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Country Report Lithuania 2018

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2018 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

Lithuania is experiencing a strong economic upswing and is using this opportunity to make growth more inclusive. It has implemented reforms in some key policy areas, like labour relations and pensions, and started taking steps towards strengthening the social safety nets and reforming the education sector. However, high income inequality and poverty remain a major challenge. A strong labour market is underpinning consumption and economic growth but at the same time labour shortages are raising concerns about the sustainability of public finances and economic growth in the long-term perspective. Demographic trends are negative due to strong emigration, and are aggravated by bad health outcomes. In this context, achieving inclusive growth, raising investment, especially in human capital, and boosting productivity and labour supply remain key challenges for Lithuania. ([1])

Economic growth has been rapidly gaining momentum. It is estimated to have reached 3.8 % for 2017. The boost came from a substantial rise in exports, thanks to a favourable external environment and a rebound in private investment. At the same time, consumption was supported by significant wage increases and strong credit growth, but was tempered by rising inflation which reduced disposable income. In 2018 and 2019, growth is expected to moderate to 2.9 % and 2.6 % respectively, as continued support from investment, also linked to the pick-up in EU funds absorption, is expected to be somewhat offset by a slowdown in exports and private consumption.

The employment rate is at a record high, and unemployment continues to fall. The employment rate is above the EU average and stands at 75.7 % in the third quarter of 2017, while unemployment has decreased, falling to 7.2 % in 2017. Youth unemployment has more than halved since the crisis, dropping to 13.2 %, while long-term unemployment has fallen below 3 %. A further drop in unemployment is expected as economic conditions improve. However, in absolute numbers employment is expected to decrease over the next few years because of a fall in the working-age population.

The untapped labour potential could mitigate the effect of a shrinking working-age population. Lithuania's population has fallen by more than 23 % since the early 1990s, and a continued decline of about 1 % annually is expected over the coming years. The main reasons for this are high net emigration, which rose again in 2014-2017, and low life expectancy. At the same time, there is still an untapped labour potential as activity rates of disabled and low-skilled people remain low. The continued decline in the working-age population and an increasing old age population are putting a strain on public resources for social and health services and are negatively affecting potential economic growth.

Lithuania's productivity growth has rebounded in 2017, alleviating pressures on competitiveness. After a period of fast catching-up, productivity growth has been disappointing over the past decade. The slowdown in productivity growth was particularly visible in manufacturing, but also in market services. As wages continued to converge towards the EU average, labour costs increased significantly in recent years. So far, much of this growth has been absorbed by companies' profit margins and has not reduced external competitiveness. However, in 2017, there was a rebound in productivity growth. This momentum will need to be preserved in order to keep the economy competitive amidst persistent upward wage pressures.

Lithuania continues to run a sound fiscal policy. In 2017, for the second year running, the general government achieved a budget surplus. This was supported by robust tax collection in the context of a strong economic performance. Public debt remains low at around 40 % of GDP. Recent reforms of the pension system seem to have improved Lithuania's long-term fiscal sustainability, but risks remain due to uncertainties surrounding the adequacy of pensions.

Lithuania has made some progress in addressing the 2017 country-specific recommendations. It has taken some steps to improve tax compliance. However, the progress with broadening the tax base to sources that are

([1]) This report assesses Lithuania's economy in the light of the European Commission's Annual Growth Survey published on 22 November 2017. 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 — boosting investment, pursuing structural reforms and ensuring responsible fiscal policies.

less detrimental to growth has been limited. Lithuania has implemented reforms to improve the sustainability of the pension system, but pensions remain inadequate and there are concerns that they might decrease further in the future. Lithuania has also taken some measures to address skills shortages, but progress in rewarding quality in teaching and higher education, as well as in improving the performance of the healthcare system, was limited. In addition, Lithuania took some important initial steps to improve the social safety net. Finally, limited progress has been achieved in strengthening productivity by improving the efficiency of public investment.

Regarding progress in reaching the national targets under the Europe 2020 strategy, Lithuania reached 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 population having attained tertiary education. However, more effort is needed to reach the energy efficiency target, to increase the share of renewable energy in the transport sector, to reduce the number of people at risk of poverty or social exclusion and to increase expenditure on research and development, particularly in the private sector.

Lithuania faces challenges with regard to a number of indicators of the Social Scoreboard supporting the European Pillar of Social Rights. Lithuania's employment rate (almost equal for men and women) and growth rate of gross disposable household income are high. However, income inequality and poverty remain high. This could partially be explained by a low effectiveness of social transfers on reducing poverty. At the same time, health outcomes remain poor, partly due to low spending on healthcare. There is room for improvement in terms of efficiency and quality of education and training. The Lithuanian government and the social partners have taken some steps to improve the social dialogue.

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

- **The tax burden on low-income earners has been slightly reduced.** However, the corrective power of the tax system remains low and shifting taxation towards sources that are less harmful to growth, like environmental or property taxes, is limited. Measures taken to improve tax compliance and tackle the shadow economy are showing first positive results, but challenges remain.

- **The long-term sustainability of Lithuania's pension system has improved but risks remain.** The pressures from a shrinking working-age population and a rising old-age dependency ratio are somewhat mitigated by the reforms undertaken in recent years, namely the increase of the retirement age since 2012 and the introduction of the new indexation formula from the beginning of 2018. However, there are concerns about how these reforms will work in practice. This particularly relates to preventing the adequacy of pensions, which is currently among the lowest in the EU, from decreasing further in the future.

- **Strengthening of productivity growth is imperative to continue the catching-up process while preserving competitiveness**. As wages are expected to continue rising above productivity, given their low absolute level and the tight labour market, productivity increases are essential to maintain competitiveness. Knowledge-based activities will require upskilling the labour force and increasing the uptake of modern technology and innovation, especially in the private sector.. The strong integration of digital technology by businesses and the solid support for start-ups are promising for the future

- **The efficiency of public R&D expenditure and the cooperation between businesses and science remain low**. Bottlenecks exist in public research leading to a low level of return on public investment in R&D. Fragmented coordination and governance of research and innovation policy lead to inefficiencies and prevent businesses from fully benefiting from the variety of support schemes. Further progress in the ongoing reform of the organisation and funding of the public research sector should help to allow for a better use of the available resources.

- **Despite a strong recovery in GDP growth, the investment rate remains below the EU average.** While Lithuania's business environment continues to improve, the investment rate has still not recovered. It is held back by the lack of a well-qualified labour force and a weak innovation environment. Investment could also benefit from improving the strategic planning and efficiency of public investments, increasing transparency and competition in public procurement, and reducing corruption.

- **Skills shortages pose a growing challenge in a tight labour market.** The gap between the high and the low-skilled in pay and job opportunities is large and widening. Vulnerable groups, such as people with disabilities, are left largely outside the labour market. Adult learning remains insufficiently developed and the relatively limited coverage of active labour market policies means that too few low-skilled people are getting the training they need.

- **Lithuania's education system lacks efficiency and is not sufficiently responsive to labour market needs.** Employees' knowledge and skills do not always match employers' needs, even though Lithuania has one of the largest shares of 30-34-year-olds with a degree in the EU. In higher education, the number of teachers and programmes, as well as the overall infrastructure, have failed to adjust to a falling number of enrolled students, which decreased by 16 % between 2013 and 2016. Low salaries and limited opportunities for professional advancement make teaching unattractive.

- **Despite recent progress, inequality and poverty remain among the highest in the EU.** This is a result of limited progressivity of the tax system, high employment gaps between low-skilled and high-skilled workers and an inadequate benefit system. The level of poverty, in particular among older people, disabled, unemployed or single-parent households remains well above the EU average. The overall spending on social protection is low compared to other EU countries and low tax revenues limit the financial resources available for more substantial reforms. The high inequality and weak position of low-wage earners is exacerbated by weak trade unions and significant skills gaps in the labour market.

- **Health outcomes remain relatively poor, making the Lithuanian workforce less productive.** The financial and social cost of poor health remains high and is exacerbated by low investment in the health sector and the slow pace of reforms. A lack of a robust framework strengthening accountability, especially at municipal level, makes disease prevention and health promotion insufficient. The health system is too hospital-centric and measures to improve the quality of hospital and primary care are too scarce to tackle effectively and efficiently the health challenges. Finally, high out-of-pocket payments and regional disparities continue to hinder access to healthcare for society's most vulnerable groups.

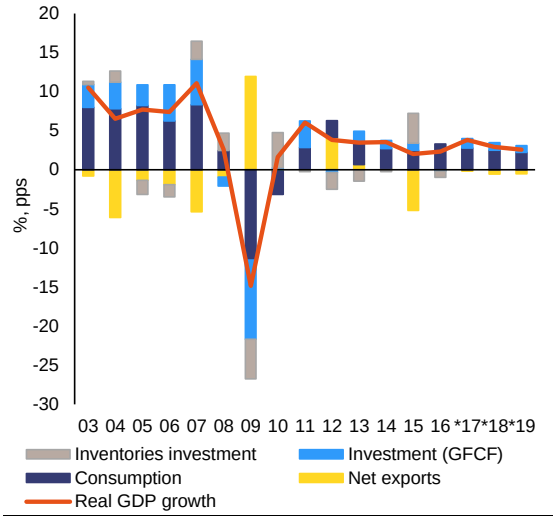
1. ECONOMIC SITUATION AND OUTLOOK

GDP growth

GDP grew by 3.8 % in 2017 on the back of surging exports and a recovery in private investment. Exports of goods and services are forecast to have grown by 10.7 % thanks to the positive developments in both the EU and Russia, and a better than expected performance of the service exports. As in previous years, private consumption has also been an important growth driver. However, rising inflation and shrinking employment weighed on household consumption even though wage growth remained strong.

According to the Commission's winter forecast, growth is expected to moderate to 2.9 % in 2018. While exports and private consumption growth are expected to slow down, investment should remain an important driver, as EU-funded spending is forecast to gather pace.

Graph 1.1: **Real GDP growth and contributions**



* Forecast
Source: European Commission

Domestic demand

Continued wage growth supports private consumption despite rising inflation. In 2017, private consumption is estimated to have grown by 3.9 % compared to 4.9 % in 2016 on the back of continued strong wage growth. At the same time, higher inflation in 2017 had a notable negative impact on disposable incomes, thereby slowing growth of private consumption. As inflation is expected to moderate slowly over the coming years, it is forecast that private consumption will grow by 3.4 % in 2018 and 3.1 % in 2019. Government consumption rose only slightly in 2017 and is expected to continue at a similar stable pace in 2018 and 2019.

Investment

Investment recovered after a temporary dip in 2016, driven mainly by the private sector. In 2017, investment is forecast to have grown by 6.0 %. The fall in 2016 was mainly due to the slowdown in implementing EU funds following the end of the 2007-2013 programming period. In 2017, government investment started to recover, while private investment accelerated even more, given the need to expand operational capacity.

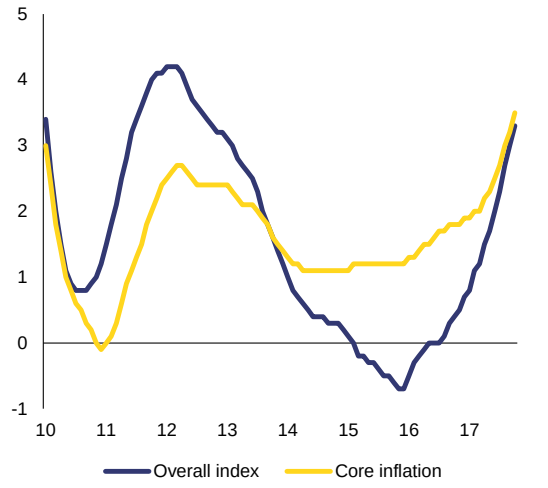
Trade

The export performance has been strengthening. Following a recovery in 2016 (+3.5 %), exports rose strongly in 2017 (+10.7 %) benefiting from the positive economic developments in Lithuania's main export markets. With this, Lithuania has increased its export market share by 18.3 % in nominal terms over the past two years, making up fully for the loss experienced in 2015. Exports of transportation services performed particularly well. The pace of export growth is set to moderate over the next few years as a result of slower growth of external demand, while rising real unit labour costs could pose a threat to cost-competitiveness.

Inflation

Inflation has been fuelled by a considerable increase in excise duties and energy prices. In 2017, the annual HICP inflation rate was 3.7 % compared to 0.7 % in 2016. The rise in the minimum monthly wage and the shortage of labour pushed the prices of services up, thereby contributing to the rise in inflation. As the effect of the hike in excise duties should fade away in part, inflation is forecast to fall to 2.9 % in 2018 and to 2.5 % in 2019.

Graph 1.2: **Harmonised index of consumer prices**



Source: European Commission

Wage growth has been high over the past years. Partly driven by demographic and emigration trends and a catching-up effect, wages have grown fast in the last years. The average monthly gross wage in 2017 stood at EUR 840, up by 8.5 % from 2016. Since 2013, nominal wage growth has slightly exceeded the theoretical level which is determined by domestic labour market conditions and the rate which is consistent with a stable evolution of cost competitiveness (see Section 3.4.4).

Demographic developments

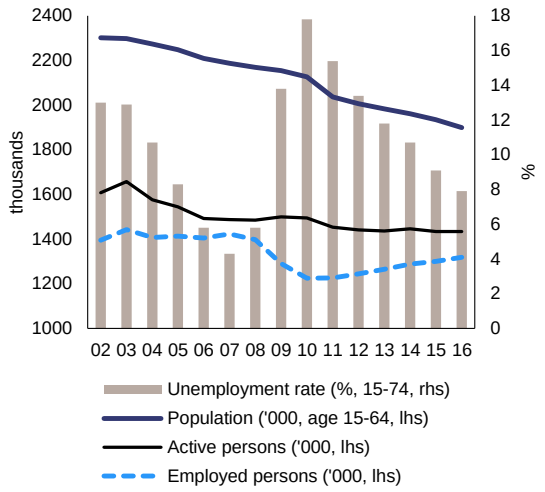
The Lithuanian population continues to decline. Since 2007 the working-age population (20-64) has decreased by more than 15 % (from 1.94 m in 2007 to an estimated 1.69 m in 2018) and continues to shrink at a fast pace. The drivers of this decline have been both an ageing population and a net emigration which has been increasing since 2014 (from 21 000 in 2012 to 30 000 in 2016). This trend continued in 2017. In 2017, more than 57 000 persons emigrated, which was almost 14 % more than in 2016. The rate of emigration increased from 17.5 per 1 000 persons in 2016 to 20.2 in 2017, and is one of the highest in the EU. As discussed in the 2017 Country Report, the main reasons for this are economic (relatively low salaries) and social (high rate of poverty and income inequality). In addition, life expectancy at birth in Lithuania is among the lowest in the EU. On the other hand, there are signs that immigration is also picking up. More than 29 000 persons immigrated in 2017 (around 45 % more than in 2016), and around 64 % of that was return immigration, i.e. Lithuanian citizens returning from abroad.

These demographic trends negatively affect labour supply and increase the risks to the sustainability of the social security system. While the pension reforms of the last years have increased the effective retirement age, the old age dependency ratio is still set to double in the next twenty years, making it more difficult to fund pensions, health care and education. This also relates to the challenge of intergenerational fairness and the potential burden put on younger generations to sustain economic growth (see more in Employment and Social Developments in Europe, European Commission 2017a).

Labour market

The labour market continued to perform well in 2017. Unemployment has been falling steadily since 2010, with rising activity and rising employment rates (see Graph 1.3). It has reached 7.2 % in 2017, below the EU average of 7.7 %. Long-term unemployment dropped by 0.3 pps y-o-y to 2.5 % in Q3 2017 and the youth unemployment fell further to 13.1 % in Q4 2017, compared to 14.7 % a year earlier, . At 75.7 % in Q3 2017, employment in Lithuania has reached the Europe 2020 target rate of 75 % and is well above the national target of 72.8 %. Unemployment is forecast to fall further in 2018, given the favourable economic environment and the shrinking working-age population. At the same time, some potential labour supply that could be essential for the future is left largely untapped. Access to the labour market remains difficult for people with disabilities and the low-skilled, and adult learning remains underdeveloped (see Section 3.3.1).

Graph 1.3: **Major labour market trends**



Source: European Commission

Poverty and social exclusion

The benefits of economic growth have not been equally spread and the risk of poverty remains among the highest in the EU. The share of people at risk of poverty or social exclusion (AROPE) has increased compared to 2015, and is among the highest in the EU (30.1 % in 2016, EU average 23.5 %). The increase was driven by a 1 pp. increase in the share of people living in households with very low work intensity (10.2 %) while both the share of people at risk-of-poverty (21.9 %) and severely materially deprived people (13.5 %) decreased marginally in 2016 but remain significantly above the EU averages of 17.3 % and 7.5 %, respectively. The elderly, people with disabilities, children, single parent households (mainly headed by women) and the unemployed remain particularly affected by poverty and social exclusion since the impact of social transfers is not efficient in reducing poverty.

Inequality

Income inequality remains one of the highest in the EU. In 2016, the richest 20 % of the population had an income more than seven times higher than the income of the poorest 20 %, a ratio significantly higher than the EU average of 5.2. This is largely a result of low levels of social protection spending and a personal income tax system which is among the least progressive in the EU (see Section 3.1.3). In addition, the wages among the low-skilled have failed to keep pace with high wage growth at the top of the income distribution. There is also a large urban-rural divide (see Section 3.3.2). Furthermore, over the period 2010 to 2017, growth in household income did not keep pace with GDP growth. In general, this suggests that the recovery has not yet substantially translated into inclusive growth.

Health

Health outcomes remain poor, exacerbated by the urban-rural divide and by poverty and social exclusion (see Section 3.3.4). Poor health outcomes hamper the potential of the Lithuanian workforce and the competitiveness of the economy. Although life expectancy in Lithuania is increasing (74.6 years in 2015), it is still six years lower than the EU average (80.6), and one of the lowest in the EU. In addition, there is an exceptionally large gap between men and women, with men's life expectancy (69.2 years) more than 10 years lower than for women's (79.7 years), the widest gender gap in the EU. Total (including both public and private) current health spending per capita in Lithuania in purchasing power standard (EUR 1 483) is less than two thirds of the EU average (EUR 2 428). As a share of GDP, total current health spending has increased from 5.6 % in 2005 to 6.5 % in 2015, but remains one of the lowest in the EU. Some 32 % of health spending, mostly on pharmaceutical products, is paid out-of-pocket, compared to the EU average of 15 %.

Competitiveness

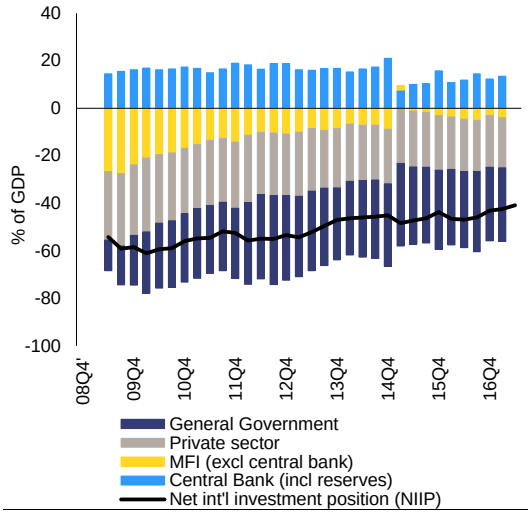
Fast-growing labour costs do not seem to have hurt Lithuania's competitiveness yet. Largely driven by a tightening labour market and a catching-up effect, wages have grown faster than productivity since 2012, leading to rising unit labour costs (see Section 3.4.4). In nominal terms, unit labour cost grew by 5.9 % in 2016, the fastest in the EU. So far, rising labour costs have not translated into deteriorating external competitiveness, as reflected by significant export market share gains, which have recovered after a dip in 2015. However, with wage growth set to remain strong over the coming years, competitiveness might deteriorate in the future unless it is matched by productivity growth.

External position

The current account is set to remain close to balance. It moved closer to balance in 2016 as the negative trade balance of goods shrank, while the surplus of trade in services increased. The negative primary income balance also shrank, helping to improve the current account position. The negative trade balance of goods is set to increase as a result of strong domestic consumption, including a rebound in import heavy investments. On the positive side, robust growth in service exports and an expected increase in the positive secondary income balance are set to keep the current account close to balance in the coming years.

