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**Country Report Croatia 2019
Including an In-Depth Review on the prevention and correction of macroeconomic
imbalances**

Accompanying the document

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN
CENTRAL BANK AND THE EUROGROUP**

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

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EXECUTIVE SUMMARY

Ensuring durable economic growth is becoming a key challenge for Croatia. While still above the EU average, the pace of economic growth is moderating and gradually nearing its potential rate, which is only slowly increasing. The stock of macroeconomic imbalances continued to be reduced, largely driven by the positive economic environment and prudent management of government finances. Using the still favourable economic outlook to step up structural reform efforts would help boost potential growth. Reforms need to be focused on sustaining the positive trends on the labour market, and on creating a business environment conducive to investment and higher productivity gains ⁽¹⁾.

The economic recovery has continued, largely driven by robust domestic demand. In 2018 GDP growth is projected to have moderated slightly to 2.8 %, from 2.9 % the year before. Private consumption remained strong as households enjoyed higher disposable incomes on account of the continued growth in employment and wages. Public capital formation remained subdued, dragging on the overall investment activity. Exports of both goods and services continued to grow at record levels, but with signs of slowing and outpaced by the increase in imports.

A full decade after the financial crisis, the economy is set to fully regain the output lost during the recession. Employment is expected to continue growing steadily. Coupled with continuing low inflation, also thanks to cuts in consumption taxes in 2019 and 2020, GDP growth is expected to remain driven largely by household consumption. However, investment will play a

gradually increasing role. In particular, the private sector is expected to continue benefiting from ample liquidity and declining interest rates. In the public sector, greater use of EU funding is expected as the end of the programming period nears. As a result of the continued deterioration of the balance of trade in goods, the contribution of the external sector to growth is projected to grow increasingly negative. In all, real GDP growth is forecast to moderate further to 2.7 % in 2019, and 2.6 % in 2020.

Boosting the economy's growth potential requires investments in transport, energy and environmental infrastructure, skills and research and innovation. Croatia's low level of capital investment, i.e. in equipment and infrastructure, affects the growth potential. The quality of service and connectivity of the transport infrastructure, in particular railways, are underdeveloped. Improving energy efficiency, water management and facilitating the transition to a circular economy also require infrastructure investment. Investment in public and private R&D and digitalisation would help to support the economy's capacity to innovate, if acting in synergy with investment in the education system to improve people's skills. Finally, there is a need for resources to get people into work and promote social inclusion. Annex D identifies key priorities for support by the European Regional Development Fund, the European Social Fund Plus and the Cohesion Fund for the 2021-2027 period in Croatia, building on the analysis of investment needs and challenges outlined in this report.

Croatia has made some progress in addressing the 2018 country-specific recommendations.

There has been substantial progress in the following areas:

- Prudent government spending and borrowing continued to support a fast decrease in the debt ratio. After a long delay, there has been progress in adopting measures to strengthen the institutional framework governing the public finances.
- An important pension reform, aimed at promoting longer working lives and addressing

⁽¹⁾ This report assesses Croatia's economy in light of the European Commission's Annual Growth Survey published on 21 November 2018 (European Commission, 2018d). In the survey, the Commission calls on EU Member States to implement reforms to make the European economy more productive, resilient and inclusive. In so doing, Member States should focus their efforts on the three elements of the virtuous triangle of economic policy — delivering high-quality investment, focusing reforms efforts on productivity growth, inclusiveness and institutional quality and ensuring macroeconomic stability and sound public finance. At the same time, the Commission published the Alert Mechanism Report (AMR; European Commission, 2018b) that initiated the eighth round of the macroeconomic imbalance procedure. The AMR found that Croatia warranted an in-depth review, which is presented in this report.

structural inconsistencies in the system, entered into force in January 2019.

There has been some progress in the following areas:

- Education and training reforms, long in the planning, have now been set in motion, while participation of vulnerable groups in policy measures to help them find or stay in work remains low.
- Some measures to make public administration more efficient have been initiated but await implementation. The reduction of administrative burden is progressing, while the reduction of ‘parafiscal charges’ (non-tax charges) has stalled.
- Court backlogs have been reduced, and measures are being gradually implemented to improve the quality of the justice system.

There has been limited progress in the following areas:

- The introduction of a recurrent property tax is no longer planned, leaving in place the system of municipal fees.
- The consolidation of social benefits remains in preparation, while new legislation setting wages for civil servants has been postponed until 2019.
- Measures to improve corporate governance in state-owned enterprises have been implemented, but less progress has been made to dispose of minority shares and other assets. Some unjustified barriers in the regulation of professional services have been removed, but many remain in place.

