21.2). ([115]) Gross financing needs are expected to remain low at around 5% of GDP in the short term (2023-2024), considerably below the recent peak in 2021 (Table 1 of Table A21.1). Financial markets' perceptions of sovereign risk are positive, as confirmed by the ratings of the main agencies.

2 - Medium-term risks to fiscal sustainability are low overall.

The baseline DSA for Latvia shows that the government debt ratio is projected to remain at a low level over the medium term, despite an increase to around 52% of GDP in 2033, (Graph 1). ([116]) ([117]) The assumed structural primary balance (a deficit of 1.8% of GDP) contributes to these developments. It appears plausible compared with past fiscal performance, indicating that the country has ample room for corrective action. At the same time, the baseline projections up to 2033 benefit from a favourable (although declining) snowball effect, also thanks to the impact of Next Generation EU, with real GDP growth averaging 1.5% in 2025-2033. Gross financing needs are expected to rise over the projection period, to around 7% of GDP in 2033.

The baseline projections are stress tested against four alternative scenarios to assess the impact of changes in key assumptions (Graph 1). For Latvia, reverting to historical fiscal trajectories under the 'historical structural primary balance (SPB)' scenario would not alter the projected debt ratio significantly since the baseline SPB is close to the historical 15-year average deficit of 1.7% of GDP. A permanent worsening of the macro-financial conditions, as reflected under the 'adverse interest-growth rate differential' scenario (i.e. 1 pp. higher than the baseline) would result in a debt-to-GDP ratio about 4 pps. higher than the baseline projection. A temporary worsening of financial conditions, as captured by the 'financial stress' scenario, would result in a debt projection similar to the baseline. The 'lower structural primary balance (SPB)' scenario (i.e. SPB level permanently reduced by half of the cumulative forecast change), would lead to a government debt-to-GDP ratio that is about 10 pps. higher by 2033 than the baseline, breaching the 60% of GDP reference value.

Additionally, stochastic debt projections indicate low risks (Graph 2). ([118]) These stochastic simulations point to a 61% probability of the debt ratio in 2027 being greater than in 2022, entailing low risk given the initial low debt level. In addition, such shocks point to some uncertainty (i.e. the difference between the 10th and 90th debt distribution percentiles) surrounding the government debt baseline projections.

3 - Long-term risks to fiscal sustainability are low overall. ([119])

([115])The S0 is a composite indicator of short-term risk of fiscal stress. It is based on a wide range of macro-financial and fiscal variables that have proven to perform well in the past in detecting situations of upcoming fiscal stress.

([116])The assumptions underlying the Commission's 'no-fiscal policy change' baseline notably comprise: (i) a structural primary deficit, before ageing costs, of 1.8% of GDP as of 2024; (ii) inflation converging linearly towards the 10-year forward inflation-linked swap rate 10 years ahead (which refers to the 10-year inflation expectations 10 years from now); (iii) the nominal short- and long-term interest rates on new and rolled over debt converging linearly from current values to market-based forward nominal rates by T+10 (as for all Member States); (iv) real GDP growth rates from the Commission 2023 spring forecast until 2024, followed by EPC/OGWG 'T+10 methodology projections between T+3 and T+10, i.e. for 2025-2033 (on average 1.5%); (v) ageing costs in line with the 2021 Ageing Report (European Commission, Institutional Paper 148, May 2021). For information on the methodology, see the 2022 Debt Sustainability Monitor (European Commission, Institutional Paper 199, April 2023).

([117])Table 1 shows the baseline debt projections 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.

([118])These projections show the impact on debt of 2000 different shocks affecting the government's primary balance, economic growth, interest rates and exchange rates. The cone covers 80% of all simulated debt paths, therefore excluding tail events.

([119])The S2 fiscal sustainability gap indicator measures the permanent fiscal effort (SPB adjustment) in 2024 that would be required to stabilise public debt over the long term. It is

The S2 sustainability gap indicator (at 1.2 pps. of GDP) points to low risks, suggesting that Latvia would need to improve its structural primary balance only to a limited extent to ensure debt stabilisation over the long term. This results from the initial budgetary position (2 pps. of GDP), which is partly compensated for by the projected decline in ageing costs (-0.9 pp.) given the expected decline in pension expenditure (Table 2).