The net international investment position (NIIP) has continued to improve and now stands at 43 % of GDP. The NIIP had plummeted during the economic boom years reaching -58 % of GDP in 2009. The sudden increase in the negative position came mainly in the form of local banks' borrowing from their Nordic parents to finance the domestic credit boom. Since then, it has improved substantially mostly thanks to a drop of private financial sector borrowing from abroad. The government and the private sector contribute equally to the total negative net position. The government's negative net position is entirely due to government long-term debt, while private sector liabilities consist almost entirely of foreign direct investment. As a result, the short-term risks associated with the negative NIIP are low.

Graph 1.4: **Net international investment position**

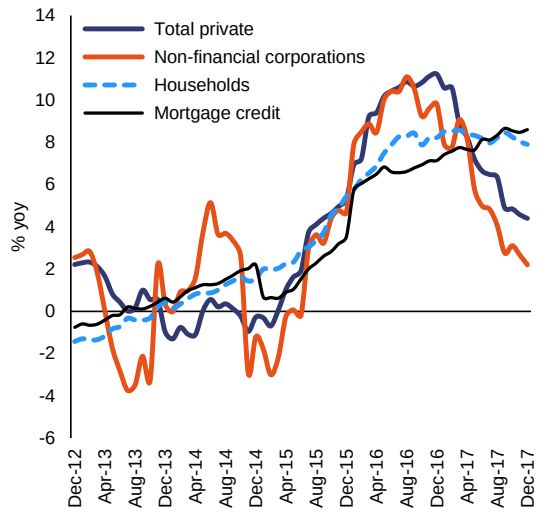


Source: European Commission

Financial sector

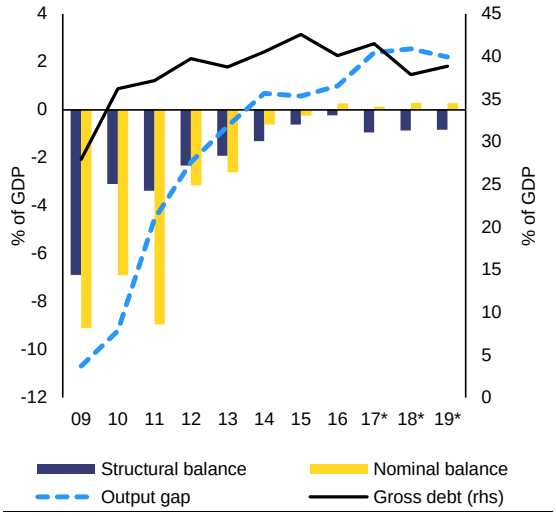
Credit to households is on the rise and access to finance for companies has improved. Credit to households, in particular mortgage credit, has been growing fast, reaching 7.9 % and 8.6 % y-o-y in December 2017, respectively (see Graph 1.5). This supports consumption as well as rising house prices. Access to finance for companies has improved as banks have eased the credit supply conditions. This was further improved through the various public support schemes available for small and medium-sized businesses and start-ups. The capital market remains stagnant, but its development remains high on the government agenda, including the regional cooperation to create a Baltic market for covered bonds and other asset classes. The aim is to attract more domestic and foreign investors and to promote growth of the Baltic stock, bond and private equity market. The government is also pursuing a strategy to make Lithuania an EU Fintech hub (see Box 3.6.1).

Graph 1.5: **Credit growth**



Source: European Central Bank

Graph 1.6: **General government balance and gross debt**



Source: European Commission

Public finance

Lithuania's public finances remain sound. After achieving a budget surplus in 2016 of 0.3 % of GDP, the general government balance is set to stay in surplus in 2017 and 2018, reaching 0.1 % and 0.2 % of GDP, respectively. General government debt is expected to continue falling and to reach 38.9 % of GDP in 2019, well below the 60 % threshold. However, in the medium term fiscal challenges are likely to remain prominent, as the declining population and growing dependency ratios are bound to drive up spending on pensions, healthcare and education.

Table 1.1: **Key economic, financial and social indicators**

Key economic and financial indicators - Lithuania

	2004-07	2008-12	2013-14	2015	2016	forecast 2017	forecast 2018	forecast 2019
Real GDP (y-o-y)	8,2	-0,4	3,5	2,0	2,3	3,8	2,9	2,6
Potential growth (y-o-y)	6,1	1,7	2,0	2,2	1,9	2,4	2,8	2,9
Private consumption (y-o-y)	11,0	-2,2	4,1	4,0	4,9	.	.	.
Public consumption (y-o-y)	2,9	-0,7	0,5	0,2	1,3	.	.	.
Gross fixed capital formation (y-o-y)	17,2	-6,8	7,0	4,8	-0,5	.	.	.
Exports of goods and services (y-o-y)	9,9	8,8	6,5	-0,4	3,5	.	.	.
Imports of goods and services (y-o-y)	15,2	3,3	6,1	6,2	3,5	.	.	.
Contribution to GDP growth:								
Domestic demand (y-o-y)	11,8	-3,5	3,9	3,4	3,2	.	.	.
Inventories (y-o-y)	0,1	-0,2	-0,8	3,8	-0,8	.	.	.
Net exports (y-o-y)	-3,7	2,9	0,4	-5,2	-0,1	.	.	.
Contribution to potential GDP growth:								
Total Labour (hours) (y-o-y)	-0,2	-0,8	0,0	0,7	0,6	0,5	0,4	0,3
Capital accumulation (y-o-y)	2,8	1,1	1,0	1,2	1,1	1,2	1,2	1,3
Total factor productivity (y-o-y)	3,5	1,4	0,9	0,3	0,2	0,7	1,1	1,3
Output gap	4,5	-4,2	0,0	0,6	1,0	2,4	2,5	2,2
Unemployment rate	7,3	13,2	11,3	9,1	7,9	7,2	6,8	6,4
GDP deflator (y-o-y)	6,2	3,3	1,2	0,3	1,0	3,5	3,9	3,0
Harmonised index of consumer prices (HICP, y-o-y)	3,3	4,7	0,7	-0,7	0,7	3,7	2,9	2,5
Nominal compensation per employee (y-o-y)	15,1	2,8	5,0	5,8	6,2	8,4	6,7	6,0
Labour productivity (real, person employed, y-o-y)	7,8	2,1	1,8	0,7	0,4	.	.	.
Unit labour costs (ULC, whole economy, y-o-y)	6,8	0,6	3,2	5,0	5,9	4,2	3,3	3,0
Real unit labour costs (y-o-y)	0,5	-2,5	2,0	4,7	4,9	0,6	-0,5	0,0
Real effective exchange rate (ULC, y-o-y)	4,6	-1,6	3,0	1,8	5,2	3,7	2,6	0,8
Real effective exchange rate (HICP, y-o-y)	0,1	1,1	1,8	0,4	2,1	-0,9	2,9	.
Savings rate of households (net saving as percentage of net disposable income)	-1,0	-0,1	-2,4	-3,9	-4,3	.	.	.
Private credit flow, consolidated (% of GDP)	16,2	-1,4	-0,5	1,9	4,3	.	.	.
Private sector debt, consolidated (% of GDP)	56,9	72,1	55,1	54,7	56,2	.	.	.
of which household debt, consolidated (% of GDP)	17,5	28,0	21,9	22,2	22,8	.	.	.
of which non-financial corporate debt, consolidated (% of GDP)	39,5	44,1	33,2	32,5	33,4	.	.	.
Gross non-performing debt (% of total debt instruments and total loans and advances) (2)	0,7	11,9	7,5	5,2	3,8	.	.	.
Corporations, net lending (+) or net borrowing (-) (% of GDP)	-7,5	6,2	9,6	5,0	5,1	5,3	6,2	6,3
Corporations, gross operating surplus (% of GDP)	33,3	35,5	37,8	34,9	33,1	33,6	34,6	35,1
Households, net lending (+) or net borrowing (-) (% of GDP)	-0,4	0,0	-2,4	-3,8	-4,5	-5,2	-5,5	-5,7
Deflated house price index (y-o-y)	18,1	-9,8	3,2	4,6	4,5	.	.	.
Residential investment (% of GDP)	2,5	2,5	2,4	2,8	3,0	.	.	.
Current account balance (% of GDP), balance of payments	-10,3	-3,9	2,0	-2,8	-1,1	-0,7	-0,3	-0,4
Trade balance (% of GDP), balance of payments	-9,4	-3,4	1,6	-0,6	1,2	.	.	.
Terms of trade of goods and services (y-o-y)	1,8	-0,4	0,3	3,2	2,5	-0,1	1,1	0,4
Capital account balance (% of GDP)	1,3	3,2	2,9	3,0	1,5	.	.	.
Net international investment position (% of GDP)	-45,1	-54,4	-46,1	-43,7	-43,2	.	.	.
Net marketable external debt (% of GDP) (1)	-15,7	-25,5	-16,8	-14,2	-13,9	.	.	.
Gross marketable external debt (% of GDP) (1)	51,1	71,6	60,7	67,3	77,3	.	.	.
Export performance vs. advanced countries (% change over 5 years)	54,3	43,9	35,9	17,0	2,4	.	.	.
Export market share, goods and services (y-o-y)	4,5	5,9	3,4	-10,0	3,2	.	.	.
Net FDI flows (% of GDP)	-3,0	-1,8	-0,3	-1,9	-0,4	.	.	.
General government balance (% of GDP)	-0,7	-6,2	-1,6	-0,2	0,3	0,1	0,2	0,2
Structural budget balance (% of GDP)	.	-2,9	-1,6	-0,6	-0,2	-0,9	-0,9	-0,8
General government gross debt (% of GDP)	17,4	31,1	39,6	42,6	40,1	41,5	37,9	38,9
Tax-to-GDP ratio (%)	29,9	29,0	27,5	29,2	30,2	30,4	30,1	30,1
Tax rate for a single person earning the average wage (%)	26,5	22,5	22,7	22,9	.	.	.	.
Tax rate for a single person earning 50% of the average wage (%)	20,0	18,0	17,9	17,8	.	.	.	.

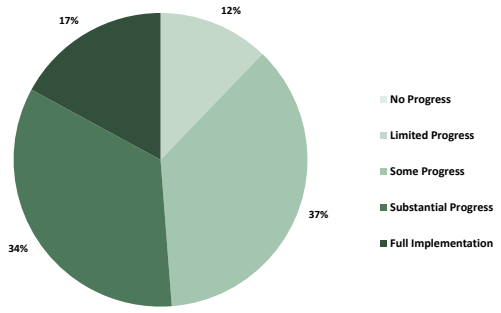
(1) NIIP excluding direct investment and portfolio equity shares. (2) Domestic banking groups and stand-alone banks, EU and non-EU foreign-controlled subsidiaries and EU and non-EU foreign-controlled branches.

Source: Eurostat and ECB as of 30 Jan 2018, where available; European Commission for forecast figures (Winter forecast 2018 for real GDP and HICP, Autumn forecast 2017 otherwise)

2. PROGRESS WITH COUNTRY-SPECIFIC RECOMMENDATIONS

Progress with implementing the recommendations addressed to Lithuania in 2017 ([2]) has to be seen in a longer term perspective since the introduction of the European Semester in 2011. Looking at the multi-annual assessment of the implementation of the CSRs since these were first adopted, all the CSRs were at least partially implemented. 88 % of all the CSRs addressed to Lithuania have recorded at least 'some progress'; while 12 % of these CSRs recorded 'limited progress' (see Graph 2.1). Substantial progress and full implementation have been achieved in fiscal policy and the governance area, where Lithuania ensured timely correction of excessive deficits and continued to observe fiscal targets. Other areas with substantial progress include the reform of the governance of state-owned enterprises and improving the security of energy supply by improving interconnectivity with other Member States for both electricity and gas.

Graph 2.1: **Overall multiannual implementation of 2011-2017 CSRs to date**



The overall assessment of the CSRs related to fiscal policy excludes compliance with the Stability and Growth Pact. The multiannual CSR assessment looks at the implementation since the CSRs were first adopted until the 2018 Country Report.
Source: European Commission

Lithuania has continued to run sound fiscal policies, containing budget deficits and improving its medium-term fiscal sustainability. Lithuania has improved its budget position significantly since 2011, reducing its structural budget deficit from 3.5 % of GDP in 2011 to an estimated 0.9 % in 2017. In nominal terms a budget surplus was attained in 2016. Lithuania also strengthened its fiscal framework. It further continued to lower the tax burden on low income earners and has implemented some measures to increase tax compliance. However, Lithuania used the opportunities for broadening the tax base to sources that are less detrimental to growth only to a limited extent. Regarding pensions, significant changes were introduced to make the system more financially sustainable in the medium and long run. A gradual increase in the retirement age is being implemented since 2014 and a new indexation formula will be applied from 2018. There are, however, risks related to implementation of these measures.

Lithuania has taken some measures to address skills shortages. By adopting the new Law on Employment, some progress has been achieved in improving the effectiveness of active labour market policies. With the law on vocational training amended in 2017, Lithuania is taking measures to improve the quality of vocational education and increase the use of apprenticeships. Lithuania continues to strengthen its network of adult learning coordinators in municipalities, but the results are limited so far. Other fields of the education system have seen limited progress and continue to face challenges in terms of quality and efficiency.

Some measures have been taken to improve the performance of the health sector, but raising the efficiency and quality of both primary and hospital care remains a challenge. Lithuania made limited progress with improving the public health policies and strengthening the accountability at the local level. The effectiveness of measures taken to reduce the high level of out-of-pocket payments and their substantial financial burden on low income groups remain to be assessed.

Lithuania achieved some progress in reducing poverty. In 2017, important legislation has been adopted which increased the adequacy of social assistance, unemployment social insurance benefits, and which revised child benefits in a way that the low income earners can fully benefit from them. Lithuania has also increased the income tax allowance. These measures should help to reduce the high level of poverty and contain the rise of income inequality to a certain extent. Having in mind the lack of adequate increase in benefits since 2008, the efforts to reduce poverty and social

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

exclusion should continue, but also focus on bringing people to the labour market and tailoring the taxes and benefits in a way that increases incentives to enter the labour market.

Overall, Lithuania has made some progress in addressing the 2017 country-specific recommendations ([3]). Lithuania achieved some progress in addressing the country-specific recommendations regarding fiscal issues and addressing the issues in the labour market and education sector. However, progress in healthcare reforms and adopting measures to strengthen the efficiency of public investment was limited.

([3]) 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. This overall assessment does not include an assessment of compliance with the Stability and Growth Pact.

Table 2.1: **Overall assessment of progress with 2017 CSR**

Lithuania	**Overall assessment of progress with 2017 CSRs: Some progress**
CSR 1: *Pursue its fiscal policy in line with the requirements of the preventive arm of the Stability and Growth Pact, which implies to remain at its medium term budgetary objective in 2018, taking into account the allowances linked to the implementation of the systemic pension reform and of the structural reforms for which a temporary deviation is granted. Improve tax compliance and broaden the tax base to sources that are less detrimental to growth. Take steps to address the medium term fiscal sustainability challenge related to pensions.*	**Some progress**(1): • It has made some progress in improving tax compliance. • It has made limited progress in broadening the tax base to sources that are less detrimental to growth. • It has made some progress in improving the fiscal sustainability of the pension system but adequacy remains a concern.
CSR 2: *Address skills shortages through effective active labour market policy measures and adult learning and improve educational outcomes by rewarding quality in teaching and in higher education. Improve the performance of the healthcare system by strengthening outpatient care, disease prevention and affordability. Improve the adequacy of the social safety net.*	**Some progress:** • It has made some progress in addressing skills shortages by increasing the effectiveness of the active labour market policy measures, but progress in adult learning remains limited. • It has made limited progress in improving educational outcomes by rewarding quality in teaching and higher education. • It has made limited progress in improving the performance of the healthcare system. • It has made some progress in improving the social safety net.
CSR 3: *Take measures to strengthen productivity by improving the efficiency of public investment and strengthening its linkage with the country's strategic objectives.*	**Limited progress** • It has made limited progress in strengthening productivity.

(1) This assessment does not include an assessment of compliance with the Stability and Growth Pact.
Source: European Commission

ESI Funds are pivotal in addressing key challenges to inclusive growth and convergence in Lithuania, notably by investing in the ongoing reform of the health system including by targeting investments for improving health-care quality and accessibility, investing in the quality and the infrastructure of education at all levels; promoting R&D in the private sector and improving cooperation between science and businesses. ESI Funds are also instrumental in supporting active policies for the labour market such as vocational training, youth employment and adult learning, promoting inclusion and poverty reduction and economic development in rural areas.

Member States can request from the Commission technical support to prepare, design, and implement growth-enhancing structural reforms. The Structural Reform Support Service (SRSS) provides, in cooperation with the relevant Commission services, tailor-made technical support, which does not require co-financing and is provided at a Member State's request. The support addresses priorities identified in the context of the EU economic governance process (i.e., implementation of country-specific recommendations), but the scope of the SRSS support is wider as it can also cover reforms linked to other Commission priorities, or reforms undertaken at the initiative of Member States.

Lithuania has requested technical support from the SRSS to help implement reforms in various areas such as: governance and public administration, growth and the business environment, healthcare, education, and the financial sector. In particular, the SRSS provides support aimed at enhancing public sector efficiency, public procurement, competitiveness, research, development and innovation (RDI), and improving the sustainability of pension systems and healthcare technology. It is also providing support to address corporate insolvency.

Box 2.1: Tangible results delivered through EU support to structural change in Lithuania

Lithuania is a beneficiary of significant European Structural and Investment Funds (ESI Funds) support and can receive **up to EUR 8,4 billion until 2020**. This represents around 3 % of GDP annually over the period 2014-2018 and 70 % of public investment. ([1]) By 31 December 2017, an estimated EUR 4 billion (48 % of the total) was allocated to projects on the ground. This has paved the way for productive investment into more than 1 470 enterprises and attracting over EUR 225 million of private investment matching public support; over 80 researchers working in improved research infrastructure facilities; improved energy efficiency for over 54 thousand households; improved childcare and education infrastructure accommodating 42 000 children. Out of the EU financing, over EUR 700 million is to be delivered via financial instruments, which is a 50 % increase compared to the 2007-2013 period.

ESI Funds help address structural policy challenges and implement country-specific recommendations. Actions financed cover, among others, support to ongoing reforms in health and education sectors, notably by investing to improve access to quality healthcare across the country, to support consolidation of education infrastructure and to improve the quality of education at all levels; promoting R&D in private sector and cooperation between science and business; support to improving the effectiveness of the justice system; support to knowledge commercialisation and technology transfer; support to active labour market policy measures, vocational training, youth employment and adult learning; and promotion of social inclusion, poverty reduction and economic development in rural areas.

Various reforms were undertaken already as precondition for ESI Funds support. ([2]) A Smart Specialisation Strategy for R&I was developed to focus efforts on product specialisation with strong market potential. This has also helped improve cooperation between enterprises and public research institutions. The national transport plan has allowed the timely preparation of projects, implemented not only with support from ESI Funds, but also from the Connecting Europe Facility (CEF), European Investment Bank (EIB) loans and national funding. The mapping of health infrastructure enhanced coordination and targeting of investments for improving health-care quality and accessibility and reducing health inequalities in the country, with special focus on prevention, primary care, advanced care centres for complex diseases and special target groups (children, elderly people, most socially disadvantaged groups).

Lithuania is advancing the take up of the European Fund for Strategic Investments (EFSI). As of December 2017, overall financing volume of operations approved under the EFSI amounted to EUR 324 million, which is expected to trigger total private and public investment of EUR 934 million. More specifically, 8 projects involving Lithuania have been approved so far under the Infrastructure and Innovation Window (including 4 multi-country projects), amounting to EUR 295 million in EIB financing under the EFSI. This is expected to trigger about EUR 640 million in investments. Under the SME Window, 5 agreements with financial intermediaries have been approved so far. European Investment Fund financing enabled by the EFSI amounts to EUR 29 million, which is expected to mobilise approximatively EUR 294 million in total investment. Over 4 800 smaller companies or start-ups will benefit from this support. SMEs rank first in terms of operations and volume approved, followed by energy and transport.

Funding under Horizon 2020, the Connecting Europe Facility and other directly managed EU funds is additional to the ESI Funds. By the end of 2017, Lithuania has signed agreements for EUR 392 million for projects under the Connecting Europe Facility.

https://cohesiondata.ec.europa.eu/countries/LT

([1]) Public investment is defined as gross fixed capital formation + investment grants + national expenditure on agriculture and fisheries.

([2]) Before programmes are adopted, Member States are required to comply with a number of so-called ex-ante conditionalities, which aim at improving conditions for the majority of public investments areas.