Regarding progress towards the targets under the Europe 2020 strategy, Croatia has reached its national targets in renewables (except in transport), energy efficiency, the employment rate, early school leaving, and poverty and social exclusion. Croatia is on track to reaching its target for lowering greenhouse gas emissions, while it appears unlikely it will reach the target for increasing higher education attainment. The

country is still farthest from reaching the target for investment in research and development.

Croatia faces several challenges with regards to a number of indicators of the Social Scoreboard supporting the European Pillar of Social Rights.

The proportion of people of working age who are in employment remains low. In addition, there are still challenges with ensuring the quality of education, both for young people and adults. The percentage of people at risk of poverty or social exclusion is declining but still above the EU average, and the capacity of social benefits to reduce poverty is limited.

The main findings of the in-depth review contained in this report and the related policy challenges are as follows.

• **In 2018, the public debt ratio is projected to have declined further.**

During the protracted recession, the general government debt more than doubled, driven by deficits and costs related to state-owned enterprises. The debt ratio started falling in 2015, and has declined by more than 12 percentage points since then, to a projected 73.5 % of GDP in 2018. Its decrease has been driven by economic growth but also by restraint in spending. Croatia does not appear to face immediate risks of ‘fiscal stress’, despite remaining vulnerability to foreign exchange movements, and the lower sovereign risk has been reflected in the declining cost of servicing the debt. However, beyond a short term perspective sustainability risks increase, under the impact of population ageing.

• **The level of corporate debt in proportion to GDP is decreasing and associated risks are moderating.**

Private debt continued to go down despite the strong recovery in lending. Economic growth was the main driver of the decrease in the private debt-to-GDP ratio, but a significant contribution also came from the appreciation of the domestic currency. The high share of debt denominated in foreign currency points to still significant exchange rate risks. The reduction of private sector debt slowed in 2018 due to a pickup in net credit flows. Both household and

corporate debt are within prudential levels, though still above the levels suggested by economic fundamentals. Corporate sector debt remains heavily concentrated and burdened with a high share of non-performing loans. Furthermore, it is high relative to corporate financial assets and equity, pointing to potential solvency risks for companies.

- **Economic growth and sustained current account surpluses are facilitating further reduction of liabilities to foreign creditors and investors.**

Croatia's net liabilities to foreign creditors and investors declined significantly since their peak in 2011 but remain above prudential level and the level suggested by economic fundamentals. They are expected to move closer to more sustainable levels by 2020, on account of expected current account surpluses. In addition, their composition, in particular the large share of direct foreign investments, significantly mitigates the refinancing risk.

- **There has been a rapid fall in the unemployment rate, but still too few people are working or looking for work.**

On the back of dynamic economic activity, the unemployment rate fell further below pre-crisis levels, but remains above the EU average. Long-term and youth unemployment also fell, but remain significant. What is more, the working age population continues to contract due to emigration and population ageing. Despite some improvement, still too few people in this age group are active in the labour market, mainly because of early retirement and care responsibilities. Many perform undeclared work. Despite still relatively high unemployment, labour shortages have appeared in some sectors of the economy, also because of skills gaps. The involvement of social partners in the preparation and implementation of policies remains limited.

- **A cumbersome business environment and a strong presence of the state in the economy hinder competitiveness and investment.**

Although more state owned companies have

been made eligible for sale and some measures to put non-productive assets to use have been introduced, no clear privatisation strategy is in place. The suboptimal performance of the research, development and innovation system represents an additional barrier to increasing the competitiveness of Croatian businesses. Progress, even if modest, is being made in liberalising regulated professions and reducing administrative burden. However, 'parafiscal charges' remain a burden, especially for smaller businesses. Substantial backlogs in courts reduce legal certainty, while inefficiencies in criminal justice hamper effective fight against economic and financial offences. Corruption is perceived to be widespread and effective tools to prevent and sanction it are lacking, particularly at local level.

Other key structural issues analysed in this report, which point to particular challenges for Croatia's economy, are as follows.

- **A well-capitalised and profitable financial sector, despite the remaining large stock of non-performing loans, is facilitating the recovery in lending to the private sector.**

Profitability of the banking sector in Croatia improved in 2018, as loan provisioning declined. Banks' capital levels remain significantly above regulatory requirements. Ample liquidity provided by an expansionary monetary policy has allowed for a further lowering of interest rates. Furthermore, strong competition in the banking sector has eased lending conditions across the board. This has spurred growth in new loans to both households and corporations. The share of non-performing loans has been reduced significantly. While this share remains high and its reduction seems to be slowing, overall risks to the financial sector appear to be low.

