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**2019 European Semester: Assessment of progress on structural reforms, prevention and
correction of macroeconomic imbalances, and results of in-depth reviews under
Regulation (EU) No 1176/2011**

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EXECUTIVE SUMMARY

The Lithuanian economy continues to catch up with the rest of the European Union rapidly but needs to adjust to the challenge of a shrinking population. Thanks to a business-friendly environment, a resilient financial system and stable government finances, the country has rebounded swiftly since the economic crisis and enjoyed relatively high growth in recent years. However, the fruits of its rapid economic development have not been equally shared among its social groups and regions. The declining population, including the labour force, is putting pressure on the labour market and social security systems. Persistent weaknesses in the education and health sectors are limiting potential growth. Stronger investment in human capital, innovation, resource efficiency and transport are key to raising productivity and long-term growth potential ⁽¹⁾.

Domestic factors are driving growth. Growth reached 3.6 % in 2018. It was underpinned by robust consumer spending as wages rose and inflation slowed. Investment also grew steadily following a strong rebound in 2017. However, imports exceeded exports as the latter slowed down due to weakening foreign demand. Consumer spending and investment are expected to remain the main drivers of growth in the coming period. In addition to continued rises in wages, disposable income should get a boost from the income tax and social security reforms that will be implemented in 2019. At the same time, investment growth is expected to remain strong, boosted by Lithuania's faster absorption of EU funds.

The strong economic performance is helping public finances. Rapid wage growth and, consequently, strong consumer spending boosted tax revenue over the last 3 years. Together with cautious government spending, this has enabled Lithuania to keep its budget in surplus.

Nonetheless, the surplus is expected to shrink in the coming years due to legislated cuts in income taxes. Public debt remains below 40 % of GDP. However, despite pension reforms adopted in recent years, long-term risks to fiscal sustainability are still present due to negative demographic trends and inconsistencies in the system's design that could undermine pension adequacy over time.

The shrinking population, notably of people of working age, remains a major bottleneck to growth. Lithuania's population has fallen by nearly 25 % since the early 1990s. The main reasons are high emigration and adverse demographic trends. Net emigration continues even though its pace has slowed recently. The shrinking working-age population is one of the reasons for the increasing shortages of skilled labour and is also pushing up wages. Employment stands at over 77 %, above the EU average, while unemployment fell to 6.3 %. Youth unemployment and long-term unemployment are below the EU average. However, the rates of people with disabilities and low-skilled people in work are worse than the EU average.

The labour cost growth is among the fastest in the EU. After a sharp contraction during the financial crisis, wages started to recover rapidly, albeit from a low level. Wage growth was driven by the growing shortage of workers and a range of labour market policies, including consecutive minimum wage increases. By contrast, productivity growth was sluggish between 2012 and 2016, which led to increasing unit labour costs. The higher costs have not had a significant impact on Lithuania's export performance so far as companies have absorbed them in their profit margins. However, a continued fast increase in labour costs could weaken Lithuania's competitiveness in the longer run. The strong rebound in productivity growth seen in 2017, which was helped by the pick-up in investment, therefore needs to be maintained.

Focusing investments on human capital, innovation, using resources more efficiently and improving transport connections would boost productivity and growth potential. Skills shortages are hindering private investment, especially with the labour force shrinking, and together with poor health status of the population are limiting productivity gains. Increasing social

⁽¹⁾ This report assesses Lithuania's economy in light of the European Commission's Annual Growth Survey published on 21 November 2018. In the survey, the Commission calls on EU Member States to implement reforms to make the European economy more productive, resilient and inclusive. In so doing, Member States should focus their efforts on the three elements of the virtuous triangle of economic policy — delivering high-quality investment, focusing reforms efforts on productivity growth, inclusiveness and institutional quality and ensuring macroeconomic stability and sound public finance.

inclusion could help reduce high levels of income inequality and poverty, and uneven access to employment. Strengthening innovation in the private sector and increasing its capacity to absorb technology could support the shift toward activities that are more knowledge-based and add higher value to the economy. Using resources more efficiently would reduce the costs for businesses and households. Better transport connections would allow Lithuanian companies to export more. Focusing on efficiency of investment would help Lithuania reach its strategic goals. Annex D identifies key priorities for support by the European Regional Development Fund, the European Social Fund Plus and the Cohesion Fund over 2021-2027 in Lithuania, building on the analysis of investment needs and challenges outlined in this report.

Lithuania has made limited ⁽²⁾ progress in addressing the 2018 country-specific recommendations.

There has been some progress in the following areas:

- Tax authorities continue to promote voluntary tax paying culture and the use of smart tax administration system. These measures are starting to give positive results although the overall tax compliance remains low.
- The introduction of the pension indexation from 2018 aims to increase the fiscal sustainability of the pension system, but might decrease the adequacy of pensions in the long run. Additional reforms passed in summer 2018 aim to strengthen the second pension pillar but their effect will largely depend on the willingness of people to participate in it.

There has been limited progress in the following areas:

- The outcomes and efficiency of the general education system, as well as adult learning, remain relatively low. The implementation of

reforms in the education sector, including the merger of universities, is slow.

- The legal frameworks for further consolidation of hospitals and strengthening disease prevention at the local level have yet to be adopted. Measures taken to improve the quality of health care were partial, targeting only primary care entities. Despite some measures taken to reduce the price of pharmaceuticals, out-of-pocket payments remain high, especially for the most vulnerable groups.
- The design of the tax and benefit system has slightly improved, but its impact on income inequality and poverty reduction remains limited. The guaranteed minimum income was increased (and started to be indexed) and so was the universal child benefit. Recent tax reform introduced some progressivity in the personal income taxation, but the effects on reducing income inequality are expected to be small. Public spending on social protection remains low.
- Some interim measures were taken to improve the efficiency of public investment, but integration of the investment and strategic planning is not foreseen before the 2021-2023 budget.
- Despite some slight improvements in the coordination of the research and innovation policy, the new coherent policy still needs to be developed. Some measures were introduced to increase the cooperation between science and industry, which, however, remains limited.

There has been no progress in the following areas:

- The tax base was not broadened to sources less detrimental to growth. Environmental and property taxes remain low.

Regarding progress towards its national targets under the Europe 2020 strategy, Lithuania has achieved its overall renewable energy target as well as the targets regarding the employment rate of the working-age population, greenhouse gas emissions, the share of early school leavers and the share of the population that has attained tertiary education. However, more effort is needed to reach

⁽²⁾ Information on the level of progress and actions taken to address the policy advice in each respective subpart of a country-specific recommendation is presented in the overview table in the Annex.

the energy efficiency target, increase the share of renewable energy in the transport sector, reduce the number of people at risk of poverty or social exclusion, and increase expenditure on research and development, particularly in the private sector.

Lithuania's performance on the indicators of the Social Scoreboard supporting the European Pillar of Social Rights is mixed. The improved conditions on the labour market are well reflected in the indicators of the Social Scoreboard supporting the European Pillar of Social Rights: the employment rate is high for both men and women, unemployment is decreasing and there are fewer young people not in employment, education or training. However, income inequality and poverty remain high, even though the impact of social transfers on reducing poverty has slightly improved.

Key structural issues analysed in this report, which point to particular challenges for Lithuania's economy, are the following.

- The tax and benefits system is having little impact on reducing income inequality.** Despite recent changes to personal income tax, the tax system is still not very progressive. Combined with low expenditure on social policies, this makes the power of the tax and benefits system to reduce income inequalities among the least developed in the EU. There was no progress in broadening of the tax base to sources less detrimental to economic growth, like environmental taxes, including car taxes, and property taxes.
- Levels of poverty and inequality remain among the highest in the EU.** Poverty and income inequality remain major challenges despite Lithuania's fast economic growth. Income inequality is largely driven by comparatively strong growth in the income of top earners. Social dialogue between employers and trade unions in the private sector is limited, which weakens the position of low wage earners. Poverty affects mostly older people, people with disabilities and single-parent households. The risk of poverty or social exclusion in rural areas is nearly double that of urban areas.
- Recent pension reforms have made the system more financially sustainable but the adequacy of pensions remains a concern.** The introduction of the pension indexation formula in 2018 linked pension rises to increases in the wage bill. This will balance the pension contributions received and spending on public pensions, thereby making the system more financially sustainable. However, since the overall wage bill is expected to increase more slowly than individual wages due to the shrinking workforce, pensions might not keep pace with wage growth over time. As a result, the adequacy of pension benefits, which is already among the lowest in the EU, is expected to drop further in the medium term.
- The shrinking labour force and the lack of necessary skills are limiting Lithuania's growth potential.** With the growing shortage of workers, the employment rate and the proportion of working-age people in employment are reaching record highs. However, relatively high unemployment among vulnerable groups suggests weaknesses in government measures to improve the level of skills and to help the jobless find work. Many low-skilled or people with disabilities are not in work or training. Participation in adult learning is stagnant at well below the EU average. The labour force's low level of digital skills is limiting the use of digital technologies by businesses and the potential for innovation.
- Ensuring efficiency and quality in the education and training system represents a major challenge.** Student numbers continue to decline across all education levels but the education system is not adjusting at the same pace. Urban-rural disparities in access to quality education and in student performance are large. This calls for organising the school and university networks more efficiently, to improve their quality and make them more inclusive of disadvantaged groups. New measures have been adopted to upgrade the vocational education and training system but concerns about their implementation remain. Policies to increase participation in adult learning are being implemented but their effect is limited.

- **The poor quality of research and limited business-science cooperation are hindering productivity growth.** The research and innovation system is fragmented and private R&D investment is among the lowest in the EU. This is yielding innovation results that are mediocre overall and is limiting the growth potential of the Lithuanian economy. Progress with the reform of innovation policy has been slow. The higher education reform envisages consolidating universities' fragmented research capacities, but these measures have yet to be implemented. Developing coherent policy measures to support science-business cooperation and introduce a simplified and consolidated research and innovation support system remains a challenge.
- **The health status of the population remains poor.** Life expectancy is among the lowest in the EU and mortality rates are above the EU average. Progress with the reforms in the health sector is slow. Spending in healthcare is too low to address the multiple challenges the sector faces. The proposals to further shift from hospital-based care towards a model based on stronger primary care remain at a draft stage. Public health policies do not sufficiently involve local offices in dealing with risk factors related to lifestyle. The overall quality of health services remains a concern and measures to improve the quality of health care remain scarce. High out-of-pocket payments (on-the-spot payments to healthcare providers) and wide regional disparities hurt the most vulnerable groups.
- **The benefits of Lithuania's speedy economic convergence are heavily concentrated in the two metropolitan areas.** Regional disparities in Lithuania are larger than the EU average and have been widening over the past two decades. Predominantly rural regions, which cover most of the territory and host nearly 55 % of the population, are experiencing strong population declines compounded by decreasing access to quality public services. Significant socio-economic disparities within the country show that certain regions have distinct investment needs. Increasing links between adjacent territories within Lithuania, including transport

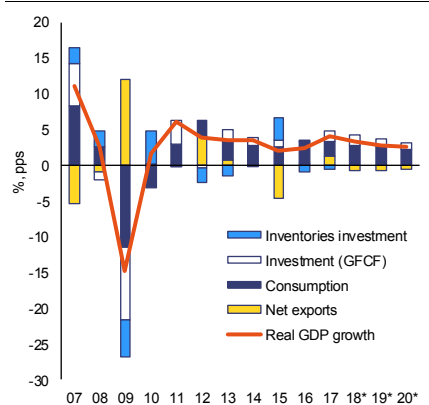
and digital connections, also remains a challenge.

1. ECONOMIC SITUATION AND OUTLOOK

GDP growth

The economy is maintaining a robust growth momentum. Real GDP growth is expected to have reached 3.6 % in 2018 after peaking at 4.1 % in 2017. Private consumption remained the main engine of growth, supported by rising wages and easing inflation, while for the second year in a row investments were spurred by high capacity utilisation in the context of increasing labour shortages. After an impressive export performance in 2017 (when export growth reached 13.6 % and was the highest in the EU), exports slowed down due to weakening external demand and the strong base effect. Consequently, the contribution of net exports to growth turned slightly negative. According to the Commission's Winter Forecast, growth in Lithuania is expected to slow to 2.7 % in 2019 and 2.4 % in 2020. The main reason is expected to be the less dynamic external environment, which will further limit export growth. At the same time, domestic factors — consumption and investment — are expected to remain the main drivers of growth (see Graph 1.1).

Graph 1.1: Breakdown of GDP growth



* Forecast

Source: European Commission

Consumption

Strong wage growth continues to support consumption. Private consumption benefited from a boost in disposable income sustained by falling unemployment, continuous real wage increases

and favourable credit conditions. It is estimated to have grown by 4.2 % in 2018, up from 3.3 % in 2017. In the coming period, disposable income should get an additional boost from income tax and social security reforms adopted in summer 2018.

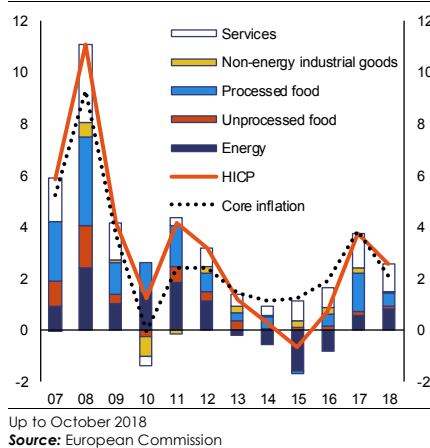
Investment

Investment has started to recover. The share of investment in GDP dropped sharply after the crisis and has since remained below the EU average. However, after being almost flat in 2016, investment growth accelerated to an average of 7 % in 2017-2018. The major contribution came from private investment, while public investment, heavily reliant on EU funds, remained subdued despite a recent pick-up in their usage. In recent years, the structure of investment has become more favourable to growth, geared towards machinery and intellectual property and away from housing. Investment growth is expected to remain buoyant, boosted by continued favourable financing conditions, the need for modernisation and automation, and improved use of EU funds.

Inflation

Inflation slowed down markedly as the effects of 2017 increases in excise duties disappeared. After reaching 3.7 % in 2017, HICP inflation dropped to 2.5 % in 2018. Prices are, however, being permanently driven upwards by rising prices of services, mainly due to the rising wages. In 2018, these pressures were reinforced by rising oil and gas prices, while the contribution of changes in excise duties, albeit much smaller than in 2017, was still positive (see Graph 1.2). Strong wage growth is expected to continue to support disposable income and service price increases in the future, but overall inflation is expected to moderate further in the coming period as the effects of higher oil prices fade away.

Graph 1.2: Contribution to HICP inflation change



Demographic developments

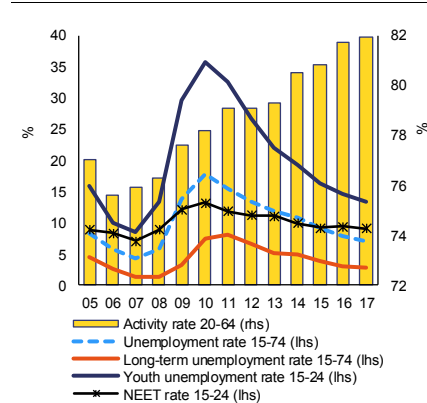
Demographic developments pose a challenge for future economic growth. Lithuania's demography is adversely affected by ageing and an overall population decline. The main drivers of the latter are the negative natural population growth rate and persistent net emigration. Over 2006-2018 Lithuania experienced one of the largest relative depopulations in the EU (from 3.3 million in 2006 to 2.8 million in 2018). To address the challenge of emigration, the government adopted in 2018 a 2018-2030 strategy on demography, migration and integration. The aim of the strategy is to ensure population growth and improve its age structure. The strategy focuses on family support policy, management of migration flows and comprehensive ageing policy.

Labour market

The labour market continued to perform well, but strong regional differences persist. Since 2010, employment and unemployment indicators have continuously been improving (see Graph 1.3). Employment reached a record high of 77.5 % in the third quarter of 2018 while unemployment was 6.3 % in the fourth quarter, a rate last observed in 2008. Nevertheless, this has to be seen in the context of a shrinking working age population. The activity rate reached 82 % in 2017. Vilnius and Kaunas counties offer better labour market

opportunities than other counties, and this drives the internal interregional migration. However, in other regions employment opportunities remain scarce. Unemployment rates remained persistently high in the least developed regions (14.9 % in Utena County as compared to 4.8 % in Vilnius County). Other key labour market indicators have improved, returning to pre-crisis levels. Long-term unemployment fell to 2.1 % in the third quarter of 2018 (EU average: 2.9 %). Youth unemployment (13.3 %) and the rate of young people not in employment, education or training (NEET, at 9.1 %) were below the EU average in 2017.

Graph 1.3: Key labour market indicators



Cost-competitiveness

Wage growth remains among the highest in the EU. The average monthly gross wage in the third quarter of 2018 was up by 10 % from the same period in 2017, representing the fastest growth rate of the last 9 years. Rapid wage growth reflects the tightening labour market with increasing labour shortages, especially in the country's largest cities, as well as successive minimum wage increases since 2015. In addition, over the course of 2018, the government decided to raise wages for workers in healthcare and higher education.

The dynamism of wages has led to strong unit labour cost increases. Over 2012-2016 productivity growth was heavily outpaced by wage growth. This led to rapidly increasing unit labour costs, whose three-year cumulative increase

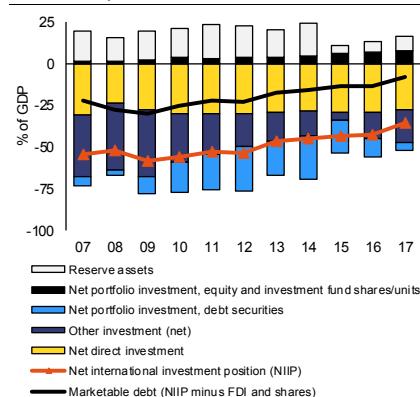
reached 16 % in 2017, the highest in the EU. However, the impact of rising labour cost on external cost-competitiveness and the export performance has been limited so far, cushioned in part by reduced profit margins. This, however, may not be sustainable in the longer term. While productivity growth picked up strongly in 2017, maintaining cost competitiveness would require that wage growth is matched by productivity growth in the longer run.

External position

The current account has been broadly balanced in recent years, reaching a small surplus in 2017. This was driven by an exceptional performance in exports which benefited from improved external demand and increased capacity, especially in the manufacturing and transportation sector, due to higher investment. In the coming period, robust private consumption and investment demand for capital goods are expected to result in a deficit in the goods trade balance. This should be partially offset by the strong performance of trade in services, especially in the transport sector and travel, together with the positive secondary income balance.

Lithuania's external position improved over the decade. The net international investment position (NIIP) improved from almost -60 % of GDP in 2009 to -36 % of GDP in 2017. This was mainly linked to the decreased dependency of the financial sector, mainly commercial banks, on parent banks abroad. The NIIP is currently mainly made up of foreign direct investment and long-term government debt (see Graph 1.4). This implies a relatively low risk from Lithuania's external position to the broader macroeconomic stability.

Graph 1.4: Financing of the international investment position



Source: European Commission

Poverty and inequality

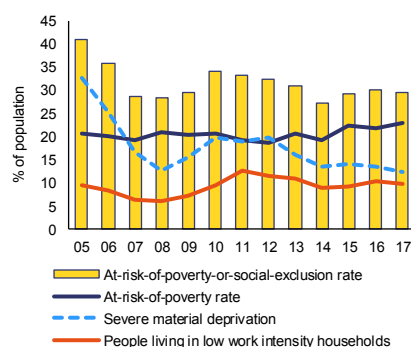
Despite recent progress, poverty remains a major challenge. Overall, the share of the population at risk of poverty or social exclusion (AROPE) has decreased since Lithuania joined the EU in 2004. However, it remains among the highest in the EU (29.6 % in 2017, compared to 22.4 % in the EU, see Graph 1.5). The risk of poverty or social exclusion in rural areas is nearly double that of urban areas, which corresponds to the gap in the unemployment rate between cities and rural areas (4.5 % v 11 % in 2017). In particular the metropolitan areas of Vilnius and Kaunas, where significant economic activity is centred, drive a significant gap between AROPE rates in urban and rural areas ⁽³⁾. Lithuania's expenditure on social protection is among the lowest in the EU and the impact of social transfers on poverty reduction is limited, but the recent reforms of social benefits are the first steps in the right direction.

Income inequality is still among the widest in the EU. In 2017, the income of the richest 20 % of households was 7.3 times greater than of the poorest 20 %. This reflects both the low level of benefit adequacy and the very limited progressivity of the tax system. In 2017, the median incomes of rural households were only 67 % of those of urban

⁽³⁾ In 2017, the AROPE rate in rural areas was 37.2 %, compared to 19.9 % in cities.

households, one of the lowest shares in the EU. In light of the low redistribution through taxes and social transfers (European Commission, 2018a), the inequality of disposable income slightly increased in 2017. The recent reform of personal income tax is not expected to have any significant effect on the progressivity (see Box 3.3.2). The indicators of the Social Scoreboard, supporting the European Pillar of Social Rights, show the level of income inequality in Lithuania as critical (see Box 3.3.1).

Graph 1.5: At-risk-of-poverty or social exclusion rate and its components



Source: European Commission

Regional disparities

Over the past 15 years, Lithuania has experienced the fastest convergence in the EU, but the benefits of economic growth are uneven across regions. Disparities among Lithuania's regions have steadily grown in this period. While GDP per capita reached nearly 110 % of the EU average in the capital region of Vilnius, it is only between 42 % and 77 % in other regions. The country's rapid convergence is mainly fuelled by two regions — the capital region of Vilnius and Kaunas County — producing 42 % and 20 % of the national GDP, respectively. In 2014-2016 these regions grew on average by 4.6 % (Vilnius) and 3.3 % (Kaunas), while the other regions, which have a higher share of rural areas, stagnated or were in recession.