3. REFORM PRIORITIES

3.1. PUBLIC FINANCES AND TAXATION

3.1.1. FISCAL POLICY

Lithuania recorded a headline surplus over the past years and has set its debt on a declining path. In 2017, taking into account preliminary data, the general government managed to maintain a surplus (expected to stand at 0.1 % of GDP) following the surplus reached in 2016 (0.3 % of GDP). Robust tax revenue collection, supported by increases in wages and consumption that were higher than expected, helped to partly offset costs associated with the labour market and pension reforms. In 2018, the surplus is expected to rise to 0.2 % of GDP, as the government has introduced some tax adjustments and cut administrative spending. These measures should compensate for higher social spending and a rise in pensions and public wages in 2018.

3.1.2. MEDIUM AND LONG TERM FISCAL CHALLENGES

Recent reforms of the pension system have improved Lithuania's long-term fiscal sustainability. Over the past years, the Lithuanian authorities legislated a number of reforms to make the pension system more sustainable, the most significant of which was the introduction of an automatic indexation mechanism (Law on Social Insurance Pensions, June 2016) whereby pensions, including the pension capital, are automatically indexed to wage bill growth from 2018. According to estimates of the Lithuanian authorities, these reforms and in particular the new indexation mechanism will lead to a steady fall in the benefit ratio after 2020 and by extension in pension expenditures through 2070, improving the long-term fiscal sustainability of the system.

However, there are concerns about how these reforms will work in practice. First, the Social Insurance Law adopted in mid-2016 states that if the pension benefit ratio declines (as the authorities' estimates suggest it will after 2020), the government has an obligation to propose alternative measures to ensure sustainability. Since the declining benefit ratio is the main factor driving the reduction in pension expenditure in the authorities' estimates, this obligation creates significant policy uncertainty and jeopardizes the pension system's long-term sustainability. Lithuania's Independent Fiscal Institution also stressed this risk in its Report on the Sustainability of the General Government Finances for 2017. Secondly, even if this obligation is changed and the wage bill indexation mechanism is implemented as legislated with the ensuing decline in the benefit ratio, this could raise concerns about pension adequacy given the high at-risk-of-poverty rates for the population above 65 years of age at in Lithuania relative to the EU average (see Section 3.3.3). Finally, even if all the reforms are implemented as legislated, the public pension system (including not only social insurance pensions but also state and social assistance pensions) is still expected to be in deficit between 2020 and 2050. However, the deficit will peak at 0.6 % of GDP, which is significantly less than in the absence of the adopted reforms (3.7 % of GDP).

Despite the projected ageing of the population, health care costs are expected to rise only moderately. Public health care spending (without investment) is relatively low in Lithuania at 4.1 % of GDP in 2016 compared to the EU average of 6.8 % of GDP. It is expected to increase only moderately in the long-term (by 0.4 pp of GDP by 2070 compared to the EU average of 0.9 pp, according to the 2018 Ageing Report, forthcoming). However, these projections are based on current policies. The Lithuanian health system is underinvested and faces numerous challenges in terms of access to and quality of healthcare (see Section 3.3.4).

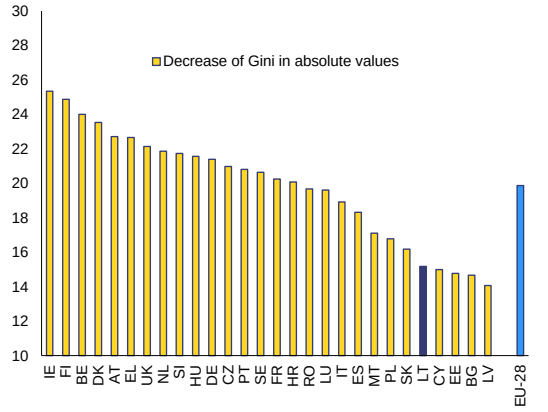
3.1.3. TAX STRUCTURE

Lithuania has the one of the lowest tax-to-GDP ratios in the EU. Total tax revenues were 29.8 % of GDP in 2016 while the EU average was 38.9 %. As regards revenue structure, Lithuania relies mostly on indirect taxes (12.0 % of GDP) and social security contributions (12.2 % of GDP). Direct taxes account for only 5.7 % of GDP, the

second lowest proportion in the EU (data for 2016).

Lithuania's tax-benefit system has one of the lowest corrective powers on income inequality in the EU, as measured by the difference between the market income Gini coefficient and the disposable income Gini coefficient, (see Graph 3.1.1). ([4]) The limitations of the Lithuanian tax and benefit system were discussed in the 2017 country report (European Commission, 2017 p.1, p.5, p. 23). While the social benefits have slightly increased recently, the low progressivity of the tax system limits the effect of redistribution and thus limits the potential for reducing inequality and poverty, which is among the highest in the EU (see Section 3.3.2).

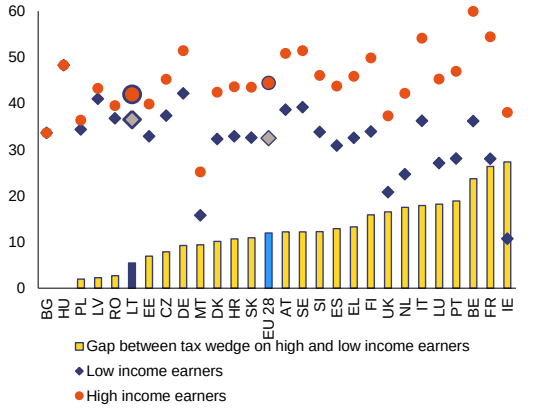
Graph 3.1.1: **Corrective power of tax benefit systems, 2016**



Source: European Commission

The low corrective power is partly explained by the low progressivity of personal income taxation. The tax wedge on labour is relatively heavy on low-income earners. While the tax burden on low-income earners (for people earning 50 % of the average wage) is above the EU average, the tax burden on high earners (people earning 167 % of the average wage) is below the EU average (see Graph 3.1.2). This may reduce the incentives to work for the low earners, increase their risk of poverty, and increase income inequality. Shifting the tax structure away from labour taxation, especially for low income earners, towards other bases such as environmental and property taxes could help to reduce income inequality whilst also promoting employment. Combined with measures to encourage entrepreneurship and innovation, these changes promote more inclusive growth.

Graph 3.1.2: **Tax wedge on low and high earners, 2016**



Low and high earners are people earning 50 % and 167 % of the average wage, respectively.
Source: European Commission

Lithuania is taking further steps to reduce the tax burden on low earners. In 2017, the non-taxable income threshold in Personal Income Tax (PIT) was raised from EUR 200 to EUR 310. This measure targets low earners as the maximum deduction applies only to incomes at or below the minimum wage – EUR 380. In January 2018, Lithuania raised this non-taxable income threshold further to EUR 380 and increased the allowance for disabled people, while the minimum wage was set at EUR 400. This should further reduce the tax payable by low earners and help reduce poverty by focusing on the most disadvantaged people in the workforce. However, it is unlikely to lower the tax burden for the most vulnerable households, those whose income tax liability is insufficient to benefit from additional increases in the non-taxable allowance. In addition, Lithuania has changed its child benefit scheme from 2018 allowing low earners to fully benefit from child support (see Section 3.3.2). While this will raise the implicit tax rate applicable to low income households with children, the combined tax-benefit reform package moderately reduces income inequality (see Box 3.3.2).

([4]) The Gini-coefficient is an indicator of income inequality with a value between 0 and 1. Lower values indicate higher equality and high values higher inequality. A value equal to 0 indicates that everybody has the same income. A value equal to 1 indicates that one person has all the income in a country.

There is scope to shift taxes towards alternative bases, such as environmental taxation, which can also help to address environmental policy aims. Environmental taxes, which account for about 1.9 % of GDP, are mainly taxes on energy (1.8 % of GDP). This figure is significantly below the EU average of 2.4 % of GDP. Moreover, taxes on transport are the lowest in the EU and take no account of vehicles' environmental performance. Lithuania has the lowest excise duties on motor fuel, petrol and diesel in the EU. The latter was raised from 2018, together with excise duties on cigarettes, while the exemptions for coal and coke used for heating purposes were abolished. The overall implicit tax rate on energy is among the EU's lowest. In 2018, Lithuania is considering some changes in waste management, including related taxation (see Section 3.5.4). However, no changes related to car taxation or road-use tax for private passenger vehicles are envisaged.

The overall level of property taxation remains low, but changes in 2018 will introduce a degree of progressivity into the system. Recurrent taxes on immovable property can be an efficient way to make taxation more progressive and raise additional revenue with limited potential for evasion. In 2015, Lithuania collected only 0.3 % of GDP from recurrent property taxes, which is significantly below the EU average of 1.2 %. Since 2015, the non-taxable threshold for immovable property has been lowered from EUR 300 000 to EUR 220 000, broadening the tax base but halving the applicable rate from 1 % to 0.5 %. New legislation was passed at the end of 2017 to tax properties in the EUR 300 000 – EUR 500 000 range at 1 %, and properties worth over EUR 500 000 at 2 % of their market value.

Though tax incentives for R&D are fairly generous, private R&D expenditure remains relatively low. In 2015, private R&D expenditure amounted to 0.3 % of GDP, compared to an EU average of 1.3 %. 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. There are, however, some concerns about the effectiveness of these measures. The compliance and administration costs are high, especially for small businesses, while the involvement of many different agencies creates uncertainties and deters some companies from using the schemes. Better coordination and guidance for companies and tax administration could increase the impact.

Additional tax measures designed to encourage entrepreneurship have been adopted in 2018. They include the additional tax relief for R&D (through reduced corporate income tax rate, 5 % instead of 15 %) and a one-year corporate income tax holiday targeting start-ups.

3.1.4. TAX COMPLIANCE

Lithuania has taken steps to fight tax evasion but tax compliance remains relatively low. Although the VAT gap ([5]) shrank from 28 % in 2014 to 26 % in 2015, Lithuania still has one of widest gaps in the EU (CASE, 2017). The country has introduced several measures to further combat the shadow economy and improve tax compliance. The first measures implemented at the end of 2016 as part of the smart tax administration system (i.MAS) – such as e-registering of VAT invoices (i.SAF) and e-waybills (i.VAZ), - have helped to improve tax compliance and raise revenue. These measures have halved the value of inconsistencies in VAT declarations, and the growth of VAT revenues over-performed consumption growth in the first half of 2017, according to the State Tax Inspectorate. Other projects of i.MAS are still in development. They are designed to simplify compliance and administration, especially in the area of e-accounting. A new control programme on aggressive tax planning has been launched. ([6]) Groups of companies have been identified in this context, and their risk profiles will be assessed. However, Lithuania is just starting to acquire expertise in this area.

Lithuania has taken steps to raise awareness and promote a voluntary taxpaying culture. In November 2017, the State Tax Inspectorate

([5]) The VAT gap is a 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.

([6]) Aggressive tax planning consists of taking advantage of the technicalities of a tax system or of mismatches between two or more tax systems for the purpose of reducing tax liability.

launched a cash registry receipt lottery scheme. Its aim is to encourage people to report their purchases by sending their receipts to the tax inspectorate, in exchange for the chance to win a prize. Two sectors (services such as hairdressers, restaurants, and goods sold on open markets) have been targeted as they are the most affected by unreported sales. Similar cash register receipt lotteries are run in Croatia, Portugal, Poland and other countries that are striving to reduce high tax evasion.

Measures implemented to tackle the shadow economy and tax non-compliance related to labour relations are showing positive early results. The 'You've been warned, now choose' programme, first introduced in 2016 as a pilot programme, consists of questionnaires sent to employers, letters to employees (known as 'cherry letters', warning about low pensions rights), interviews, and control activities, such as selecting part-time employment as an indicator of possible informal work. In 2016, audited companies reduced the proportion of supposedly part-time employees (by 11 % compared to 4 % overall). The fact that information on the average wages companies pay was made public in 2017 may also have had an impact.

3.1.5. FISCAL FRAMEWORK

The fiscal framework has been developed further. Lithuania further refined the application of the national expenditure rules and the accountability on meeting fiscal targets. In 2017, two ministerial orders were issued clarifying how the Constitutional Law on the Implementation of the Fiscal Treaty is to be applied. They specified methodological aspects of assessing compliance with the rule on the growth of expenditure in the general government sector and the reporting by the Ministry of Finance to the government on the achievement of the structural adjustment target. In 2018, the Law on the Budget Structure is set to be amended so as to improve the transposition of Council Directive 2011/85/EU on requirements for the Member States' budgetary frameworks. For example, this amendment will require the government to provide the comparison of the macroeconomic and budgetary forecasts produced by the Lithuanian Ministry of Finance and the European Commission.

Lithuania is taking steps to upgrade its medium-term budgetary planning system. Its medium-term budgetary framework for fiscal policy-making extends over three years, but the substance of the multiannual targets is considered to be weak as they are rarely upheld. In 2017, Lithuania started a multi-year exercise to make its medium term budgetary planning system more robust. The exercise seeks to strengthen the link between the multiannual budgets and strategic planning, to establish a robust assessment of the outcomes achieved and to introduce clearer reporting and dissemination of information on the budget implementation. This should be formalised in the new version of the Law on the Budget Structure, which is scheduled for adoption in 2019.

3.2. FINANCIAL SECTOR

3.2.1. FINANCIAL STABILITY

The banking sector is stable and well capitalised. The capital adequacy ratio is 19.8 % (June 2017), far above the regulatory minimum of 8 %, and the capital consists almost entirely of high-quality (Tier 1) instruments. The non-performing loan ratio continued to fall after the crisis, reaching 3.7 % in June 2017, while profitability (return on equity and return on assets) remains high by EU standards (see Table 3.2.1). With a loan-to-deposit ratio close to 100 %, the sector is on average fully funded by local deposits. However, banks' liabilities to their Scandinavian parent banks rose recently from 4 % to 6 % of total liabilities. An increase of parent bank funding relates basically to the merger of two banks as purchaser attracted additional funds to fund the whole deal. Although these are not worrying levels, the possible return of reliance on parent bank funding needs to be monitored. This is especially important in the context of risks associated with the Swedish real estate market.

Table 3.2.1: **Financial soundness indicators**

(%)	2010	2011	2012	2013	2014	2015	2016	2017Q2
Non-performing debt	16.1	13.4	10.9	8.5	6.5	5.2	3.8	3.5
Non-performing loans	-	-	-	-	6.8	5.6	4.0	3.7
Non-performing loans NFC	-	-	-	-	10.3	8.4	6.2	5.5
Non-performing loans HH	-	-	-	-	8.9	6.6	4.8	4.3
Coverage ratio	45.5	45.8	44.1	40.6	31.5	32.3	32.2	32.3
Loan to deposit ratio*	144.9	133.2	125.4	115.7	99.3	97.1	97.8	102.2
Tier 1 ratio	10.8	12.0	14.6	17.0	20.9	24.3	19.1	19.5
Capital adequacy ratio	14.8	14.2	15.7	17.5	21.3	24.8	19.4	19.8
Return on equity**	-3.8	15.5	7.8	8.6	7.7	7.5	11.9	-
Return on assets**	-0.3	1.5	0.9	1.0	0.9	0.9	1.0	-

* ECB aggregated balance sheet: loans excluding to government and MFI / deposits excluding from government and MFI
** For comparability only annual values are presented
Source: ECB CBD

While concentration in the banking market is high, this is partly attributable to the relatively small market size. The recent creation of Luminor Bank in October 2017, a merger between Nordea and DNB Baltic operations, further increased concentration in the Lithuanian market where on the eve of the merger the three largest banks held 72 % of loans and 74 % of deposits. ([7]) The market share of Luminor was above 30 % in the retail loan segment and 20 % in corporate loans, deposits and leasing. ([8]) The merger prompted the Bank of Lithuania (BoL) to call for new entrants to the market. Yet competition levels are not a major concern at this stage; the number of financial institutions is appropriate to the size of the economy, according to recent market assessments by retail financial services (Lithuanian Competition Council, 2016).

The reform of credit unions, small financial cooperatives serving local people in rural areas, is underway. As many smaller credit unions were facing financial difficulties, the BoL launched a programme of restructuring and consolidation of the sector. From January 2018, two central credit unions will take over management of 20 and 14 small institutions respectively, thus improving the sector's viability. The remaining seven credit unions will have time to become banks until 2023.

3.2.2. ACCESS TO FINANCE

Recent data indicate an improvement in small and medium-sized businesses' access to finance, though loan rejection rates remain high. In recent years, there has been a gradual improvement in such businesses' access to finance, although the level of corporate investment in Lithuania is relatively low compared to the other Baltic countries. Banks are still selective and the growth of credit to corporations (5 % in June 2017 y-o-y) remained below nominal GDP growth (7 % y-o-y). With the support of EU structural funds, the Lithuanian government is providing a number of financial instruments for small and medium-sized firms (SMEs) and it aims to further diversify financing sources for business development. This includes loans and guarantees managed by the Lithuanian agency for financial support to SMEs (INVEGA). The government is also working to establish a National development institution.

The local equity and debt markets remain underdeveloped limiting the choice of companies' funding sources. A series of regulatory amendments designed to encourage the growth of the local equity and debt market, venture capital and crowdfunding were passed in 2016-2017. To this end, two technical support projects were agreed with the Commission by October 2017: to improve the environment for local institutional investors and to design a new corporate insolvency regime. The government is finalising a project with the EBRD on updating the covered bond and securitisation regulation with a

([7]) Bank of Lithuania statistic, Q3 2017 data.
([8]) European Commission decision approving Nordea – DNB merger in Estonia, Latvia and Lithuania (C(2017)6281 final of 14/09/2017).

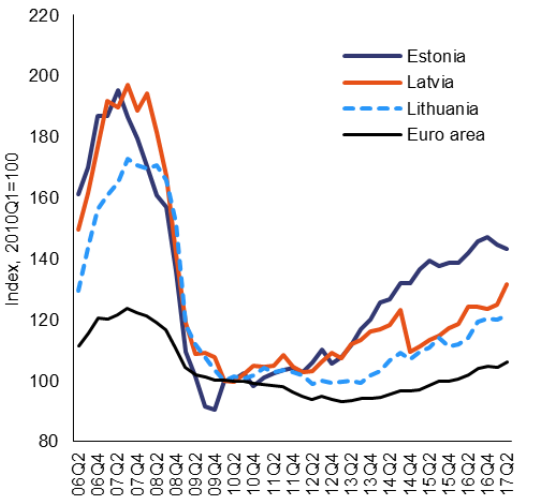
view to creating a common Baltic market. In this vein, in November 2017 the Ministry of Finance signed a Memorandum of Understanding with its Latvian and Estonian counterparts on regional capital market development.

Lithuania has seen a particularly steep rise in venture capital investment in recent years. Over the last few years, it has developed an attractive and dynamic start-up ecosystem. The government has made considerable efforts to increase venture capital investment. Between 2000 and 2016, Lithuania has experienced the second highest growth in venture capital financing, after Estonia. In 2017 the government has established a new seed and venture capital fund and co-investment fund. In 2018-19 also plans to establish 5 new venture capital funds including Accelerator fund, using both ESI Funds for the period 2014-2020 and reflows from 2007-2013 financial instruments. Furthermore, to facilitate access to capital for start-ups and seeds companies, venture capital funds started benefiting from the same fiscal treatment as other investment funds in 2018. Still, Lithuania does not currently offer tax incentives to business angel investors. With the implementation of the ESI Funds gaining momentum, access to finance for businesses should further improve.

3.2.3. HOUSING MARKET

Following a period of relative stagnation, house price growth has picked-up in the last three years (see Graph 3.2.1). Since 2014 real house prices have grown by 5.1% on average annually driven by positive economic trends and supported by generally favourable credit conditions. Mortgage credit has been on a steady rise since the end of 2015 and grew by 8.6 % y-o-y in December 2017. Household indebtedness started to grow as well, although from the lowest levels in the EU.