- **Territorial fragmentation of the public administration affects its efficiency and exacerbates regional disparities.**

The powers granted to local government units often do not match their administrative and financial capacities. This results in an uneven

provision of public services, including social services, across financially strong and financially weak local units. Also, the capacity at central government level to design and implement policy and to use EU funding need to be strengthened. The wage-setting framework still lacks consistency across the public administration and public services.

- **Poverty and social exclusion are declining but remain above the EU average, while ensuring adequate pensions is a challenge.**

Having someone in the household engaged in paid work offers strong protection against the risk of poverty or social exclusion, whereas the capacity of social benefits to reduce poverty is limited. Age, gender and disability are also factors that influence poverty levels. Ensuring that the pension system is adequate is a significant challenge, in part because people's working lives are among the shortest in the EU. This is partly being addressed by the recent reform of the pension system.

- **Structural weaknesses, in part addressed by ongoing reforms, impact people's skills and health.**

The region where people live and their socio-economic background influence the extent to which they have access to early childhood education and care and attain a given level of education. Vocational education and training and higher education are not sufficiently aligned with the needs of the labour market. The school curriculum is being reformed on a pilot basis to improve the overall quality of education and teaching. Measures to rationalise hospitals are progressing slowly. With higher employment, more people are paying into the health system, but inadequate financing of hospitals continues to generate arrears in the system, albeit at a slower pace than in previous years.

- **Challenges in network industries impact the environment and raise costs for consumers.**

Far too much waste is put on landfills and too little is recycled. There is further potential to increase the share of renewable energy. Losses

in the water supply increase the use of resources and costs for consumers. Competition is low in retail electricity and gas markets, which remain highly regulated. Inadequate urban transport systems in most cities and the underdeveloped railway network hinder worker mobility and have negative effects on the competitiveness of businesses and the environment.

- **The reliability of statistics remains a matter of concern.**

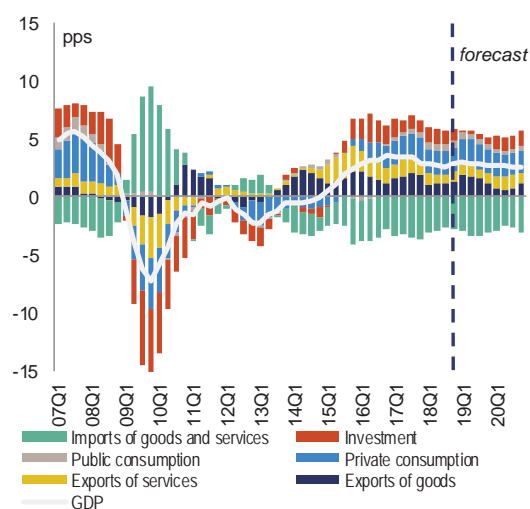
Croatia has taken some steps towards improving the production of macroeconomic and government finance statistics, but issues with their completeness, accuracy and timeliness persist.

1. ECONOMIC SITUATION AND OUTLOOK

GDP growth

Growth moderates as output finally approaches pre-crisis level. Having peaked at the rate of 3.5 % in 2016, real GDP growth slowed to 2.9 % in 2017 and is projected to have edged down to 2.8 % in 2018. Domestic demand was bolstered by strong household consumption as well as dynamic private investment, as financing conditions remained favourable and the uncertainties surrounding the restructuring of Agrokor (European Commission, 2018e) wound down substantially⁽²⁾. By contrast, the 2018 data available so far suggest the start of a slowing trend in exports of goods and services. At the same time, imports of goods and services, while also slowing somewhat, continue to perform strongly, reducing further the contribution of net exports to growth (see Graph 1.1).

Graph 1.1: Real GDP growth by demand component



Year-on-year contributions are obtained as the moving average of four quarters GDP component compared to the moving average of the respective components in the same quarters of previous year.

Source: European Commission.

Growth is expected to remain solid, while slowing gradually over the forecast period. The strong momentum in consumer spending is expected to moderate only mildly, supported by steadily rising disposable incomes as households

continue benefitting from increasing employment, rising wages and subdued inflation, also thanks to consumption tax cuts in 2019 and 2020. Investment activity is expected to continue intensifying, mainly driven by a pick-up of public investment as the uptake of EU funding improves towards the end of the programming period. On the external side, export growth is set to moderate further, in line with a slowing pace of market share gains, while strong domestic demand is projected to continue to sustain import growth. Overall, the Commission's 2019 Winter Forecast (European Commission, 2019c) sees real GDP growth slightly down at 2.7 % in 2019, and 2.6 % in 2020.