Financial sector

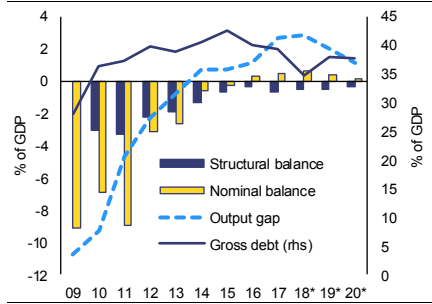
Lithuania's banking system is well capitalised, liquid and profitable. The level of non-performing loans is below the EU average and the level of capital is high, ensuring the banking sector's resilience to adverse shocks. Amid a financial upturn, the profit of the banking sector remained historically high. Banks' net interest income continued to grow, mainly due to cheap funding and rapidly expanding credit, the latter accompanied by rising housing prices. The main systemic risks to financial stability relate to these cyclical developments in credit and real estate markets, as well as to banks' structural interconnectedness with Nordic financial groups amidst high real estate valuations and household indebtedness in some Nordic countries. This warrants proactive use of macro-prudential policy tools by the Bank of Lithuania and close collaboration among financial supervisors.

Public finance

Lithuania is maintaining its public finances in surplus. In 2017, the general government budget surplus stood at 0.5 % of GDP (see Graph 1.6). It was the second year in a row that Lithuania sustained a strong fiscal position thanks to robust tax revenue collection and contained government spending. The general government balance is expected to remain around ½% of GDP in 2018 and 2019. The general government debt is expected to decrease further from 39.4 % of GDP in 2017 to 37.9 % in 2019. Nonetheless, fiscal challenges are likely to remain relevant in the medium term, as the declining population and ageing are expected to put upward pressure on spending on pensions, healthcare and long-term care.

1. Economic situation and outlook

Graph 1.6: General government balance and gross debt



* Forecast

Source: European Commission

Table 1.1: Key economic indicators

Real GDP (y-o-y)	8.2	-0.4	3.0	2.4	4.1	3.6	2.7	2.4
Potential growth (y-o-y)	6.1	1.7	2.0	1.9	2.6	3.2	3.6	3.5
Private consumption (y-o-y)	11.0	-2.2	4.1	5.0	3.3	.	.	.
Public consumption (y-o-y)	2.9	-0.7	0.4	-0.1	-0.4	.	.	.
Gross fixed capital formation (y-o-y)	17.2	-6.8	6.3	0.3	6.8	.	.	.
Exports of goods and services (y-o-y)	9.9	8.8	4.6	4.0	13.6	.	.	.
Imports of goods and services (y-o-y)	15.2	3.3	6.3	3.8	12.0	.	.	.
Contribution to GDP growth:								
Domestic demand (y-o-y)	11.8	-3.5	3.8	3.2	3.4	.	.	.
Inventories (y-o-y)	0.1	-0.2	0.5	-1.0	-0.6	.	.	.
Net exports (y-o-y)	-3.7	2.9	-1.3	0.1	1.3	.	.	.
Contribution to potential GDP growth:								
Total Labour (hours) (y-o-y)	-0.2	-0.8	0.1	0.2	0.0	0.1	0.2	0.0
Capital accumulation (y-o-y)	2.7	1.1	1.1	1.2	1.3	1.5	1.5	1.5
Total factor productivity (y-o-y)	3.6	1.4	0.8	0.6	1.3	1.7	1.9	2.0
Output gap	4.6	-4.2	0.2	1.1	2.7	2.8	2.0	1.1
Unemployment rate	7.3	13.2	10.5	7.9	7.1	6.5	6.3	6.3
GDP deflator (y-o-y)	6.2	3.3	0.9	1.4	4.3	2.6	3.7	3.6
Harmonised index of consumer prices (HICP, y-o-y)	3.3	4.7	0.2	0.7	3.7	2.5	2.2	2.1
Nominal compensation per employee (y-o-y)	15.1	2.8	5.3	6.7	8.7	8.2	7.7	6.0
Labour productivity (real, person employed, y-o-y)	7.8	2.1	1.4	0.4	4.7	.	.	.
Unit labour costs (ULC, whole economy, y-o-y)	6.8	0.6	3.8	6.4	3.8	4.2	4.2	2.9
Real unit labour costs (y-o-y)	0.5	-2.5	2.9	4.9	-0.5	1.6	0.6	-0.7
Real effective exchange rate (ULC, y-o-y)	4.6	-1.6	2.6	5.8	3.3	3.5	1.7	0.5
Real effective exchange rate (HICP, y-o-y)	0.1	1.1	1.4	2.0	0.1	4.0	-0.5	-0.5
Savings rate of households (net saving as percentage of net disposable income)	-1.0	-0.1	-2.8	-3.6	-5.2	.	.	.
Private credit flow, consolidated (% of GDP)	16.6	-1.3	0.7	4.4	3.7	.	.	.
Private sector debt, consolidated (% of GDP)	56.8	72.1	55.0	56.1	56.1	.	.	.
of which household debt, consolidated (% of GDP)	17.4	28.0	22.0	22.8	22.4	.	.	.
of which non-financial corporate debt, consolidated (% of GDP)	39.4	44.0	33.0	33.3	33.6	.	.	.
Gross non-performing debt (% of total debt instruments and total loans and advances) (2)	0.7	11.9	6.7	3.8	3.1	.	.	.
Corporations, net lending (+) or net borrowing (-) (% of GDP)	-7.5	6.2	8.0	4.2	6.5	5.7	5.1	5.6
Corporations, gross operating surplus (% of GDP)	33.3	35.5	36.8	33.1	33.6	33.6	33.7	34.6
Households, net lending (+) or net borrowing (-) (% of GDP)	-0.4	0.0	-2.8	-3.7	-4.9	-5.7	-4.9	-5.1
Deflated house price index (y-o-y)	18.1	-9.8	3.7	4.5	5.4	.	.	.
Residential investment (% of GDP)	2.5	2.5	2.5	3.0	2.7	.	.	.
Current account balance (% of GDP), balance of payments	-10.3	-3.9	0.6	-0.8	0.9	-0.8	-0.8	-0.6
Trade balance (% of GDP), balance of payments	-9.4	-3.4	0.8	1.2	2.8	.	.	.
Terms of trade of goods and services (y-o-y)	1.8	-0.4	1.1	2.2	0.4	-0.5	0.2	0.9
Capital account balance (% of GDP)	1.3	3.2	2.9	1.5	1.2	.	.	.
Net international investment position (% of GDP)	-44.9	-54.6	-45.2	-42.7	-35.9	.	.	.
NIIP excluding non-defaultable instruments (% of GDP) (1)	-15.4	-25.7	-15.9	-13.6	-7.9	.	.	.
IIP liabilities excluding non-defaultable instruments (% of GDP) (1)	51.1	71.6	62.8	77.0	75.6	.	.	.
Export performance vs. advanced countries (% change over 5 years)	54.3	43.9	28.9	2.4	4.8	.	.	.
Export market share, goods and services (y-o-y)	.	.	-1.3	3.3	10.3	.	.	.
Net FDI flows (% of GDP)	-3.0	-1.8	-0.8	-0.4	-1.3	.	.	.
General government balance (% of GDP)	-0.7	-6.2	-1.2	0.3	0.5	0.6	0.4	0.1
Structural budget balance (% of GDP)	.	.	-1.3	-0.4	-0.6	-0.5	-0.5	-0.4
General government gross debt (% of GDP)	17.4	31.1	40.6	39.9	39.4	34.8	37.9	37.6
Tax-to-GDP ratio (%) (3)	28.9	29.0	28.1	30.0	29.8	30.2	30.6	30.5
Tax rate for a single person earning the average wage (%)	26.5	22.5	22.7	.	.	.	.	.
Tax rate for a single person earning 50% of the average wage (%)	20.0	18.0	17.8	.	.	.	.	.

(1) NIIP excluding direct investment and portfolio equity shares.

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

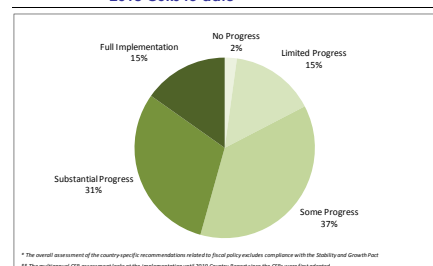
(3) The tax-to-GDP indicator includes imputed social contributions and hence differs from the tax-to-GDP indicator used in the section on taxation.

Source: Eurostat and ECB as of 31-1-2019, where available; European Commission for forecast figures (Winter forecast 2019 for real GDP and HICP, Autumn forecast 2018 otherwise)

2. PROGRESS WITH COUNTRY-SPECIFIC RECOMMENDATIONS

Since the start of the European Semester in 2011, 83 % of all country-specific recommendations addressed to Lithuania have recorded at least 'some progress' ⁽⁴⁾. 17 % of these CSRs recorded 'limited' or 'no progress' (see Graph 2.1). Lithuania has achieved substantial progress and full implementation in the areas of fiscal policy and governance, including governance of state-owned enterprises, and improving the security of energy supply.

Graph 2.1: Overall multiannual implementation of 2011-2018 CSRs to date



The multiannual CSR assessment looks at the implementation since 2011 until the 2019 Country Report.

Source: European Commission

Lithuania has maintained its public finances in surplus and continued adjusting the pension system to address its fiscal sustainability and adequacy. For the third year in a row, Lithuania achieved a general government surplus, which was well supported by tax-rich economic growth. In structural terms, Lithuania's budget position has improved significantly, as the structural budget deficit shrunk from 3.5 % of GDP in 2011 to an estimated 0.6 % in 2018. It also made efforts to strengthen its fiscal framework. The government implemented measures to reduce the tax burden on low income earners and increase tax compliance. However, during the recent overhaul of the income tax system, Lithuania once again did not use the opportunity to broaden the tax base to sources that are less detrimental to growth, and thus to compensate, at least partly, for the costs of the reforms. From 2018, the fiscal sustainability of the pensions system has been strengthened by introducing a pension indexation formula. These reforms also address to some extent the low

adequacy of pensions. However, in the longer term the overall low level of spending on pensions might limit further improvements.

Lithuania has made limited progress in improving the quality, efficiency and labour market relevance of education and training. The reforms in general education are still ongoing, with the efficiency of the school network and the quality of outcomes remaining the main challenges. The reform of the higher education system is progressing slowly. The measures taken to improve vocational education and training (VET) seem promising, but consistent progress is still needed to ensure effective governance of VET institutions and improve the learning experience. Lithuania continues to strengthen its network of adult learning coordinators in municipalities, but the results are limited so far and participation in adult learning remains low.

Progress with improving the performance of the health sector has been limited. Measures to further consolidate the hospital network are yet to be adopted. Adopting legislation on the use of alcohol and tobacco in recent years has helped somewhat to contain health risk factors. However, public health interventions at local level remain limited due to low investments and the lack of a framework ensuring that municipalities implement evidence-based interventions. In recent years, an increasing number of measures have also sought to improve the quality of healthcare services. However, their scope remains limited, addressed only to primary care and introduced on a voluntary basis. Despite some measures taken in the last 2 years to reduce the overall costs of pharmaceuticals, including the reduction of user charges and VAT and incentivising the sale of cheaper products, measures to address affordability for specific groups have not been adopted yet.

Lithuania is continuing its efforts to reduce poverty and income inequality, but the results are limited so far. In recent years, some important measures have been taken to address poverty. These include the revision of unemployment benefits, the increase of the state supported income, and improving legislation on cash social assistance. From 2019, Lithuania has further increased the universal child benefit, which should have a positive impact on poverty reduction.

⁽⁴⁾ For the assessment of other reforms implemented in the past, see in particular Section 3.

However, important challenges remain. The risk of poverty for elderly people and people with disabilities remains high, and despite the recent progress, the adequacy of benefits remains relatively low. Income inequality remains among the highest in the EU, and the recent tax reforms do not seem to be sufficiently effective in reducing it. Tailoring taxes and benefits in a way that reduces poverty and income inequality, and increasing incentives to enter the labour market, remain major challenges.

Overall, Lithuania has made limited progress in addressing the 2018 CSRs⁽⁵⁾. Some progress was achieved in addressing the CSRs on tax compliance and strengthening the sustainability and adequacy of the pension system. However, progress in addressing the issues in the labour market, education and health sector, improving the design of the tax and benefit system, as well as in increasing productivity by making public investment and research and innovation policy more efficient, was limited. There was no progress in broadening the tax base to sources less detrimental to growth.

⁽⁵⁾ Information on the level of progress and actions taken to address the policy advice in each respective subpart of a CSR is presented in the overview table in the Annex.

Table 2.1: Assessment of 2018 CSR implementation

Lithuania	Overall assessment of progress with 2018 CSRs: Limited progress
<i>CSR 1: Improve tax compliance and broaden the tax base to sources less detrimental to growth. Ensure the long-term sustainability of the pension system while addressing the adequacy of pensions.</i>	Some progress: <ul style="list-style-type: none"> • Some progress in improving tax compliance. • No progress in broadening the tax base to sources that are less detrimental to growth. • Some progress in improving the fiscal sustainability of the pension system and increasing adequacy of pensions.
<i>CSR 2: Improve the quality, efficiency and labour market relevance of education and training, including adult learning. Improve the performance of the healthcare system by a further shift from hospital to outpatient care, strengthening disease prevention measures, including at local level, and increasing the quality and affordability of care. Improve the design of the tax and benefit system to reduce poverty and income inequality.</i>	Limited progress: <ul style="list-style-type: none"> • Limited progress in improving the quality, efficiency and labour market relevance of education and training, including adult learning. • Limited progress in improving the performance of the healthcare system. • Limited progress in improving the design of the tax and benefit system to reduce poverty and income inequality.
<i>CSR 3: Stimulate productivity growth by improving the efficiency of public investment, ensuring efficient governmental coordination of research and innovation policy and tackling gaps and inefficiencies in public measures supporting science-industry cooperation.</i>	Limited progress <ul style="list-style-type: none"> • Limited progress in improving the efficiency of public investment. • Limited progress in ensuring efficient governmental coordination of research and innovation policy and tackling gaps and inefficiencies in public measures supporting science-industry cooperation.

Source: European Commission

Box 2.1: EU funds and programmes contribute to addressing structural challenges and to fostering growth and competitiveness in Lithuania

Lithuania is a major beneficiary of the European Structural and Investment (ESI) Funds and can receive up to EUR 8.4 billion over 2014–2020. This potentially represents around 3 % of GDP annually. By the end of 2018, an estimated EUR 5.6 billion (66 % of the total) had been allocated to projects on the ground. Over the same period, Lithuania signed 13 agreements for EUR 390 million for strategic transport projects under the Connecting Europe Facility. A total of 313 participants received funding of EUR 40 million under Horizon 2020 (including 69 SMEs which received about EUR 13 million).

EU funding has helped to address policy challenges identified in the 2018 CSRs. Actions financed through European Regional and Development Fund (ERDF) and European Social Fund (ESF) cover, among other things: support for ongoing reforms in the health and education sectors, notably by investing to improve access to quality healthcare across the country; support for consolidating education infrastructure and raising the quality of education at all levels; promoting R&I in the private sector and cooperation between science and business. By the end of 2018, ERDF and Cohesion Fund (CF) investment had reached more than 4 800 businesses and attracted over EUR 450 million in private funds matching public support. Around 22 000 pupils are studying in renovated schools. A total of 76 upgraded health care institutions provide improved services for over 220 000 patients. Among other achievements, ERDF and CF investments led to the reconstruction of 480 km of roads and 60 km of railways and improved wastewater treatment services for 995 000 people. The ESF invested in people and in social inclusion — more than 71 000 unemployed persons (including about 20 000 young people aged under 29) improved their employability. More than 110 000 pupils could improve their skills in formal and non-formal education and about 10 000 people participated in lifelong learning activities. Social services were provided for more than 11 000 people, and 16 000 people with disabilities were given support to enable them to work in adapted workplaces. Each year about 200 000 people received food packages from FEAD, together with measures to support their social inclusion.

In addition, the Commission can provide tailor-made technical support upon a Member State's request via the Structural Reform Support Programme to help Member States implement growth-sustaining reforms to address challenges identified in the European Semester process or other national reforms. Lithuania, for example, received support to enhance the public sector efficiency through the optimisation of the institutional framework of public-sector organisations, enable industry transformation through digitalisation and address corporate insolvency. In 2018, technical support is being provided to the Office of the Government of the Republic of Lithuania for its efforts to reduce shadow economy via measures that raise awareness and create positive incentives in the public. Support measures are also underway to enhance the capacity of local authorities to evaluate the long-run sustainability of their financial structure and develop structural analysis of the revenue and expenditure of municipalities. In addition, support is also being provided to the authorities to help reform the network of teacher education institutions and to help develop alternative access to finance for SMEs.

EU actions strengthen national, regional and local authorities and civil society. EUR 123 million of ESI Funds has been allocated for strengthening the capacity of public administrations at different levels by prompting close cooperation with stakeholders. Lithuania is also benefiting from support under the pilot action for regions in industrial transition, which provides advisory services for the development of a comprehensive strategy for national economic transformation.

EU funding is helping to mobilise private investment. ESI Funds, especially via ERDF and CF, are mobilising additional private capital by allocating about EUR 700 million in the form of loans, guarantees and equity. This is expected to leverage additional private investment of EUR 1.3 billion. Altogether, EUR 650 million of the ESI Funds have been paid in the form of financial instruments. In addition, the European Fund for Strategic Investments (EFSI) has allocated EUR 399 million to 13 infrastructure and innovation projects and 6 SMEs projects in Lithuania. This is set to trigger EUR 1.5 billion in additional investments. Lithuania ranks 11th in the overall volume of approved EFSI operations as a share of GDP.

More information on: <https://cohesiondata.ec.europa.eu/countries/LT>

3. REFORM PRIORITIES

3.1. PUBLIC FINANCES AND TAXATION

3.1.1. FISCAL POLICY

Lithuania plans to maintain the budget surplus.

In 2018, according to preliminary data, the general government balance remained in surplus for the third consecutive year, amounting to 0.6 % of GDP. However, due to costs of the reforms legislated in the middle of 2018, the general government surplus is set to decrease slightly to 0.4 % of GDP in 2019. Revenue losses stemming from adjustments to personal income tax and social security contributions are expected to be partially offset by additional revenues thanks to improvements in tax administration and the termination of transfers from the State Social Insurance Fund to private pension funds. Overall, taking into account increases in public wages, social benefits and other types of social support, the current fiscal stance is considered to be slightly expansionary.

3.1.2. TAX POLICY

Lithuania has one of the lowest tax-to-GDP ratios in the EU.

Total tax revenues were 29.5 % of GDP in 2017 compared with the EU average of 39.0 %. Lithuania relies mostly on indirect taxes (11.9 % of GDP) and social security contributions (12.3 % of GDP). Direct taxes account for only 5.4 % of GDP, among the lowest proportions in the EU (data for 2017). However, the tax burden on low-income labour is relatively high.

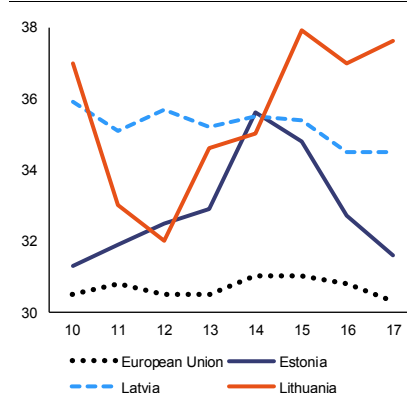
The tax-benefit system has one of the weakest powers to correct income inequality in the EU.

As measured by the Gini coefficient ⁽⁶⁾, Lithuania has relatively high inequality in pre-tax market income. Combined with a weak redistribution through taxes and social transfers, this leads to one of the highest levels of disposable income inequality in the EU. Moreover, inequality is on the rise with the Gini index climbing to 37.6 in 2017 from 37.0 in 2016 (see Graph 3.1.1). This

⁽⁶⁾ The scale of the Gini coefficient is from 0 to 100. The value 0 corresponds to perfect equality (same income for everybody) while 100 corresponds to maximum inequality (all income distributed to only one person and all the others have nothing).

compares to levels in neighbouring Estonia and Latvia of 31.6 and 34.5, respectively. The EU average stands at 30.3.

Graph 3.1.1: Gini coefficient development in the Baltic countries



(1) Income data are adjusted for household size

(2) EU-SILC 2016 data are based on income generated in 2015 (with the exception of IE and UK.)

Source: European Commission

Despite the reduction in the tax burden for low income earners, overall tax progressivity remains low.

The tax wedge ⁽⁷⁾ on low-income earners in 2017 (34.0 % for singles without children earning 50 % of the average wage) fell compared to 2016 (-2.5 pps). However, it remains above the EU average of 32.4 %, even though income tax in Lithuania is well below the EU average. Lithuania continued to raise the non-taxable income threshold in personal income tax, from EUR 310 in 2017 to EUR 380 in 2018, and increased the allowance for people with disabilities, while the minimum wage was set at EUR 400.

Personal income tax will become more progressive in 2019.

⁽⁷⁾ The tax wedge indicator is defined as the sum of personal income taxes and employee and employer social security contributions net of family allowances, expressed as a percentage of total labour costs (sum of the gross wage and social security contributions paid by the employer). The indicator is computed by the OECD based on the OECD Tax and Benefit model.

reform further increases the non-taxable income threshold. This is expected to reduce the tax payable by low income earners and help cut poverty by focusing on the most disadvantaged people in the workforce (see Box 3.3.2). In addition, Lithuania is introducing a new progressive tax structure for personal income tax with a 20 % and 27 % ⁽⁸⁾ tax rate replacing the existing 15 % flat tax rate. However, the income of self-employed people and certain social security benefits like maternity benefits, sickness benefits, etc. will continue to be taxed at 15 %. This implies that the effective labour taxation rate on the same job is not neutral in respect to which legal form of activity is chosen (individual activity certificate, self-employed or regular employment contract).

The overall progressivity of labour taxation remains relatively low due to changes to the social security contribution (SSC). The combined SSC rate (employer and employee) will be reduced by around 19 pps. Employers' SSC rate will be set at 1.47 % instead of current 30.5 %, and employees' contribution rate will be raised to 19.5 % from 9 % currently. To compensate for the statutory tax increase for employees, employers are legally obliged to increase gross salaries by 28.9 %. Additionally, Lithuania introduced a SSC cap with the aim of attracting investors. The cap will be applied to yearly incomes exceeding 120 average monthly wages and will be gradually reduced to 84 average monthly wages in 2020 and to 60 in 2021. In practice, this measure counterbalances the labour taxation progressivity introduced by the personal income tax reform for the highest earners and is not expected to reduce income inequality (see Box 3.3.2).