Graph 3.2.1: **Real house price index, 2010=100**



Source: European Commission

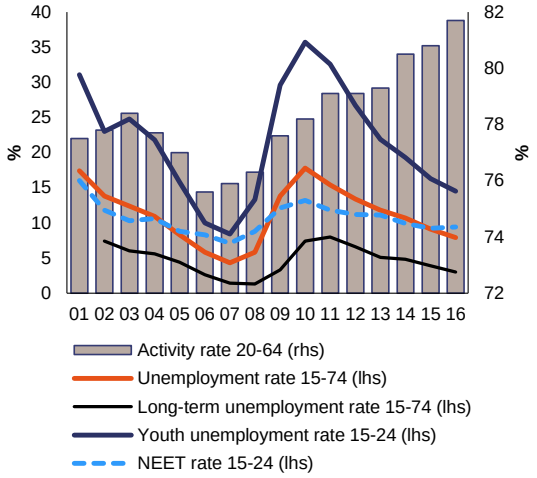
So far, house prices are in line with fundamentals. Between the bursting of the bubble in 2008 and 2016, both the house price-to-income ratio and the price-to-rent ratio were below their historical values, suggesting no overheating and even a slight undervaluation. However, with the recent growth of house prices, these values have come closer to fundamentals in 2017 (Bank of Lithuania, 2017), as it is consistent with domestic growth drivers, in particular the wage growth (see Section 3.4.5). In order to increase the resilience of banks against a potential market downturn, in December 2017 the Bank of Lithuania set a Counter Cyclical Buffer for Lithuanian exposures at 0.5 % of risk-weighted assets. The main purpose of this measure is to build capital reserves during good times, when profitability of the banking sector is high, in order to cover potential losses and reduce credit cyclicality during the bad times. The banks will have to comply with the new capital requirement as from 31 December 2018. The BoL announced it will also consider other macro prudential measures if needed, for example increasing the countercyclical buffer to 1 % or introducing a Debt to Income ceiling beside the existing Debt Servicing to Income ceiling.

3.3. LABOUR MARKET, EDUCATION AND SOCIAL POLICIES

3.3.1. LABOUR MARKET

Labour market developments are generally positive with an overall increase in employment and a considerable decline in youth unemployment. Youth unemployment has more than halved from its peak of 35.7 % in 2010, and came to 13.2 % in 2017, significantly below the EU average of 16.8 % (see Graph 3.3.1). In 2016, the overall unemployment rate dropped by 1.2 pps to 7.2 % in 2017, and long-term unemployment has decreased by almost 1 pp. to 3.0 % in 2016. In absolute figures, employment has been growing since 2010 (from 1.22 m in 2010, to 1.31 m in 2016). In 2016, employment rates were higher for women than for men in the age group 25-54 which is unique in the EU. However, given the demographic challenges, continued good performance depends on improving participation of disadvantaged groups, in particular those who do not have relevant skills or have other difficulties integrating in the labour market.

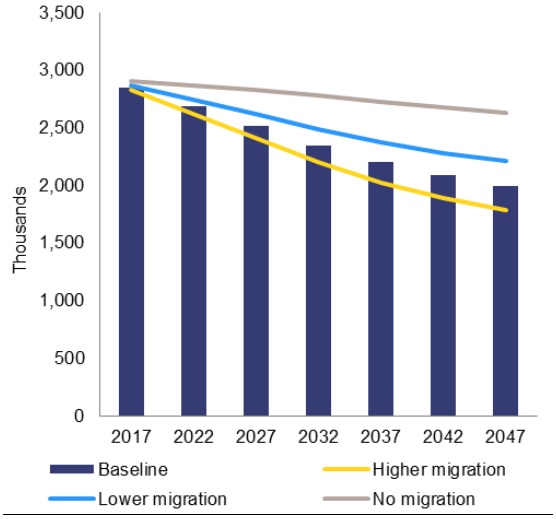
Graph 3.3.1: **Labour market trends**



Source: European Commission

Demographic challenges remain a risk for potential economic growth. Population decline may aggravate the existing skills shortages in certain economic sectors, which would need to be compensated by increased productivity and investment. The emigration intensified during the last couple of years, even though there was an increase in immigration in 2017. The main drivers of the country's population decline are continuous high net emigration and negative natural growth. According to latest Eurostat projections, by 2047 the Lithuanian population could decrease by 30 % to around 2 million (see Graph 3.3.2).

Graph 3.3.2: **Population development scenarios**



Source: European Commission

Employment opportunities vary significantly across skill groups, albeit less so than during the pre-crisis period. The low- and medium-skilled have disproportionally fewer labour market opportunities compared to the highly-skilled, although this trend has slowed down in the last 10 years. Survey-based data (European Commission, 2017c) also point to labour shortages, notably in the construction sector, albeit to a lower degree than in the past. To some extent, skills mismatches and labour shortages can be linked to emigration, unfavourable working conditions and demographic trends (including ageing), but they also underscore the need to improve the quality and labour market relevance of Lithuania's education system (see Section 3.3.5).

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

The European Pillar of Social Rights, proclaimed on 17 November 2017 by the European Parliament, the Council and the European Commission, sets out 20 key principles and rights to benefit citizens in the EU. In light of the legacy of the crisis and changes in our societies driven by population ageing, technological change and new ways of working, the Pillar serves as a compass for a renewed process of convergence towards better working and living conditions.

LITHUANIA		
Equal opportunities and access to the labour market	Early leavers from education and training (% of population aged 18-24)	Best performers
	Gender employment gap	Best performers
	Income quintile ratio (S80/S20)	Critical situation
	At risk of poverty or social exclusion (in %)	To watch
	Youth NEET (% of total population aged 15-24)	To watch
Dynamic labour markets and fair working conditions	Employment rate (% population aged 20-64)	Better than average
	Unemployment rate (% population aged 15-74)	On average
	GDHI per capita growth	Better than average
Social protection and inclusion	Impact of social transfers (other than pensions) on poverty reduction	Critical situation
	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 situations"). 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 2018, COM (2017) 674 final. NEET: neither in employment nor in education or training; GDHI: gross disposable household income.

Lithuania faces challenges with regard to a number of indicators of the Social Scoreboard([1]) supporting the European Pillar of Social Rights. This is notably the case for equal opportunities and access to the labour market, as well as social protection**.** Lithuania has high levels of income inequality (measured by the income quintile ratio), largely driven by a disproportionate growth in income among top earners. Unequal growth in income among different groups, together with the low progressivity of the tax system risk further aggravating the situation.

The share of the population at risk of poverty and social exclusion remains high despite steady economic growth since the crisis. The impact of social transfers (other than pensions) on poverty reduction in Lithuania is relatively low. However, recent increases of unemployment benefits and social assistance together with the introduction of a universal child benefit system are expected to improve poverty and inequality levels.

The employment gender gap is reducing. The Lithuanian labour market has improved recently and the employment rate of both women and men has risen. For the age group 25-54, the employment rate for women is even slightly higher than for men, despite low participation of children under 3 in formal childcare. Factors such as a relatively high tertiary educational attainment of women and relatively low disincentives for second earners may contribute to this.

([1]) The Social Scoreboard is composed of 14 headline indicators, of which 12 are currently used to compare Member States' performance. The indicators "participants in active labour market policies per 100 persons wanting to work" and "compensation of employees per hour worked (in EUR)" are not used due to reservations by Member States. Possible alternatives will be discussed in the relevant Committees. GDHI: gross disposable household income.

Digital skills are not widespread among the general population. Only 54.8% of Lithuanians aged 16 to 74 have basic or above-basic digital skills. Around one fifth of the population has never used the internet, although this share has dropped again in 2017 when it reached 19.3%. While Lithuania has a relatively high share of science, technology, engineering and mathematics graduates, the share of information and telecommunications technology (ICT) specialists in total employment is lower than the EU average (2.1 % compared to 3.5 %). This is partly a consequence of significant outflows of skilled labour.

There are some efforts to promote digital skills among the general population and help increase the number of ICT professionals. Established in

2013, the National Digital Coalition advises on the major steps to boost investment in human capital, and works to attract more young people to ICT and other science studies in order to ensure the acquisition of digital skills. Appropriate implementation of the Digital Agenda 2014-2020 should help increase the digital skills of the general population and reduce the digital skills gap in the Lithuanian labour market.

The spending on and the coverage of active labour market policy (ALMP) measures remains limited compared to other EU countries. The authorities are revising the provision and funding of ALMP measures, notably through an increase, albeit marginal, in public funding. While the coverage of the ALMP measures did not improve significantly in 2017 compared to 2016, more people were involved in vocational training compared to 2016. With the new Law on Employment, adopted in 2017, Lithuania envisages a significant improvement in ALMP measures. Promoting self-employment is one of the tools to give unemployed an opportunity to fully participate in society and the economy, but the share of self-employed is below the EU average and decreasing over years.

Further improving the coverage and effectiveness of ALMP measures will help to improve labour supply in the short term. The system of public works has been reformed, resulting in a decrease in the number of people in supported employment. This can be considered as positive development, since research shows that vocational training provides more sustainable employment (Lithuanian Ministry of Finance, 2016). The Labour Exchange is undergoing a reform, which aims to optimise management and resources. This should result in shifting more personnel to work directly with the clients and more flexibility in ALMPs and therefore help implement ALMP measures more effectively. Return migration and immigration of skilled third country nationals could also help to bridge the skills gap in the short term.

It is important to optimise use of the potential labour force to sustain labour supply. Further increases in the employment rate, in particular for disadvantaged groups, are needed to cope with the demographic challenges. Lithuania has one of the largest gaps in the employment rate between people with and without disabilities (38.4 pps compared to the EU average of 25.7 pps, EU-SILC, 2015). The employment rate of people with disabilities in Lithuania is one of the lowest in the EU (40.5 % compared to the EU average of 47.4 %, EU-SILC, 2015). Legislation on social enterprises is currently being revised, but in the meantime it seems that under the current system social enterprises do not fully play their part in helping disabled people to integrate into the labour market. The new labour code includes some obligations and assistance for employers to improve working conditions for disabled employees but there is no strong universal incentive to recruit the disabled. In addition, the low- and medium-skilled remain underrepresented on the labour market, as highlighted above.

The new labour code improves labour market flexibility but its effect will only be felt in the medium term. In July 2017 the new labour code came into effect in Lithuania, together with other related legislation. The main changes in regulation were related to employee dismissals; introducing more types of labour contracts; increasing unemployment benefits; and creating more scope for collective bargaining. While initial data do not point to changing trends, it is not yet possible to fully assess the impact of the changes on the labour market.

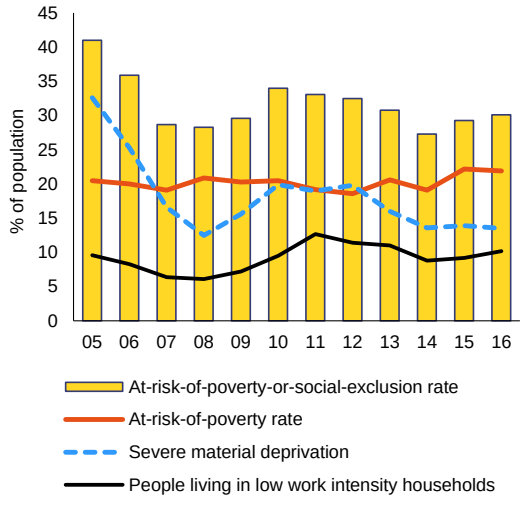
Social dialogue in Lithuania is slowly improving. The institutional setup for involving social partners at national level is in place. There is scope to improve the quality of social dialogue at sectoral and territorial levels. The new labour regulation could boost the social dialogue at all levels, provided there are opportunities to increase the capacity of social partners. In October 2017, the Lithuanian government and the social partners signed a National Agreement, which, among other things, acknowledged the importance of the social dialogue and pledged to promote it, invest in building the capacity of the social partners, and promote and support collective bargaining at sectoral and territorial levels, including by providing assistance and expertise. This Agreement could help establish a culture of cooperation and discussion among the social partners at all levels. However, successfully implementing the Agreement requires concrete measures and steps to improve the capacity of social partners, increase coverage of employer

organisations and trade unions, and strengthen the social dialogue mechanisms at sectoral level. The European Social Fund supports the capacity building of the social partners.

3.3.2. SOCIAL POLICIES

The level of poverty and social exclusion in Lithuania is among the highest in the EU. The number of people at-risk-of-poverty or social exclusion has increased by 14 000 since 2015, reaching 871 000 in 2016. The rate in Lithuania is one of the highest in the EU (30.1 % in 2016, compared to 23.4 % EU average). While severe material deprivation and at-risk-of-poverty rates have stagnated, the share of people living in low work intensity households has increased (see Graph 3.3.3). Older people, single parent households (mainly headed by women), the disabled and the unemployed remain particularly affected by poverty or social exclusion. In all four categories**,** Lithuania has one of the highest shares of risk of poverty or social exclusion in the EU (EU-SILC, 2016).

Graph 3.3.3: **At-risk-of-poverty or social exclusion rate and its components**



Source: European Commission

Lithuania has taken steps to improve the adequacy and coverage of its social safety net. Lithuania is among the Member States with the lowest adequacy level of minimum income benefit. ([9]) The monthly state supported income of EUR 102, which is the base for the cash social assistance, has been increased in January 2018 to EUR 122 for the first time since 2008. This step will also increase the coverage of poor residents. Lithuania is also planning further reforms to its social assistance system, such as establishing an 'amount of minimum consumption needs' and linking it to the basic social indicators from 2019. Overall, the impact of the increase in social benefits on the rate of poverty or social exclusion is expected to be positive, reducing the at-risk of poverty rate by at least 1 pp. (see Box 3.3.2). While these measures will have a positive impact on poverty, the scale of the challenge suggests further measures will be required to ensure moving closer to the EU average. The efforts need to continue to compensate for the lack of any increase since 2008, but must also focus on bringing people back to the labour market by tailoring the benefits in a way that they increase incentives to enter the labour market. Lithuania also has one of the lowest net replacement rates of unemployment benefits in the EU which may negatively impact the access to the labour market and employability of those with higher unemployment duration ([10]).

A universal child benefit scheme was introduced in 2018, allowing low-income earners to fully benefit from child support. The at-risk-of-poverty and social exclusion rate for children under 18 is significantly higher than the EU average (32.4 % compared to 26.4 % in 2016). Despite its universality, the new system of child benefit is more favourable to the low-income earners than the previous one, which was based on the tax allowance: low-income families were not able to fully benefit from the additional tax allowance for children because of their low taxable income (or absence of it). For the higher income earners, the universal child benefit substitutes the previous tax allowance for children. The introduction of the universal child benefit will reduce at-risk-of-poverty rate, especially for families with three or more children (more than

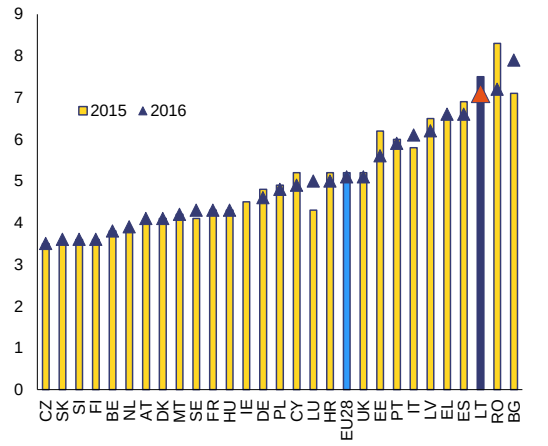
([9]) According to the results of the 2017 Benchmarking exercise in the area of Minimum Income of the Social Protection Committee. See the draft Joint Employment Report 2018 for details.

([10]) According to the benchmarking exercise in the area of unemployment benefits and active labour market policies conducted within the EMCO Committee. See the draft Joint Employment Report 2018 for details.

10 pps), followed by single parent families (4 pps). For more information see Box 3.3.2.

Rising income inequality is the result of income growth at the top of the wage distribution and the inability of non-wage earning households to keep pace. In 2016, the income of the richest 20 % of the population was 7.1 times higher than the poorest 20 % (see Graph 3.3.4). Although the ratio has decreased slightly, it is still one of the highest in the EU. Incomes of the richest 10 % grew fastest among the EU countries in 2015, albeit with moderation in 2016. At the same time, the incomes of the very poorest — mostly non-wage earners — have failed to keep pace in the context of high wage growth and rising inflation. The ratio of the poorest 10 % of households with respect to the median increased steadily from 10.23 in 2013 — about the EU average — to 12.45 in 2016, one of the highest in the EU. This rise in market incomes is combined with the inability of the relatively flat rate income tax system to curb the rise at the top of the distribution (see Section 3.1.3).

Graph 3.3.4: **Relative difference between income of the richest 20 % and the poorest 20 % in the EU**



Source: European Commission

High levels of income inequality combine with poor access to the main public services to undermine opportunities for the disadvantaged and the rural population. A high percentage (69.2 %) of children of low-skilled parents is at risk of poverty (compared to EU average of 52.4 %). While this disadvantage is not reflected in educational outcomes to the same extent as in other EU countries, challenges in access to good quality healthcare, childcare and education are aggravated by a high level of poverty and social exclusion. There is also a spatial dimension to inequality. In 2016, the median incomes of rural households were only 65 % of those of urban households. This is among the lowest ratios in the EU and is falling over time (from 71.7 % in 2010).

3.3.3. PENSIONS

The pension system continues to experience pressure, mainly because of the large scale of emigration, low birth rate and population ageing. The pension system is focused on fiscal sustainability, but it is not successful in preventing old-age poverty. At 37.4 %, the at-risk-of-poverty and social exclusion rate for people aged 65 and over is among the highest in the EU. There is also a significant gender gap in poverty amongst this population (14.8 %, compared to the EU average of 5.0 %). The current replacement rate is low and might be decreasing in the near future. Changes introduced so far, including an increase in the retirement age (since 2012) and the introduction of a new pension formula and indexation mechanism (since 2018), do not fully address the issue of adequacy of the pension system (see section 3.1.2). The theoretical net replacement rate is estimated to drop by 7 p.p. from 56.1 % in 2016 to 49.1 % in 2056, placing Lithuania among the countries with the lowest net replacement rates. (Pension Adequacy Report, forthcoming, European Commission, 2018a).

Box 3.3.3: **EUROMOD simulations of proposed tax changes**

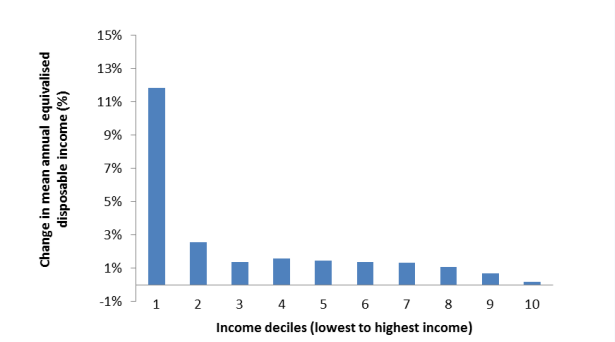
This box presents the results of a simulation by the Joint Research Centre of the European Commission (EUROMOD ([1])) based on the reform scenario proposed by the government in the middle of 2017. The proposed changes came into effect at the beginning of 2018.

From January 2018, the tax-exempt amount of income increased from EUR 310 to EUR 380. An additional tax-exempt amount of income for children was replaced by the universal child benefit, and the monthly state supported income has risen from EUR 102 to EUR 122.

According to the simulation results, the total net effect of these changes on the public finances should be a revenue loss of around 212 million EUR or 0.5 % of GDP. This estimate comprises effects of the adjustments of the personal income tax (PIT) and an increase in social spending. Except for the assessment of collected PIT due to the withdrawn additional tax-exempt amount of income for children, the EUROMOD simulation results are broadly in line with the evaluations made by the Lithuanian authorities. The discrepancy can be explained by the differences in data used for the calculations, assumptions about the fixed minimum monthly wage and a fraction of the additional tax-exempt amount which is not used by taxpayers in reality, i.e. official income might be lower than according to the EU-SILC data.

The results of the simulation suggest that approximately 53 % of households will benefit from this reform. The largest absolute and relative increases of income are observed in the first two deciles of the household income distribution (see graph 1), mainly due to the higher social assistance. However, the implicit tax rate will increase for low-income earners as the additional tax-exempt amount for children ceases to exist, while households with higher incomes will benefit from the increased basic tax-exempt amount of income. As the result of the reform, at-risk-of-poverty rate should decrease by almost 2 pps, with the biggest decrease observed in the households having three or more children (by 18 pps).

Graph 1. Reform effect on income



The projected adjustments of the tax and social systems should have a positive impact on income inequality, i.e. the reform scenario would lead to decrease in Gini coefficient by almost 1 pp. The changes in labour supply would be almost negligible. In general, the reform would slightly reduce probability to work fulltime and overtime and slightly increase probability to work part-time for both women and men. The model estimates that very few women would probably withdraw from the labour market.