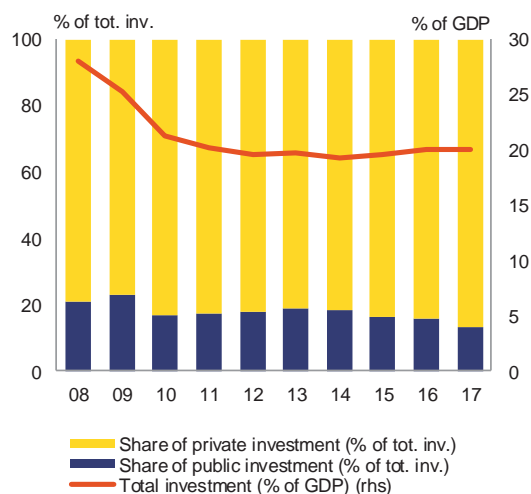
Investment

Gross fixed capital formation in proportion to GDP remains well below pre-crisis levels.

Leading up to the crisis, investment was the key driver of growth, peaking at 28.1 % of GDP in 2008 (see Graph 1.2). In that year, public investment, driven by large infrastructure projects (mainly motorways), made up more than 20 % of total investment. Financed by relatively expensive borrowing, public investment contributed to the build-up of sizeable external liabilities. In the 2 years of the sharp adjustment that followed, investment activity contracted by almost a third, down to only 21 % of GDP in 2010. It continued declining even as the economy started recovering at the end of 2014. A mild recovery in investment, driven by the private sector, started in 2015 and intensified the following year. In 2017 gross fixed capital formation stood at around 20 % of GDP, and public investment accounted for some 13.5 % of it, with no clear sign of recovery. Since EU accession, Croatia has increasingly relied on EU funding for public investment, containing the build-up of external liabilities. However, the take-up of EU funds remains limited (see Section 4.4).

⁽²⁾ On 26 October the High Commercial Court in Zagreb confirmed the settlement agreed by Agrokor's creditors in July 2018, clearing way for the process of the Group's financial and operational restructuring to start.

Graph 1.2: Private and public investment



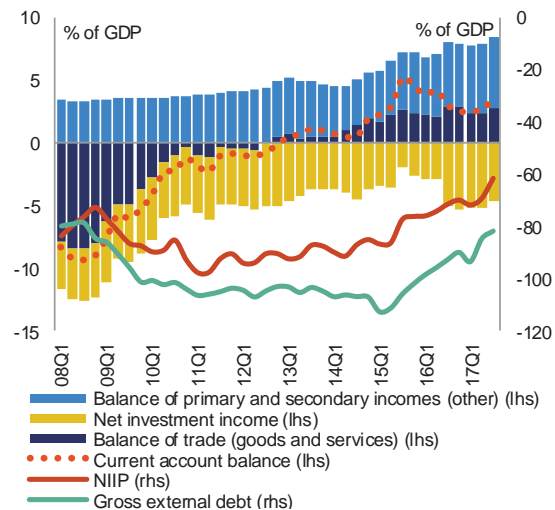
Source: Eurostat, own calculations.

External position

A weakening trade balance is set to decrease the current account surplus. In the absence of temporary effects on the primary income balance in 2018, such as loss of profits in the largely foreign-owned banking sector seen in previous years, the reduction of the current account surplus has been and is projected to continue being largely driven by the deteriorating trade balance. The current account balance is nevertheless forecast to remain positive, decreasing from a projected surplus of 2.5 % of GDP in 2018 to just below 2 % in 2020. In cyclically adjusted terms, the current account surplus is much higher, at 4 % of GDP in 2018.

External imbalances narrow further, supported by the positive, albeit declining, current account balance. Deleveraging of both the public and private sector continued in 2018. By June 2018, gross external debt declined by 1.8 pps to 80 % of GDP, while the net international investment position (NIIP) rose by 1.6 pps to -60.3 % of GDP (see Graph 1.3). The net external debt ratio is projected to remain on a declining path, thanks to solid GDP growth and current account surpluses.

Graph 1.3: Current account composition, gross external debt and net international investment position



Gross external debt is expressed in absolute terms.