Given low long-term debt vulnerabilities, as highlighted by the S1 indicator, overall long-term risks are assessed as low. Indeed, the S1 sustainability gap indicator signals that a limited consolidation effort of 1.1 pps. of GDP would suffice to bring debt to 60% of GDP by 2070. This result is driven by the initial budgetary position (1.9 pps. of GDP), with the current low debt level (-0.4 pp.) and the projected decline in ageing costs (-0.4 pp.) reducing the required effort (Table 2).

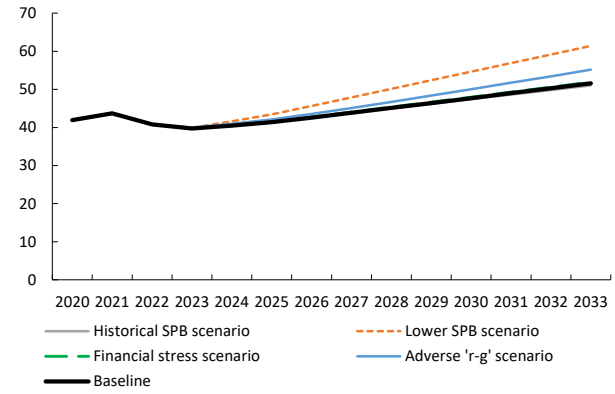
Finally, several additional risk factors need to be considered in the assessment. On the one hand, risk-increasing factors include the recent increase in interest rates, the relatively large share of public debt held by non-residents and the negative net international investment position. On the other hand, risk-mitigating factors include the fact that debt is fully denominated in euro and the low share of short-term debt in total debt. In addition, the structural reforms under the NGEU/RRF, if fully implemented, could have a further positive impact on GDP growth in the coming years, and therefore help to mitigate debt sustainability risks.

complemented by the S1 fiscal sustainability gap indicator, which measures the permanent fiscal effort required in 2024 to bring the debt-to-GDP ratio to 60% in the long term (by 2070). For both the S1 and S2 indicators, the risk assessment depends on the amount of fiscal consolidation needed: 'high risk' if the required effort exceeds 6 pps. of GDP, 'medium risk' if it lies between 2 pps. and 6 pps. of GDP, and 'low risk' if the effort is negative or below 2 pps. of GDP. The overall long-term risk classification brings together the risk categories derived from S1 and S2. S1 may notch up the risk category derived from S2 when it signals a higher risk than S2. See the 2022 Debt Sustainability Monitor for further details.

Table A21.1:**Debt sustainability analysis – Latvia**

Table 1. Baseline debt projections	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Gross debt ratio (% of GDP)	**42.0**	**43.7**	**40.8**	**39.7**	**40.5**	**41.4**	**42.6**	**43.8**	**45.1**	**46.4**	**47.7**	**49.0**	**50.3**	**51.6**
Changes in the ratio	5.4	1.8	-2.9	-1.1	0.8	0.9	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3
of which														
Primary deficit	3.7	6.7	3.9	3.2	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7
Snowball effect	1.1	-3.7	-5.6	-3.3	-1.3	-1.0	-0.7	-0.6	-0.5	-0.5	-0.5	-0.4	-0.5	-0.4
Stock-flow adjustments	0.6	-1.2	-1.2	-1.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross financing needs (% of GDP)	9.0	10.1	4.9	4.7	4.9	5.1	5.4	5.7	6.0	6.3	6.6	6.9	7.2	7.4

Graph 1. Deterministic debt projections



Graph 2. Stochastic debt projections 2023-2027

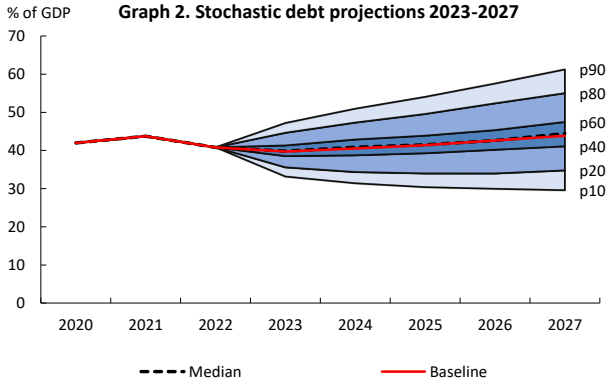


Table 2. Breakdown of the S1 and S2 sustainability gap indicators

		S1	**S2**
Overall index (pps. of GDP)		**1.1**	**1.2**
of which			
Initial budgetary position		1.9	2.0
Debt requirement		-0.4	
Ageing costs		-0.4	-0.9
of which	*Pensions*	-0.7	-1.1
	Health care	0.3	0.2
	Long-term care	0.1	0.1
	Others	-0.1	-0.1

Source: Commission services.