Source: European Commission, Joint Research Centre

([1]) The simulation has been conducted by the Joint Research Centre of the European Commission to analyse the fiscal and distributional impact of the reforms using EUROMOD, the tax-benefit microsimulation model for the EU. EUROMOD simulates benefit entitlements and tax liabilities (including social security contributions) of individual and households according to the tax-benefit rules in place in 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 and social contributions as well as non-contributory benefits.

3.3.4. HEALTH

Lithuanians have the lowest life expectancy in the EU. Lithuania has one of the highest amenable mortality rates in the EU and one of the biggest gender gaps at 10.5 %, compared to the EU average of 5.4 %. There is low take up of prevention measures, and alcohol consumption remains the highest in the EU. The prevalence of behavioural risk factors is particularly high among people with lower education and income, contributing to health inequalities. ([11])

Health spending is low. Both as a share of GDP in 2015 (6.5 %) and on a per capita basis in purchasing power standard (EUR 1 483 per person), spending on healthcare (public and private) is below the EU average. While demographic effects are expected to increase spending, the share of public health spending as a proportion of GDP is expected to grow at a considerably slower rate than the EU average (see Section 3.1.2).

More effective public health policy would require embedding a comprehensive approach with a robust financial framework. Though some prevention measures have been proposed and developed, enforcing accountability for outcomes through a framework that mobilizes stakeholders at municipality level is still inadequate. Actions taken so far have been of small scale and did not prioritise the most challenging issues, for example reducing heavy drinking and the high prevalence of risk factors among socially disadvantaged groups. The ESI Funds are not fully exploited and could be used to curb unhealthy behaviours more rapidly.

Rebalancing primary care and hospital care with stronger focus on quality of services can help to improve the effectiveness, efficiency of care and health outcomes. There has been quite substantial progress in decreasing a number of hospitals. However, the reliance on the hospital sector remains significant. There are no plans to reduce hospital capacity beyond the scope of the fourth and last stage of the reform coming to an end in 2017. Lithuania has one of the highest mortality rates after hospital admissions in the EU, but has not fully exploited measures to improve quality and safety of care. Remuneration of hospitals tied to quality and standardization of procedures in ambulatory and emergency care could help to improve patient care.

The hospital consolidation reform has not embedded a solid framework to manage resources in primary and outpatient care. A rapid increase in the supply of general practitioners is not matched with needs and there is a growing shortage of nurses, which needs to be addressed. The delineation of responsibilities between general practitioners and specialists has not fully evolved into the fully-fledged case management model. More strategic resource management and a shift to the competence-based education model, supported possibly by European Structural and Investment Funds, would help optimise resources.

Lithuania faces challenges with access to healthcare. The health system is mainly funded through the National Health Insurance Fund, which covers almost the entire resident population. However the Lithuanian health system is mostly based on compulsory health insurance, with an estimate of 2-4 % of the population uninsured. The out-of-pocket payments represent about 32 % of health spending and have a significant impoverishing effect. ([12]) A fifth of patients still declare they have to pay for services informally, which leads to inequalities in access (see Section 3.6.3). A new list of medicines to be reimbursed was introduced in July 2017. The impact it is expected to have on the level of out-of-pocket payments should be exploited in a broader framework that includes new pharmaceutical policy measures planned for 2018. Mechanisms protecting patients from financial hardship remain to be considered. The uneven distribution of doctors across the country, with fewer general practitioners available in rural areas in particular, also hinders access to healthcare. This challenge will be exacerbated with the ageing of the health

([11]) In Lithuania, obesity is 50 % higher among the population with the lowest level of education than those with the highest level of education. Smoking rates are also higher among Lithuanians with the lowest level of education. Regular heavy drinking is more prevalent among the lowest educated, especially among men (OECD, 2017a).

([12]) Some 80 % of this very high out-of-pocket spending is due to costs of medicines, and the share is even higher among households in the lowest income quintile (OECD 2017a).

workforce and emigration of medical professionals. So far, no systematic tools were put in place to assess future needs and gaps or evaluate the impact of existing measures.

3.3.5. EDUCATION AND SKILLS

The education system in Lithuania faces major challenges. Quality and access to early childhood education and care (ECEC), outcomes of general education, efficiency of higher education and participation of adults in lifelong learning are the main policy areas in need of attention. There is a general consensus in Lithuania about the major reform priorities, supported by the research of, among others, the National Audit Office, the Research and Higher Education Monitoring and Analysis Centre (MOSTA) and the OECD.

Participation in ECEC is increasing, but strong regional differences remain. In 2016, 91.8 % of Lithuanian children attended ECEC (Lithuanian Ministry of Education and Science, 2017). This is below the EU 2015 average of 94.8 % but still within reach of the national target of 95 % by 2020. Despite the success in the increase in ECEC coverage — a robust 5 pps in 2013-2016 — persistent challenges remain in provision beyond major city centres. The urban-rural divide in enrolment rates has decreased by only 5 pps since 2006, when it stood at 55 % (OECD, 2017b). This is partly a result of the funding model which relies strongly on the municipalities, and leads to significant variations in total expenditure per child.

There are persistent risks associated with the quality of ECEC. There is no external monitoring of ECEC institutions (National Audit Office of Lithuania, 2016a), while the salary for ECEC educators' is half that of teachers in primary education for the same number of working hours (Lithuanian Education Council, 2017). As a consequence, despite an overall improvement in national ECEC access, there are still problems related to lower quality and lower accessibility of ECEC between different regions.

There has been little progress in Lithuania as regards adult participation in learning. At 6 % in 2016, participation in lifelong learning in Lithuania remained substantially lower than the EU average of 10.8 %. To address this problem and in the context of the Upskilling Pathways recommendation, in June 2017 Lithuania adopted an action plan for the development of lifelong learning for 2017-2020. The plan envisages key competences training programmes for adults, second chance education for early school leavers, training for the senior population, funding of non-formal and continuing training programmes and projects, preparation and implementation of procedures to recognise non-formal and informal learning. However, existing reforms seem to still pay insufficient attention to the learning of disadvantaged groups with typically low participation levels. Access to education for these groups is hampered by an absence of functional mechanisms for validating non-formal and informal learning, low awareness of adult education and training opportunities and insufficient guidance and support. More investment in adult learning programmes could be beneficial for up-skilling and reskilling and reducing skills mismatches which are prominent in the elderly population.

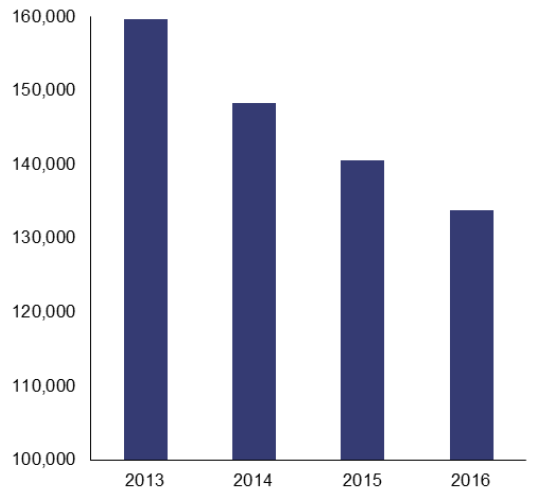
Lithuania faces bottlenecks related to skill supply, which may have a negative impact on economic growth. Alongside with the general challenges of the educational system, the diminishing number of high-skilled workers reduces the potential and opportunities for production development (see Section 3.3.1). This in particular affects the more remote regions, which cannot benefit from well-developed links to the bigger cities. The vast majority of emigrants (approx. 70 %) are persons aged 18-44. The groups of young and middle-aged adults (in particular aged 18-24, 25-34) are considerably larger among emigrants, compared to the share of these age groups in the general population (European Centre of Expertise in the field of labour law, employment and labour market policy, 2018 forthcoming). The outcome of these outflows is skills shortages in different economic sectors, such as transport, retail, construction, healthcare, and others. The shortage of skilled labour force becomes a bottleneck for foreign investment, because uncertainty about labour supply is seen as a risk by foreign investors. It is estimated that emigration and skill deterioration could reduce the annual growth rate by up to 0.9 pp (IMF, 2016). This situation underpins the importance of improving the education outcomes in Lithuania.

The high public investment in education is not reflected in the general education outcomes. Lithuania's public expenditure on education, standing at 15.4 % of total general government expenditure in 2015, is above the EU average of 10.3 %. However, at 2.4 % the level of investment in pre-primary and primary education is relatively low (3.2 % in the EU). In terms of educational outcomes, Lithuanian 15 year-olds performed below the EU average according to Programme for International Student Assessment (PISA), and the number of pupils with low competences has increased since 2012, except in mathematics (OECD, 2016). In Lithuania, pupils from disadvantaged backgrounds are 2.6 times more likely to score low in PISA science than students from other socioeconomic backgrounds. In all three PISA areas (reading, mathematics and science), pupils from rural schools perform worse than pupils from towns or cities (OECD, 2016). Despite a low rate of early schools leavers, Lithuania has one of the highest rates of early school leavers among pupils with disabilities in the EU (44.6 % v the EU average of 22 %, EU-SILC, 2015).

Reforms are under way to improve the attractiveness of the teaching profession. Initial teacher training is highly fragmented and delivered through over 120 tertiary education programmes. Persistent doubts about their quality have led to reform plans (Lithuanian Education Council, 2015). Only 25 % of teaching programmes' graduates joined the teaching profession, leading to a scarcity of teachers in some fields and regions. This has contributed to an increase in the average age of teachers: almost 50 % of general education teachers were aged over 50 in 2016 (MOSTA, 2017). One of the reasons for these challenges was a strong link between teachers' salaries and seniority (determined on the basis of workload, years of service and teachers' category), which provided little incentive for new graduates to join the teaching profession. The situation is likely to improve as a result of a new collective agreement, signed in October 2017, which reduced the salary link with seniority. The changes planned in 2018 to the initial teacher training programmes and the general education funding model (the 'pupils' basket') are expected to take these reforms further.

The tertiary education sector is quantitatively strong, but evidence points to efficiency challenges. With 58.7 % 30-34-year-olds holding a tertiary education degree in 2016, Lithuania was the EU leader in educational attainment (EU: 39.1 %). Nevertheless, the high effectiveness of the system hides significant efficiency and quality challenges. The number of students enrolled in tertiary education decreased by 16 % between 2013 and 2016 (see Graph 3.3.5), but this was not reflected in the number of programmes or institutions. The decline in student numbers has led to significant efficiency challenges, with every third university programme and every fourth professional programme admitting fewer than 10 students (MOSTA, 2017). Since tertiary education institutions receive state funding per enrolled student, there is a strong incentive to develop as many attractive programmes as the quality criteria allow. To ensure a stronger match between pupils and tertiary programmes, as of the 2017 academic year, the government introduced minimum entry requirements to increase the quality of entrants into tertiary education. This is to be followed by a reform plan to consolidate universities, address proposals for abolishing bachelor's tuition fees while raising entry requirements, and to reform the tertiary education funding system. However, these reforms remain at an early stage.

Graph 3.3.5: **Total number of students enrolled in tertiary education**



Source: European Commission

Efforts to increase the attractiveness of vocational education and training (VET) have had moderate effect. Since 2010, Lithuania has been developing modern sectoral practical training centres. However, given the falling number of

pupils and general preference towards higher education many of the centres struggle to attract students. The proportion of upper secondary students enrolled in VET programmes in Lithuania was below the EU average (27 % in 2015 compared to 47 % in the EU). However, the employment rate of recent upper secondary VET graduates was higher than in the EU (75.6 % in 2015, compared to the EU average of 73 %). Substantial effort has been put into designing modular VET programmes with a policy target that by December 2020 all VET programmes should be modular. ([13]) There is still substantial scope for progress to extend work-based learning in Lithuania with almost no work-based learning provision in formal VET in 2015. In December 2017 Lithuania has updated the legislation on VET to foster the uptake of apprenticeships and other improvements in the field.

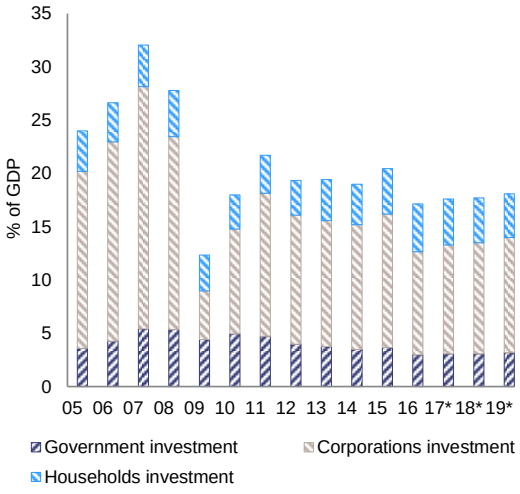
([13]) Modular vocational education and training programmes allow flexible adaptation to the differences in learners' performance or level of prior knowledge, skills and competencies, by enabling learners to add extra modules to address specific issues or gaps. Alternatively, they can progress more smoothly through the course if certain skills have been already gained elsewhere (CEDEFOP, 2015).

3.4. INVESTMENT AND COMPETITIVENESS

3.4.1. INVESTMENT

After a drop in 2009, the investment rate has somewhat recovered but has stayed significantly below its pre-crisis level. The slump and recovery in investment was mostly linked to developments in corporate investment, while household and government investment have been more stable, the latter due to high volumes of EU funds invested in the country (see Box 2.1).

Graph 3.4.1: **Investment by sectors**



* Forecast
Source: European Commission

In 2016, investment dynamics were relatively weak, but have recovered in 2017 in line with the economic upswing. Only 68 % of Lithuanian firms made investments in 2016 compared to an EU average of 84 % (EIB Investment Survey, 2017). Almost a third of firms in Lithuania (31 %) believe they have invested too little in the last three years, which is the highest share among the Member States. However, during the first three quarters of 2017 investment growth reached 6.6 % y-o-y, driven mainly by private investment in engineering structures, non-residential buildings and transport equipment. Investment in ITC and intellectual property products was also stepped up. Lithuanian businesses need investment to boost their capacity in the short term and to maintain and improve their competitiveness in the longer term (see Section 3.4.4).

3.4.2. BUSINESS ENVIRONMENT

Lithuania has an overall favourable business environment and the authorities are working on further reducing the administrative burden. Ministries and other state institutions are required to estimate the administrative burden imposed by new draft legislation. Under the 'one-in-one-out' rule the level of administrative burden created by new draft legislation must remain unchanged or be reduced over a period of a calendar year, but this principle may need to be better implemented and enforced. Since 2017, any new regulation that would increase the administrative burden by more than EUR 100 000 is reviewed by the Commission for the Supervision of Better Regulation, consisting of representatives from different authorities and stakeholders. The Ministry of Economy regularly reports on the reduction of the administrative burden and bi-annual plans are adopted with measures to further reduce it. At the same time, the lack of national rules and procedures for companies to directly transfer their registered offices into and out of Lithuania remains an issue for some businesses. For more challenges to the business environment see Box 3.4.1.

The analysis of the impact of new legislation on businesses could still be improved. While the regulatory impact assessment is largely in place, there is still room for improvement, for example regarding the application of the 'SME test' to assess the impact of new regulations on SMEs. The regulatory impact assessment is not consistently used and quality control could be further improved. A project on fitness checks and compliance costs was launched in 2016 to better assess compliance costs associated with new legislation, which are still perceived by businesses as relatively high in some areas. As a pilot, the compliance costs are assessed in two selected sectors, chemicals and manufacturing. The project also aims at identifying other possible ways to further reduce administrative and other compliance costs. A project to reduce the administrative and other regulatory burden also at the level of municipalities is currently under preparation.

The insolvency framework has been strengthened. An amendment of the law to optimise insolvency procedures was introduced in early 2017, complementing the 2015 amendments to the Bankruptcy Law. The new rules clarify how

bankruptcy expenses are calculated and should thus reduce disputes over bankruptcy administration costs. However, the insolvency framework is still facing challenges, for example regarding the help for distressed businesses to avoid bankruptcy and encouraging honest entrepreneurs to re-start.

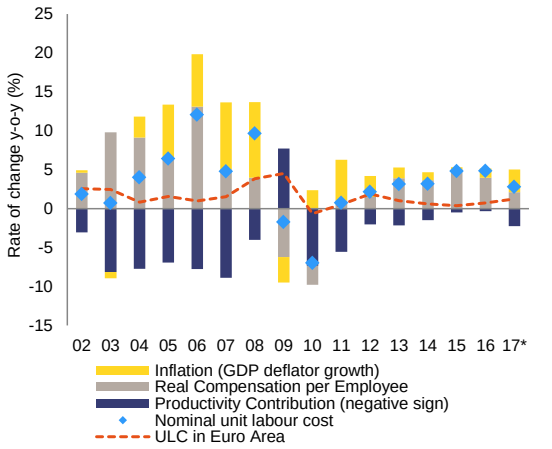
3.4.3. ENTREPRENEURIAL ACTIVITY

Lithuania has developed an attractive start-up ecosystem. A range of measures are in place to make Lithuania attractive for start-ups. Recent measures include a new immigration legislation (the 'start-up visa') adopted in January 2017, which aims to attract ambitious non-EU entrepreneurs to Lithuania. A National Mentor Network was established which allows beginner entrepreneurs to learn from experienced entrepreneurs and experts. The agency 'Enterprise Lithuania' offers a wide range of support. It provides consultation and trainings and regularly organises events, such as the LOGIN Start-up Fair, and helps selected Lithuanian start-ups to attend international conferences and networking events. The Action Plan for the Government Programme adopted in March 2017 announced a number of additional measures aimed at further promoting start-ups. These include the possible introduction of 'start-up employee visa' for high-skilled employees from non-EU countries, specific training programmes for start-ups and a new venture capital (acceleration) fund.

3.4.4. COST-COMPETITIVENESS

Unit labour costs (ULC) have increased significantly in recent years, with an average of 3.9 % annually since 2012 (see Graph 3.4.2)**.** In 2016, nominal ULC increased by 5.9 %, which is the highest increase in the EU and far above the euro area average, raising concerns about Lithuania's cost competitiveness. Productivity improvements will be essential in order to maintain competitiveness amidst a shrinking labour force and upward wage pressures.

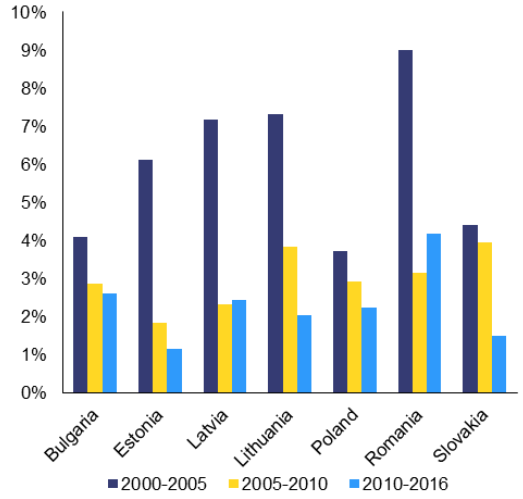
Graph 3.4.2: **Unit labour cost developments**



* Forecast
Source: European Commission

While wage growth has picked up strongly since the crisis, productivity growth remained subdued until 2017. After an impressive period of catching-up in productivity, Lithuania's productivity growth slowed down since 2012. As a result, the average productivity growth since 2010 was less than in most peer countries (see Graph 3.4.3). This has been particularly visible in manufacturing, but also in market services. As discussed in the 2017 country report, the rapid productivity growth was primarily due to the structural transformation from agriculture and industry to a more service-driven economy. However, boosted by a growing economy, productivity growth rebounded in 2017. This trend is expected to continue in the coming years, slowing down somewhat the increase in ULC. Productivity growth will increasingly depend on improvements in higher education and training, goods and labour market efficiency, technological readiness, business sophistication and innovation.

Graph 3.4.3: **Annual average productivity growth, %**

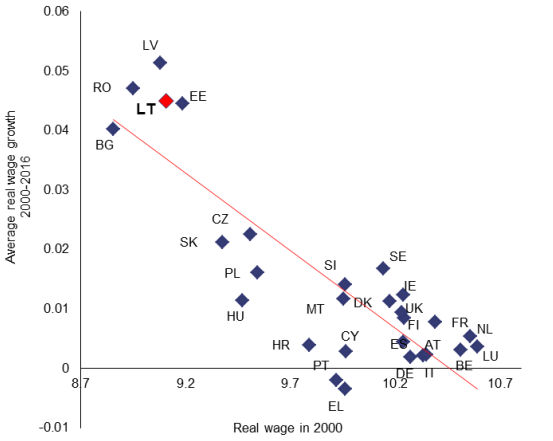


Source: European Commission

Rapid wage growth is driven by a tightening labour market and by significant increases in the minimum wage. Structural weaknesses affecting the labour market (see Section 3.3.1) together with the current cyclical upswing are putting upward pressure on wages. Part of the wage growth is also due to large increases in the minimum wage (see Section 3.3.2). At 43 % of the average wage in 2016, the minimum wage in Lithuania is slightly higher than in the EU as a whole at 40 % (OECD). The Bank of Lithuania estimates the increases in the minimum wage to be responsible for one third of the overall wage growth. This is partly a statistical phenomenon as it is possible that the increasing minimum wage prompted some employers to start declaring part of the "envelope" salary as regular wage.