The current reform does not involve any broadening of the tax base to more growth-friendly sources, despite entailing budgetary costs (see Box 3.3.2). Environmental taxes, which account for 1.9 % of GDP, are mostly taxes on energy (1.7 % of GDP). Environmental taxes are significantly below the EU average of 2.4 % of GDP (data for 2017). Taxes on transport are the lowest in the EU and do not take into account vehicles' environmental performance. CO₂-based motor vehicle taxes are not in place in Lithuania. Incentives to favour cars with lower CO₂

emissions are very limited and new vehicles purchased in Lithuania are among the least environmentally friendly in the EU. No changes to car taxation or the road-use tax for private passenger vehicles are envisaged. Lithuania has one of the lowest excise duties on petrol, diesel and other motor fuels in the EU. The overall implicit tax rate on energy is among the EU's lowest. However, excise duties on tobacco products will further increase and a tax on electronic cigarette liquid will be introduced in 2019. Property taxation remains low and no further changes are planned. In 2017, Lithuania collected only 0.3 % of GDP from recurrent property taxes, which is significantly below the EU average of 1.6 %.

Lithuania's R&D incentives are generous but appear ineffective in motivating private sector R&D investment. In 2017, private R&D expenditure amounted to 0.3 % of GDP, compared to an EU average of 1.4 %. The fiscal instruments in place to support R&D include a deduction of 300 % of R&D expenditures from taxable income if certain innovation criteria are met and a scheme allowing faster depreciation of some R&D capital assets. A reduction in compliance costs and relieving the administrative burden on small businesses could widen the use of R&D tax incentives.

3.1.3. TAX COMPLIANCE

Tax compliance remains relatively low. Although the VAT gap ⁽⁹⁾ decreased slightly from 25.6 % in 2015 to 24.5 % in 2016, Lithuania still has one of the largest gaps in the EU (CASE, 2018). The country has introduced several measures to combat the shadow economy and improve tax compliance. The State Tax Inspectorate is continuing taxpayer awareness campaigns and promoting a voluntary taxpaying culture. The cash registry receipt lottery game organised by the Inspectorate showed good results, with more than two thirds of VAT payers in the

⁽⁸⁾ For annual income exceeding 120 average monthly wages (in 2019), 84 (in 2020), and 60 (from 2021 onwards).

⁽⁹⁾ The VAT gap is the difference between the estimated VAT revenues (VAT Total Tax Liability) and the amount of VAT actually collected. The VAT gap measures the effectiveness of VAT enforcement and compliance measures. It estimates revenue loss due to fraud and evasion, tax avoidance, bankruptcies, financial insolvencies and miscalculations.

catering sector registered in the lottery. Several public relations campaigns aimed at increasing public awareness and engagement were undertaken. 'Smart tax administration system' (i.MAS) measures introduced in recent years have almost halved the time businesses need to comply with tax rules, from 171 hours in 2015 to 99 hours in 2017 (World Bank, 2018a).

Lithuania will introduce taxpayer risk profiles and other compliance measures from 2019. The government will provide a one-time opportunity for taxpayers to benefit from the tax amnesty in 2019. Private individuals will have the opportunity to recover some of their personal income tax if they use services with certified tax accounting. Other compliance measures are planned, such as a free accounting system services for small businesses in 2019 and a 'virtual cash register' project in 2020.

3.1.4. FISCAL FRAMEWORK

Application of the fiscal rules has been broadened. According to the Constitutional Law on the Implementation of the Fiscal Treaty, from 1 January 2018, all large budgets in the central and local government sector have to be balanced or in surplus in structural terms. This requirement, intended to further strengthen fiscal discipline, was applied in 2018 for the first time to the budgets of the three biggest municipalities and the National Health Insurance Fund. According to the Law, the balanced budget rule does not apply to the state budget and the State Social Insurance Fund. In July 2018, the Law on the Budget Structure was amended to improve the transposition of Council Directive 2011/85/EU on requirements for Member States' budgetary frameworks. The amendments are aimed at increasing the transparency of the macroeconomic and budgetary forecasts produced by the Ministry of Finance and improving the monitoring of national fiscal rules (Office of the Seimas of the Republic of Lithuania, 2018).

Lithuania seeks to further improve its medium-term budgetary planning system. Under the first stage of this reform, budgetary procedures were revised in 2018. Deliverables and key performance indicators were set for appropriation managers, who are expected to achieve them over a three-

year period. During preparation of the draft budgetary plan for 2019 the Lithuanian authorities also made efforts to perform expenditure reviews. Though such reviews had been implemented in the past, they lack a more structured approach, including adopted methodologies and tools. Taking into account the small size of the government sector, Lithuania would also benefit from a fundamental review of state functions in the context of limited public funding. In 2019, during the second stage of the reform, the Ministry of Finance plans to draft the necessary legal documents and procedures on budget structure, implementation, monitoring and evaluation.

3.1.5. DEBT SUSTAINABILITY ANALYSIS AND FISCAL RISKS

Lithuania faces low sustainability risks in the short, medium and long term. The early-detection indicator of fiscal stress, S0⁽¹⁰⁾, is below its critical threshold, both for the fiscal and the financial competitiveness sub-indices (see Annex B). Similarly, fiscal sustainability risks appear low over the medium term, both according to the sustainability gap indicator S1⁽¹¹⁾ and the debt sustainability analysis, given the moderate current debt-to-GDP ratio and the limited sensitivity to possible macro-fiscal shocks (European Commission, 2019). Lastly, over the long term Lithuania is considered at low fiscal sustainability risk. The sustainability gap indicator S2⁽¹²⁾ shows that only a small fiscal adjustment would be required to stabilise debt in the long run.

Total ageing costs are projected to remain relatively flat in the long term. They are

⁽¹⁰⁾ Short-term fiscal stress is measured by the S0 indicator, an early-detection indicator designed on the basis of past crises to highlight short-term fiscal risks stemming from the financial-competitiveness or the fiscal side of the economy.

⁽¹¹⁾ The medium-term fiscal sustainability indicator S1 shows the additional adjustment effort required, in terms of a cumulated gradual improvement in the structural primary balance over five years (starting from 2021), to reach a 60 % debt-to-GDP ratio by 2033, including paying for any future additional expenditure arising from an ageing population.

⁽¹²⁾ The long-term fiscal sustainability indicator S2 shows the upfront adjustment to the current structural primary balance (subsequently kept constant at the adjusted value forever) that is required to stabilise the debt-to-GDP ratio over the infinite horizon, including paying for any additional expenditure arising from an ageing population.

projected to increase from 16.0 % of GDP in 2016 to 16.7 % in 2030 and peak at 17.1 % in 2040 before decreasing again to below 16 % in 2070 (European Commission, 2018b).

The introduction of the new pension indexation formula in 2018 increased fiscal sustainability.

Following the 2016 reform, pension benefits and accumulated pension points are now indexed on the basis of changes in the total wage sum. The introduction of a link between public pension expenditure and the contributions received provides for an automatic balancing of the system. The indexation mechanism, together with the increase in eligibility requirements for full pension benefits, should reduce pension expenditure between 2016 and 2060 by 3.7 % of GDP (European Commission, 2018b) compared to projections based on the previous rules. Since pensions account for over 40 % of all age-related costs, this has reduced the overall risk demographic ageing poses to Lithuania's public finances. However, baseline pension projections for Lithuania are subject to important risks as the current legislation expects authorities to put forward corrective measures in case the benefit ratio decreases (European Commission, 2018c).

Increasing fiscal sustainability, however, comes at the cost of declining pension adequacy.

Since the total wage bill is expected to increase at a slower pace than wages due to the rapidly shrinking working-age population, the benefit ratio is projected to fall in the future. This is particularly worrisome since Lithuania has one of the lowest benefit ratios in the EU (see Section 3.3.3). With a relatively weak corrective power of the tax and benefit system (see Section 3.1.2), pensions are the main redistributive mechanism in Lithuania. Declining adequacy would therefore significantly increase poverty rates. To address the issue of a low replacement ratio, the government passed an additional pension reform in summer 2018 to move the basic pension from the State Social Insurance Fund to the state budget. According to the Lithuanian authorities, this aims to reinforce the link between benefits and contributions and strengthen the second pension pillar (see Section 3.3.3). The results of the reform will largely depend on the participation rate, i.e. on the willingness of participants to stay enrolled in the

second pillar and pay higher pension contributions ⁽¹³⁾.

Despite rapid population ageing, expenditure on healthcare and long-term care is expected to remain relatively contained.

It is projected to increase from, respectively, 4.1 and 1.0 % of GDP in 2016 to 4.6 and 1.7 % by 2040. Both increases are below EU average expenditure growth over this period.

⁽¹³⁾ The previous contribution formula of 2 %+2 %+2 % (from employee, social security contribution and state budget) will be replaced by 4 %+0 %+2 % (from employee, social security contribution and state budget).

3.2. FINANCIAL SECTOR

3.2.1. FINANCIAL STABILITY

The financial position of the Lithuanian banking sector is strong. Lithuanian banks operate with high levels of capital (Table 3.2.1). As of June 2018, the total capital ratio was 19.0 %, well above the minimum capital adequacy requirements and the capital buffers currently in place. As regards its composition, the capital consists almost entirely of Common Equity Tier 1 (CET 1), which is the highest-quality capital (CET 1 ratio of 18.7 %). The rapid decline in funding costs was the main contributor to high bank profitability, with a return on equity of 13.5 %. The non-performing loan ratio continued its decreasing trend to below the European average, falling to 3.1 % from 3.7 % the year before. Banks in Lithuania have minor exposure to non-bank non-residents (only 2.3 % of the total amount of outstanding loans as of Q1-2018), as the loan portfolio is largely domestically oriented. The loan-to-deposit ratio remains safely below 100 %, at 93 % at the end of November 2018, indicating sustainable bank funding amid active lending.

Table 3.2.1: Financial soundness indicators

	2014q4	2015q4	2016q4	2017q4	2018q1	2018q2
Non-performing loans	6.8	5.6	4.0	3.2	3.4	3.1
o/w foreign entities	6.4	-	-	-	-	-
o/w NFC & HH sectors	9.6	7.5	5.5	4.4	4.4	4.4
o/w NFC sector	10.3	8.4	6.2	5.0	4.8	4.2
o/w HH sector	8.9	6.6	4.8	3.7	3.9	3.6
Coverage ratio	31.5	32.3	32.2	30.8	27.6	27.9
Return on equity(1)	7.7	7.5	11.9	9.1	12.9	-
Return on assets(1)	0.9	0.9	1.0	0.9	1.3	-
Total capital ratio	21.3	24.8	19.4	19.1	19.6	-
CET 1 ratio	20.9	24.3	19.1	18.8	19.3	-
Tier 1 ratio	20.9	24.3	19.1	18.8	19.3	18.7
Loan to deposit ratio	80.1	83.8	82.3	78.8	84.0	99.7

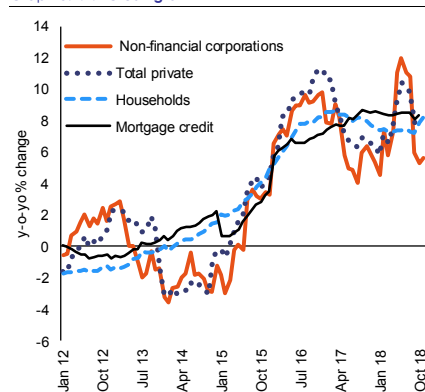
(1) ECB aggregated balance sheet: loans excluding to government and MFI / deposits excluding from government and MFI

Source: European Central Bank

One of the main systemic risks to financial stability relates to cyclical developments in credit and real estate markets. Credit to Lithuanian residents continues to grow robustly, albeit at a slower pace than to corporations (Graph 3.2.1). The housing loan portfolio posted the highest growth, with an annual growth of around 8 % in 2018. Given the sustained upswing in the credit and housing market (see Section 3.2.3), the Bank of Lithuania decided to apply a countercyclical buffer of 0.5 % at the end of 2017 (with effect from January 2019). In June 2018, the Bank further increased it to 1 % (with effect from June 2019), as credit growth continued and banks'

profitability was high. The primary objective of this macro-prudential tool is to make the banking system more resilient and less pro-cyclical. Measures aimed at the borrower's side date back to 2011, when the Bank approved the Regulation for Responsible Lending, which was amended in 2015. It includes a loan-to-value ratio of maximum 85 %, a debt-service-to-income ratio of maximum 40 % (50 % with a 5 % interest rate; 60 % in exceptional circumstances) and a loan maturity of maximum 30 years.

Graph 3.2.1: Credit growth



Source: European Central Bank

Lithuania's banking sector has become one of the most concentrated in the EU, thereby also increasing systemic risk. As of September 2018, the three largest banks (Swedbank, SEB and Luminor) hold a market share of 82 %. This is partly attributable to the relatively small market size and the high competitiveness of the big players which crowd out smaller institutions. The Bank of Lithuania actively encourages the entry of new participants into the market and, together with the government, in 2016 submitted a set of proposals and amendments of legal acts covering diverse alternative financing sources for small and medium sized enterprises (SMEs).

A highly integrated and concentrated Nordic-Baltic banking system warrants close collaboration among financial supervisors. Risks mainly relate to the Scandinavian housing markets and the high indebtedness of their households. They may materialise in the form of

constrained lending activity, short-term deposit volatility, and higher financing costs for Lithuanian banks, given the relatively heavy dependence on wholesale funding from some Nordic countries. Supervisors from the Nordic and Baltic countries are aware of potential spillovers and of the existing differences in legal frameworks. They are cooperating closely to maximise the effectiveness of national macro-prudential policy instruments, ensure a level playing field for all credit institutions and reduce the risk of regulatory arbitrage. In this respect, the Bank of Lithuania has decided to automatically reciprocate other EU countries' macro-prudential policy measures, ⁽¹⁴⁾ e.g. the lower limit for risk weights on residential mortgage loans in Finland ⁽¹⁵⁾ as well as a 1 % systemic risk buffer rate to banks' Estonian exposures ⁽¹⁶⁾.

Ensuring cyber security remains an important challenge to Lithuania's financial system. FinTech developments are increasing the risk of cyber attacks, which may have a large impact on financial stability. Virtual currencies and unregulated digital money that may be used as a payment pose additional risks to financial stability — notably money laundering, hacking and market risk in terms of the exchange rate of the virtual currency.

3.2.2. ACCESS TO FINANCE

Difficulties in accessing finance affect SMEs' innovation and growth. More than one of eight SMEs considered access to finance its most important concern. This is among the highest and almost double the EU average. Despite the improved availability of funding, SMEs access to finance score remained close to the EU average. (European Commission, 2018d). SMEs continued

to experience some challenges in obtaining loans. This is evidenced by one of the highest loan rejection rates in the EU, the perceived deterioration of banks' willingness to provide a loan, and higher relative borrowing cost for small loans to large loans (European Commission, 2018e). The market gap for business financing was estimated at EUR 660 million in 2018 and growing. Funding gaps were high and growing for risk capital and start-ups in particular (Ministry of Finance, 2019). These bottlenecks affect the entrepreneurial ecosystem and the innovation capacity (see Section 3.4.1), hindering SMEs' growth.

3.2.3. HOUSING MARKET

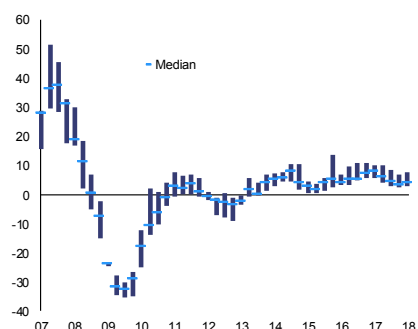
House prices are slowing. After averaging 5 % since 2014, growth in house prices has slowed recently as housing supply catches up with demand growth (see Graph 3.2.2). The supply of new housing in Vilnius and its suburbs, the country's biggest real estate market, has reached post-crisis highs and the stock of unsold apartments in the three largest cities has started to increase since the beginning of 2017. The demand for housing is still strong, fuelled by rapidly rising wages (see Section 3.4.2), benign financial conditions and positive expectations. In the first half of 2018, the number of monthly transactions was the highest since the 2007-2008 peak (State Enterprise Centre of Registers, 2018). Since 2010 housing market activity has been concentrated in more densely populated areas and the largest cities, but in 2018 less populated areas started to get very active as well.

⁽¹⁴⁾ While reciprocation is voluntary, with its decision to reciprocate automatically, Lithuania is implementing in practice the European Systemic Risk Board recommendation of 15 December 2015 on the assessment of cross-border effects of and voluntary reciprocity for macro-prudential policy measures.

⁽¹⁵⁾ Banks established in Lithuania thus need to comply with the same requirements for risk weights as the Finnish banks when lending to households with a mortgage on housing units located in Finland.

⁽¹⁶⁾ Eesti Pank has requested the authorities of other member states to apply equivalent additional buffer requirements to the banks that provide services in Estonia through branches or directly cross-border.

Graph 3.2.2: Annual change in real house prices



Note: The median represents a middle value of house price growth reported by three sources

Source: State Enterprise Centre of Registers, Statistic Lithuania, UAB OberHaus, Commission calculations

The key drivers in the housing market seem to be in balance. The overall valuation gap calculated by the European Commission ⁽¹⁷⁾ signals that house prices in Lithuania are not overvalued. This indicator, however, does not catch large regional differences, which are prominent in Lithuania (Vilnius and other cities v rural areas). While credit growth, supported by low interest rates, improving financial health of households and positive expectations, has been noticeable in recent years, households are also financing a large share of housing purchases with their own resources ⁽¹⁸⁾. The household debt at 26 % of GDP in 2017 is among the lowest in the EU, aligned with fundamentals, and not leading to prudential concerns ⁽¹⁹⁾. These factors point to an overall balanced situation in the housing market and suggest limited risks of market correction at the present juncture.

⁽¹⁷⁾ The analysis of price valuations is based on an average of three metrics: (i) affordability gap (price-to-income deviation with respect to its long-term average); (ii) dividend gap (price-to-rent deviation from its long-term average); and (iii) estimates of deviations of house prices from equilibrium values justified by housing demand and supply fundamentals. See Philipponnet and Turrini, 2017.

⁽¹⁸⁾ Although decreasing, the number of housing transactions financed without a mortgage remains high, at around 60 % (State Enterprise Centre of Registers).

⁽¹⁹⁾ Fundamentals-based benchmarks are based on methodologies developed by the European Commission in 2017 and 2018. The are derived from regressions capturing the main determinants of credit growth and taking into account a given initial stock of debt. Prudential thresholds represent the debt threshold beyond which the probability of a banking crisis is relatively high, minimising the probability of missed crisis and that of false alerts.

3.3. LABOUR MARKET, HEALTH, EDUCATION, AND SOCIAL POLICIES

3.3.1. LABOUR MARKET

The labour market continues to perform well but a shrinking labour force, skills shortages and territorial disparities remain challenges.

The working-age population decreased from 1.8 million to 1.7 million between 2014 and 2017, reducing the potential supply of labour at a time of economic growth. Work-related immigration has increased and a majority of third-country nationals fill the jobs requiring medium skills, mainly in the transport, construction and service sectors. To a certain extent, this indicates the inability of the Lithuanian education and training system to anticipate and provide the required skills. Employment opportunities are also very unequal in Lithuania: in 2017 the employment rate gap between people living in cities and those living in rural areas was one of the highest in the EU (13.7 pps).

Employment opportunities for low-skilled workers are fewer than in other EU Member States. Tertiary graduates in Lithuania perform better on the labour market than the EU average. Their unemployment rate in 2017 was lower than the EU average (3.0 % v 4.6 % in the EU). The employment rate difference for people with different skills levels is significant. The employment rate for the low, medium and high-skilled is 44 % (55 % in the EU), 70 % (73 % in the EU) and 90 % (84 % in the EU) respectively. Due to the tightening labour market, the unemployment rate of the medium and low-skilled is decreasing, but remains well above the EU average and has not yet reached pre-crisis levels. The government has recently started developing national skills/human resource monitoring processes, but there is no structured regulatory framework for anticipating the skills that will be needed in the medium term. Ensuring the supply of skills is one of the main areas where demand for investment remains significant.

Spending on and coverage by active labour market policy measures remains limited compared to other EU countries. The proportion of registered unemployed people in Lithuania covered by these policies is relatively low (around 20 %). The low-skilled unemployed are underrepresented as, for example, they count for

only 16 % (October 2018) of total participants in vocational training programmes. Participation by people with disabilities in active labour market policy (ALMP) measures is also low. The measures are overwhelmingly financed by external sources like the European Social Fund (around 60 % of the total cost). In 2018 the cost of providing these measures increased due to the configuration of vocational training provision and increased costs for other measures, but the resources allocated remain limited. The extent of the ALMP measures' coverage is linked to funding, and the demand for investment will remain significant.

Cooperation between the Public Employment Service and other stakeholders on labour market activation is lacking. This reduces the relevance and effectiveness of ALMP measures. To ensure better effectiveness and relevance of labour market activation measures, and their integration with social and health services, Lithuania is developing a special integrated services model. It envisages cooperation between different stakeholders, including social partners, municipalities and civil society organisations. In 2019, a pilot project of the model targeting the long-term unemployed will be launched in several municipalities.

The level of digital skills in the labour force is limiting the use of digital technologies by businesses. While the use of digital technologies by businesses is above the EU average, the number of ICT specialists is among the lowest in the EU with 2.7 % ICT specialists as a percentage of employed individuals, against 3.7 % on average in the EU. This, and the decreasing number of graduates in STEM subjects (science, technology, engineering and mathematics), are factors limiting the further uptake of digital technologies. Among businesses that have recruited or tried to recruit ICT specialists, 40 % reported hard-to-fill vacancies. Lithuanian businesses are also underinvesting in enhancing digital skills: only 9 % of companies provide training to their personnel to develop and upgrade their ICT skills, significantly below the EU average of 23 % (European Commission 2018f). The Lithuanian Digital Agenda strategy and the National Industry Digitalisation Platform 'Pramonė 4.0', launched in

2017, have helped the digital transformation of the economy but further efforts are needed.