Source: Eurostat, Croatian National Bank.

Inflation and interest rates

Rising energy prices pushed inflation up in 2018. Despite continued strong growth in employment and rising wages, core inflation has remained subdued. However, with unemployment shrinking steadily and demand for labour intensifying in some sectors, wage pressures are expected to grow stronger in 2019 and 2020. At the same time, the Value Added Tax (VAT) rate reduction on several products (mostly unprocessed food) in 2019 and the 1 pp. reduction of the standard VAT rate in 2020 are expected to exert downward pressure on prices. Energy prices are also expected to stabilise in mid-2019. As a result, after averaging 1.6 % in 2018, inflation is expected to moderate slightly after that. Core inflation is expected to pick up towards the end of the forecast period.

Interest rates continue declining amid abundant liquidity in the financial system and the improving country risk profile. Interest rates on all new loans to households and non-financial corporations are decreasing, most notably on loans indexed in euros. The trend is expected to continue as Croatia's risk premium continues declining amid a positive economic and budgetary outlook. It has significantly improved in recent years, as reflected in the declining spread between the yield on Croatia's sovereign debt and the German bund, which, while still higher than for most EU

countries, stayed below 200 basis points throughout 2018, as compared to 390 in mid-2016.

Private indebtedness

Private sector debt further decreased despite the recovery of bank lending, especially to households. Consolidated corporate and household debt continued decreasing throughout the first three quarters of 2018. In September 2018 corporate debt stood at 63.2 % and household debt at 34.1 % of GDP — some 20 and 8 pps below the peaks registered in 2010. The private sector debt ratio decreased on account of GDP growth and, to a lesser extent, valuation effects, as continued kuna appreciation reduced the value of outstanding liabilities indexed to or denominated in foreign currency. New lending to the non-bank private sector (adjusted for sales and securitisation) from domestic credit institutions remained positive in 2018 but declined by 3.2 % compared to 2017 despite a sharp pick-up in new loans to households. However, households continued decreasing their exposure to foreign currency and variable interest rate risk significantly. The private debt ratio is expected to keep decreasing.

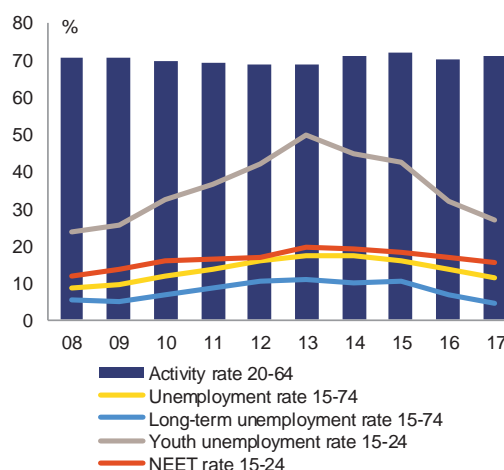
Public finances

The general government balance improved further thanks to dynamic revenue growth and expenditure containment. It recorded a surplus of 0.9 % of GDP in 2017, a notable increase from a deficit of 0.9 % the year before. Revenues grew largely on account of dynamic household consumption and an improving labour market. Expenditure growth was flat in nominal terms, largely through cuts in investment and declining interest expenditure, benefiting from the low interest rate environment. The headline balance in 2018 is expected to decline under the impact of the materialisation of contingent liabilities, but remain in surplus. It would slightly increase in 2019, despite the impact of the planned cuts in taxes and social contributions, before decreasing again in 2020 on account of investment and the reduction in the general VAT rate. In turn, continued mild surpluses and economic growth are expected to support the further reduction of general government debt. The ratio is expected to have declined to below 73.5 % in 2018, and should fall to 68.2 % by 2020.

Labour market

Croatia's labour market continues to improve on the back of the economic recovery. Since 2015, robust and broad-based economic growth has been accompanied by sustained employment growth. As a result of job creation, as well as emigration and ageing, the unemployment rate has been declining rapidly over the same period. From 11.0 % in 2017, it fell to 8.5 % in the first three quarters of 2018, and is expected to continue decreasing to 7.6 % in 2019. Nevertheless, the activity rate (20-64) remains very low (71.2 % in 2017 vs 78.0 % for the EU) (see Graph 1.4). The share of temporary employees in total employment remains well above the EU average (17.5 % vs EU 11.3 %), despite the increase in the share of permanent contracts in new hiring.

Graph 1.4: Labour market developments



Source: Eurostat.