Table A21.2:**Heat map of fiscal sustainability risks – Latvia**

Short term	**Medium term - Debt sustainability analysis (DSA)**							**Long term**		
			Deterministic scenarios							
Overall (S0)	**Overall**		Baseline	Historical SPB	Lower SPB	Adverse 'r-g'	Financial stress	**Stochastic projections**	**S2**	**S1**	**Overall** (S1 + S2)
LOW	**LOW**	Overall	**LOW**	**LOW**	**MEDIUM**	**LOW**	**LOW**	**LOW**	**LOW**	**LOW**	**LOW**
		Debt level (2033), % GDP	51.6	51.0	61.4	55.2	51.9				
		Debt peak year	2033	2033	2033	2033	2033				
		Fiscal consolidation space	76%	75%	79%	76%	76%				
		Probability of debt ratio exceeding in 2027 its 2022 level						61%			
		Difference between 90th and 10th percentiles (pps. GDP)						31.7			

(1) *Debt level* in 2033. 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 debt ratio exceeding in 2027 its 2022 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: Commission services.

The Macroeconomic Imbalance Procedure matrix presents the main elements of the in-depth review undertaken for Latvia ([120]). Latvia was selected for an in-depth review in the 2023 Alert Mechanism Report. This in-depth review on the prevention and correction of macroeconomic imbalances presents the main findings on the gravity and evolution of the challenges identified, as well as policy responses and potential policy needs. Findings cover all areas of vulnerability assessed in the in-depth reviews.

In Latvia, vulnerabilities related to housing and external borrowing remain mild, however risks to competitiveness remain pertinent, albeit contained in the near term. House prices doubled during the past decade after having undergone a significant correction in the aftermath of the global financial crisis. However, over the past decade house price growth has remained broadly in line with income growth. Moreover, weak mortgage credit growh suggests that the effective demand impulse from credit has been negative over the past 10 to 15 years. Latvia's current account deficit considerably widened over the past two years. In 2021, it was largely explained by elevated government borrowing, however in 2022 rising energy prices negatively affected the balances of both households and the govrnement. Latvia's net international investment position at -27% of GDP is relatively benign. However, excluding non-defaultable instruments from the balance, renders it positive. The gap between Latvia's real wage growth and productivity growth has consistently expanded over the past decade, resulting in notable increase in the labour share of income, raising concerns about its cost competitiveness. The recent energy price shock hit Latvia particularly hard, leading to a significant divergence in inflation with the euro area countries, adding further concerns about its price competitiveness.

House price growth and inflation are expected to slow and external balances to stabilise while the fundamental drivers of wage divergence from productivity are expected to persist. Rising interest rates and falling real disposable income are expetcted to dampen demand for housing over the near term and would hence slow the growth of house prices. The current account deficit is expected to remain elevated in 2023 and 2024, however, given the lack of momentum in private lending, government deficit is likely to be the main contributor to the current account deficit over the foreseeable future and hence a reduction in the budget deficit should also return the current account close to balance. Finally, inflation is expected to subside this year and, especially in 2024, while real wage growth is likely to resume growth at a brisk pace over the medium term as the falling labour supply, which is largely driving the productivity divergence, is expected to persist.

Policies that help increase the quality and quantity of labour supply are essential to mitigate the impact of the ageing society. With demand impulse from credit being negative, Latvia's challenges are on the supply side of the economy with the falling labour supply being the key issue. Investments in skills and health offer one avenue to boost quality and quantity of labour supply in the context of a significant cohort of population having inadequate skills and society's overall weak health outcomes. Moreover, facilitating internal labour mobility should help better match skills supply with demand. Reducing the red tape in construction as well as supporting lending to SMEs in regions outside of Riga should facilitate housing supply. Finally, it is important that any future energy price support measures maintain the price signal in order to mitigate the widening of the current account.

Based on this assessment, the Commission considered in its communication European Semester – 2023 Spring Package (COM(2023) 600 final) that Latvia does not experience imbalances.

([120]) European Commission (2023), In-Depth Review for Latvia, Commission staff working document (COM(2023) 636 final), in accordance with Article 5 of Regulation (EU) No 1176/2011 on the prevention and correction of macroeconomic imbalances.