Real wage growth in Lithuania is also a result of the convergence process. Starting from a relatively low wage level, Lithuania is one of the Central and Eastern European countries (together with the rest of Baltics, Bulgaria, and Romania) which have witnessed rapid real wage growth since 2000 (see Graph 3.4.4) ([14]). High wage growth in Lithuania – 4.5 % on average per year over the period 2000-2016 – was, at least partly, driven by a catching-up effect, namely the trend to converge to the higher wage level of the EU-17 economies. ([15]) During this period, real wage in Lithuania grew almost 80 percent faster than in EU-17. After a temporary standstill in 2008-2011, this convergence pattern resumed in 2012. As in the case of the rest Central and Eastern European catching-up countries, the dynamism of wages in Lithuania has also been mostly consistent with the trends in GDP per capita.

Graph 3.4.4: **Convergence of wages in the EU**



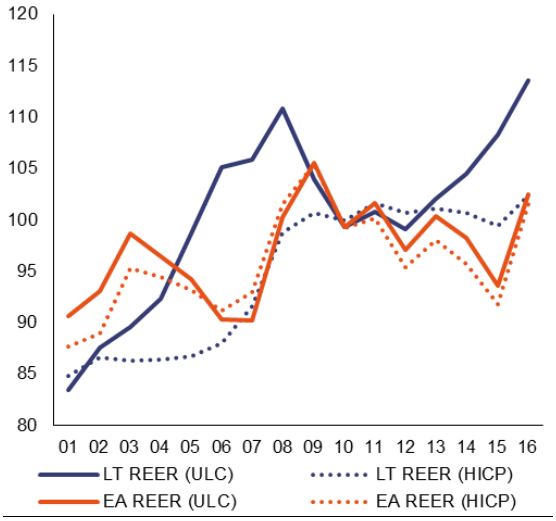
Source: European Commission

The growth of labour costs has been largely absorbed by companies' profit margins and has not yet translated into a deterioration of price competitiveness. Between 2013 and 2016 ULCs have appreciated by 14.7 % cumulatively, yet the price growth has been flat at 0.2 %. Consequently, the inflation-based Real Effective Exchange Rate (REER) has grown notably slower than the ULC-based REER (see Graph 3.4.5). As a result, the impact of the rapid wage growth on Lithuania's price competitiveness has been limited.

Continued growth of the export market shares suggests a good export performance. After a temporary contraction in 2015, related to the Russian crisis, export market shares started to grow again in 2016 (see Graph 3.4.6). With a strong growth of exports in 2017, which outpaced foreign demand growth in both goods and services sector, Lithuania is expected to continue gaining market share. However, in the longer run upward wage pressures amidst a shrinking labour force might start hurting Lithuania's competitiveness. In order to alleviate these pressures, as noted, productivity improvements will be essential.

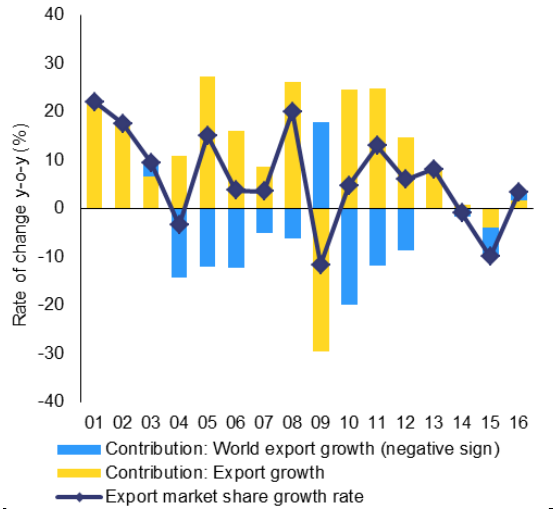
([14]) Wages are proxied by 'compensation per employee'
([15]) See Barro and Sala-i-Martin (1992) for more details about the methodology.

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



Source: European Commission

Graph 3.4.6: **Breakdown of export market share dynamics**

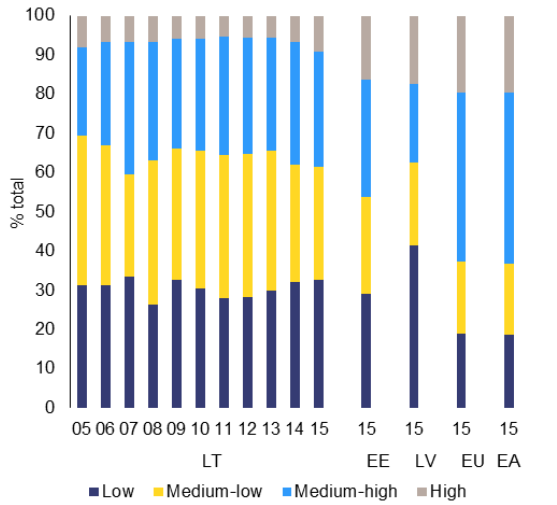


Source: European Commission

3.4.5. NON-COST COMPETITIVENESS

Lithuania is slowly improving the quality and sophistication of its exports. The structure of the economy and the technology-intensity of exports have not changed significantly in recent years. As a result, the vast majority of exports are less knowledge-intensive services and low-technology and medium- and low-technology manufacturing products. Although the composition of Lithuania's exports confirms a gradual specialisation in medium- to high-tech goods, their structure is far from the average level of sophistication in the EU (see Graph 3.4.7). However, in the last ten years, Lithuania has seen rapid growth in some knowledge-based industries such as biotechnology, laser manufacturing, mechatronics and information technology. Many of the businesses in these fields are highly productive and well integrated in international value chains. Sectors that base their production on high technology or knowledge-intensive services are less sensitive to rising unit labour costs, but are highly dependent on the supply of a qualified labour force. The exports of these industries are growing rapidly, albeit from a very low base.

Graph 3.4.7: **Technology-intensity of exports**



Source: European Commission

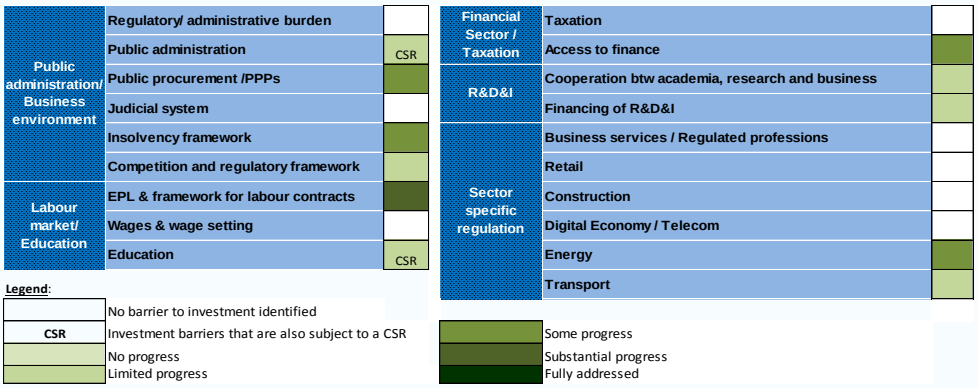
The government aims to boost competitiveness by increasing the digitalisation of the economy. Lithuania continues to perform well above the EU average in terms of integration of digital technology by businesses. The Lithuanian Digital Agenda launched by the government in mid-2017 recognises the benefits of increased online sales and the implementation of digital technologies by businesses in general. The Agenda has set ambitious targets of increasing the share of companies selling online from 18 % in 2016 to 45 % by 2020. Moreover, a National Industry Digitalisation Platform 'Pramonė 4.0' was launched in 2017. The platform brings together all relevant stakeholders and aims at strengthening the competitiveness and productivity of the Lithuanian industry by reaping the benefits of digitalisation.

Box 3.4.4: **Investment challenges and reforms in Lithuania**

1. Macroeconomic perspective

Investment in Lithuania dropped sharply after the financial crisis and has been recovering very slowly since. At around 18 % of GDP it is below the EU average and too low for a catching-up economy. As it is financed mostly by EU funds, public investment held up fairly well, but the business investment gap is among the highest in the EU (European Commission, 2017d). However, lately these trends have reversed somewhat. Private investment picked up strongly in 2017 in line with robust consumption and export growth, while public investment has been limited since 2016 by slower pace of investment of EU funds (ESI Funds investments in 2016 and 2017 amounted to 1.5 % of GDP annually compared to the average of 3 % of GDP, see Box 2.1). Investment is expected to become one of the main drivers of growth in the coming period, supported also by a pick up in EU funds investment from 2018.

2. Assessment of barriers to investment and ongoing reforms



The business environment is generally investment-friendly, with moderate barriers to investment (European Commission, 2015). Lithuania scores relatively high in the World Bank doing business indicator and is among the countries where it is particularly easy to register property and enforce contracts. Some challenges, however, remain in the area of resolving insolvency, protecting minority investors and getting credit. In 2017, a number of measures were introduced to further improve the business environment, including strengthening the alternative means of financing and insolvency framework, speeding up access to electricity and digitising procedures for licences and procurements. The labour code adopted in July 2017 made labour relations more flexible (see Section 3.3.1). Limited progress was also made in increasing the efficiency of public investment by introducing EU funds' ex-post evaluation criteria for all state funded projects.

Main barriers to investment and priority actions underway:

1. The lack of a qualified labour force is a major bottleneck to investment. The education system is not responsive to the labour market needs. Educational outcomes are improving but only slowly, while vocational training and in particular adult learning remain at low levels. There is still scope to improve legislation on the employment of third country nationals.

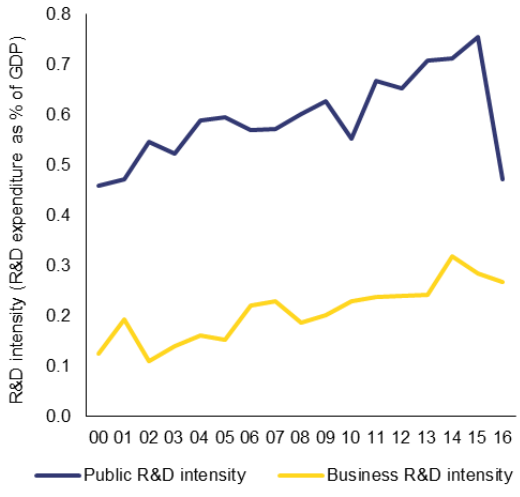
2. In the field of research and innovation there is a lack of coordination and implementation of government strategies. A coherent government policy appears to be missing and having a relatively large number of implementing agencies and instruments is confusing for potential beneficiaries. Private R&D investment remains low, while generous tax incentives for innovation are being poorly used due to their complexity.

3.5. SECTORAL POLICIES

3.5.1. RESEARCH AND DEVELOPMENT AND INNOVATION

Despite some improvements, Lithuania's innovation performance remains moderate. The innovation environment improved significantly since 2010 (European Commission, 2017e), especially in the areas related to the innovation in SMEs. However, significant challenges remain. In particular, the already low level of investment in R&D experienced a sharp fall in 2016. The governance of the innovation policy system remains fragmented at various levels, with multiple agencies and a variety of support schemes, including generous tax incentives which are still being underused (see Section 3.1.3). The ongoing higher education reform is expected to address the low efficiency of the public R&D system and in this way increase public cooperation with businesses.

Graph 3.5.1: **Public and private R&D intensity**



Source: European Commission

In 2016, Lithuania's investment in R&D fell by 27 %, coming to 0.74 % of GDP, significantly below the EU average of 2.0 %. Most of the decrease was caused by a drop in public investment (see Graph 3.5.1). This was related to a decline of funding from the EU funds due to the transition between programming periods, but also to the ongoing reform in the higher education sector, which slowed down the absorption rates. As a result, Lithuania is not on track to reach the national R&D intensity target of 1.9 % of GDP by 2020.

The efficiency of public R&D expenditure remains low. The country's representation in widely-cited scientific journals is the second lowest in the EU and the share of international co-publications is the third lowest in the EU, although the count is steadily increasing every year. This low level of return on public investment in R&D supports the need to make further progress in reforming the organisation and funding of the public research sector in order to make better use of available resources.

The ongoing higher education reform entails a broad spectrum of relevant policy changes (see Section 3.3.5). It includes consolidating of public universities, developing of new funding models and a revamping of researchers' careers. Two-stage system of R&I assessment and funding was introduced in 2017 focusing on research quality, social and economic impact, activities related to international R&D programmes and science-business cooperation. A quick consolidation of higher education institutions could help the country to efficiently use ESIF funding. Merging of universities' research agendas, with respect to the smart specialisation strategy, where relevant, and introducing efficient funding schemes would help to improve the quality of the research base, which brings value to innovative businesses.

Cooperation between businesses and universities or research centres remains scarce. This is a reflection of the structure of the Lithuanian economy, which is weakly integrated in global value chains and mostly consists of lower value-added industry, and limited public R&I capabilities**.** Bottlenecks exist on the research supply side as well, as evidenced by the engineering industry which is willing to innovate, but cannot find relevant scientific excellence in the country. Lithuania has some success in attracting foreign direct investment (FDI), albeit in less innovation-oriented sectors. The Lithuanian government received recommendations from the European Commission's Horizon 2020 Policy Support Facility which aim to enhance the engagement between business and science and also attract innovation intensive FDI (European Commission, 2017f). The recommendations advise consolidating and professionalising business innovation support and overhauling the policy instruments intended to encourage business investment. Implementing them will be crucial to

energising the system and will add to the government's new initiatives, such as launching a new venture capital fund (see Section 3.2.2) and approving the list of professions where Lithuania lacks workforce, thus allowing faster visa processing. Other recent measures include the introduction of an "IP box", to account for costs related to intellectual property rights.

The implementation of the Smart Specialisation strategy is gaining pace. A number of measures have been launched and more than EUR 400 million of ESI Funds are already available for research and innovation in businesses and research institutions and for their co-operation. Based on the first results, the Smart Specialisation progress report identified four sectors with the highest potential for R&D and innovation: laser technologies, molecular technologies, functional materials and health technologies. The findings of the report will feed into the comprehensive review of the Smart Specialisation priorities in late 2018. Re-launching of the entrepreneurial discovery dialogue will be essential to ensure the cooperation between business and academia and to attract private investment in order to develop and maintain competitive advantages of the country.

Lithuania's innovation policy is fragmented and suffers from a lack of coordination. Fragmented coordination and governance of R&I policy with lacking emphasis on experimental development leads to a lot of red tape for public research institutions and prevents the businesses from fully benefiting from the variety of support schemes. The lack of leadership, synergies and overlap between the competence areas of ministries responsible for R&I policy, as well as a high number of lower-level agencies, leads to missed opportunities and wasted efforts (European Commission, 2017g). The implementation of the Smart specialisation strategy has started to increase policy coordination and the Government Chancellery's new initiative to increase the efficiency and effectiveness of public service institutions is expected to encourage sound policy coordination and implementation. Lithuania started reviewing all existing strategic documents in order to develop a "Common long-term programme for the development of Research, Development and Innovation".

3.5.2. TRANSPORT

No progress has been recorded regarding the competitiveness in Lithuania's rail market, but the start of the operation of the new independent rail market regulator is a positive sign. Ensuring a level playing field for all players is fundamental in view of the rail market opening. A new independent rail market regulator started its activities in November 2016, which is seen as an important prerequisite for creating favourable conditions for new entrants.

The Rail Baltica project continues to progress, despite a number of delays. The project aims to link Warsaw via Elk, Kaunas and Riga to Tallinn by rail, with a connection to Vilnius. The targeted date for completing of the project (2025) was reaffirmed by the Intergovernmental Agreement ratified in 2017 by Estonia, Latvia and Lithuania. The updated cost-benefit analysis of the project, delivered in April 2017, confirmed the expected positive impact on the economic growth in the region and on the environment due to the likely modal shift from road to rail in passenger and freight transport (Ernst & Young Baltic Ltd (2017). In October 2017, it was agreed to review the organisational setup of the Rail Baltica project in order to speed up implementation of the project. The aim is to move to a highly integrated project delivery organisation, notably to ensure the efficiency of EU funding in the framework of the CEF, cost minimisation, full interoperability and synchronisation of works.

In the field of road safety, figures for 2016 show an impressive decrease in road fatalities, but the number of deaths on the road is still above the EU average. Road fatalities fell by 22 % compared to the previous year, to 65 deaths per million inhabitants, compared to the EU average of 50. However, the share of pedestrian fatalities is significantly higher (38 % of all road victims) than the EU average (21 %). The major causes of road accidents are risky road behaviour, such us speeding or inappropriate choice of speed by the motorists.

3.5.3. ENERGY

Lithuania is highly dependent on energy imports, the vast majority of which are coming

from Russia. In 2015, 78 % of Lithuania's energy consumption came from imports, of which about 83 % came from Russia. However, for natural gas, the Liquefied Natural Gas (LNG) terminal in Klaipėda that started operating in December 2014 is already helping greatly to diversify gas imports.

On the upstream gas market, the Klaipėda LNG terminal is sufficient to cover around 90 % of all current demand of the Baltic States. The gas pipeline Klaipėda-Kuršėnai is also fully functional, but the work on the gas interconnector pipeline with Poland (known as GIPL) is behind schedule. This pipeline will connect the Baltic countries with the continental European gas network for the first time and is essential for the development of the regional market for natural gas. Analysis indicates that one regional LNG terminal, together with the pipeline projects that are being built in the region (with substantial EU financial support), including the GIPL (Poland-Lithuania) and the Baltic connector (Estonia-Finland), are sufficient to cover future supply needs of the region.

Lithuania is part of the Nordic and Baltic wholesale electricity market. The interconnection capacity for electricity in the Baltic States increased to 23.7 % in 2017, exceeding the 10 % target. This was possible thanks to the commissioning of electricity interconnections with Finland via the Estlink2, with Poland via LitPol Link and with Sweden via NordBalt.

Electricity interconnections and gas imports diversification had a positive impact on energy prices, despite the very high concentration on the wholesale gas market. Better interconnections and the diversification of gas imports via the LNG terminal have increased competition and benefitted Lithuanian electricity and gas consumers (as well as Latvian and Estonian consumers). In 2016, households' electricity and gas prices in Lithuania were already below the EU average.

The next main objective for Lithuania is to synchronise its electricity systems with the European network. For historical reasons, the Baltic States are today operated in a synchronous mode forming the so-called BRELL ring (Belarus-Russia-Estonia-Latvia-Lithuania). The three Baltic States aim to synchronise their grids with the European network by 2025. The core of the work is being carried out within the Baltic Energy Market Interconnection Plan (BEMIP). A dedicated BEMIP working Group was set up supported by the Commission to work on the identification of the most cost-efficient synchronisation scenario that ensures system stability. The infrastructure element of the synchronisation of the Baltic States' electricity system with the European network has been included in the third list of projects of common interest.

Primary energy consumption in Lithuania increased in 2016. The current level (6.0 Mtoe in 2016) is below the 2020 target for primary energy consumption (6.5 Mtoe). Lithuania's final energy consumption increased by 5 % in 2015 (reached 5.1 Mtoe) and was above its 2020 target for final energy consumption (4.3 Mtoe). Although primary energy intensity decreased over the 2005-2016 period, it remains above the EU average.

In terms of energy efficiency, some progress was observed in the final energy intensity in industry and in the services sector as well as in the final consumption per m^2 for the residential sector. However, energy intensity in these sectors is still above the EU average and timely renovation of residential buildings remains a challenge. Conversely, the final energy consumption in transport is increasing faster than GDP despite a higher use of public transport.

Lithuania's renewable energy share in gross final energy consumption was 25.6 % in 2016, above its 2020 target of 23 %. This good performance was driven mostly by the heating sector, where the share of renewables reached 46.5 %. The renewables share in electricity production reached 16.8 %. Lithuania is below the 2020 target of 10 % for renewable energy share in transport, with 3.6 % in 2016. Due to a consistent deployment of renewables since 2005, it is estimated that in 2015 Lithuania cut its consumption of fossil fuel by about 11.8 % in gross inland consumption.