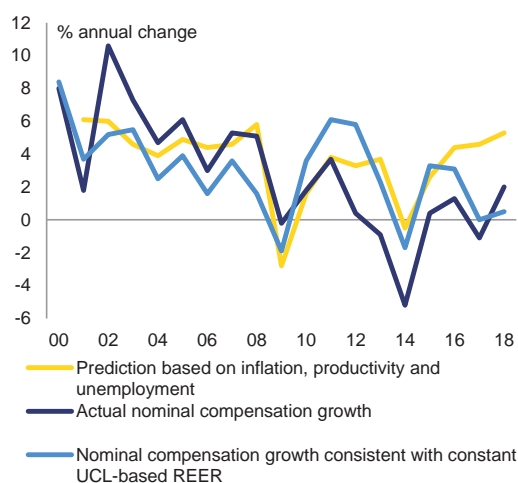
After years of moderation, wage growth is resuming. The different data sources offer a mixed picture on wage dynamics ⁽³⁾. According to national accounts, nominal compensation per employee continued to decrease by 1.1 %, in 2017. By contrast, administrative figures show the growth of average nominal gross wages resuming. The Commission's 2018 Autumn Forecast projects compensation per employee to have risen by 2 % in 2018, and to grow by a further 1.7 % in 2019,

⁽³⁾ The difference between administrative data (on nominal gross wages) and national accounts (nominal compensation per employee) is due to inconsistency between (survey based) employment data and administrative records.

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

driven by the negotiated increases in the public sector wages and the decline in unemployment. Nominal wage growth is projected to remain below the level consistent with the labour market conditions and slightly above that for cost competitiveness (see Graph 1.5). In real terms (GDP deflated), compensation per employee is projected to have declined by a further 0.3 % in 2018, and is expected to stabilise in 2019.

Graph 1.5: **Nominal wage growth: actual and predicted based on economic fundamentals**



Source: Eurostat, own calculations.

Social developments

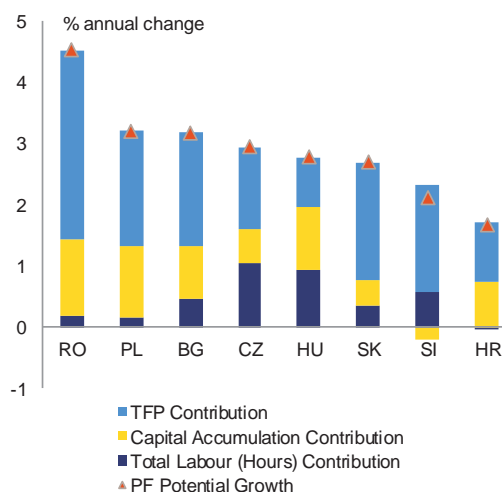
The share of people at risk of poverty or social exclusion remains high. Although it has been declining since 2013, it remained high at 26.4 % of the resident population in 2017 (EU 22.5 %). The elderly, low-skilled and people with disabilities are particularly affected. Poverty in Croatia is closely related to the absence of work income in the household, as in-work poverty is well below the EU average (see Section 4.3). Inequality, as measured by the S80/S20 income quintile share ratio, was just below the EU average in 2017 for those under 65, but higher for older persons.

Potential growth

Croatia's real GDP growth is moving closer to its gradually increasing potential. Following five years of negative rates, potential growth turned positive in 2014, and has been gradually increasing since. It is estimated to reach 2.4 % by 2020. Labour utilisation remains chronically low despite

some positive developments on the labour market. Moreover, the working age population (15 – 64 years) shrank by 4.8 pps between 2010 and 2017 due to ageing and emigration. It is estimated that in 2018 the negative contribution of labour to potential growth will have turned marginally positive thanks to the projected higher participation rates. Total factor productivity (TFP) remains at relatively low levels, reflecting a below-par performance on measures of goods and service market efficiency and public sector governance. Overall, Croatia's potential growth, while gradually increasing, remains modest for a catching-up economy, and lowest among peer Member States (see Graph 1.6).

Graph 1.6: **Potential output and components, 2017**



Potential output: production function approach.

Source: European Commission, own calculation.