Box 3.3.1: Monitoring performance in light of the European Pillar of Social Rights in Lithuania

The European Pillar of Social Rights is designed as a compass for a renewed process of upward convergence towards better working and living conditions in the European Union ⁽¹⁾. It sets out 20 essential principles and rights in the areas of equal opportunities and access to the labour market; fair working conditions; and social protection and inclusion.

SOCIAL SCOREBOARD FOR LITHUANIA		
Equal opportunities and access to the labour market	Early leavers from education and training (% of population aged 18-24)	Better than average
	Gender employment gap	Best performers
	Income quintile ratio (S80/S20)	Critical situation
	At risk of poverty or social exclusion (in %)	Critical situation
	Youth NEET (% of total population aged 15-24)	On average
Dynamic labour markets and fair working conditions	Employment rate (% population aged 20-64)	Better than average
	Unemployment rate (% population aged 15-74)	On average
	Long-term unemployment rate (% population aged 15-74)	On average
	GDPI per capita growth	Best performers
	Net earnings of a full-time single worker earning AW	Weak but improving
Social protection and inclusion	Impact of social transfers (other than pensions) on poverty reduction	To watch
	Children aged less than 3 years in formal childcare	To watch
	Self-reported unmet need for medical care	On average
	Individuals' level of digital skills	On average

Members States are classified according to a statistical methodology agreed with the EMCO and SPC Committees. The methodology looks jointly at levels and changes of the indicators in comparison with the respective EU averages and classifies Member States in seven categories (from "best performers" to "critical situation"). For instance, a country can be flagged as "better than average" if the level of the indicator is close to EU average, but it is improving fast. For methodological details, please consult the draft Joint Employment Report 2019, COM(2018)761 final. Data update of 29 January 2019.

NEET: neither in employment nor in education and training; GDPI: gross disposable household income.

Lithuanian's performance on the indicators of the Social Scoreboard supporting the European Pillar of Social Rights is mixed.

Continuous economic growth is driving the good performance of the labour market and the employment rate of both women and men has risen. However, skills shortages are becoming evident. Lithuania continues to have one of the smallest gender employment gaps in the EU. The economic growth has not yet translated into greater social inclusion, though. Income inequality (measured by the income quintile ratio), which is largely driven by disproportionate growth in the income of top earners, is the main challenge. The impact of social transfers on poverty reduction, while improving slowly, remains weak. The level of poverty and social exclusion remains among the highest in the EU and there is much more to be done to achieve convergence.

Poor health outcomes call for persisting challenges in the healthcare system and public health policies to be addressed. Unmet medical needs are around the EU average but out-of-pocket payments are still high and have an impoverishing effect on certain groups. Lifestyle risk factors need to be addressed more consistently and the role of local entities in public health policies needs to be strengthened.

The recent increase in social benefits has improved the impact of social transfers on poverty reduction. The situation is not assessed as critical, in contrast to the 2018

Country Report. The universal child benefit system, introduced in 2018, has been instrumental in reducing the risk of poverty for households with children, including for single-parent families (see Box 3.3.2).

⁽¹⁾ The European Pillar of Social Rights was proclaimed on 17 November 2017 by the European Parliament, the Council and the European Commission: https://ec.europa.eu/commission/priorities/deeper-and-fairer-economic-and-monetary-union/european-pillar-social-rights/european-pillar-social-rights-20-principles_en

Social dialogue in Lithuania is slowly improving. The institutional setup for involving the social partners at national level is in place. Bipartite social dialogue is rather weak, with some

progress being made in signing sectoral agreements, but only in the public sector. There is scope for further improvement, in particular focusing on the know-how and training of the

social partners, developing models of cooperation between the trade unions and work councils, and incentivising engagement in negotiations at sectoral and company level. In this context, investment in building up the social partners' capacity and engagement is important to ensure the effectiveness of social dialogue, in line with the social dialogue principle of the European Pillar of Social Rights.

3.3.2. SOCIAL POLICIES

Income inequality remains one of the highest in the EU and is largely driven by income growth among top earners. According to the indicators of the Social Scoreboard, supporting the European Pillar of social rights, Lithuania faces a critical challenge on income inequality. In 2017, the income of the richest 20 % of the population was 7.3 times higher than the poorest 20 %, up from 7.1 times from the previous year. The top 20 % also earned 2.7 times that of the middle 20 %, one of the highest ratios in the EU. The effect of benefits on reducing market income inequality is below the EU average and the tax system is not conducive to reducing inequality ⁽²⁰⁾. The tax reform passed in 2018 seems to be having little to no effect on disposable income inequality (see Section 3.1.2 and Box 3.3.2).

Old-age poverty remains a serious challenge, with levels well above the EU average. In 2017, over 16 % of people over 65-years-old were severely materially deprived. This is lower than in 2016 (17 %), but still three times higher than the EU average (5 %). Also in 2017, 33 % of over-65-year-olds were at risk of poverty, after significant year-on-year increases since 2012 due to pensions not keeping up with the increase in salaries. There is also concern at the levels of older women at risk of poverty or social exclusion (AROPE) ⁽²¹⁾, with a 20 % pps gender gap. These data do not take account of the recent policy changes and the

indexation of pensions in 2018, which could have had some positive impact. (see Section 3.3.3).

The risk of poverty for people with disabilities is also one of the highest in the EU, and is increasing. About 44 % are at risk of poverty or social exclusion compared to 30 % in the EU. The AROPE rate gap between people with and without disabilities is one of the highest in the EU (twice the EU average). At the same time, access to jobs for people with disabilities who are able and willing to work is improving, but remains limited. The employment rate gap between people with and without disabilities is 31 pps compared with the EU average of 26 pps. The lack of skills and of the effectiveness of vocational rehabilitation are two of the main obstacles to integrating people with disabilities into the labour market (ANED, 2018). Public and private investment is needed to facilitate the integration of the people with disabilities into the labour market and put in place an effective scheme of social economy.

Despite recent progress, the adequacy of benefits remains low. Social protection spending in Lithuania is among the lowest in the EU, amounting to about 15 % of GDP in 2016 ⁽²²⁾. This is also reflected in the poor adequacy of the guaranteed minimum income, which in 2016 was around 36 % of the poverty threshold ⁽²³⁾ compared to the EU average of 58 % (European Commission 2018g). In January 2018, the minimum monthly guaranteed income was raised for the first time since 2008 (by almost 20 % or EUR 20 in absolute terms).

Current reforms have allowed for an increase in the state-supported income as well as family-related benefits. The government is taking further action to increase the adequacy of support by introducing the 'amount of minimum consumption needs' and a system of automatic indexation based on this amount. The new system is effective from 1 January 2019 but has not led to any significant change in monetary terms compared to 2018, and does not compensate for the 10-year freeze in the state-supported income. A universal child benefit system was put in place in 2018, and from January 2019 the amount has increased from EUR 30 to

⁽²⁰⁾ In 2017, taxes reduced income inequality by only 8.7 % v the EU average of 11.7 %. The benefits reduced income inequality by 31.0 %, below the EU average of 40.4 %.

⁽²¹⁾ This is a headline indicator of the Europe 2020 strategy and corresponds to the total number of persons who are at risk of poverty or severely materially deprived or living in households with very low work intensity. Persons are only counted once even if they are present in several sub-indicators.

⁽²²⁾ Data for European system of integrated social protection statistics 2016 are provisional as of 23 Oct.

⁽²³⁾ 60 % of median income.

EUR 50 per child per month. This measure will reduce the at-risk-of-poverty rate for households with children (see Box 3.3.2), but there is still a lot of scope for further social convergence with the rest of the EU.

High levels of homelessness persist. The most recent data on homelessness for Lithuania (FEANTSA, 2015), estimate that over 4 000 people are homeless or living in shelters. Lithuania has one of the highest rates in the EU of households unable to keep the home adequately warm in winter, and of tenants overburdened by housing costs. The housing cost overburden for tenants is 48 %, among the highest in the EU. Lithuania also faces a shortage of social housing (OECD, 2016). The poor quality of housing remains a concern in rural areas. At almost 10 %, the rate of severe housing deprivation for the rural population, though falling, remained above the EU average in 2017, and significantly higher than for urban dwellers (6 %). To address the issue of homelessness and poor quality of housing, investment needs to be ensured, in particular at municipal level.

3.3.3. PENSIONS

The Lithuanian pension system is not effective at protecting the elderly against poverty and social exclusion. Public pension expenditure on pensions as a share of GDP is among the lowest ⁽²⁴⁾ in the EU (European Commission, 2018b). As a result, old-age benefits are low, unable to keep pace with the increase of salaries, and the old-age poverty rate is one of the highest in the EU (see Section 3.3.2). Recent reforms put more emphasis on financial sustainability but were less successful in ensuring adequacy (see Section 3.1.5). The theoretical net replacement rate is low and estimated to drop by 7 pp. from 56 % in 2016 to

49 % in 2056, placing Lithuania among the countries with the lowest such rates in the EU (European Commission, 2018h). The changes to the pension system in January 2018 led to a gradual increase in the number of working years required to qualify for a full pension, from 30 to 35 years by 2027, and introduced annual indexation. The indexation will increase old-age pensions by 6.9 % and 7.6 % in 2018 and 2019, respectively. This increase should help to reduce the old-age poverty rate in the short and medium term. In the long term, the increase in the adequacy of pensions might remain limited due to the decrease in the working-age population and low public expenditure on pensions.

As of January 2019, the pension system has been further adjusted to mitigate the risks caused by demographic trends. A points system is introduced for calculating the earnings-related part (individual pension component), which is expected to lead to a more transparent accrual of entitlements in the future. The government shifted the ‘general’ (basic) components of social insurance pensions to the state budget, and the statutory funded pension scheme (second-pillar pension scheme) was strengthened by introducing automatic enrolment for those aged under 40, which should increase coverage. From 2020, the annuities will be paid by a single institution, the State Social Insurance Fund Board. To cope with future economic shocks, Lithuania established a social insurance reserve fund in 2018. This will strengthen the fiscal sustainability of the pension system. However, some concerns remain over pension adequacy in the long term.

⁽²⁴⁾ 6.9 % of GDP in 2016 (11.2 % in the EU), 7.0 % in 2040 (12 % in the EU) and 5.2 % in 2070 (11 % in the EU), baseline scenario.

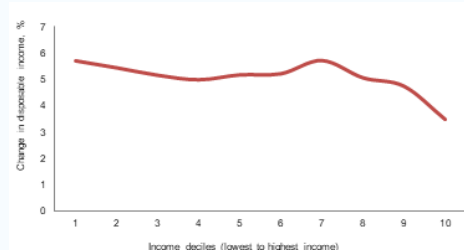
Box 3.3.2: EUROMOD simulations of adopted tax changes

This box presents the results of a simulation conducted by the Joint Research Centre of the European Commission using EUROMOD⁽¹⁾ based on the reforms adopted by the government in mid-2018. From January 2019, notable changes to social insurance contributions (namely their consolidation and the shift to employees) and personal income tax came into force. In addition, the universal child benefit was increased from EUR 30 to EUR 50 per month while the minimum monthly wage was set at EUR 555.

According to the simulation outcome, the adjustments to personal income tax and social insurance contributions are set to result in revenue losses of around EUR 560 million (or 1.2 % of GDP). Though changes in personal income tax are expected to generate additional tax receipts of EUR 1.3 billion (or 2.7 % of GDP), revenues from social insurance contributions are set to shrink by EUR 1.8 billion (or 3.9 % of GDP). The overall simulated tax cuts are around EUR 120 million higher than the estimates provided by the Lithuanian Ministry of Finance. The discrepancies can be explained by the differences in data used for the calculations, such as the fact that EU-SILC does not capture high-income earners well, and assumptions about wage dynamics. The cost of the increase in child benefit is expected to amount to EUR 140 million or 0.3 % of GDP, which is in line with the estimates of the national authorities.

Overall, the simulated reforms have a positive impact on individuals from all income deciles, with the smallest relative gains for the top decile (see Graph 1). Equivalised household income is expected to rise by an average of 4.7 %. The implicit tax rate is expected to fall on average from 8.1 pps in the first decile of equivalised income to 2.4 pps in the tenth. This assessment does not take account of voluntary additional transfers to private pension funds that could eliminate the positive effect of the tax cuts on disposable income.

Graph 1: Reform effect on equivalised household disposable income



Effects on disposable income inequality

are expected to be neutral overall. The simulation shows the Gini coefficient only slightly decreasing from 34.52 to 34.25. However, the at-risk-of-poverty rate drops significantly for households with children. For example, the rate for single-parent families falls by 8.8 pps. This highlights the positive impact of increasing the universal child benefit.

Source: European Commission, Joint Research Centre

Shifting the social insurance contribution burden from employers to employees would provide positive (albeit mild) work incentives. According to the results from the labour supply model, simulated reforms slightly increase both the average participation rate and the number of hours worked. In the former case, the reform marginally raises the probability of the unemployed entering the labour market. In the latter case, the policy changes create an incentive to work additional hours, by shifting from part-time jobs to full-time employment and overtime.

⁽¹⁾ EUROMOD is the tax-benefit microsimulation model for the EU. It simulates benefit entitlements and tax liabilities (including social security contributions) of individuals and households according to the tax-benefit rules in place in

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each Member State. The simulation is based on representative survey data from the European Statistics on Income and Living Conditions (EU-SILC) and covers the main elements of direct taxation, social contributions and non-contributory benefits. An added labour supply module allows estimates of behavioural effects on the labour market.

3.3.4. HEALTH

Health outcomes remain among the worst in the EU. Life expectancy at birth is 6 years below the EU average and characterised by a large gender gap. Excess mortality due to cardiovascular diseases and suicides, mainly among men, is more than double the EU average; in 2016 it was on average 30 % higher in rural areas than in urban areas. Preventable and amenable mortality was respectively 2 and 2.5 times higher than the EU average.

Spending on healthcare is low and major challenges to the efficiency of spending and the quality of health services remain. Health expenditure amounted to 6.3 % of GDP in 2017, and was among the lowest in the OECD (OECD, 2018a). Overall, the focus on quality is insufficient and quality-assurance policies and measures remain underdeveloped. Hospitalisations for ambulatory care-sensitive conditions remain significant and hospital mortality for acute conditions is high. A system-wide support for continuous healthcare quality improvement at the clinical level is not developed and compliance with clinical guidelines and quality indicators in hospitals, even if sometimes monitored, does not inform decisions. Progress in the accreditation programme launched in 2016 is insignificant. Strengthening policy impact evaluation and the application of Healthcare Systems Performance Assessment methods is an important enabling condition for results-driven investments.

Public health policy measures are relatively weak. Public health initiatives, which are the responsibility of local public health offices, are of small scale and the resources to scale up activities are too low. Strengthened co-operation of public health bureaus with primary care centres is a good step in the right direction. However, the effectiveness of measures on the ground is not evaluated and monitoring is limited to the assessment in terms of process indicators. Measures addressing the key drivers of poor health with a focus on specific risk groups are underdeveloped. Despite legislation put in place to

reduce the use of alcohol and smoking, alcohol and tobacco consumption remains high.

Absolute levels of hospitalisation remain high and bed occupancy ratios and variation are low. The shift from hospital to primary care improved the capacities of primary care to manage patient care, but was put on hold at the end of 2017. Some measures which have been taken have the potential to further consolidate the hospital network. These include limiting contracting for surgery and maternity to hospitals exceeding a minimum volume of services, and standardising pathways for stroke and some myocardial infarctions. However, more decisive steps at higher administrative level to plan the delivery of hospital services across municipalities is key to a quicker transition.

Primary care is well organised, with modernised general practitioner and nursing services, but there is room to strengthen its role in managing patients' health. Some guidelines continue to unnecessarily limit the responsibilities of general practitioners, and the share of responsibilities between general practitioners and specialists is not fully delineated. Recent measures to expand the functions of primary care practitioners are a step in the good direction. Furthermore, the role of primary care teams in coordinating patient care, including mental healthcare, is not being fully exploited. Recent measures to reorganise services for patients with mental health problems have the potential to increase access to mental health at primary care level.

Long-term care is predominantly provided by residential care institutions, but not all needs are met. In 2014, 47 % of elderly people in need of long-term care were on the waiting list. As elderly people report having particularly low health status, the needs for integrated social and health services for the elderly will continue to grow. Considering that Lithuania is one of the fastest-ageing Member States, well-functioning and effective long-term care and deinstitutionalisation will remain a significant challenge in the medium term. The deinstitutionalisation programme, launched in 2014, aims at moving people with disabilities and

children from institutional care to home- and community-based care services. Its implementation is going well in reducing the number of children under institutional care, but for persons with mental disabilities the programme is less advanced. Long-term care and deinstitutionalisation will remain a challenge in the medium term and will require adequate investment.

The affordability of healthcare remains a challenge. Out-of-pocket payments represent a third of health spending in Lithuania (32 % in 2016) and are heavily concentrated among older people (aged 60+) and households without children. 80 % of out-of-pocket payments are due to medicines and this proportion is even higher among households belonging to the lowest income quintile (WHO, 2018). Several measures intended to reduce user charges on prescription medicines were implemented in 2017 and 2018, and measures to increase financial protection of the most vulnerable groups have been presented, but not adopted yet. Though declining, informal payments remain high with one in four patients still declaring them in 2016 (Transparency International, 2016). Unmet medical needs due to waiting time exceeded the EU average in 2016. This, together with low affordability, reduces access to quality healthcare, in particular for more vulnerable groups.

Imbalances in the health workforce, including territorial ones, are becoming evident. These imbalances are not addressed through a fully-fledged strategy involving forecasting of professions and skills. Recent measures taken to modernise the system of doctors' training are a step in the good direction. Training of nurses is not adapted to current needs and remains a particular challenge. The territorial distribution of healthcare personnel exacerbates these challenges, with specialists particularly unevenly distributed across the country. Considering the overall ageing of the working age population, increased investment will be needed to address the current and potential imbalances in the supply of the health workforce. The government focuses on creating incentives to attract medical staff to public services by increasing salaries at 20% annual rate in 2018, 2019 and 2020.

3.3.5. EDUCATION AND SKILLS

The quality and efficiency of the education and training systems remain major challenges.

Education and training systems and adult learning remain relatively ineffective in addressing skills shortages and mismatches. Government expenditure on education was 5.2 % of GDP in 2016, above the EU average of 4.7 %. The share of total public government expenditure that goes to education and training has remained broadly stable since 2010, at around 15 % (v around 10.5 % in the EU). However, the funds are mostly used to maintain the buildings and not to improve the quality of education (National Audit Office, 2017). Even though certain constraints are imposed by specifying a minimum amount of expenditure for non-salary expenses such as textbooks, continuing professional development of teachers, ICT and student career guidance, the spending tends to gravitate towards the required minimum level.

Demographic decline has put the school network under pressure.

The number of pupils and students across the education system has declined by 19 % since 2010. This has led to one of the lowest student-to-teacher ratios in the EU (on average there are 8 students for every teacher in primary and secondary school v 13 in the EU in 2016). In addition, strong differences exist across education levels and regions. The number of general school pupils declined by 22 % over the period, whereas that of primary pupils alone rose by 1 %. In geographic terms, while Vilnius County lost 6 % of pupils in general education between 2010 and 2017, the rest of the country saw enrolment decline by 25 %. As a consequence, schools, mainly those in rural areas, merge classes by bringing together pupils from grades 1 to 4 into a single class, which risks compromising the quality of education. This demographic shift calls for strategies to preserve access to high-quality education for all while ensuring the efficiency of the school network and supporting teachers affected by school consolidation.

The new 'class basket' model might prevent an efficient organisation of the school network.

In September 2018, the government moved from the 'student basket' funding model for schools to the 'class basket' and 'quality basket' models. The 'quality basket' model aims to link funding with quality indicators while the 'class basket' model

bases funding on the number of classes in a school. In the new system, funds for teacher salaries cannot be used to cover administrative costs and municipalities must add extra funding for extremely small classes. However, the model does not prevent funding for schools with a small number of pupils, weakening the incentives to optimise the oversized school network and to make it more efficient. First results of the implementation of the new funding system are expected by March 2019.

Reforms to teachers' salaries and initial training have been launched but the public debate on wage increases is ongoing. A new collective agreement with teacher unions was signed in November 2017 and launched a move from salaries based on teaching hours to a fixed salary model. The model, introduced in September 2018, aims to provide a smoother salary progression. In the new system, school heads are more responsible for managing teachers' working hours. The final step in the teacher system reform relates to initial teacher education. The new Teacher Training Regulation adopted in May 2018, sets quality requirements for study programmes and teacher placements, as well as quality criteria for national teacher training centres, but will require investment to become operational.

Participation in early childhood education and care (ECEC) is increasing, but challenges in access and quality remain. Participation in ECEC by children older than 4 years is increasing but remains below the EU average (91 % vs 95 % in 2016). For children under 3, it has increased only marginally and is half the EU average (15 % in 2016 vs 33 %). The increase in overall enrolment in ECEC is tempered by regional differences in participation and quality. The enrolment of 3-6 year-olds in rural areas is approximately half the rate in urban areas. These disparities arise from the limited availability of public ECEC, transport difficulties in rural areas and differences in demand. The increasing number of private centres is making ECEC services more widely accessible, mainly in urban areas. However, the proportion of the costs of privately-provided ECEC reimbursed through public subsidies varies by municipality, and not all families receive a subsidy. Investment is needed to increase access to public ECEC.

Lithuania's education and training system is successful in preventing early leaving. Lithuania continues to perform well in preventing early leaving from education and training. With the rate at 5.4 % in 2017, Lithuania reached its Europe 2020 target and is among the EU's top performers (EU average 10.6 %). However, the early school leaving rate for people with disabilities is much higher than the EU average (36 % v 24 %). Lithuania has launched the Action Plan on the Inclusion of Children in Education and Multidimensional Education for 2017-2022, which aims to reduce the number of children in special schools, but it is too early to assess progress.

School outcomes are below the EU average, with a wide performance gap between rural and urban areas. There is a significant gap between students from urban and rural areas, which have smaller schools and merged classes. This gap is wider than observed among Lithuania's regional peers (OECD, 2017) and is mostly explained by the socio-economic status of rural families and schools. A small share of audited schools implement some form of monitoring of students' progress, and in only 18 % do leaders indicate the improvement of learning outcomes and school performance indicators as a goal (National Audit Office, 2017). Additional efforts are needed to improve school monitoring and better identify individual educational needs in order to improve school outcomes.