In terms of climate change policy, according to its own projections, Lithuania will meet its 2020 emission reduction target in the sectors not covered by the EU ETS by a 13 pps gap. Lithuania is at an initial stage regarding the development of

an integrated national energy and climate plan for 2021–2030.

3.5.4. WASTE MANAGEMENT

In the past few years Lithuania has made a number of policy and legislative changes in order to improve its municipal waste management. These changes aim to improve separate collection, including for bio-waste and, in particular, by introducing a deposit-return system for beverage container packaging. This system is essential to help Lithuania reach its recycling target for 2020, including by making recycling more economically feasible. Nevertheless, managing waste efficiently and fulfilling the obligations from the EU Directives on waste remain challenges in Lithuania

Landfilling remains the predominant way of treating waste in Lithuania, exceeding significantly the EU average of 25 %. While Lithuania has improved its performance, particularly by increasing waste recycling and lowering its landfilling rate, landfilling still remains the cheapest municipal waste treatment option. This is partly due to the low applicable tax rate. In this regard, Lithuania has indicated its intention to progressively increase its landfill tax from 2019. This would be a positive step in waste management since the landfill tax plays an important role in encouraging resource efficiency in waste management and diverting waste from landfill.

Lithuania has also made significant investments in infrastructure to treat residual waste and divert waste from landfills. Following the completion of mechanical biological treatment plants across the country, Lithuania plans to construct two new combined heat and power plants in Vilnius and in Kaunas. While these plants in Vilnius are to be financed from EU funds, the decision on the feasibility of combined heat and power in Kaunas will be left to the Lithuanian authorities. The capacity of the planned plants has raised concerns, because the extensive network and capacity of mechanical biological treatment plants combined with further investments in long-term infrastructure for the treatment of residual waste is likely to have a lock-in effect at the lower levels of waste hierarchy hampering the development of separate collection and recycling of municipal waste. This may put Lithuania at risk of not meeting EU waste recycling targets for 2020 (50 %) and beyond given the ambitious upcoming targets for 2030 and 2035.

3.6. PUBLIC ADMINISTRATION

3.6.1. EFFICIENCY OF PUBLIC ADMINISTRATION

Despite a good overall performance, a few weaknesses in governance and public administration still weigh on the business environment. International rankings such as the Sustainable Governance Indicators or the World Bank Worldwide Governance Indicators confirm Lithuania's overall positive performance, but also point to some challenges in terms of regulatory quality and control of corruption. Challenges include improving the quality of regularity impact assessments, ensuring that policy delivery is coordinated effectively, and enforcing anti-corruption laws. Reform measures to increase the quality and efficiency of the public administration, in particular by centralising support functions, are currently being considered.

Lithuania further improved its online public services. Lithuania is in the best performing cluster as regards e-Government services, according to the 2017 e-Government benchmark report. Lithuania has further improved the availability and sophistication of its existing online services and has made further progress towards increasing its uptake of e-Government. However, it is still performs below the EU average in promoting 'open data', i.e. the open access to public data. Lithuania has effective tools for digital service transformation, such as a catalogue of public services, a register of information systems and standards for project management. However, it seems to lack a more strategic vision of how these individual elements can work together to create a modern, open, responsive and data-driven public sector.

The planning and management of government expenditure and investment could be further improved. The National Audit Office carried out two audits in 2016 on strategic planning and budget management. The audits concerned the management of the public programme for investment, the approval of budgetary funds and developing, monitoring and reporting on strategic action plans. Audit recommendations focused on integrating and streamlining public investment plans with other government programmes (such as the budget) and the country's overall strategic goals. They also aimed at increasing the transparency of the public sector activities and the use of taxpayers' money, as well as reducing the administrative burden of managing public funds. In 2017, the National Audit Office has evaluated the implementation of these recommendations and concluded that so far the follow-up on these audits had been limited (National Audit Office, 2017).

3.6.2. PUBLIC PROCUREMENT

The efficiency of public procurement is improving, although challenges remain. The functioning of the public procurement system is gradually improving, especially at the central level. Activities connected with the aggregation of purchases as well as risk assessments and a problem detection mechanism are very promising and will help remedy shortcomings in public procurement professionalisation. However, challenges remain. In 2017, there was only one bidder for 21 % of the public procurement procedures published in the EU Official Journal (European Commission, 2018b). Improving the efficiency of the public procurement system and the quality of public investments would require further strengthening the professional capacity of the public procurement agents.

Transparency in public procurement is increasing, as is its electronic uptake. In order to reduce corruption risks and conflicts of interest in public procurement, including the low-value purchase, the government obliged contracting authorities to publish online information on initiated tenders, the successful bidders and the contracts awarded (with an exception for the lowest value procurement). The above is eased by Lithuania's significant progress in introducing an electronic path in public procurement, with 98 % of all procurements carried out electronically, representing 99 % of the total contractual value (European Commission, 2017e). At the same time, given the late transposition of the three new public procurement directives ([16]) and the perceived risks related to corruption, the functioning of the system under the new rules still needs to be observed. In 2016, the Public Procurement Office analysed several sectors with increased corruption risks. The main findings relate to procurement in the health

([16]) Lithuania was late in transposing the three new public procurement directives. The law transposing the procurement Directives was adopted only in spring 2017, and entered into the force on 1 July 2017 and 1 January 2018.

sector, which has the highest number of single bids in competitive procedures (45 %), as well as insufficient competition and a high number of companies recurrently winning tenders in IT service provision and constructions. Cross-border procurement remains low, with a potential negative impact on prices. At the same time, the Public Procurement Office notes that contracting authorities have started being more proactive in applying preventive measures.

At the local level, concerns remain as regards adequate procurement planning, transparency and in-house procurement. The Public Procurement Office notes that while all municipalities are obliged to adopt in advance yearly procurement plans, in practice the vast majority of these plans are significantly modified within a year. Single bidding remains high in certain municipalities. A recent legislative change bans in-house procurement for state-owned-enterprises, but not for municipally-owned companies. This comes with a high risk of conflicts of interest and is likely to affect prices negatively. The business perception of corruption has improved. In 2017, only 21 % of business respondents thought that corruption was a problem for doing business in Lithuania (down from 28 % in 2015) and only 26 % consider that corruption prevented their company from winning a public tender (compared to 39 % in 2015). Nevertheless, conflicts of interest in the evaluation of bids (50 %, up by 10 pp compared to 2015, EU average 51 %) and collusive bidding (56 %, up by 6 pps, EU average 54 %) are cited by businesses as widespread practices in public procurement (European Commission, 2017h).

3.6.3. FIGHT AGAINST CORRUPTION

Measures have been taken to improve the corruption prevention framework, but difficulties remain with its implementation. A new lobbying law came into force in September 2017, but its implementation will be a challenge since it applies a rather broad definition for lobbying activities and contains significant loopholes for avoiding registration. The law obliges all companies that are willing to engage in lobbying activities to register on the website. However, it does not impose similar obligations for public sector high-level officials or on Parliament members. 107 000 officials in Lithuania are under the obligation to declare assets and interests. Such a large number poses serious difficulties in terms of monitoring, analysing and verifying these declarations. The potential for civil society oversight is substantial, as 40 000 declarations are public, but rid with practical impediments as declarations are not in open data format and can only be downloaded one at a time. A new single registry of interests has been envisaged for 2018, but this measure has been postponed by one year. New legislation on whistle-blower protection was adopted in November 2017. The law introduces protection obligations for the public and the private sector. . Moreover, the direct experience of corruption has dropped considerably as regards both the general public (-17 pp compared to 2013) and businesses (-15 pp compared to 2015).

Despite some improvements, corruption in health sector remains a concern. Although the trust in healthcare institutions is slowly growing ([17]), 20 % of patients still admit paying bribes and unofficial payments for consultations (68 %), operations (38 %) or referrals (20 %). The "clean hand" programme, run by the government since 2015, has contributed to somewhat reducing the level of corruption in the health sector. Civil society started to participate in supervisory councils of some public hospitals, but it is too early to see the effects on improving transparency and curbing corruption. According to the Lithuanian Ministry of Health, some progress was also achieved in reporting sponsorship from pharmaceutical products and medical equipment sellers and the submission of declarations of private interest by doctors (with only the estimated 1.2 % of doctors not fulfilling this obligation).

([17]) According to the Lithuanian map of corruption for 2016, 51 % of respondents believe that healthcare institutions are most corrupt, down from 55 % in 2014.

Box 3.6.5: **Policy highlights: The Lithuanian Fintech initiative**

Lithuanian authorities, including the Bank of Lithuania (BoL), Ministry of Finance and Invest Lithuania agency are working together to actively promote the development of the Fintech sector in Lithuania. Fintech encompasses a wide set of innovative financial technologies, most of which are at this stage related to online payment services such as eMoney, crowdfunding or peer-to-peer payments. The majority of already active companies are domestic, but large foreign investments include Barclays and Swedbank innovation centres. The "Go Vilnius" agency is currently working on mapping the industry.

The authorities have set a common strategic goal to make Lithuania attractive for Fintech services. Licensing procedures have been streamlined and enable new businesses benefit from a 'regulatory sandbox', as of 2018. Guidance and assistance is offered to new businesses to facilitate compliance with regulation and authorities use proportionality available in EU financial services legislation through lighter authorisation regime, e.g. for obtaining a Special Purpose Bank licence. Fintech companies can also benefit from direct access to the BoL retail payment system, without intermediation of commercial banks. The authorities pursue an active PR strategy, targeting various international markets, including the US, Israel and Singapore. A number of other measures are currently being considered, including facilitating venture capital investments in the sector, or measures to attract talents, such as organising hackathons.

Apart from the obvious advantages of developing a new segment of the financial market in Lithuania, with positive impact on GDP and employment, the initiative is also expected to stimulate growth in other sectors, for example in banking, ICT or R&D. The initiative is a good example of efficient cooperation among different governmental bodies in achieving a common policy objective, which could also serve as a model for other challenges. It may therefore have a broader positive effect on governance in Lithuania. For example, it is expected to contribute to speeding up the planned creation of a one-stop-shop access to different governmental registries, databases and info systems.

ANNEX A

OVERVIEW TABLE

Commitments	**Summary assessment([18])**
2017 country-specific recommendations (CSRs)	
CSR 1: Improve tax compliance and broaden the tax base to sources that are less detrimental to growth. Take steps to address the medium-term fiscal sustainability challenge related to pensions.	Lithuania has made **some progress** in addressing CSR 1 (the overall assessment of the CSR1 does not include an assessment of compliance with the Stability and Growth Pact)
Improve tax compliance	**Some progress** has been made in fighting tax avoidance, but further progress must be made to increase tax compliance and the fairness of the overall system. Despite a decrease in the VAT gap from 28 % in 2014 to 26 % in 2015, Lithuania still has one of widest gaps in the EU. Lithuania has introduced several measures as part of the smart tax administration system such as e-registering of VAT invoices and e-waybills. These measures have already helped to improve tax compliance and raise revenue.
and broaden the tax base to sources that are less detrimental to growth.	**Limited progress** was made in broadening the tax base. Excise duties on diesel (which has been the lowest in the EU),

([18]) The following categories are used to assess progress in implementing the 2017 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 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.

	diesel for agricultural purposes and cigarettes have been increased from 2018 while the exemptions for coal and coke used for heating purposes have been abolished. Property taxation became more progressive since 2018 with a broader tax base. However, environmental and transport taxes remain very low. At the moment, there are no plans to introduce car taxation or road-use tax for private passenger vehicles.
Take steps to address the medium-term fiscal sustainability challenge related to pensions.	**Some progress** was made in increasing the sustainability of the pension system. From 2018, pensions started to be are automatically indexed to the wage bill growth. This will strengthen the fiscal sustainability of the pension system. However, the new indexation mechanism will still lead to a steady fall in the theoretical replacement rate after 2056, possibly raising concerns for pension adequacy and future sustainability of the system.
CSR 2: Address skills shortages through effective active labour market policy measures and adult learning and improve educational outcomes by rewarding quality in teaching and in higher education. Improve the performance of the healthcare system by strengthening outpatient care, disease prevention and affordability. Improve the adequacy of the social safety net.	Lithuania has made **some progress** in addressing CSR 2
Address skills shortages through effective active labour market policy measures and adult learning	**Some Progress** was made in addressing skills shortages. Lithuania has adopted a new Law on Employment which will improve provision of the ALMP measures, and the public works will no longer be considered an ALMP measure. The increase in funding for ALMP is envisaged. Lithuanian Public Employment Service is undergoing a reform, which should result in more staff working directly with job seekers. Lithuania adopted an action plan for the development of lifelong learning for 2017-2020 in June 2017, and continued expanding and enabling the country-wide network of adult learning coordinators. Further progress in this area, however, is needed.
and improve educational outcomes by rewarding quality in teaching and in	**Limited progress** was achieved in improving educational

higher education.	outcomes. At the end of 2017, the government and the trade unions signed a new collective agreement aimed at weakening the link between seniority and salaries and strengthening the link between salaries and quality. Further progress depends on adapting a wider funding system to better reward quality. Lithuania has started consolidation of higher education institutions, and plans to improve the system of quality assurance, but the reforms are at the initial stage only.
Improve the performance of the healthcare system by strengthening outpatient care, disease prevention and affordability.	**Limited Progress** was achieved in improving the performance of the healthcare. Some structural elements are already in place to meet the challenge of the status of poor health. However, there is limited progress in restructuring of healthcare delivery along the efficiency and quality concerns for both primary care and hospital care. The public health policies should also improve more rapidly, strengthening the accountability at local level and focus on the most serious challenges. Results of measures taken to reduce the high level of out-of-pocket payments and their substantial financial burden on low income groups remain to be assessed.
Improve the adequacy of the social safety net.	**Some progress** was achieved in improving the adequacy of the social safety net. Unemployment benefits have been increased in 2017. The monthly state supported income amount was increased from January 2018 from EUR 102 to EUR 122 Child benefits have been revised so that low income earners could fully benefit from them as of January 2018. The automatic indexation of pensions became effective as of January 2018. However, the indexation of the guaranteed minimum income is not yet in place, and measures need to be taken to ensure progressive phasing out of the benefits in order to keep the incentives of social assistance beneficiaries to enter the labour market.
CSR 3: Take measures to strengthen productivity by improving the efficiency	Lithuania has made **Limited progress** in strengthening

of public investment and strengthening its linkage with the country's strategic objectives.	productivity by improving efficiency of the public investment. The Government Resolution on State capital investments was revised and the rules for investment project selection, accountability and control were strengthened. Cost/benefit analyses are required and investment projects need to demonstrate their link with the country's strategic goals. The rules for monitoring the implementation of investment projects have been strengthened by introducing EU funds' ex-post evaluation criteria also for state funded projects. The effective application of the new rules still needs to be monitored. Public investment in R&D dropped significantly in 2016. Business investment in R&D is also lagging behind. The consolidation of higher education institutions is ongoing and the system of institutional R&D funding is being revised. Cooperation between businesses and science remains scarce.
Europe 2020 (national targets and progress)	
Employment rate target: 72.8%	The employment rate reached 75.2 % in 2016 and is above the national target and the EU average in 2016.
R&D target: 1.9 % of GDP with half coming from private sector	In 2016 Lithuania's R&D investment was 0.74 % of GDP compared to previous year´s value of 1.04 % of GDP – a sharp decline mainly caused by falling public investment. Private investment is on sub-par level and maintains decrease trend for a second consecutive year. The R&D investment is unlikely to reach the target level by 2020.
Greenhouse gas (GHG) emissions target: Non-ETS target for 2020: +15% compared to 2005 Non-ETS interim target for 2016:+6% compared to 2005	Europe 2020 target: 15 % Lithuania is expected to increase its emissions by 2 % in 2020 compared to 2005. Lithuania will consequently meet its target with a margin of 13 percentage points. Non-ETS 2016 target: -2 % Lithuania achieved its interim target for 2016.
Renewable energy target: 23 % Share of renewable energy in transport sector: 10 %	With a renewable energy share of 25.8 % in 2015, Lithuania already met its 23 % target in 2020. Lithuania considers holding negotiations with other Member States on sharing its excess renewables production (up to 2020) under cooperation mechanisms for renewable energy. The Commission strongly

	encourages this initiative and hopes that it will result in the signing of relevant cooperation agreements. However, there is no progress of renewable energy share in transport. The share of renewable energy in fuel consumption of transport is decreasing: 4.6 % in 2015 and 3.6 % in 2016.
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 the past 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 % reaching 5.1 Mtoe. Therefore, in order to reach its 2020 target for final energy consumption (4.3 Mtoe), Lithuania must further increase its efforts in promoting energy efficiency.
Early school leaving target: < 9 %	The early school leaving rate among 18-24 year olds decreased further to 4.8 % in 2016. This figure is also significantly below the EU average of 10.7 %, %, placing Lithuania among the leading EU Member States.
Tertiary education target: 48.7 %	Tertiary attainment among 30-34 year olds in Lithuania reached 58.7 % in 2016. It is above the national target and one of the highest in the EU.
Risk of poverty or social exclusion target: 814,000	Lithuania falls short of its national target: in 2016 there were 871 000 people at risk of poverty or social exclusion (30.1 % of the total population). Compared to 2015, the number and share of people at risk of poverty or social exclusion has increased.

ANNEX B

MACROECONOMIC IMBALANCE PROCEDURE SCOREBOARD

Table B.1: **The MIP scoreboard for Lithuania (AMR 2018)**

			Thresholds	2011	2012	2013	2014	2015	2016
External imbalances and competitiveness	Current account balance, % of GDP	3 year average	-4%/6%	-1.5	-2.4	-1.7	0.9	0.4	-0.3
	Net international investment position	% of GDP	-35%	-52.5	-53.4	-47.0	-45.1	-43.9	-43.2
	Real effective exchange rate - 42 trading partners, HICP deflator	3 year % change	±5% (EA) ±11% (Non-EA)	1.7	-6.7	-0.6	1.7	4.3	5.4
	Export market share - % of world exports	5 year % change	-6%	29.7	32.9	19.8	34.2	15.3	5.4
	Nominal unit labour cost index (2010=100)	3 year % change	9% (EA) 12% (Non-EA)	-7.8	-4.2	6.2	8.7	11.7	14.7
Internal imbalances	House price index (2015=100), deflated	1 year % change	6%	2.4	-3.2	0.2	6.3	4.6	4.5
	Private sector credit flow, consolidated	% of GDP	14%	-2.2	0.3	-1.3	0.3	1.9	4.3
	Private sector debt, consolidated	% of GDP	133%	64.7	61.1	56.3	53.9	54.7	56.2
	General government gross debt	% of GDP	60%	37.2	39.8	38.8	40.5	42.6	40.1
	Unemployment rate	3 year average	10%	15.7	15.5	13.5	12.0	10.5	9.2
	Total financial sector liabilities, non-consolidated	1 year % change	16.5%	2.5	-1.0	-1.4	16.2	7.0	16.3
Employment indicators	Activity rate - % of total population aged 15-64	3 year change in pp	-0.2 pp	3.0	2.2	2.2	2.3	2.3	3.1
	Long-term unemployment rate - % of active population aged 15-74	3 year change in pp	0.5 pp	6.7	3.3	-2.3	-3.2	-2.7	-2.1
	Youth unemployment rate - % of active population aged 15-24	3 year change in pp	2 pp	19.3	-2.9	-13.8	-13.3	-10.4	-7.4

1) This table provides data as published under the Alert Mechanism Report 2018, which reports data as of 24 Oct 2017. Please note that figures reported in this table may therefore differ from more recent data elsewhere in this document.2) Figures highlighted are those falling outside the threshold established in the European Commission's Alert Mechanism Report.
Source: European Commission 2017, Statistical Annex to the Alert Mechanism Report 2018, SWD(2017) 661.