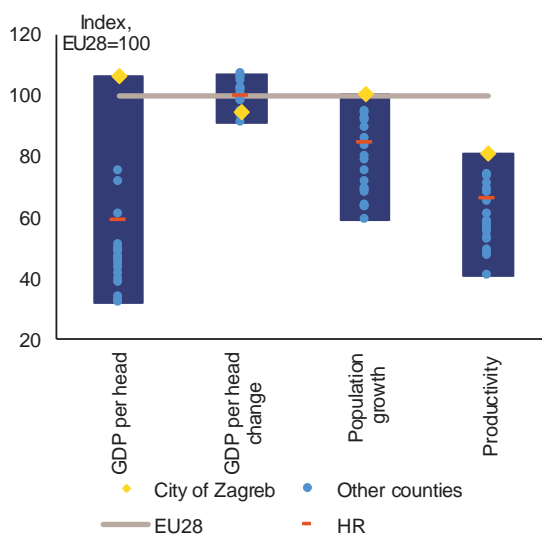
Statistical issues

Concerns remain regarding the completeness, accuracy and timeliness of macroeconomic and government finance statistics. Reliable statistics are a precondition to economic and budgetary surveillance and informed economic policy making. While close cooperation between the Croatian Bureau of Statistics and Eurostat has led to some progress in producing national accounts and ensuring consistency between government finance statistics and national accounts, sector accounts have yet to be published.

Regional disparities

There are significant regional disparities in Croatia. GDP per capita (in Purchasing Power Standard) remains well below the EU average in all the counties, with the exception of the capital region of Zagreb (see Graph 1.7). Over the 2000-2015 period disparities in GDP per capita have widened across the country. In 2015, GDP per capita ranged between 107 % of the EU average in Zagreb to 32 % in Virovitica-Podravina county in eastern Croatia. Population has been shrinking across the country since 2010, with the exception of the city of Zagreb. The phenomenon, however, is much more pronounced in the eastern regions of Croatia. Regional demographic developments are in fact correlated with the labour market outcomes which also display strong territorial disparities (see Section 4.4).

Graph 1.7: **Regional convergence**



Year(s) of reference: GDP per head, 2015; GDP per head change, 2010-2015; Population growth, 2010-2016; Productivity, 2015.

Source: Eurostat, own calculations.