The number of students in higher education continues to decrease. In 2017 Lithuania remained the EU leader in tertiary educational attainment, at 58 % of people aged 30-34. In 2017, the employment rate of recent tertiary graduates was 7 pps higher than the EU average (92 % vs 85 %). Due to demographic trends, the number of students fell by 37 % between 2010 and 2017 and is expected to further decrease, partly because the minimum admission requirements have been raised to improve the quality of new entrants. However, higher education in Lithuania is not inclusive: the tertiary education attainment gap between people with and without disabilities is twice the EU average (28 pps v 13 pps).

Implementation of the reform of the higher education system is progressing at a slow pace. A number of institutions and programmes have not adjusted to the declining number of students, thus

lowering the quality and efficiency of higher education. The government launched a series of reforms, most notably to consolidate the network of universities and strengthen the accreditation system. However, their implementation is lagging. Three mergers are currently ongoing but significant steps are still required to consolidate the higher education network comprising more than 40 state-owned and private universities and colleges.

In 2017, Lithuania took additional steps to upgrade its vocational education and training (VET) system. The initial steps seem promising, but significant and consistent progress is still needed to implement the changes in governance and the curriculum if the upgrade is to transform learning experience in schools. In 2019, 24 updated or new professional standards, as well as the guidelines for continued renewal of professional standards, need to be adopted. All modular VET programmes should be updated in line with new professional standards by July 2020. Extending access to new (modular) programmes is envisaged as at present only 24 % of VET qualifications can be attained through such programmes, even if 43 % of all VET students were already enrolled in modernised programmes in 2018. Reform of the governance of VET institutions was completed in 2018 but it has yet to be seen whether the involvement of municipalities and the social partners will result in VET making a stronger contribution to local needs for skills, improved work organisation practices and technology adoption. Investment is needed to increase the uptake of updated modular VET programmes and broaden work-based learning opportunities.

Adult participation in learning remains low. At 5.9 % in 2017, it remained below the EU average of 10.9 %. Some measures to encourage adult learning have been rolled out at municipal level but adult learning features low on the political agenda and in the education reform (Ministry of Education and Science, 2018). The resources deployed have very limited impact on the ground. There is a lack of coordination of the validation of programmes across education, the labour market and the voluntary sector. Coverage by existing instruments, such as financial incentives to companies or guidance to individuals, is low or not well balanced or targeted. Less than 10 % of adults

in Lithuania report having received any guidance on learning opportunities in 2016, compared to an EU average of 24 % (European Commission, 2018i). Public financial incentives or grants are mostly focused on medium-sized and large businesses. Investment is needed to boost adult learning and to put in place a sustainable adult learning system, in particular targeting low- or medium-qualified adults and smaller companies.

3.3.6. INVESTMENT NEEDS

A rapidly shrinking working age population and persistently high levels of poverty and inequality call for increased investment in education, training and social inclusion to foster long-term inclusive growth. Skills shortages and mismatches are among the main obstacles to business investment, pointing to the need to invest more in flexible upskilling and reskilling opportunities and better anticipate new skills requirements. Better aligning education curricula to labour market needs and expanding adult participation in learning are needed to reduce skills shortages. Making use of the full labour potential also requires investment in social inclusion and a reduction in material deprivation; an affordable and effective healthcare system; and the availability of child and long-term care services, including deinstitutionalisation.

3.4. COMPETITIVENESS REFORMS AND INVESTMENT

3.4.1. PRODUCTIVITY

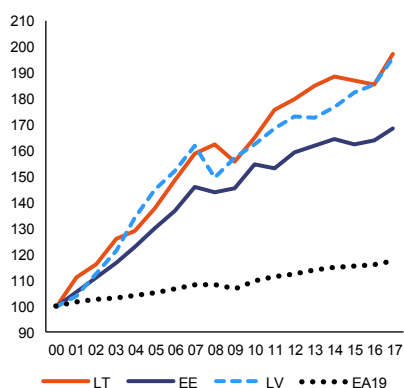
Following a period of rapid catching-up with the EU, productivity growth has slowed since the crisis. At the same time, labour productivity growth rate is still among the highest in the EU. This reflects the fast catching-up process and the effects of the structural transformation of the economy towards modern technologies, mainly in agriculture and manufacturing. In 2017, labour productivity stood at over 75 % of the EU average, almost 35 pps higher than in 2000. However, productivity growth has been more or less stagnant in 2012-2016. This is mainly linked to subdued total factor productivity growth, indicating a lack of technology uptake by companies. Accompanied by a rebound in investment growth (see Section 3.4.2), productivity growth recovered in 2017. Increasing the share of knowledge-based activities in the economy, based on skills and technology upgrade, would help sustaining these positive developments and resume the fast catch-up process.

confirmed by firm-level data. At firm level, labour productivity growth appears to have been higher among exporting firms (compared to non-exporters) and — contrary to most EU countries — among low-productivity firms (CompNet, 2018).

Population decline impacts productivity.

Lithuania's rapidly declining population (see Section 1) impacts productivity growth in several ways. Net emigration is leading to increasing skills shortages, which are already very prominent (see Section 3.3.1). Furthermore, it is making the provision of a number of activities less productive because of diminished usage, such as schools, hospitals, roads and energy infrastructure. On the other hand, a tightening labour supply and resulting high wage growth is putting pressure on firms to invest in productivity - enhancing technologies, such as automation and robotisation. This is becoming increasingly important in the context of increasing unit labour cost and its impact on cost-competitiveness (see Section 3.4.3)

Graph 3.4.1: Labour productivity, whole economy (2000=100)



Source: European Commission

Productivity growth is concentrated in low value added sectors. A breakdown of real productivity growth for 2016 shows that it has been highest in low value added sectors, such as agriculture and manufacturing. These are also sectors that are strongly oriented towards exports and which experience pressure to innovate in order to maintain their cost competitiveness. This is

3.4.2. INVESTMENT

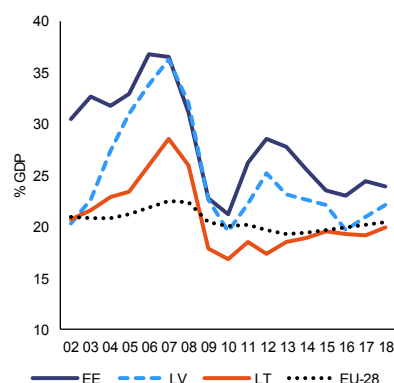
Investment needs

The economy needs additional investment in innovation, resource efficiency and connectivity to ensure a smoother integration into the single market and raise productivity growth. The level of innovation and technology absorption capacity of businesses in Lithuania is low. Higher investment levels are needed, especially in the private sector, to increase productivity growth. The economy remains relatively resource-intensive, with high dependency on energy and material imports. Resource productivity is low while energy consumption is high, especially in the residential and transport sectors. More investment in energy efficiency and domestic energy generation from renewable sources would help to 'green' the economy and put it on a more sustainable growth path, while also reducing dependency on energy imports. Better connectivity of air, rail, maritime and road transport would increase the economy's productivity and allow it to take full advantage of the single market (see Section 3.4.4).

Investment

Despite recent increases, investment remains at a relatively low level, notably in the corporate sector. Total investment stood at 19.7 % of GDP in the third quarter of 2018. During the crisis, corporate sector investment dropped by almost 40 % between 2007 and 2009. It has slightly recovered since, but has remained significantly below the other Baltic countries and the EU average throughout the period (see Graph 3.4.2). However, from 2017, investment started to grow robustly (see Section 1) and has been accompanied by increasing productivity growth. This momentum needs to be sustained in order to improve long-term growth prospects and speed up the convergence process. In the last decade, household and government investment, which is highly dependent on EU funds, stayed rather stable. However, at 3.3 % of GDP, public investment in Lithuania, although above the EU average of 2.8 %, remains 30-40 % below the level of other Baltic countries. In view of possible changes in the allocation of EU Cohesion Funds and the national co-financing rate, Lithuania would need to plan sufficient public investment to ensure funding for key policy areas.

Graph 3.4.2: Total investment

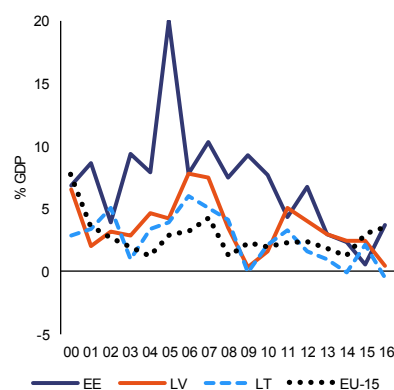


Source: European Commission

The lack of investment is aggravated by low levels of inward foreign direct investment (FDI). FDI inflows have been consistently below those of peer countries in recent years (see Graph 3.4.3). They remain depressed at 1.2 % of GDP,

compared to levels around 5 % before the crisis. The lower inflows have resulted partly from poor international market conditions holding back investment and FDI, but also from transforming the Lithuanian economy to a market economy – the level of inflows seen before the crisis will probably not be reached again because they were related mostly to large privatisations and acquisitions. However, Lithuania is still far from the productivity frontier and attracting FDI, with the transfer of capital and knowledge it implies, remains an important policy goal.

Graph 3.4.3: FDI inflows



Source: United Nations Conference on Trade and Development (UNCTAD)

Research, development and innovation

The competitiveness of the country's research and innovation (R&I) system is hampered by the shortage of skills and a lack of a coherent programme for publicly funded science to collaborate with businesses. Lithuania is a moderate innovator, ranking at around 70 % of the EU average (European Commission, 2018j). In particular, the low level of R&I outputs shows that policies to date have not yet delivered the expected benefits for the economy and competitiveness. Despite gradual progress, the proportion of innovative businesses in Lithuania is lagging behind the EU average, in particular those introducing product, organisational or marketing innovations (OECD, 2018b). Cooperation between businesses and universities or research centres —

an important channel of knowledge transfer and commercialisation — remains scarce.

Investment in R&D is below the EU average and remains highly dependent on ESI Funds. In 2017, total R&D investments amounted to only 0.9 % of GDP, compared to an EU average of 2.1 and far away from its 2020 target of 1.9 %. Public investment, which is funded mainly from EU funds, made up the bulk of R&D investment at 0.6 % of GDP. Private R&D investment reached only 0.3 % of GDP, which is one fifth of the EU average and constitutes one of the lowest private investment levels in the EU ⁽²⁵⁾. Public R&D investment is focused on the Smart Specialisation strategy, which is rather broad and covers most economic sectors, thus contributing to a thin spread of limited funding.

The underfunding of researchers and fragmentation of the R&I system is resulting in low quality of public research. As part of the ongoing reform of the higher education system, multiple amendments to the Law on Research and Studies in 2017-2018 provide for a gradual increase in researchers' salaries by 40 % over 2018 and 2019 and the 83 % increase in PhD scholarships announced for 2019. They also introduced industrial PhDs and a progressive move to reward institutional performance by incentivising cooperation with industry, internationalisation and participation in Horizon 2020. The merging of universities with the aim of consolidating the country's fragmented research capacities is ongoing (see Section 3.3.5). To ensure its success, this process requires close monitoring by universities and authorities and a strengthening of their administrative capacities, especially in relation to the development and implementation of coherent joint research agendas of the merged entities.

The economy's capacity to innovate and absorb R&I is limited. Innovating firms in Lithuania are relatively small in size. They are weakly integrated around domestic clusters and into global value chains, with low potential of attracting critical mass investments and developing large-scale innovations. Low business demand for research and innovation is mainly predetermined by the

structure of the economy, which mostly consists of lower value added industry and services. In Lithuania total value added in high and medium high-tech manufacturing and knowledge-intensive services is among the lowest in the EU and stagnant since 2007. Further investment in innovative SMEs, including internationalisation and support for moving up global value chains, clusterisation and cooperation activities could support a shift to high-tech/higher value added products.

The ongoing reform of innovation policy aims to raise innovation levels and absorption capacity. The leadership of the Ministry of the Economy and Innovation has been strengthened through being given additional responsibilities to ensure the promotion of innovation and boost the experimental development part of research and innovation ⁽²⁶⁾. The reform takes into account the recommendations stemming from the European Commission's Horizon 2020 Policy Support Facility in 2017, which is focused primarily on increasing the engagement between business and science and the attraction of innovation intensive FDI (RIO, 2018). The implementation of recommendations is uneven, however. The highest uptake is in relation to FDI-related recommendations and progress is still required on aspects such as the overhaul of financial incentives for science-business cooperation or the revision of the system to financially reward research performance. The success of the reform will require ensuring the coherence of R&I policies, underpinned by efficient coordination of the policy mix and close cooperation between the involved authorities.

Resource efficiency

Resource productivity in Lithuania remains low. It has not grown since 2010 and at 0.8 EUR/kg remains far below the EU average of 2.0 EUR/kg. Eco-innovation, where Lithuania is also below the EU average, could help resource productivity to improve. Investments need to be scaled up to unlock the potential in sectors such as waste management, solar and wind energy, green transport and construction.

⁽²⁵⁾ Business expenditure on R&D as % of GDP — Lithuania ranks 25th in the EU.

⁽²⁶⁾ Stipulated in the new Law on Technologies and Innovation, adopted in 2018 and changes to the Law on Research and Studies, 2018.

Lithuania is taking further steps towards a more circular economy, but waste management remains a challenge. Investment will need to be scaled up to meet the new post-2020 EU recycling targets for different waste streams⁽²⁷⁾. Additional efforts will be needed to improve waste prevention, product reuse, separate waste collection at source and out-of-home separate collection, sorting and recycling. Lithuania has one of the lowest landfill fees in the EU, which remains an obstacle to improving the economic viability of recycling. New energy-from-waste projects are in the pipeline, creating the risk of over-capacity in this sector.

To achieve national climate and renewable energy goals, significant investment is needed. Lithuania expects emissions to rise by 6 % by 2030 relative to 2005 levels whereas its binding EU target is a reduction of 9 %. With a 25.6 % share for renewables in 2016, Lithuania is already above its 2020 target (23 %) and aims to reach an ambitious 45 % by 2030. This includes doubling domestic power generation capacities (with 70 % of electricity produced domestically in 2030). This will be achieved through investment in wind and solar power generation and wide uptake of small-scale renewable installations owned by private energy consumers and communities (with 30 % of consumers producing energy for their own needs in 2030). Successfully integrating the increased amounts of renewable energy and the large number of producing consumers will also require investment in smart energy systems, including transmission, distribution and storage infrastructure as well as investment in increasing the amount of required balancing capacities.

⁽²⁷⁾ Directive (EU) 2018/851, Directive (EU) 2018/852, Directive (EU) 2018/850 and Directive (EU) 2018/849 amend the previous waste legislation and will set more ambitious recycling targets for the period up to 2035.

Lithuania already reached 68 % of renewables in central heating with existing heat production facilities. Due to technical limitations and thermal load shifting over diurnal, weekly and seasonal periods some of the equipment operate at only 50 % of their capacity. Therefore, additional investments are needed for the installation of heat storages to reach their full operational potential and efficiency. That would increase amount of energy produced from renewables as well as increase reliability of district heating systems.

The share of renewables in transport remains low. Transport is the sector with the highest energy consumption and is responsible for half of Lithuania's total greenhouse gas emissions. Cars remain the main mode of transport while public transport (rail and buses) accounts for only 10 % of passenger travel. However, the share of renewables in the transport sector is very low and decreasing. It fell from 4.6 % in 2015 to 3.7 % in 2017, well below the 2020 target of 10 %. Alternative-fuel passenger cars represent less than 1 % of total cars, despite expanding networks of refuelling points and electric charging points.

Energy consumption is increasing and additional efforts are needed to meet the national climate and energy targets. The residential and transport sectors are responsible for the highest share of final energy consumption. While the final energy intensity in transport is increasing, some savings have been observed in the industry and services sectors as well as in the residential sector. However, energy intensity in these sectors is still above the EU average and renovating the large stock of inefficient housing and public buildings remains a challenge. The financing gap for modernising multi-apartment and public infrastructure is estimated at EUR 2 billion until 2030.

Box 3.4.1: Investment challenges and reforms in Lithuania

1. MACROECONOMIC PERSPECTIVE

Despite a pick-up in 2017 and 2018, investment in Lithuania remains rather low at 19 % of GDP. This is below the EU average and the levels of other Baltic countries, mainly because of lower investment in dwellings and machinery. Recently, however, productive investment — machinery and other investment (including R&D) — has started to grow at a healthy pace. This has been driven by private investment in the context of high capacity utilisation and labour shortages, supported by high corporate profits, positive expectations and easy financing conditions (see Section 1). In the coming period, investment should remain one of the main drivers of growth, with support also from faster use of EU funds from 2019.

From 2018, there are three promotional banks in Lithuania. The Investment and Business Guarantees Agency (INVEGA) promotes start-ups, SMEs and innovations. The Public Investment Development Agency (VIPA) promotes the renovation and development of residential and public infrastructure and energy efficiency. The Agricultural Credit Guarantee Fund supports agricultural products.

2. ASSESSMENT OF BARRIERS TO INVESTMENT AND ONGOING REFORMS

Public administration/ Business environment	Regulatory/administrative burden		Financial Sector / Taxation	Taxation	
	Public administration	CSR		Access to finance	
	Public procurement / PPPs			Cooperation btw academia, research and business	CSR
	Judicial system			Financing of R&D&I	CSR
	Insolvency framework			Business services / Regulated professions	
Labour market/ Education	Competition and regulatory framework		Sector specific regulation	Retail	
	EPL & framework for labour contracts			Construction	
	Wages & wage setting			Digital Economy / Telecom	
	Education, skills, lifelong learning	CSR		Energy	
				Transport	

Legend:		
No barrier to investment identified		Some progress
Investment barriers that are also subject to a CSR	CSR	Substantial progress
No progress		Fully addressed
Limited progress		Not assessed yet

The business environment is generally favourable to investment, which faces only limited barriers (European Commission, 2015). According to the World Bank's 2018 Ease of Doing Business indicator, Lithuania is the 14th easiest country in the world to run a business in. To further improve the business environment a number of measures have been introduced recently in the area of protecting minority investors, paying taxes, trading across borders and labour market regulation.

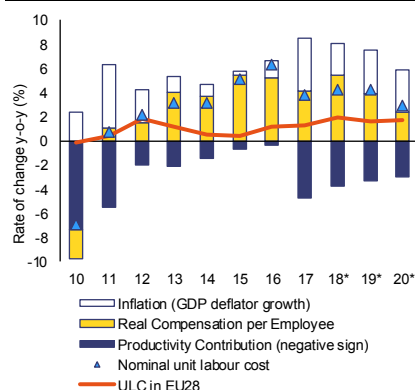
Main barriers to investment and priority actions underway:

1. The lack of skilled workers remains a major bottleneck to investment. Although Lithuania invests more in education and training than the EU average, the efficiency of this spending remains low and school outcomes remain below the EU average. Adult learning and vocational education and training have so far not been sufficiently effective in raising the level of skills in the workforce. To address the issue, reforms are being implemented in Lithuania's education and training system (see Section 3.3.5).
2. Poor innovation results are not helping to support the competitiveness of the economy and attract investment. Investment in R&D, especially in the private sector, is low while tax incentives, although generous, do not appear to be motivating enough for companies to innovate due to their complexity. Cooperation between the public and private sectors is limited. To address this issue, the government has started implementing the reform of innovation policy (see Section 3.4.2).

3.4.3. COMPETITIVENESS

Rapid wage growth in Lithuania has outpaced productivity growth in recent years. Nominal unit labour costs (ULC) increased cumulatively by 16 % in 2014-2017, the fastest growth in the EU. Following a very strong ULC growth in 2015 and 2016, of 5.1 % and 6.4 % respectively, it decelerated somewhat to 3.8 % in 2017 (see Graph 3.4.4). Since 2011, wage growth has consistently outweighed productivity growth. ULCs have grown across all sectors and most strongly in construction, which is in line with the recent surge in construction activity. Wage growth over recent years has been mainly driven by a tightening labour market and a range of labour market policies, in particular consecutive minimum wage increases. For the coming years a continued increase in ULCs is forecast, on the back of upward wage pressures stemming from the tight labour market conditions.

Graph 3.4.4: Breakdown of ULC growth



* Forecast

Source: European Commission

Long-term competitiveness could be hampered by sustained high wage growth and subdued productivity growth. The unit labour cost growth has considerably exceeded that of Lithuania's main trading partners. This is reflected by the ULC-based real effective exchange rate (REER) ⁽²⁸⁾,

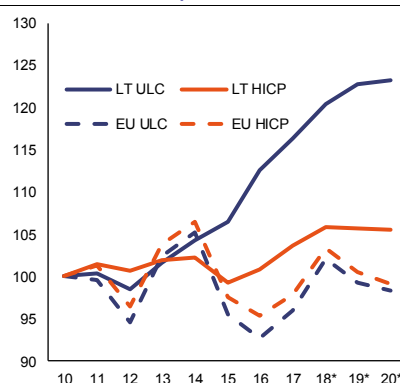
⁽²⁸⁾ The Real Effective Exchange Rate (REER) assesses a country's price or cost competitiveness relative to its principal competitors in international markets. Changes in

which appreciated by 11.5 % between 2014 and 2017. This wage cost appreciation relative to trading partners implies a risk of undermining the price competitiveness of Lithuania's exports.

The pass-through of the high labour cost growth to prices has so far remained muted.

Wage growth has been slow to affect prices of goods and services. This is reflected in the inflation-based REER (measured by harmonised index of consumer prices (HICP), which has appreciated much more moderately than the ULC-based REER, at 2.3 % over 2014-2017 (see Graph 3.4.5). Given the position of Lithuania as a price taker on international markets, ULC increases in the export sector have mainly come at the cost of a reduction in profit margins. While this ensures price competitiveness in the short run, it may harm investment and might not be a sustainable long-term solution.