Table A22.1:**Assessment of macroeconomic imbalances matrix**

	Gravity of the challenge	Evolution and prospects	Policy response
	Unsustainable trends, vulnerabilities and associated risks		
External position	While Latvia's current account broadly remained in balance since the global financial crisis, it declined significantly over the past two years, reaching a deficit of 6.1% of GDP in 2022. The deterioration in non-energy goods balance as well as services balance and primary income were the main contributors to the increase in deficit in 2021.The worsening in 2022 was mainly driven by the deterioration of the energy balance. From the sectoral net borrowing perspective, it was mostly driven by government borrowing, albeit, households' net lending position also decreased. However, Latvia's net international investment position (NIIP) has significantly improved over the past decade, from -83% of GDP in 2010 to [-27%] of GDP in 2022 and it is positive if non-defaultable instruments are excluded.	The current account balance is expected to improve to 3.4% of GDP in 2023, and to 2.7% in 2024. Over the medium term, the current account is expected to normalise provided the public deficit returns to the pre-pandemic levels. Given the decade-long trend of weak bank lending, both households and corporations are expected to continue deleveraging or to grow their liabilities no faster than the pace of GDP growth. Public deficits, EU fund inflows and FDI flows are expected to be the main determinants of the current account balance.	Fiscal policy bore the most signficiant contribution to the current account deficit recently and hence an improvement of the current account is tied to reduction in fiscal deficits. Budgetary support to the private sector to compensate for energy price increases links the energy prices to the current account. The design of the support system for the 2022/2023 heating season made sure to maintain the price signals to motivate the households to reduce energy consumption and hence mitigate current account widening.
House prices	Since 2012 house prices have grown by 103% while income has grown by 94%. This has led the price to income ratio to increase by 4.5% over the same period. However, in historical perspective, the price to income ratio has remained broadly unchanged – below the average of the early 2000s and some 36% below its peak reached in 2007. The Commission estimates Latvian house prices to have been overvalued by 18.7% in 2022 mostly due to a large increase in the price-to-rent ratio, while the price-to-income ratio and model-based assessments show only mild overvaluation. Mortgage lending in Latvia has been weak since the global financial crisis. As a result, household debt declined from 50% of GDP in 2009 to below 20% of GDP in 2021. The substantial household deleveraging suggests that the demand impulse from credit was negative.	House price growth accelerated in Q4 2021, peaking at 17.4% y-o-y in Q2 2022. It has moderated since then, with the most recent reading showing 11.1% y-o-y growth in Q4 2022. Monthly bank lending data for November 2022 show lending growth slowed from around 7% during the first half of the year to 4.7% in November. Demand for housing and hence house price growth is expected to trend downwards in the near term, as interest rates continue rising and real income growth remains subdued.	Latvia could do more to improve the functioning of the housing market on the supply side. Moreover, Latvia would benefit from the shortening of the construction permitting process, which is considerably longer than in neighbouring Estonia and Lithuania. Additionally, it is advisable to monitor the impact on the rental market of the new rental law of 2021, which aims to facilitate investments in rental properties. Finally, the housing supply would likely benefit from better access to skilled labour.
Cost competitiveness	Latvia's 3-year unit labour cost growth reached 13.7% in 2022. Since 2014, real wage growth has exceeded productivity growth by some 15 pps., raising concerns about cost competitveness. Moreover, the recent energy price surge has added to cost competitiveness pressures as it has hit Latvia harder than other euro area economies. Energy price inflation in Latvia peaked at 70% (vs. 40% in euro area) and HICP inflation peaked at 22% (vs. 11.5% in euro area), with domestic factors playing a singificant role . At the same time, Latvia's export market shares have continued growing at a brisk pace since 2014. In 2022, exporters benefitted from nearly unchanged terms of trade, despite the significant increase in imported prices.	The wage-productivity gap is set to narrow in 2023 as pressure in the labour market abates with slowing economic growth. However, the underlying problem stemming from population ageing is set to shape the labour market over the medium and long term, and hence wage pressures are set to return. Inflation is forecast to slow to 9.3% in 2023 and to 1.7% in 2024. Compared with EU and euro area averages, inflation is still projected to remain higher in Latvia in 2023 and only somewhat lower in 2024 pointing to continued inflation differentials.	Measures to invest in skills and health of its working population, as well as to facilitate internal mobility to better match skills with jobs could help address labour shortages and thus mitigate the impact of population ageing, which is the structural driver of cost competitiveness concerns.

Source: European Commission