ANNEX C

STANDARD TABLES

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

	2012	2013	2014	2015	2016	2017
Total assets of the banking sector (% of GDP)(1)	73.2	68.8	69.7	66.2	70.0	66.6
Share of assets of the five largest banks (% of total assets)	83.6	87.1	85.7	86.8	87.1	-
Foreign ownership of banking system (% of total assets)(2)	94.4	91.5	92.0	91.8	91.9	91.7
Financial soundness indicators:2)						
- non-performing loans (% of total loans)(3)	10.9	8.5	6.5	5.2	3.8	3.5
- capital adequacy ratio (%)	15.7	17.5	21.3	24.8	19.4	19.8
- return on equity (%)(4)	7.8	8.6	7.7	7.5	11.9	6.4
Bank loans to the private sector (year-on-year % change)(1)	2.2	-1.0	-0.3	5.3	11.2	4.9
Lending for house purchase (year-on-year % change)(1)	-0.8	0.6	2.2	3.5	7.1	8.7
Loan to deposit ratio(1)	125.4	115.7	99.3	97.1	97.8	100.7
Central Bank liquidity as % of liabilities	-	-	0.0	1.7	1.3	1.3
Private debt (% of GDP)	61.1	56.3	53.9	54.7	56.2	-
Gross external debt (% of GDP)(2) - public	38.2	33.3	38.0	38.0	35.6	35.0
- private	18.8	19.2	17.5	17.5	17.6	16.7
Long-term interest rate spread versus Bund (basis points)*	333.6	226.2	162.9	88.5	80.8	-0.9
Credit default swap spreads for sovereign securities (5-year)*	203.1	107.5	100.9	76.4	62.8	50.8

1) Latest data Q3 2017.
2) Latest data Q2 2017.
3) As per ECB definition of gross non-performing debt instruments
4) 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**

	2012	2013	2014	2015	2016	2017 [5]
Equal opportunities and access to the labour market						
Early leavers from education and training (% of population aged 18-24)	6.5	6.3	5.9	5.5	4.8	:
Gender employment gap (pps)	1.2	2.6	2.5	2.4	1.9	0.8
Income inequality, measured as quintile share ratio (S80/S20)	5.3	6.1	6.1	7.5	7.1	:
At-risk-of-poverty or social exclusion rate[1] (AROPE)	32.5	30.8	27.3	29.3	30.1	:
Young people neither in employment nor in education and training (% of population aged 15-24)	11.2	11.1	9.9	9.2	9.4	:
Dynamic labour markets and fair working conditions†						
Employment rate (20-64 years)	68.5	69.9	71.8	73.3	75.2	75.8
Unemployment rate[2] (15-74 years)	13.4	11.8	10.7	9.1	7.9	7.2
Gross disposable income of households in real terms per capita[3] (Index 2008=100)	:	:	103.5	108.5	114.7	:
Public support / Social protection and inclusion						
Impact of social transfers (excluding pensions) on poverty reduction[4]	34.5	32.0	30.5	22.4	21.5	:
Children aged less than 3 years in formal childcare	8.0	:	22.9	9.7	15.2	:
Self-reported unmet need for medical care	2.3	3.2	3.7	2.9	3.1	:
Individuals who have basic or above basic overall digital skills (% of population aged 16-74)	:	:	:	51.0	52.0	55.0

† The Social Scoreboard includes 14 headline indicators, of which 12 are currently used to compare Member States performance. The indicators "participants in active labour market policies per 100 persons wanting to work" and "compensation of employees per hour worked (in EUR)" are not used due to technical concerns by Member States. Possible alternatives will be discussed in the relevant Committees.
(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) Gross disposable household income is defined in unadjusted terms, according to the draft Joint Employment Report 2018.
(4) 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).
(5) Average of first three quarters of 2017 for the employment rate and gender employment gap.
Sources: Eurostat"

Table C.3: **Labour market and education indicators**

	2012	2013	2014	2015	2016	2017 [5]
Activity rate (15-64)	71.8	72.4	73.7	74.1	75.5	:
Employment in current job by duration						
From 0 to 11 months	15.1	16.3	14.7	15.5	18.9	:
From 12 to 23 months	11.9	11.4	12.3	11.7	11.0	:
From 24 to 59 months	20.2	18.8	20.8	20.3	19.9	:
60 months or over	52.8	53.5	52.3	52.5	50.2	:
Employment growth* (% change from previous year)	1.8	1.3	2.0	1.3	2.0	-0.4
Employment rate of women (% of female population aged 20-64)	67.9	68.6	70.6	72.2	74.3	75.4
Employment rate of men (% of male population aged 20-64)	69.1	71.2	73.1	74.6	76.2	76.2
Employment rate of older workers* (% of population aged 55-64)	51.7	53.4	56.2	60.4	64.6	65.7
Part-time employment* (% of total employment, aged 15-64)	8.9	8.4	8.6	7.6	7.1	7.8
Fixed-term employment* (% of employees with a fixed term contract, aged 15-64)	2.6	2.7	2.8	2.1	2.0	1.8
Transition rate from temporary to permanent employment (3-year average)	38.6	41.4	38.2	46.1	:	:
Long-term unemployment rate[1] (% of labour force)	6.6	5.1	4.8	3.9	3.0	2.7
Youth unemployment rate (% active population aged 15-24)	26.7	21.9	19.3	16.3	14.5	13.2
Gender gap in part-time employment	3.8	3.8	4.2	4.2	3.4	3.6
Gender pay gap[2] (in undadjusted form)	11.9	12.2	13.3	14.2	:	:
Education and training indicators	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Adult participation in learning (% of people aged 25-64 participating in education and training)	5.4	5.9	5.1	5.8	6.0	:
Underachievement in education[3]	26.0	:	:	25.4	:	:
Tertiary educational attainment (% of population aged 30-34 having successfully completed tertiary education)	48.6	51.3	53.3	57.6	58.7	:
Variation in performance explained by students' socio-economic status[4]	13.8	:	:	11.6	:	:

Notes:
* Non-scoreboard indicator

[1] Long-term unemployed are people who have been unemployed for at least 12 months.

[2] 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

[3] PISA (OECD) results for low achievement in mathematics for 15 year-olds.

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

[5] Average of first three quarters of 2017, unless for the youth unemployment rate (annual figure).

Sources: Eurostat, OECD

* Non-scoreboard indicator
(1) Long-term unemployed are people who have been unemployed for at least 12 months.
(2) 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.
(3) PISA (OECD) results for low achievement in mathematics for 15 year-olds.
(4) Impact of socio-economic and cultural status on PISA (OECD) scores. Values for 2012 and 2015 refer respectively to mathematics and science.
(5) Average of first three quarters of 2017 for the employment rate and gender employment gap
Sources: Eurostat, OECD.

Table C.4: **Social inclusion and health indicators**

	2012	2013	2014	2015	2016	2017
Expenditure on social protection benefits* (% of GDP)						
Sickness/healthcare	4.2	4.1	4.1	4.5	:	:
Disability	1.5	1.4	1.4	1.4	:	:
Old age and survivors	7.2	6.9	7.1	7.0	:	:
Family/children	1.4	1.1	1.1	1.1	:	:
Unemployment	0.4	0.4	0.3	0.5	:	:
Housing	0.0	0.0	0.0	0.0	:	:
Social exclusion n.e.c.	0.7	0.6	0.4	0.3	:	:
Total	15.4	14.5	14.4	14.8	:	:
of which: means-tested benefits	0.9	0.7	0.5	0.4	:	:
General government expenditure by function (% of GDP, COFOG)						
Social protection	12.0	11.3	11.4	11.1	:	:
Health	5.9	5.6	5.5	5.8	:	:
Education	5.8	5.6	5.4	5.4	:	:
Out-of-pocket expenditure on healthcare (% of total health expenditure)	31.8	32.8	31.5	32.1	:	:
Children at risk of poverty or social exclusion (% of people aged 0-17)*	31.9	35.4	28.9	32.7	32.4	:
At-risk-of-poverty rate[1] (% of total population)	18.6	20.6	19.1	22.2	21.9	:
In-work at-risk-of-poverty rate (% of persons employed)	7.6	9.1	8.3	9.9	8.5	:
Severe material deprivation rate[2] (% of total population)	19.8	16.0	13.6	13.9	13.5	:
Severe housing deprivation rate[3], by tenure status						
Owner, with mortgage or loan	1.3	1.2	8.9	5.3	4.2	:
Tenant, rent at market price	8.1	28.9	3.2	28.7	5.7	:
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	:
Poverty thresholds, expressed in national currency at constant prices*	6964	7313	7420	2303	2526	:
Healthy life years (at the age of 65)						
Females	6.1	6.3	6.1	5.5	:	:
Males	5.6	5.9	6.1	5.0	:	:
Aggregate replacement ratio for pensions[5] (at the age of 65)	0.5	0.5	0.5	0.5	0.5	:
Connectivity dimension of the Digital Economy and Society Inedex (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	:

* 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.

Sources: Eurostat, OECD

Table C.5: **Product market performance and policy indicators**

Performance Indicators	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Labour productivity (real, per person employed, year-on-year % change)							
Labour productivity in Industry	13.04	6.24	-1.11	3.90	6.35	0.64	-3.78
Labour productivity in Construction	17.19	16.76	-10.15	-0.75	14.31	-7.73	-6.86
Labour productivity in Market Services	3.01	6.77	3.90	3.71	-0.73	1.86	0.13
Unit labour costs (ULC) (whole economy, year-on-year % change)							
ULC in Industry	-7.32	-1.95	2.51	0.54	3.66	5.89	4.48
ULC in Construction	-0.66	-0.11	11.98	-0.96	-4.89	6.54	13.32
ULC in Market Services	-5.10	1.24	2.46	3.47	3.59	4.87	5.29
Business Environment	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Time needed to enforce contracts[(1)] (days)	300.0	300.0	370.0	370.0	370.0	370.0	370.0
Time needed to start a business[(1)] (days)	22.0	22.0	19.5	8.5	5.5	5.5	5.5
Outcome of applications by SMEs for bank loans[(2)]	na	0.92	na	1.16	1.27	1.14	1.17
Research and innovation	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
R&D intensity	0.78	0.90	0.89	0.95	1.03	1.04	0.74
General government expenditure on education as % of GDP	6.40	6.10	5.80	5.60	5.40	5.40	na
Persons with tertiary education and/or employed in science and technology as % of total employment	47	47	47	48	49	50	50
Population having completed tertiary education[(3)]	27	28	29	30	31	33	34
Young people with upper secondary level education[(4)]	87	88	89	90	91	91	92
Trade balance of high technology products as % of GDP	0.23	0.11	0.23	0.06	-0.08	-0.45	na
Product and service markets and competition					**2003**	**2008**	**2013**
OECD product market regulation (PMR)[(5)], overall					na	na	1.52
OECD PMR5, retail					na	na	1.11
OECD PMR5, professional services					na	na	1.85
OECD PMR5, network industries[(6)]					na	na	2.02

(1) The methodologies, including the assumptions, for this indicator are shown in detail here: http://www.doingbusiness.org/methodology.
(2) 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 most of it, two if only received a limited part of it, three if refused or rejected and treated as missing values if the application is still pending or don't know.
(3) Percentage population aged 15-64 having completed tertiary education.
(4) Percentage population aged 20-24 having attained at least upper secondary education.
(5) 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
(6) Aggregate OECD indicators of regulation in energy, transport and communications (ETCR).

Source: 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		2011	2012	2013	2014	2015	2016
Macroeconomic							
Energy intensity	kgoe / €	0.24	0.23	0.21	0.20	0.20	0.20
Carbon intensity	kg / €	0.72	0.69	0.62	0.60	0.60	-
Resource intensity (reciprocal of resource productivity)	kg / €	1.40	1.24	1.45	1.32	1.29	1.21
Waste intensity	kg / €	-	0.18	-	0.19	-	-
Energy balance of trade	% GDP	-7.6	-7.5	-6.1	-4.7	-3.6	-2.6
Weighting of energy in HICP	%	15.35	16.39	16.84	14.25	13.60	11.79
Difference between energy price change and inflation	%	6.9	3.8	-1.8	-4.8	-9.2	-5.5
Real unit of energy cost	% of value added	28.7	28.1	28.1	28.7	-	-
Ratio of environmental taxes to labour taxes	ratio	0.13	0.13	0.13	0.13	0.13	-
Environmental taxes	% GDP	1.7	1.6	1.7	1.7	1.9	1.9
Sectoral							
Industry energy intensity	kgoe / €	0.16	0.16	0.15	0.15	0.14	0.14
Real unit energy cost for manufacturing industry excl. refining	% of value added	14.0	13.3	13.1	13.3	-	-
Share of energy-intensive industries in the economy	% GDP	-	-	-	-	-	-
Electricity prices for medium-sized industrial users	€ / kWh	0.10	0.11	0.12	0.12	0.10	0.09
Gas prices for medium-sized industrial users	€ / kWh	0.04	0.05	0.04	0.04	0.02	0.03
Public R&D for energy	% GDP	0.02	0.01	0.02	0.01	0.02	0.01
Public R&D for environmental protection	% GDP	0.00	0.00	0.00	0.01	0.01	0.00
Municipal waste recycling rate	%	19.9	23.5	27.8	30.5	33.1	48.0
Share of GHG emissions covered by ETS*	%	42.4	41.7	38.8	35.9	36.1	32.1
Transport energy intensity	kgoe / €	0.48	0.46	0.44	0.47	0.51	0.51
Transport carbon intensity	kg / €	1.37	1.29	1.23	1.31	1.41	-
Security of energy supply							
Energy import dependency	%	81.7	80.3	78.3	78.0	78.4	77.4
Aggregated supplier concentration index	HHI	97.8	99.7	97.5	87.8	71.7	-
Diversification of energy mix	HHI	0.29	0.29	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 00MWh 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 sector
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)

REFERENCES

Arpaia, A. and A. Kiss, (2015): *Benchmarks for the assessment of wage developments: Spring 2015*, Analytical web note 2/2015, European Commission. Retrieved from: http://ec.europa.eu/social/BlobServlet?docId=14070&langId=en.

Bank of Lithuania (2017): *Countercyclical capital buffer*, December 2017. Retrieved from: https://www.lb.lt/en/publications/countercyclical-capital-buffer-2017-q4

Barro, Robert J., and Xavier Sala-i-Martin (1992): *Convergence*. Journal of Political Economy 100(2): p. 223-251. Retrieved from: https://dash.harvard.edu/bitstream/handle/1/3451299/barro_convergence.pdf?sequence=4

CASE (2017): Centre for Social and Economic Research: *Study and Reports on the VAT Gap in the EU-28 Member States: 2017 Final Report*, IHS, Institute for Advanced Studies, Vienna. Retrieved from: https://ec.europa.eu/taxation_customs/sites/taxation/files/study_and_reports_on_the_vat_gap_2017.pdf

CODEFOP (2015). *The role of modularisation and unitisation in vocational education and training*, Luxembourg: Publications Office. Cedefop working paper; No 26. Retrieved from: http://dx.doi.org/10.2801/38475

European Commission (2015), *Challenges to Member States' Investment Environments*, SWD(2015) 400 final. Retrieved from: http://ec.europa.eu/europe2020/challenges-to-member-states-investment-environments/index_en.htm

European Commission (2017a): *Employment and Social Developments in Europe*, July 2017. Retrieved from: http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8030&furtherPubs=yes

European Commission (2017b): *Country Report Lithuania 2017, SWD(2017) 80 final*, February 2017, Brussels. Retrieved from: https://ec.europa.eu/info/sites/info/files/2017-european-semester-country-report-lithuania-en.pdf

European Commission (2017c): *European Business and Consumer Survey*, 2017. Retrieved from: https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/business-and-consumer-surveys_en

European Commission (2017d): *Investment in the EU Member States: An Analysis of Drivers and Barriers*, October 2017. Retrieved from: https://ec.europa.eu/info/publications/economy-finance/investment-eu-member-states-analysis-drivers-and-barriers_en

European Commission (2017e): *European Innovation Scoreboard 2017*, Brussels. Retrieved from: http://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards_en

European Commission (2017f): *Horizon 2020 Policy Support Facility Specific support for Lithuania – Fit for the future*. Retrieved from: https://rio.jrc.ec.europa.eu/policy-support-facility/specific-support-lithuania

European Commission (2017g): *Research and Innovation Observatory Country Report 2016: Lithuania*. Retrieved from: https://rio.jrc.ec.europa.eu/en/country-analysis/Lithuania/country-report

European Commission (2017h): *Flash Eurobarometer 457: Businesses' attitudes towards corruption in the EU*, October 2017. Retrieved from:

https://data.europa.eu/euodp/data/dataset/S2177_457_ENG

European Commission (2018a): Pension Adequacy Report 2018(forthcoming).

European Commission (2018b): *EU Single Market Scoreboard 2017*, (forthcoming). Retrieved from: http://ec.europa.eu/internal_market/scoreboard and https://opentender.eu/

European Centre of Expertise in the field of labour law, employment and labour market policy (2018, forthcoming): *Labour Market Policy Thematic Review 2017: An in-depth analysis of the emigration of skilled labour*

EIB (2017): *Investment Survey*. Retrieved from: http://eibis.eib.org/eibis-2017#!/lithuania

Ernst & Young Baltic Ltd (2017): *Rail Baltica Global Project Cost-Benefit Analysis*, April 2017. Retrieved from: http://www.railbaltica.org/wp-content/uploads/2017/04/RB_CBA_FINAL_REPORT_0405.pdf

IMF (2016): *Emigration and Its Economic Impact on Eastern Europe. IMF Staff Discussion Note. Internet.* Retrieved from: https://www.imf.org/external/pubs/ft/sdn/2016/sdn1607.pdf

Lithuanian Education Council (2015), *Dėl bendrojo ugdymo politikos: problemos ir jų spredimo būdai (General Education Policy: the Problems and Possible Solutions)*: Retrieved from: http://www3.lrs.lt/pls/inter/w5_show?p_r=9495&p_k=1

Lithuanian Education Council, (2017). *Lietuvos švietimo būklės 2013-2016 metais apžvalga (Overview of the Lithuanian Education Development in 2013-2016)*: Retrieved from: http://www.lrs.lt/sip/portal.show?p_r=9258&p_k=1

Lithuanian Ministry of Education and Science, (2017): *Lietuvos Respublikos švietimo ir mokslo ministerijos 2016 metų veiklos ataskaita (The 2016 Annual Activity Report of the Ministry of Education of the Republic of Lithuania)*. Retrieved from: http://www.smm.lt/web/lt/veikla/ministerijos-veiklos-ataskaitos

Lithuanian Ministry of Finance (2016): *2007–2013 m. ES struktūrinės paramos poveikio užimtumui ir kitiems Lietuvos ūkio makroekonominiams rodikliams vertinimas, Galutinė ataskaita (Evaluation of the Impact of EU Structural Assistance 2007–2013 on Employment and other Macroeconomic Indicators of the Lithuanian Economy).* Retrieved from: http://www.esinvesticijos.lt/lt/dokumentai/2007-2013-m-es-strukturines-paramos-poveikio-uzimtumui-ir-kitiems-lietuvos-ukio-makroekonominiams-rodikliams-vertinimas

MOSTA (2017) - Research and Higher Education Monitoring and Analysis Centre, (2017). *Lietuvos studijų, mokslo ir inovacijų apžvalga (Overview of Lithuanian Higher education, Research and Innovation Status)*. Retrieved from: http://www.mosta.lt/lt/tyrimai/ataskaitos#2017-m

National Audit Office of Lithuania, (2016). *Valstybinio audito ataskaita Švietimo stebėsena (Public Audit Report Education Monitoring)*. Retrieved from: https://www.vkontrole.lt/pranesimas_spaudai_en.aspx?id=23011

National Audit Office of Lithuania, (2017). *Auditų „Programinis biudžetas: strateginių veiklos planų sudarymas ir įgyvendinimo stebėsena“ ir „Valstybės investicijų 2015 metais programos valdymas“ rekomendacijų įgyvendinimo eiga, (Public audit report on the progress of implementing the recommendations of audits 'Programme budget system: setting up action plans and monitoring their implementation' and 'Management of the programme for investment in 2015')*, October 2017, Vilnius. Retrieved from: https://www.vkontrole.lt/failas.aspx?id=3775

OECD (2016), PISA 2015 Results (Volume I): *Excellence and Equity in Education*, Tables I.2.4a, I.4.4a and I.5.4a. Retrieved from: http://dx.doi.org/10.1787/9789264266490-en

OECD (2017a), *European Observatory on Health Systems and Policies Lithuania: Country Health Profile 2017, State of Health in the EU*, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. Retrieved from: http://dx.doi.org/10.1787/9789264283534-en

OECD (2017b), *Education in Lithuania*, OECD Publishing, Paris. Retrieved from:

http://dx.doi.org/10.1787/9789264281486-en

Special Investigation Service of the Republic of Lithuania (2016): *The Lithuanian Map of Corruption 2016*. Retrieved from: https://www.stt.lt/en/news/?cat=1&nid=2505