Graph 3.4.5: Real effective exchange rate, index (ULC and HICP based)



* Forecast

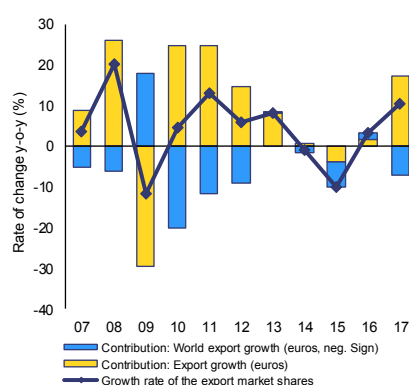
Source: European Commission

Despite the rising labour costs, Lithuania's external performance does not seem to have been harmed so far. The growth in Lithuania's export market share in 2017 was among the highest in the EU, supported by strongly favourable overall economic sentiment as well as the rebound in exports to Russia. At the same time,

cost and price competitiveness depend not only on exchange rate movements but also on cost and price trends. A rise in the index means a loss of competitiveness.

the 5-year increase in export market shares shows a relatively muted development. This is mostly due to the sharp drop in Russian demand following the introduction of international sanctions (see Graph 3.4.6). Positive developments in the export market shares are reflected in the trade balance, and consequently in the current account balance. In 2014-2017, the current account has shown a small deficit of 0.7 % of GDP on average, with the most recent year 2017 posting a surplus of 0.9 % of GDP. According to the 2018 Commission Autumn Forecast, for the coming years a small deficit is expected, which can be linked to the projected pick-up of EU funds.

Graph 3.4.6: Export market share development



Source: European Commission

3.4.4. SINGLE MARKET INTEGRATION

Transport

Low international connectivity is hampering competitiveness and limiting the benefits from the single market. Lithuania suffers from limited international connectivity in terms of rail, road, maritime and air. Rail traffic is dominated by East-West flows, while the North-South axis remains underdeveloped. Lithuania ranks 21st in the EU Transport scoreboard, and continues to have the least developed TEN-T core road and rail network⁽²⁹⁾. The Lithuanian part of the TEN-T

Core Network essentially still needs to be built, with only the inland waterways completed. The quality of Lithuania's transport infrastructure and logistics is close to the EU average for road and rail but below the average for ports and air transport infrastructure.

Expanding and upgrading the transport infrastructure requires large investments. The priorities for transport investments include TEN-T and local infrastructure, sustainable transport, and safety. In the context of the North Sea-Baltic Corridor, 54 projects have been identified with a total investment need of EUR 4 billion over 2016-2030. The bulk of this focuses on the Via Baltica highway and electrification of the rail network, which remains among the least electrified in the EU, with only 6.4 % of rail tracks electrified. To complete the largest ongoing project, Rail Baltica, will require additional investment of about EUR 2 billion (4.2 % of GDP) (Rail Baltica, 2017). This railway will connect two major economic centres (Kaunas and Vilnius) with Poland, Latvia and Estonia, unlocking additional benefits from the EU single market. It will also help reduce the growing road traffic intensity, thus improving overall transport efficiency. The project is scheduled for completion by 2026 (European Commission 2018k).

Additional investments are needed to improve road safety. Lithuania has one of the EU's highest road accident fatality rates. In 2017, it reported 67 road fatalities per million people, compared to the EU average of 49. Lithuania can catch up with better-performing countries by investing in safer infrastructure (e.g. the ongoing works on Via Baltica), improving road users' behaviour and introducing safer vehicles.

Accessibility and competition in the transport market remain a challenge. A weak regulatory body and non-existent competition constitute obstacles to the efficient functioning of the rail market. The long-pending issue of the lack of mandatory public tender procedures for the new Klaipėda port land lease contracts, which constituted an unjustified restriction on freedom of establishment, has been solved through recent legislative amendments. Their implementation will need to be monitored.

⁽²⁹⁾ The EU Transport scoreboard compares how Member States perform in 30 categories covering all aspects of transport.

Single energy market

The opening of the liquefied natural gas (LNG) terminal has reduced Lithuania's energy dependence on Russia. The LNG terminal in Klaipėda started operating at the end of 2014 and has allowed for diversification of gas suppliers in Lithuania and the whole Baltic region. The terminal has sufficient capacity to cover around 90 % of all current demand in the Baltic States. It has helped to reduce Lithuania's high dependency on gas imports, significantly reduced the price of gas for consumers and improved the country's energy security. In 2017, 46 % of total gas consumption volume was imported through the LNG terminal. Progress in building the gas interconnector pipeline with Poland is slow, however. This pipeline (known as GIPL) will connect the Baltic countries with the continental European gas network for the first time and is essential for developing the regional market for natural gas. The European Commission has been working with Poland to overcome the delays faced by the project.

In summer 2018, the three Baltic states agreed on how to synchronise their electric grids with the European network. For historical reasons, the Baltic states are still operating in a synchronous mode that forms the so-called BRELL ring (Belarus-Russia-Estonia-Latvia-Lithuania). To reap more benefits from the single market and increase the security of their electricity supply, the target is set to synchronize Baltic countries electricity grids with continental Europe by 2025. After years of discussions it is decided that synchronisation will take place through Poland, notably via the existing link between Poland and Lithuania (LitPol) together with a new link. The drafting of a connection agreement is expected to be completed by spring 2019. A EUR 323 million grant is already awarded to finance 1st stage of synchronization project. The parties are preparing an application for an additional financing of EUR 805 million necessary for the 2nd stage of the synchronization process towards its completion until 2025.

In its forthcoming National Energy and Climate Plan, Lithuania will provide an overview of its investment needs until 2030 for the different dimensions of the Energy Union. They will include renewable energy, energy efficiency,

security of supply, and climate mitigation and adaptation. The Plan is to be adopted by 31 December 2019 in line with the Regulation on the Governance of the Energy Union and Climate Action⁽³⁰⁾. The information provided, including in the draft plan submitted on 17 December 2018, will further help in identifying and assessing the country's energy and climate-related investment needs.

Digital Single Market

Lithuania faces obstacles in preparing for the rollout of the next generation of mobile data-based services. The government has developed a strategy on usage of the 700 MHz band, which is key for the future 5G rollout and the deployment of 5G-based services all over the European territory. Nevertheless, due to restrictions stemming from cross-border coordination issues with non-EU countries, the timely implementation of the strategy remains a challenge.

Lithuania performs relatively well on mobile access and pricing of fast broadband networks.

The Lithuanian broadband price index ranks among the top performers in the EU. Lithuania has good 4G coverage (98 % of households) and take up. However, fixed broadband coverage is still below the EU average at 96 %, which means that 4 % of households cannot have fixed internet at home. As far as take-up of fixed broadband is concerned, only a low percentage of households has internet at home, with Lithuania among the worst performing countries in this regard (64 % compared to 77 % EU average) (European Commission 2018f). Challenges related to the lack of fast broadband connectivity in rural areas (see Section 3.4.4) are preventing a share of the population from taking advantage of the digital and technological transformation. Currently, Lithuania is implementing broadband infrastructure projects to improve coverage of rural

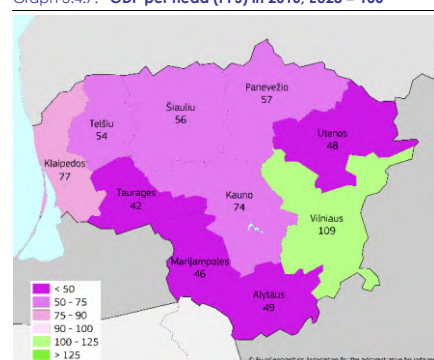
⁽³⁰⁾ Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council (Text with EEA relevance.).

areas and is launching the project "Development of Next Generation Access Infrastructure RAIN3", with the goal of further increasing coverage with the next generation network.

3.4.5. REGIONAL DISPARITIES

Significant differences persist among Lithuania's regions even as the country as a whole is converging rapidly with the EU. In 2016, GDP per capita was 2.6 times higher in the richest than in the poorest NUTS3 region of Lithuania ⁽³¹⁾. This gap is higher than two decades ago and it continues to grow (See Map 3.4.7). Most economic development takes place in Vilnius and Kaunas counties, which contribute 42 % and 20 % to the total GDP of the country, respectively. The two cities have played a key role in Lithuania's convergence process whereas economic growth has been much lower in the predominantly rural regions, which cover most of the Lithuanian territory and host nearly 55 % of the population. In 2016, the Vilnius and Kaunas regions accounted for 81.7 % of total FDI, with 68 % taken by Vilnius city. The Vilnius region attracts most of the investment in knowledge-intensive services, while FDI in manufacturing has shifted to other regions.

Graph 3.4.7: GDP per head (PPS) in 2016, EU28 = 100

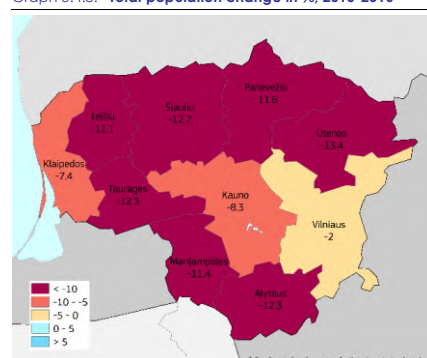


Source: European Commission

⁽³¹⁾ Nomenclature des unités territoriales statistiques — territorial units defined for statistical purposes. NUTS1 (3-7 million inhabitants), NUTS2 (800 000 to 3 million inhabitants), NUTS3 (150 000 to 800 000 inhabitants).

The rapid depopulation and ageing of regions is putting pressure on the efficiency and quality of public infrastructure and services. The rapid decline in and ageing of the population, due to negative demographic trends and external and internal migration, are much stronger outside the capital region and major cities (see Map 3.4.8). This poses a challenge to the country's prospects of achieving more cohesive and sustainable growth, but also for the efficiency and quality of its public sector as it is putting significant pressure on the education, health and social systems (see Section 3.3). The at-risk-of-poverty-rate in rural areas is considerably higher than in cities and the gap continues to grow.

Graph 3.4.8: Total population change in %, 2010-2016



Note: Total population in the EU28 in the same period increased by 1.64%.

Source: European Commission

The lack of adequate skills and the high share of the population that is economically inactive is weighing on the competitiveness of predominantly rural regions. General weaknesses analysed in Sections 3.3 and 3.4 are amplified at the regional level. Small, low-tech and less knowledge-intensive companies and low-productivity farming dominate the economy of predominantly rural and intermediate regions. At the same time, most FDI and productive public investment is concentrated around the two main economic development poles of Vilnius and Kaunas. This leaves many businesses in the other regions lagging on technological progress and this weighs heavily on their productivity. Due to demographic trends in the country, the rural and intermediate regions are dominated by residents who are older, economically less active and have

lower socio-economic status. Despite persistently high levels of unemployment in these regions, these factors result in limited availability of adequately skilled labour and generally low domestic demand. This limits their ability to attract the investment necessary for sustainable regional economic development, and further reinforces the downward spiral of declining regions and the socio-spatial polarisation within the country.

The quality of public services varies among regions, resulting in region-specific investment needs. The higher concentration of the population in cities and surrounding areas is putting additional pressure on, and creating the need for investment in, sustainable urban mobility and social infrastructure. On the other hand, depopulation together with the ageing of the population is putting even more pressure on the efficiency and quality of public services in the predominantly rural regions, creating particular challenges in the health and education sectors. There are wide disparities in education and health outcomes in urban centres and rural areas, pointing to gaps in access to good quality services (See Section 3.3). The slow speed of reforms in education and health institution networks to adapt them to the swift population decline in smaller towns and rural areas is leading to serious efficiency issues: an increasing share of funding is spent on maintenance of buildings and administration rather than on the quality of education and health services. Moreover, high emigration rates and a lack of medical personnel are further thinning out health services outside the main cities.

Significant disparities in mobility and digital infrastructure endowments underline distinct investment needs. Connections between TEN-T corridors and national or local transport networks — across Lithuania's borders — are rated among the least developed in the EU (see Section 3.4.3). Gaps in connectivity with peripheral and border regions are still substantial as reflected by the share of population in a neighbourhood of 180 km radius accessible within 1h30 by road is 44% (below the EU average of 46%). The mobility difficulties are limiting both the possibility for people to commute to work and the country's attractiveness for new investments. In addition to infrastructure gaps, mobility bottlenecks are also caused by inconvenient public transport routes and schedules, fragmented municipal public transport

systems or a lack of incentives or support for regular commuters. Moreover, while overall Lithuania performs relatively well on digital mobile coverage and take-up, there is a significant digital divide between urban and rural areas as regards fixed broadband connectivity: only 87 % of rural households have internet access, below the EU average of 92 % (European Commission 2018f). While Lithuania becomes more digitised, its electronic communication networks, especially the public very high-capacity networks, become critical infrastructure that need to be secured from cyber threats. It is important for the Lithuanian economy that citizens and businesses, whether in the countryside or in cities, can get access to connectivity with high speed and security.

The lack of a coherent regional development strategy is hindering the effectiveness of cohesion policy investments. Most of the productive investment takes place in the largest cities, while other regions receive a much smaller share of the funds and mostly invest in quality of life. In the absence of a national strategy for territorial development and 'space aware' sectoral strategies, the territorial investments are often driven by national sectoral priorities. In most cases territorial development strategies are not linked to any regional specialisation or potential economic development of the territory (with the exception of Vilnius and Klaipėda) and are limited to the administrative boundaries, with no functional approach to building linkages that would allow wealth or opportunities to spread from richer to poorer regions. The implementation of integrated territorial development strategies is also hampered by the low capacity of local and regional bodies to administer integrated territorial investments, their low financial independence and the lack of incentives to attract investments and create jobs.

Better access to quality public services and connectivity could help increase the attractiveness of the poorest regions. The EU Cohesion Funds will continue to represent a significant share of overall public investments in Lithuania, with an impact of 1.7 % on projected 2021-2027 GDP, or 2.7 % of GDP when national co-financing is included (European Commission 2018i). Tailored strategies for the various regions are needed in order to address their specific challenges. The investments in the economic development prospects of the major cities and their

functional urban area need to be coupled with investments in the needs and potential that exist in the predominantly rural regions. These including the inner peripheries located on the border with Belarus and Russia (Taurage, Utena, Alytus). Appropriate cooperation mechanisms, international connections and incentive regimes to firms tailored to specific characteristics of each region would support the regional catch-up process. Incentive regimes providing access to finance in particular need to be justified by clearly identified market failures, taking account of the availability of financial instruments (see Section 3.2.2.).

3.4.6. GOVERNANCE AND INSTITUTIONAL QUALITY

Business environment

The business environment improved but resolving insolvency remains an issue. In 2018, Lithuania improved in terms of ease of doing business (World Bank, 2018a), ranking higher than Estonia, Latvia and Finland. It strengthened minority investor protections by introducing stricter requirements for the disclosure of the compensation of directors and other high-ranking officers on an individual basis. Exporting was made easier by improving the automated customs data management system. The government is also performing fitness and compliance checks to reduce the costs and administrative burden for businesses. Specific measures also aim to assess the regulatory impact on SMEs, but there is scope to improve their effectiveness. The time, cost and conditions for resolving insolvencies remain obstacles to doing business, in particular for failed entrepreneurs seeking to start over. The government put in place some measures to support second-chance entrepreneurship, including awareness-raising, training and mentoring, but more progress is needed.

The shadow economy continues to weigh on the business environment. The shadow economy index worsened by 1.7 percentage points in Lithuania to 18.2 % in 2017 (Stockholm School of Economics in Riga, 2018). Lithuania continues to have a relatively high level of bribery. Corruption and unfair practices by other companies remain among the challenges to business, worsening the

business environment, companies' performance and public sector effectiveness.

Public administration

The government is implementing a reform to further improve the quality of the public sector. Changes laid down in the new Civil Service Law include a narrower definition of public servants, an evaluation of their performance, centralised recruitment procedures, a more flexible incentive system and increased liability. The measures also aim to optimise public sector institutions and introduce clear tasks among them, to generate savings by introducing shared services, and to improve quality through common quality standards. However, the civil service is losing competitiveness in the labour market due to its low salaries and unattractive working conditions. It has difficulties in attracting new qualified staff, while increasing numbers of professionals are leaving the service. This is leading to the ageing of the civil service and requires a long-term strategy to make the public sector an attractive employer for the young.

Lithuania has improved substantially in providing digital public services, but could benefit from a more strategic vision. Progress has been driven by the use of e-Government services, the availability of pre-filled forms and the availability of open data, where Lithuania has made a significant effort to reduce the considerable gap with the EU average (European Commission 2018m). However, there are often uncoordinated elements in the digital service transformation process which if managed appropriately could build a more modern, open, responsive and data-driven public sector. There is, therefore, an investment need for public sector institutions to coordinate better with each other in order to improve their performance and develop more advanced and fully interactive services.

Despite the overall good management and control of EU funds, the system would benefit from streamlining and simplification. Drawing on the lessons learned during the current financial period, a major simplification of procedures and reduction of administrative burden for applicants and beneficiaries is necessary, including full use of the available simplification and flexibility options. More interaction between national and local

authorities, the social partners and civil society organisations through all stages of policy-making and implementation would improve involvement, ownership and democratic accountability. In particular, local authorities need to be better equipped for developing their integrated territorial development strategies and selecting operations, and to be assisted through the entire process.

Public procurement

The efficiency and transparency of public procurement continued to improve, but some challenges remain. The public procurement system is improving, especially at the central level. Activities to support public purchasing mechanisms, risk assessments and problem detection are managed by the Public Procurement Office in a mature manner. Professionalisation remains one of the major shortcomings of the public procurement system. Further, the competitiveness of the procurement market has room for improvement. In 2018, there was only one bidder for 24 % of the public procurement procedures published in the EU Official Journal. Transparency in public procurement is relatively high, with publication of information on all initiated tenders, successful bidders and contracts awarded (with an exception for the lowest value procurement). Lithuania's significant achievement in introducing an electronic path in public procurement helps transparency, with 99.8 % of offers in procurement procedures above the Directives' thresholds submitted electronically. Cross-border procurement remains low, with a potential negative impact on prices. At the local level, some concerns remain over the adequacy of procurement planning as well as over transparency and in-house procurement.

Achieving the targets for green public procurement could encourage the emergence of new markets for innovative products. To this end, a national strategy requiring authorities to apply 'green public procurement' criteria in public tenders was adopted. The ambitious targets are still to be achieved. In 2016, green public procurement accounted for 8 % of contracts (13 % in value terms) (Dovilė Šličiuvienė, 2017).

Corruption

The government is planning measures to strengthen the prevention and control of corruption. Lithuania's score on controlling corruption is 70/100, a five-point decrease from the previous year (World Bank, 2018b). The scores on components relating to conflict of interest regulation and incidence of corruption remained unchanged (World Economic Forum, 2018). Several legislative initiatives targeting the prevention and control of corruption are under discussion. Implementing legislation to the Whistleblowers' protection law (adopted in 2017), was passed, in order to clarify its provisions on internal reporting channels and compensatory mechanisms in case of retaliation. A new law regulating lobbying is under discussion. The proposal narrows down the definition of lobbying activities to exclude attempts to influence administrative decisions and extends the application of the law to ministers, deputy-ministers and heads of political parties. Reporting obligations would be introduced for both lobbyists and officials, to allow cross-checking of the information. The latter bill is under government discussion.

The new single registry of interests, initially envisaged for 2018, has now been postponed to 2020. The Chief Official Ethics Commission, the body in charge of verifying declarations of private interest, is currently unable to determine the precise number of officials who did not fill in the declarations as the system for submitting them is not integrated with other state/municipal registries and databases. Moreover, there is a very broad range of officials who are bound to submit such declarations, which makes it difficult to put a precise figure on the number of omissions. In the absence of an integrated system that would allow the pre-filling of private interest declarations, there is a risk of certain conflicts of interest passing unnoticed. It is hoped the problem will be solved in 2020 with the implementation of an integrated registry of private interest where information can be cross-checked.

There have been improvements in addressing corruption in the healthcare sector, but irregularities still persist. In 2018, progress was noted in terms of the transparency of sponsorships of healthcare professionals and pharmacists to

participate in international events, as well as regarding civil society participation in supervisory councils of municipal hospitals. Moreover, informal payments in the health sector have decreased, linked to the Clean Hands programme the government has been running since 2015 and possibly also thanks to a salary increase for medical staff in 2018. The Ministry of Health estimates the rate of informal payments at 9 % in 2018, as compared to 35 % in 2017. However, the perception of corruption remains quite high (European Commission, 2017): 93 % of citizens (compared to 31 % EU average) believe that giving and taking bribes and abusing power for personal gain are widespread in the healthcare area.

ANNEX A: OVERVIEW TABLE

Commitments	Summary assessment ⁽³²⁾
2018 country-specific recommendations (CSRs)	
<p>CSR 1: Improve tax compliance and broaden the tax base to sources less detrimental to growth. Ensure the long-term sustainability of the pension system while addressing the adequacy of pensions.</p> <p>Improve tax compliance</p> <p>and broaden the tax base to sources less detrimental to growth.</p>	<p>Lithuania has made some progress in addressing CSR 1</p> <p>Some progress was made in fighting the shadow economy but further efforts are needed. Tax compliance remains relatively low. Although Lithuania's VAT gap decreased slightly from 26 % in 2015 to 25 % in 2016, it is still one of the largest in the EU.</p> <p>Several public relations campaigns aimed at increasing public awareness and engagement were undertaken.</p> <p>Smart Tax Administration system (i.MAS) measures introduced in recent years resulted in almost halving the time needed to comply with taxes.</p> <p>No progress was made in broadening the tax base. The new tax reform does not involve any shift of the tax base towards more growth-friendly sources.</p>

⁽³²⁾ The following categories are used to assess progress in implementing the country-specific recommendations (CSRs):
No progress: The Member State has not credibly announced nor adopted any measures to address the CSR. This category covers a number of typical situations to be interpreted on a case by case basis taking into account country-specific conditions.

They include the following:
 no legal, administrative, or budgetary measures have been announced in the national reform programme,
 in any other official communication to the national Parliament/relevant parliamentary committees or the European Commission, publicly (e.g. in a press statement or on the government's website);
 no non-legislative acts have been presented by the governing or legislative body;
 the Member State has taken initial steps in addressing the CSR, such as commissioning a study or setting up a study group to analyse possible measures to be taken (unless the CSR explicitly asks for orientations or exploratory actions). However, it has not proposed any clearly-specified measure(s) to address the CSR.

Limited progress: The Member State has:
 announced certain measures but these address the CSR only to a limited extent; and/or
 presented legislative acts in the governing or legislative body but these have not been adopted yet and substantial further, non-legislative work is needed before the CSR is implemented;
 presented non-legislative acts, but has not followed these up with the implementation needed to address the CSR.

Some progress: The Member State has adopted measures that partly address the CSR; and/or
 that address the CSR, but a fair amount of work is still needed to fully address the CSR fully as only a few of the measures have been implemented. For instance, a measure or measures have been adopted by the national Parliament or by ministerial decision but no implementing decisions are in place.

Substantial progress: The Member State has adopted measures that go a long way towards addressing the CSR and most of them have been implemented.

Full implementation: The Member State has implemented all measures needed to address the CSR appropriately.

<p>Ensure the long-term sustainability of the pension system while addressing the adequacy of pensions.</p>	<p>Environmental taxes are significantly below the EU average. Taxes on transport are the lowest in the EU and do not take into account vehicles' environmental performance. CO₂-based motor vehicle taxes are not in place in Lithuania. No changes related to car taxation or road-use tax for private passenger vehicles are envisaged.</p> <p>Property taxation remains low and no further changes are planned.</p> <p>Some progress was made with the introduction of the pension indexation formula from January 2018 and additional pension reforms legislated in summer 2018.</p> <p>These reforms increase the fiscal sustainability of the pension system in the medium and long term and, to some extent addresses the issue of adequacy in the short term. Adequacy will also partly depend on the participation rate in the second pension pillar.</p> <p>In the longer term, however, adequacy might become an issue, mainly due to the low spending on pensions.</p>
<p>CSR 2: Improve the quality, efficiency and labour market relevance of education and training, including adult learning. Improve the performance of the healthcare system by a further shift from hospital to outpatient care, strengthening disease prevention measures, including at local level, and increasing the quality and affordability of care. Improve the design of the tax and benefit system to reduce poverty and income inequality.</p> <p>Improve the quality, efficiency and labour market relevance of education and training, including adult learning.</p>	<p>Lithuania has made limited progress in addressing CSR 2</p> <p>Limited progress was made in the general education area.</p> <p>The outcomes and efficiency of the general education system remain relatively low. The reforms are ongoing, but no substantial positive effect on educational outcomes has yet been observed, and the efficiency of the education system remains a challenge.</p> <p>Initial VET is in the process of being modernised; while some positive steps have been taken, it had not</p>

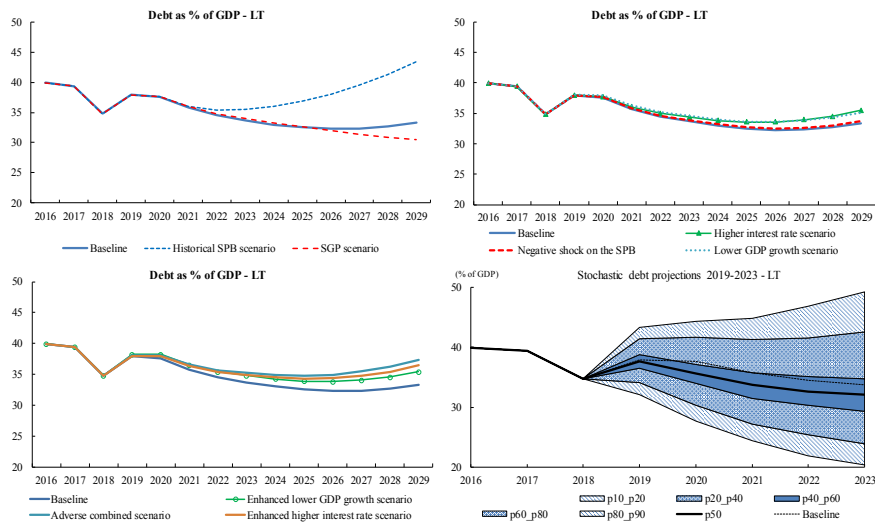
	<p>yet improved sufficiently the supply of relevant skills for the labour market.</p> <p>The reform of the higher education network is slow.</p> <p>The adult learning system is at the initial stage and there has not been any significant improvement in adult participation in learning.</p>
Improve the performance of the healthcare system by a further shift from hospital to outpatient care, strengthening disease prevention measures, including at local level, and increasing the quality and affordability of care.	<p>Limited progress was made in improving the performance of the healthcare system.</p> <p>Though preparatory work has been undertaken, legal frameworks for further consolidating the hospital network and strengthening disease prevention at local level have not been approved yet.</p> <p>Measures were taken to reduce prices of pharmaceuticals, but the measures to address the affordability constraints of specific groups are pending.</p> <p>Measures taken to improve the quality of care were partial, targeting only primary care entities and limited to the introduction of some monitoring indicators. It is premature to assess whether these measures are sufficient to address quality concerns.</p>
Improve the design of the tax and benefit system to reduce poverty and income inequality.	<p>Limited progress was achieved in improving the tax and benefit system.</p> <p>Lithuania has implemented some measures to reduce poverty and social exclusion, namely increasing the level of guaranteed minimum income and introducing the universal child benefit system. The indexation of the minimum income has been established, and the universal child benefit has been increased in 2019. However, public spending on social protection is low, and the impact of social transfers on poverty reduction is limited.</p> <p>Lithuania introduced some progressivity in its personal income taxation, but the effects on income inequality are expected to be negligible.</p>
CSR 3: Stimulate productivity growth by improving the efficiency of public investment, ensuring efficient governmental coordination of research and	Lithuania has made limited progress in addressing CSR 3

innovation policy and tackling gaps and inefficiencies in public measures supporting science-industry cooperation.	
Stimulate productivity growth by improving the efficiency of public investment,	<p>Limited progress was made in improving the efficiency of public investment.</p> <p>Some interim measures were taken to improve the procedures for the preparation, evaluation and selection of public investment projects.</p> <p>However, the new integrated approach to strategic and investment planning should be put in place only for the 2021-2023 budgeting process.</p>
ensuring efficient governmental coordination of research and innovation policy and tackling gaps and inefficiencies in public measures supporting science-industry cooperation.	<p>Limited progress was made in the area of R&I.</p> <p>R&I policy coordination was slightly improved by reassigning responsibility for it to the Ministry of Economy and the Ministry of Education and Science, and transferring the experimental development in companies file to the Ministry of Economics. However, a coherent new R&I policy still needs to be developed.</p> <p>Some progress was achieved in improving science-industry cooperation. Progressive measures were introduced in the evaluation of universities and research institutes (taking account of their ties with businesses), industrial PhDs, innovation vouchers and other schemes.</p>
Europe 2020 (national targets and progress)	
Employment rate target: 72.8 %	The employment rate reached 76 % in 2017, above the national target and the EU average.
R&D target: 1.9 % of GDP with half coming from private sector	In 2017 Lithuania's R&D investment was 0.9 % of GDP compared to 0.8 % the previous year. Private investment remains low, at 0.3 % of GDP in 2017. R&D investment is unlikely to reach the target level by 2020.
Greenhouse gas (GHG) emissions target:	<p>Europe 2020 target: 15 %</p> <p>Lithuania's emissions are expected to increase by 2 %</p>

Non-ETS target for 2020: +15 % compared to 2005	in 2020 compared to 2005. It will consequently meet its target with a margin of 13 percentage points.
Non-ETS interim target for 2017: +7 % compared to 2005	Preliminary data indicates that Lithuania has overachieved its interim target for 2017 by around 1 pp.
Renewable energy target: 23 % Share of renewable energy in transport sector: 10 %	With a 25.6 % share of renewables in 2016, Lithuania has already more than achieved its 2020 target and aims to reach an ambitious 45 % target by 2030. However, the share of renewables in the transport sector is very low and decreasing. It fell from 4.6 % in 2015, to 3.7 % in 2017, well below the 2020 target of 10 %.
Energy efficiency target: 17 % reduction in final energy use compared to 2009 level (reduction of 740 ktoe), which implies reaching a 2020 level of: 6.5 Mtoe of primary 4.3 Mtoe of final energy consumption	There has been a decoupling of primary energy consumption and GDP in recent years. However, although the primary energy intensity has been decreasing, it remains above the EU average. Lithuania's final energy consumption was relatively stable between 2010 and 2015, but in 2016 it increased by 5 % to 5.11 Mtoe. Therefore, in order to reach its 2020 final energy consumption target, Lithuania must further increase its efforts to promote energy efficiency.
Early school leaving target: < 9 %	The early school leaving rate among 18-24 year-olds increased to 5.4 % in 2017. Nevertheless, it remains significantly below the EU average of 10.6 %, placing Lithuania among the leading EU Member States.
Tertiary education target: 48.7 %	Tertiary attainment among 30-34 year-olds in Lithuania was 58 % in 2017. It is above the national target and among the highest in the EU.
Risk of poverty or social exclusion target: 814 000	Even though the number of persons at risk of poverty or social exclusion has fallen from the 2016 level, Lithuania is falling short of its national target: in 2017, 843 000 people were at risk of poverty or social exclusion (29.6 % of the total population).

ANNEX B: COMMISSION DEBT SUSTAINABILITY ANALYSIS AND FISCAL RISKS

General Government debt projections under baseline, alternative scenarios and sensitivity tests													
LT - Debt projections baseline scenario													
Gross debt ratio	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Changes in the ratio (1+2+3)	-0.6	-4.6	3.1	-0.3	-1.8	-1.3	-0.8	-0.7	-0.5	-0.2	0.1	0.3	0.7
of which													
(1) Primary balance (1.1+1.2+1.3)	1.6	1.5	1.2	0.8	0.6	0.4	0.3	0.2	0.1	-0.1	-0.2	-0.4	-0.5
(1.1) Structural primary balance (1.1.1-1.1.2+1.1.3)	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.1	-0.1	-0.2	-0.4	-0.5
(1.1.1) Structural primary balance (def. CoA)	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
(1.1.2) Cost of ageing					0.0	0.0	0.0	0.1	0.2	0.4	0.5	0.7	0.8
(1.1.3) Others (taxes and property incomes)					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(1.2) Cyclical component	1.1	1.2	0.8	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(1.3) One-off and other temporary measures	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2) Snowball effect (2.1+2.2+2.3)	-2.0	-1.3	-1.3	-1.5	-1.2	-0.8	-0.5	-0.4	-0.3	-0.2	-0.1	-0.1	0.1
(2.1) Interest expenditure	1.1	0.9	0.9	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.9	1.0	1.1
(2.2) Growth effect	-1.5	-1.2	-0.9	-0.9	-0.8	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5	-0.4	-0.3
(2.3) Inflation effect	-1.6	-1.0	-1.2	-1.3	-1.1	-0.9	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6	-0.6
(3) Stock-flow adjustments	3.1	-1.7	5.7	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Short term	Medium term	S1	Debt sustainability analysis (detail)						DSA	S2	Long term
			Baseline	Historical SPB	Lower GDP growth	Higher interest rate	Negative shock on SPB	Stochastic projections			
LOW (S0 = 0.2)	LOW	LOW (S1 = -1.8)	Risk category	LOW	LOW	LOW	LOW	MEDIUM	LOW	LOW (S2 = 0.5)	LOW
			Debt level (2029)	33.4	43.4	35.1	35.5	33.7			
			Debt peak year	2019	2029	2019	2019	2019			
			Percentile rank	53.0%	69.0%						
			Probability debt higher					40.1%			
			Dif. between percentiles					26.0			

Note: For further information, see the European Commission Fiscal Sustainability Report (FSR) 2018.

[1] The first table presents the baseline no-fiscal policy change scenario projections. It shows the projected government debt dynamics and its decomposition between the primary balance, snowball effects and stock-flow adjustments. Snowball effects measure the net impact of the counteracting effects of interest rates, inflation, real GDP growth (and exchange rates in some countries). Stock-flow adjustments include differences in cash and accrual accounting, net accumulation of assets, as well as valuation and other residual effects.

[2] The charts present a series of sensitivity tests around the baseline scenario, as well as alternative policy scenarios, in particular: the historical structural primary balance (SPB) scenario (where the SPB is set at its historical average), the Stability and Growth Pact (SGP) scenario (where fiscal policy is assumed to evolve in line with the main provisions of the SGP), a higher interest rate scenario (+1 pp. compared to the baseline), a lower GDP growth scenario (-0.5 pp. compared to the baseline) and a negative shock on the SPB (calibrated on the basis of the forecasted change). An adverse combined scenario and enhanced sensitivity tests (on the interest rate and growth) are also included, as well as stochastic projections. Detailed information on the design of these projections can be found in the FSR 2018.

[3] The second table presents the overall fiscal risk classification over the short, medium and long-term.

a. For the short-term, the risk category (low/high) is based on the S0 indicator. S0 is an early-detection indicator of fiscal stress in the upcoming year, based on 25 fiscal and financial competitiveness variables that have proven in the past to be leading indicators of fiscal stress. The critical threshold beyond which fiscal stress is signalled is 0.46.

b. For the medium-term, the risk category (low/medium/high) is based on the joint use of the S1 indicator and of the DSA results. The S1 indicator measures the fiscal adjustment required (cumulated over the 5 years following the forecast horizon and sustained thereafter) to bring the debt-to-GDP ratio to 60 % by 2033. The critical values used are 0 and 2.5 pps. of GDP. The DSA classification is based on the results of 5 deterministic scenarios (baseline, historical SPB, higher interest rate, lower GDP growth and negative shock on the SPB scenarios) and the stochastic projections. Different criteria are used such as the projected debt level, the debt path, the realism of fiscal assumptions, the probability of debt stabilisation, and the size of uncertainties.

c. For the long-term, the risk category (low/medium/high) is based on the joint use of the S2 indicator and the DSA results. The S2 indicator measures the upfront and permanent fiscal adjustment required to stabilise the debt-to-GDP ratio over the infinite horizon, including the costs of ageing. The critical values used are 2 and 6 pps. of GDP. The DSA results are used to further qualify the long-term risk classification, in particular in cases when debt vulnerabilities are identified (a medium / high DSA risk category).

ANNEX C: STANDARD TABLES

Table C.1: **Financial market indicators**

	2013	2014	2015	2016	2017	2018
Total assets of the banking sector (% of GDP) ¹⁾	68.8	69.7	66.2	69.7	67.7	64.3
Share of assets of the five largest banks (% of total assets)	87.1	85.7	86.8	87.1	90.1	-
Foreign ownership of banking system (% of total assets) ²⁾	91.5	92.0	91.8	91.9	91.6	90.8
Financial soundness indicators: ²⁾						
- non-performing loans (% of total loans)	-	6.8	5.6	4.0	3.2	3.1
- capital adequacy ratio (%)	17.5	21.3	24.8	19.4	19.1	19.0
- return on equity (%) ³⁾	8.6	7.7	7.5	11.9	9.1	13.5
Bank loans to the private sector (year-on-year % change) ¹⁾	-1.0	-0.3	5.3	11.2	4.4	7.8
Lending for house purchase (year-on-year % change) ¹⁾	0.6	2.2	3.5	7.1	8.6	8.1
Loan to deposit ratio ²⁾	-	80.1	83.8	82.3	78.8	85.4
Central Bank liquidity as % of liabilities ¹⁾	-	0.0	1.7	1.3	1.2	0.7
Private debt (% of GDP)	56.3	53.9	54.8	56.1	56.1	-
Gross external debt (% of GDP) ²⁾ - public	33.3	38.0	38.0	35.5	34.1	29.2
- private	19.2	17.5	17.5	17.5	19.7	18.6
Long-term interest rate spread versus Bund (basis points)*	226.2	162.9	88.5	80.8	-	-
Credit default swap spreads for sovereign securities (5-year)*	107.5	100.9	76.4	62.8	50.8	52.8

1) Latest data Q3 2018. Includes not only banks but all monetary financial institutions excluding central banks.

2) Latest data Q2 2018.

3) Quarterly values are not annualised

* Measured in basis points.

Source: European Commission (long-term interest rates); World Bank (gross external debt); Eurostat (private debt); ECB (all other indicators).

Table C.2: **Headline Social Scoreboard indicators**

	2013	2014	2015	2016	2017	2018 ⁶
Equal opportunities and access to the labour market						
Early leavers from education and training (% of population aged 18-24)	6.3	5.9	5.5	4.8	5.4	:
Gender employment gap (pps)	2.6	2.5	2.4	1.9	1.0	2.7
Income inequality, measured as quintile share ratio (S80/S20)	6.1	6.1	7.5	7.1	7.3	:
At-risk-of-poverty or social exclusion rate ¹ (AROPE)	30.8	27.3	29.3	30.1	29.6	:
Young people neither in employment nor in education and training (% of population aged 15-24)	11.1	9.9	9.2	9.4	9.1	:
Dynamic labour markets and fair working conditions²						
Employment rate (20-64 years)	69.9	71.8	73.3	75.2	76.0	77.3
Unemployment rate ² (15-74 years)	11.8	10.7	9.1	7.9	7.1	6.4
Long-term unemployment rate ³ (as % of active population)	5.1	4.8	3.9	3.0	2.7	2.2
Gross disposable income of households in real terms per capita ⁴ (Index 2008=100)	100.9	103.5	108.2	114.6	118.5	:
Annual net earnings of a full-time single worker without children earning an average wage (levels in PPS, three-year average)	9428	9911	10517	11150	:	:
Annual net earnings of a full-time single worker without children earning an average wage (percentage change, real terms, three-year average)	1.5	3.6	5.4	6.5	:	:
Public support / Social protection and inclusion						
Impact of social transfers (excluding pensions) on poverty reduction ⁵	32.0	30.5	22.4	21.5	23.2	:
Children aged less than 3 years in formal childcare	:	22.9	9.7	15.2	20.3	:
Self-reported unmet need for medical care	3.2	3.7	2.9	3.1	1.5	:
Individuals who have basic or above basic overall digital skills (% of population aged 16-74)	:	:	51.0	52.0	55.0	:

1 People at risk of poverty or social exclusion (AROPE): individuals who are at risk of poverty (AROP) and/or suffering from severe material deprivation (SMD) and/or living in households with zero or very low work intensity (LWI).

2 Unemployed persons are all those who were not employed but had actively sought work and were ready to begin working immediately or within two weeks.

3 Long-term unemployed are people who have been unemployed for at least 12 months.

4 Gross disposable household income is defined in unadjusted terms, according to the draft Joint Employment Report 2019.

5 Reduction in percentage of the risk of poverty rate, due to social transfers (calculated comparing at-risk-of-poverty rates before social transfers with those after transfers; pensions are not considered as social transfers in the calculation).

6 Average of first three quarters of 2018 for the employment rate, unemployment rate and gender employment gap. Data for unemployment rate is seasonally adjusted.

Source: European Commission

Table C.3: Labour market and education indicators

Labour market indicators	2013	2014	2015	2016	2017	2018 ⁴
Activity rate (15-64)	72.4	73.7	74.1	75.5	75.9	:
Employment in current job by duration						
From 0 to 11 months	16.3	14.7	15.5	18.9	17.8	:
From 12 to 23 months	11.4	12.3	11.7	11.0	12.5	:
From 24 to 59 months	18.8	20.8	20.3	19.9	19.2	:
60 months or over	53.5	52.3	52.5	50.2	50.5	:
Employment growth*						
(% change from previous year)	1.3	2.0	1.3	2.0	-0.5	0.5
Employment rate of women						
(% of female population aged 20-64)	68.6	70.6	72.2	74.3	75.5	76.0
Employment rate of men						
(% of male population aged 20-64)	71.2	73.1	74.6	76.2	76.5	78.7
Employment rate of older workers*						
(% of population aged 55-64)	53.4	56.2	60.4	64.6	66.1	67.6
Part-time employment*						
(% of total employment, aged 15-64)	8.4	8.6	7.6	7.1	7.6	7.3
Fixed-term employment*						
(% of employees with a fixed term contract, aged 15-64)	2.7	2.8	2.1	2.0	1.7	1.8
Participation in activation labour market policies (per 100 persons wanting to work)	8.6	11.1	13.2	12.9	:	:
Transition rate from temporary to permanent employment (3-year average)	41.4	38.2	46.1	39.5	:	:
Youth unemployment rate						
(% active population aged 15-24)	21.9	19.3	16.3	14.5	13.3	11.3
Gender gap in part-time employment						
(Gender pay gap ¹ (in undadjusted form))	3.8	4.2	4.2	3.4	3.7	3.9
	12.2	13.3	14.2	14.4	15.2	:
Education and training indicators	2013	2014	2015	2016	2017	2018
Adult participation in learning (% of people aged 25-64 participating in education and training)	5.9	5.1	5.8	6.0	5.9	:
Underachievement in education ²	:	:	25.4	:	:	:
Tertiary educational attainment (% of population aged 30-34 having successfully completed tertiary education)	51.3	53.3	57.6	58.7	58.0	:
Variation in performance explained by students' socio-economic status ³	:	:	11.6	:	:	:

* Non-scoreboard indicator

1 Difference between the average gross hourly earnings of male paid employees and of female paid employees as a percentage of average gross hourly earnings of male paid employees. It is defined as "unadjusted", as it does not correct for the distribution of individual characteristics (and thus gives an overall picture of gender inequalities in terms of pay). All employees working in firms with ten or more employees, without restrictions for age and hours worked, are included

2 PISA (OECD) results for low achievement in mathematics for 15 year-olds.

3 Impact of socio-economic and cultural status on PISA (OECD) scores. Values for 2012 and 2015 refer respectively to mathematics and science.

4 Average of first three quarters of 2018. Data for youth unemployment rate is seasonally adjusted.

Source: European Commission, OECD

Table C.4: Social inclusion and health indicators

	2012	2013	2014	2015	2016	2017
Expenditure on social protection benefits* (% of GDP)						
<i>Sickness/healthcare</i>	4.2	4.1	4.1	4.4	4.6	:
<i>Disability</i>	1.5	1.4	1.4	1.4	1.4	:
<i>Old age and survivors</i>	7.2	6.9	7.1	7.0	6.7	:
<i>Family/children</i>	1.4	1.1	1.1	1.1	1.1	:
<i>Unemployment</i>	0.4	0.4	0.3	0.5	0.5	:
<i>Housing</i>	0.0	0.0	0.0	0.1	0.1	:
<i>Social exclusion n.e.c.</i>	0.7	0.6	0.4	0.3	0.3	:
<i>Total</i>	15.5	14.5	14.5	14.8	14.6	:
<i>of which: means-tested benefits</i>	0.9	0.8	0.6	0.5	0.4	:
General government expenditure by function (% of GDP, COFOG)						
<i>Social protection</i>	12.0	11.4	11.4	11.1	11.2	:
<i>Health</i>	5.9	5.6	5.5	5.8	5.8	:
<i>Education</i>	5.8	5.6	5.4	5.4	5.2	:
Out-of-pocket expenditure on healthcare (% of total health expenditure)	31.8	32.8	31.5	31.8	32.3	:
Children at risk of poverty or social exclusion (% of people aged 0-17)*	31.9	35.4	28.9	32.7	32.4	31.6
At-risk-of-poverty rate ¹ (% of total population)	18.6	20.6	19.1	22.2	21.9	22.9
In-work at-risk-of-poverty rate (% of persons employed)	7.6	9.1	8.3	9.9	8.5	8.5
Severe material deprivation rate ² (% of total population)	19.8	16.0	13.6	13.9	13.5	12.4
Severe housing deprivation rate ³ , by tenure status						
<i>Owner, with mortgage or loan</i>	1.3	1.2	8.9	5.3	4.2	4.9
<i>Tenant, rent at market price</i>	8.1	28.9	3.2	28.7	5.7	12.9
Proportion of people living in low work intensity households ⁴ (% of people aged 0-59)	11.4	11.0	8.8	9.2	10.2	9.7
Poverty thresholds, expressed in national currency at constant prices*	6964	7313	7420	2303	2526	2727
Healthy life years (at the age of 65)						
<i>Females</i>	6.1	6.3	6.1	5.5	5.6	:
<i>Males</i>	5.6	5.9	6.1	5.0	5.6	:
Aggregate replacement ratio for pensions ⁵ (at the age of 65)	0.5	0.5	0.5	0.5	0.5	0.4
Connectivity dimension of the Digital Economy and Society Index (DESI) ⁶	:	:	53.0	58.4	68.6	70.4
GINI coefficient before taxes and transfers*	51.8	53.5	51.9	54.0	52.2	52.1
GINI coefficient after taxes and transfers*	32.0	34.6	35.0	37.9	37.0	37.6

* Non-scoreboard indicator

1 At-risk-of-poverty rate (AROP): proportion of people with an equivalised disposable income below 60 % of the national equivalised median income.

2 Proportion of people who experience at least four of the following forms of deprivation: not being able to afford to i) pay their rent or utility bills, ii) keep their home adequately warm, iii) face unexpected expenses, iv) eat meat, fish or a protein equivalent every second day, v) enjoy a week of holiday away from home once a year, vi) have a car, vii) have a washing machine, viii) have a colour TV, or ix) have a telephone.

3 Percentage of total population living in overcrowded dwellings and exhibiting housing deprivation.

4 People living in households with very low work intensity: proportion of people aged 0-59 living in households where the adults (excluding dependent children) worked less than 20 % of their total work-time potential in the previous 12 months.

5 Ratio of the median individual gross pensions of people aged 65-74 relative to the median individual gross earnings of people aged 50-59.

6 Fixed broadband take up (33%), mobile broadband take up (22%), speed (33%) and affordability (11%), from the Digital Scoreboard.

Source: European Commission, OECD

Table C.5: Product market performance and policy indicators

Performance indicators	2012	2013	2014	2015	2016	2017
Labour productivity per person ¹ growth (t/t-1) in %						
Labour productivity growth in industry	0.12	3.24	5.51	0.20	-0.56	4.16
Labour productivity growth in construction	-10.11	-1.19	13.85	-6.68	-6.07	12.00
Labour productivity growth in market services	3.38	2.05	0.28	3.01	1.04	4.93
Unit Labour Cost (ULC) index ² growth (t/t-1) in %						
ULC growth in industry	2.54	0.54	3.73	6.21	4.98	0.86
ULC growth in construction	12.73	-0.95	-4.78	6.76	17.47	3.70
ULC growth in market services	2.68	3.91	3.75	5.43	5.30	5.33
Business environment	2012	2013	2014	2015	2016	2017
Time needed to enforce contracts ³ (days)	370	370	370	370	370	370
Time needed to start a business ³ (days)	19.5	8.5	5.5	5.5	5.5	5.5
Outcome of applications by SMEs for bank loans ⁴	.	1.16	1.27	1.14	1.17	1.06
Research and innovation	2012	2013	2014	2015	2016	2017
R&D intensity	0.89	0.95	1.03	1.04	0.84	0.88
General government expenditure on education as % of GDP	5.80	5.60	5.40	5.40	5.20	.
Employed people with tertiary education and/or people employed in science and technology as % of total employment	47	48	49	50	50	50
Population having completed tertiary education ⁵	29	30	31	33	34	35
Young people with upper secondary education ⁶	89	90	91	91	92	91
Trade balance of high technology products as % of GDP	0.23	0.06	-0.08	-0.46	-0.40	-0.30
Product and service markets and competition				2003	2008	2013
OECD product market regulation (PMR) ⁷ , overall				:	:	1.52
OECD PMR ⁷ , retail				:	:	1.11
OECD PMR ⁷ , professional services				:	:	1.85
OECD PMR ⁷ , network industries ⁸				:	:	2.02

1 Value added in constant prices divided by the number of persons employed.

2 Compensation of employees in current prices divided by value added in constant prices.

3 The methodologies, including the assumptions, for this indicator are shown in detail here:

<http://www.doingbusiness.org/methodology>.

4 Average of the answer to question Q7B_a. "[Bank loan]: If you applied and tried to negotiate for this type of financing over the past six months, what was the outcome?". Answers were codified as follows: zero if received everything, one if received 75% and above, two if received below 75%, three if refused or rejected and treated as missing values if the application is still pending or don't know.

5 Percentage population aged 15-64 having completed tertiary education.

6 Percentage population aged 20-24 having attained at least upper secondary education.

7 Index: 0 = not regulated; 6 = most regulated. The methodologies of the OECD product market regulation indicators are shown in detail here: <http://www.oecd.org/competition/reform/indicatorsofproductmarketregulationhomepage.htm>

8 Aggregate OECD indicators of regulation in energy, transport and communications (ETCR).

Sources: European Commission; World Bank — Doing Business (for enforcing contracts and time to start a business); OECD (for the product market regulation indicators); SAFE (for outcome of SMEs' applications for bank loans).

Table C.6: **Green growth**

Green growth performance		2012	2013	2014	2015	2016	2017
Macroeconomic							
Energy intensity	kgoe / €	0.23	0.21	0.20	0.20	0.21	0.21
Carbon intensity	kg / €	0.69	0.62	0.60	0.60	0.58	-
Resource intensity (reciprocal of resource productivity)	kg / €	1.24	1.45	1.32	1.29	1.30	1.32
Waste intensity	kg / €	0.18	-	0.19	-	0.19	-
Energy balance of trade	% GDP	-7.5	-6.1	-4.7	-3.6	-2.6	-3.0
Weighting of energy in HICP	%	16.39	16.84	14.25	13.60	11.79	12.02
Difference between energy price change and inflation	%	3.8	-1.8	-4.8	-9.2	-5.5	-3.6
Real unit of energy cost	% of value added	27.6	27.8	27.7	28.7	29.8	-
Ratio of environmental taxes to labour taxes	ratio	0.13	0.13	0.13	0.14	0.13	-
Environmental taxes	% GDP	1.6	1.7	1.7	1.9	1.9	1.9
Sectoral							
Industry energy intensity	kgoe / €	0.13	0.12	0.11	0.11	0.11	-
Real unit energy cost for manufacturing industry excl. refining	% of value added	13.9	13.8	14.0	14.3	14.5	-
Share of energy-intensive industries in the economy	% GDP	9.6	9.3	9.3	9.2	-	-
Electricity prices for medium-sized industrial users	€ / kWh	0.11	0.12	0.12	0.10	0.09	0.08
Gas prices for medium-sized industrial users	€ / kWh	0.05	0.04	0.04	0.02	0.03	0.03
Public R&D for energy	% GDP	0.01	0.02	0.01	0.02	0.01	0.01
Public R&D for environmental protection	% GDP	0.00	0.00	0.01	0.01	0.00	0.00
Municipal waste recycling rate	%	23.5	27.8	30.5	33.1	48.0	48.1
Share of GHG emissions covered by ETS*	%	41.7	38.8	35.9	36.1	30.7	-
Transport energy intensity	kgoe / €	0.46	0.44	0.47	0.51	0.51	-
Transport carbon intensity	kg / €	1.29	1.23	1.31	1.41	1.42	-
Security of energy supply							
Energy import dependency	%	80.5	78.5	78.3	78.4	77.6	75.6
Aggregated supplier concentration index	HHI	99.7	97.5	87.8	71.7	51.5	-
Diversification of energy mix	HHI	0.29	0.27	0.27	0.27	0.27	0.27

All macro intensity indicators are expressed as a ratio of a physical quantity to GDP (in 2010 prices)

Energy intensity: gross inland energy consumption (in kgoe) divided by GDP (in EUR)

Carbon intensity: greenhouse gas emissions (in kg CO₂ equivalents) divided by GDP (in EUR)

Resource intensity: domestic material consumption (in kg) divided by GDP (in EUR)

Waste intensity: waste (in kg) divided by GDP (in EUR)

Energy balance of trade: the balance of energy exports and imports, expressed as % of GDP

Weighting of energy in HICP: the proportion of 'energy' items in the consumption basket used for the construction of the HICP

Difference between energy price change and inflation: energy component of HICP, and total HICP inflation (annual % change)

Real unit energy cost: real energy costs as % of total value added for the economy

Industry energy intensity: final energy consumption of industry (in kgoe) divided by gross value added of industry (in 2010 EUR)

Real unit energy costs for manufacturing industry excluding refining: real costs as % of value added for manufacturing sectors

Share of energy-intensive industries in the economy: share of gross value added of the energy-intensive industries in GDP

Electricity and gas prices for medium-sized industrial users: consumption band 500–20 000 MWh and 10 000–100 000 GJ; figures excl. VAT.

Recycling rate of municipal waste: ratio of recycled and composted municipal waste to total municipal waste

Public R&D for energy or for the environment: government spending on R&D for these categories as % of GDP

Proportion of GHG emissions covered by EU emissions trading system (ETS) (excluding aviation): based on GHG emissions (excl. land use, land use change and forestry) as reported by Member States to the European Environment Agency.

Transport energy intensity: final energy consumption of transport activity (kgoe) divided by transport industry gross value added (in 2010 EUR)

Transport carbon intensity: GHG emissions in transport activity divided by gross value added of the transport industry

Energy import dependency: net energy imports divided by gross inland energy consumption incl. consumption of international bunker fuels

Aggregated supplier concentration index: covers oil, gas and coal. Smaller values indicate larger diversification and hence lower risk.

Diversification of the energy mix: Herfindahl index covering natural gas, total petrol products, nuclear heat, renewable energies and solid fuels

* European Commission and European Environment Agency

Source: European Commission and European Environment Agency (Share of GHG emissions covered by ETS); European Commission (Environmental taxes over labour taxes and GDP); Eurostat (all other indicators)

ANNEX D: INVESTMENT GUIDANCE ON COHESION POLICY FUNDING 2021-2027 FOR LITHUANIA

Investment Guidance on Cohesion Policy Funding 2021-2027 for Lithuania ⁽³³⁾

Building on the Commission proposal for the next Multi-Annual Financial Framework for the period 2021-2027 of 2 May 2018 (COM (2018) 321), this Annex D presents the preliminary Commission services views on priority investment areas and framework conditions for effective delivery for the 2021-2027 Cohesion Policy. These priority investment areas are derived from the broader context of investment bottlenecks, investment needs and regional disparities assessed in the report. This Annex provides the basis for a dialogue between Lithuania and the Commission services in view of the programming of the cohesion policy funds (European Regional Development Fund, Cohesion Fund and European Social Fund Plus).

Table D.1: Policy Objectives

Policy Objective 1: A Smarter Europe – Innovative and smart industrial transformation
<p>Lithuania's general innovation performance and the proportion of innovative and high added value businesses, which both are the main drivers of productivity and competitiveness, are lagging behind the EU28 average. High priority investment needs⁽¹⁾ have therefore been identified to enhance research and innovation capacities and the uptake of advanced technologies, where appropriate, in cooperation with other countries and in line with the EU Strategy for the Baltic Sea Region, as well as building on the lessons learned in Lithuania during the implementation of the Commission pilot project on industrial transition, and in particular to:</p> <ul style="list-style-type: none"> • strengthen innovation performance and productivity growth by identifying smart specialisation areas on the basis of national and regional needs and potential; • increase the number of innovative firms in the smart specialisation sectors with the highest potential, and taking into account regional specialisations; • strengthen the supply side of research and innovation by increasing the attractiveness and competitiveness of the research system; • support collaborative research between universities and businesses, thereby enabling technology transfer and commercialisation of research outcomes. <p>Uptake of broadband by households and use of advanced data-driven technologies by firms remain limited despite Lithuania's relatively high ranking in terms of broadband coverage. Priority investment needs have therefore been identified to reap the benefits of digitalisation for citizens, companies and governments, and in particular to:</p> <ul style="list-style-type: none"> • increase Information and Communications Technology uptake in small and medium-sized enterprises, including supporting infrastructures and services; • promote the range, quality and interoperability of e-services provision and their uptake by citizens, with special focus on rural areas and the older population, and in a cross-border context; • upscale and accelerate open data, e-government.

⁽¹⁾ The intensity of needs is classified in three categories in a descending order – high priority needs, priority needs, needs.

(Continued on the next page)

⁽³³⁾ This Annex is to be considered in conjunction with the EC Proposal for a Regulation of the European Parliament and of the Council on the European Regional Development Fund and on the Cohesion Fund COM(2018) 372 and in the EC Proposal for a Regulation of the European Parliament and of the Council on the European Social Fund Plus COM(2018) 382 and in particular the requirements for thematic concentration and urban earmarking outlined in these proposals.

Table (continued)

Firms in Lithuania are relatively small and weakly integrated into domestic and international clusters and global value chains. The start-up ecosystem is relatively young and dynamic and needs further development. High priority Investment needs have therefore been identified to **increase the growth and competitiveness of small and medium-sized enterprises**, and in particular to:

- strengthen the competitiveness and growth prospects of the innovative small and medium-sized enterprises;
- internationalise their activities and move up the global value chains;
- identify new export markets and promote participation in cooperation networks and interregional clusters, including in the Baltic Sea region;
- promote entrepreneurship, as well as the creation and growth of start-ups/scale-ups and accelerators.

The transition to new technologies in Lithuania is hampered by weak innovation and a low degree of digital proficiency within companies. Investment needs have therefore been identified to **develop skills for smart specialisation, industrial transition and entrepreneurship** and in particular to:

- provide small and medium-sized enterprises and research institutions with targeted training on how to manage innovations;
- support small and medium-sized enterprises in re-skilling in smart specialisation areas;
- develop universities' and research institutions' capacity to improve the commercial viability and market relevance of their research projects;

develop digital skills in small and medium enterprises in order to increase their productivity.

Policy Objective 2: A low-carbon and greener Europe – Clean and fair energy transition, Green and Blue investment, circular economy, climate adaptation and risk prevention⁽²⁾

Lithuania's economy is still relatively energy-intensive, with energy consumption levels well above the EU average, even though the country is expected to over-achieve its 2020 greenhouse gas emission reduction targets. High priority investment needs have therefore been identified to **promote energy efficiency measures and renewable energy**, and in particular to:

- reduce energy consumption levels in housing, public buildings and by businesses;
- support deployment of small-scale renewable electricity capacities, owned by energy communities, businesses or individual energy consumers;
- support the transition to renewables in the heating sector;
- deploy solutions for smart electricity distribution grids and storage.

Lithuania's economy is very resource-inefficient. Landfill remains the cheapest and still important way of treating waste in Lithuania, despite good progress in improving waste management performance. Investment needs have therefore been identified to further **promote the transition to the circular economy**, also with a view to achieving new recycling and landfilling targets, and in particular to:

- support the shift towards more waste prevention, reuse and recycling;
- promote the use of recycled materials as alternatives to raw materials and of recycled content in general.

Regarding climate change-induced risks Lithuania suffers from floods and flood-induced damages to the economy and infrastructure and from coastal erosion. Investment needs have therefore been identified for **climate change adaptation, risk prevention, disaster resilience** to:

- address risks as identified in the national risks assessment, with the focus on prevention;
- promote coordinated and cooperative preventive measures actions in line with the EU Strategy for the Baltic Sea Region.

⁽²⁾ While outside of the scope of the ERDF and the Cohesion Fund (art. 6, paragraph 1(h), COM (2018)372), energy interconnectors could be financed by the Connecting Europe Facility in line with its objectives (art. 3, paragraphs 1 and 2 (b), COM(2018) 438).

(Continued on the next page)

Table (continued)

Policy Objective 3: A more connected Europe – Mobility and regional Information and Communications Technology connectivity
<p>Lithuania's transport infrastructure remains far below EU average standards in terms of network's extension, research and innovation investments, carbon emissions and safety issues, even though coverage and quality have been significantly improved in recent years. High priority investment needs have therefore been identified to develop a sustainable, climate-resilient, intelligent, secure and intermodal Trans-European Transport Network, and its accessibility, in particular to:</p> <ul style="list-style-type: none"> • complete core and comprehensive Trans-European Transport Network and bring its national sections up to EU standards; • improve the access to Trans-European Transport Networks, the connectivity of the peripheral regions and cross-border mobility; • invest in addressing externalities (inefficiency, congestion, safety) and deploying new technologies. <p>Concentration of population in cities and surrounding areas puts additional pressure on sustainable urban mobility, including accessibility issues and traffic congestion. Investment needs have therefore been identified to promote sustainable multimodal urban mobility to:</p> <ul style="list-style-type: none"> • promote sustainable, cleaner and efficient urban transport systems as part of the relevant integrated territorial development strategies and sustainable urban mobility plans with the focus on functional areas; • promote investment in low-carbon public transport and active modes of transport. <p>There is a significant digital divide, in terms of coverage and take-up, between urban and rural areas in Lithuania, even though the country performs relatively well in terms of overall broadband connectivity. Investment needs have therefore been identified to improve digital connectivity, and in particular to:</p> <ul style="list-style-type: none"> • deploy very-high capacity networks, eliminating coverage gaps in rural and less populated areas; • improve the cyber security and physical security of investments in public very high-capacity networks.
Policy Objective 4: A more social Europe – Implementing the European Pillar of Social Rights
<p>Population is ageing and emigration is high. Skills shortages are a challenge. Vulnerable groups are largely outside the labour market. Bilateral social dialogue and the capacity of the social partners are limited. Priority investment needs have therefore been identified to improve access to employment and promote the social economy, and in particular to:</p> <ul style="list-style-type: none"> • improve the coverage of active labour market measures, especially for vulnerable groups, and promote a healthy and well-adapted working environment; • support the social economy and start-up social entrepreneurs; • support voluntary labour mobility across sectors and regions; • promote social dialogue and help the social partners in capacity building. <p>The education and training system faces challenges. Formal childcare coverage is low. Gaps in employment based on skills level and on disability persist. Participation in adult learning is low. Large territorial differences remain. High priority investment needs, including in infrastructure, are identified to improve the quality, effectiveness and labour market relevance of the education and training system and to promote lifelong learning, flexible upskilling and reskilling opportunities for all, better anticipating change and new skills requirements, and in particular to:</p> <ul style="list-style-type: none"> • support acquisition of key competences, including digital skills and innovation management, with a focus on reducing territorial and social disparities; • improve the quality and continuous training of the education and training workforce; • widen access to affordable and good quality childcare; • improve inclusive quality education for persons with disabilities; • expand life-long and workplace learning in cooperation with relevant stakeholders; • incentivise investment in training by employers; • support partnerships to ensure better transfer of information on labour market needs.

(Continued on the next page)

Table (continued)

Poverty, social exclusion and income inequality are high. The availability of social housing is low. High priority investment needs have therefore been identified to **foster active inclusion, improve employability and address material deprivation through food and basic material assistance**, including accompanying measures, and in particular to:

- support integrated active inclusion involving civil society and local communities;
- increase outreach to vulnerable groups, address barriers to social and labour market integration and address the specific needs of carers;
- reduce homelessness and improve access to social housing, including through infrastructure.

Health outcomes are weak. Inefficiencies in the health care sector persist. Access to long-term care is low. Priority investment needs, including in infrastructure, are identified to **improve the affordability, quality, effectiveness and resilience of health care and long-term care services**, with a view to reducing health inequalities, and in particular to:

- improve equal access to affordable and good quality healthcare and long term care;
- move health services to the stronger primary care and more person-centred model;
- complete the transition from institutional care to independent living community-based services;
- support re-skilling, upskilling and retention of the healthcare, long-term and social care workforce;
- improve public health and prevention policies, targeting the main health risk factors and groups.

Policy Objective 5 – A Europe closer to citizens by fostering the sustainable and integrated development of urban, rural and coastal areas and local initiatives

Lithuania's biggest cities have played an important role in the country's rapid convergence process, but wealth and opportunities are spread very unevenly and the divide between urban and predominantly rural areas is growing. High priority investments needs in the tailor-made, sustainable and integrated development of urban, rural and coastal areas and local interventions are therefore identified to complement policies to **address the demographic challenges and socio-economic disparities**, and in particular to:

- improve the attractiveness, business environment of urban areas, create links with the functional urban areas;
- address the needs and potential of the regions that are lagging behind in economic and social development, by combining adaptation and quality-of-life measures with investments to increase growth;
- build the capacity and competencies of local and regional authorities and local communities to develop sound integrated territorial strategies and to assess and select projects.

Factors for effective delivery of Cohesion policy

- promote social innovation and social experimentation of projects and programmes;
- broaden use of financial instruments and/or contributions to a Lithuanian compartment under InvestEU for revenue-generating and cost-saving activities;
- build on the lessons learned in Lithuania during the implementation of the Commission pilot project on industrial transition;
- revise and simplify procedures, eliminating overlaps and excessive documentation and coordination requirements in programming and implementing EU funds;
- increase the capacity of intermediate bodies' and beneficiaries' to prepare and implement projects;
- strengthen the partnership capacity of social partners and increase dialogue with civil society organisations;
- improve public procurement performance, in particular by making efforts to reduce the rate of "single-bidding" and more transparent procurements at municipal level

Source: European Commission

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