Table 1.1: Key economic and financial indicators - Croatia

	2004-07	2008-12	2013-15	2016	2017	forecast		
						2018	2019	2020
Real GDP (y-o-y)	4.5	-1.9	0.6	3.5	2.9	2.8	2.7	2.6
Potential growth (y-o-y)	3.0	0.0	0.2	1.6	1.7	1.8	2.1	2.4
Private consumption (y-o-y)	4.4	-2.1	-0.8	3.5	3.6	.	.	.
Public consumption (y-o-y)	4.5	-0.1	0.4	0.7	2.7	.	.	.
Gross fixed capital formation (y-o-y)	6.6	-5.7	0.8	6.5	3.8	.	.	.
Exports of goods and services (y-o-y)	4.9	-1.3	6.2	5.6	6.4	.	.	.
Imports of goods and services (y-o-y)	6.2	-4.3	5.1	6.2	8.1	.	.	.
Contribution to GDP growth:								
Domestic demand (y-o-y)	5.2	-2.6	-0.2	3.4	3.3	.	.	.
Inventories (y-o-y)	0.3	-0.7	0.3	0.3	0.2	.	.	.
Net exports (y-o-y)	-0.9	1.3	0.5	-0.1	-0.6	.	.	.
Contribution to potential GDP growth:								
Total Labour (hours) (y-o-y)	0.5	-0.6	-0.9	-0.1	0.0	0.1	0.3	0.5
Capital accumulation (y-o-y)	2.0	1.2	0.6	0.7	0.7	0.8	0.9	1.0
Total factor productivity (y-o-y)	0.5	-0.6	0.5	1.0	1.0	0.9	0.9	0.8
Output gap	3.1	-0.8	-3.5	-0.7	0.6	1.6	2.3	2.5
Unemployment rate	12.1	11.8	16.9	13.4	11.0	9.0	7.5	6.5
GDP deflator (y-o-y)	3.8	2.5	0.3	-0.1	1.1	2.3	1.7	1.6
Harmonised index of consumer prices (HICP, y-o-y)	2.8	2.9	0.8	-0.6	1.3	1.6	1.4	1.4
Nominal compensation per employee (y-o-y)	4.8	2.1	-2.0	1.3	-1.1	2.0	1.7	1.5
Labour productivity (real, person employed, y-o-y)	2.5	0.1	0.2	3.2	0.7	.	.	.
Unit labour costs (ULC, whole economy, y-o-y)	2.3	2.0	-2.2	-1.8	-1.8	1.5	0.9	0.2
Real unit labour costs (y-o-y)	-1.5	-0.4	-2.4	-1.8	-2.8	-0.8	-0.8	-1.3
Real effective exchange rate (ULC, y-o-y)	1.9	-1.0	-3.2	-1.8	-1.1	1.2	-1.5	-1.9
Real effective exchange rate (HICP, y-o-y)	0.8	-0.7	0.1	1.2	0.4	2.6	-1.3	-1.0
Savings rate of households (net saving as percentage of net disposable income)	.	6.0	.	.	.	.	.	.
Private credit flow, consolidated (% of GDP)	14.8	3.6	-0.6	-0.1	1.2	.	.	.
Private sector debt, consolidated (% of GDP)	86.5	119.5	116.2	105.3	98.4	.	.	.
of which household debt, consolidated (% of GDP)	32.6	40.7	39.6	35.1	34.1	.	.	.
of which non-financial corporate debt, consolidated (% of GDP)	53.9	78.9	76.7	70.1	64.3	.	.	.
Gross non-performing debt (% of total debt instruments and total loans and advances) (2)	.	.	12.4	10.1	8.4	.	.	.
Corporations, net lending (+) or net borrowing (-) (% of GDP)	.	-1.0	.	.	.	.	.	.
Corporations, gross operating surplus (% of GDP)	.	19.3	.	.	.	.	.	.
Households, net lending (+) or net borrowing (-) (% of GDP)	.	3.5	.	.	.	.	.	.
Deflated house price index (y-o-y)	9.8	-5.1	-3.1	2.1	2.8	.	.	.
Residential investment (% of GDP)	0.0*	0.0*	0.0*	0*	0*	.	.	.
Current account balance (% of GDP), balance of payments	-5.9	-3.3	2.4	2.5	3.9	2.5	2.0	1.8
Trade balance (% of GDP), balance of payments	-6.6	-2.4	1.5	2.8	2.1	.	.	.
Terms of trade of goods and services (y-o-y)	1.3	0.5	0.3	1.4	0.2	1.1	0.3	0.5
Capital account balance (% of GDP)	0.0	0.1	0.4	1.4	0.6	.	.	.
Net international investment position (% of GDP)	-66.5	-87.3	-83.3	-69.9	-62.4	.	.	.
NIIP excluding non-defaultable instruments (% of GDP) (1)	-29.3	-47.5	-42.8	-25.5	-17.3	.	.	.
IIP liabilities excluding non-defaultable instruments (% of GDP) (1)	68.7	88.8	92.2	77.5	69.2	.	.	.
Export performance vs. advanced countries (% change over 5 years)	37.3	-4.3	-12.6	5.0	14.6	.	.	.
Export market share, goods and services (y-o-y)	.	.	2.7	7.9	2.5	.	.	.
Net FDI flows (% of GDP)	-4.7	-3.1	-1.4	-4.1	-2.4	.	.	.
General government balance (% of GDP)	-3.7	-5.6	-4.6	-0.9	0.9	0.2	0.4	0.1
Structural budget balance (% of GDP)	.	.	-3.1	-0.8	0.7	-0.5	-0.7	-1.1
General government gross debt (% of GDP)	39.3	55.6	82.7	80.2	77.5	73.5	70.1	68.2
Tax-to-GDP ratio (%) (3)	36.7	36.0	36.8	37.8	37.8	37.9	37.4	36.9
Tax rate for a single person earning the average wage (%)	.	.	29.9	.	.	.	.	.
Tax rate for a single person earning 50% of the average wage (%)	.	.	22.7	.	.	.	.	.

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

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

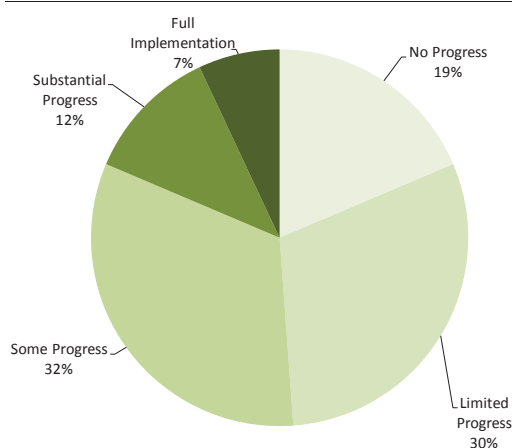
(3) The tax-to-GDP indicator includes imputed social contributions and hence differs from the tax-to-GDP indicator used in the section on taxation

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

2. PROGRESS WITH COUNTRY-SPECIFIC RECOMMENDATIONS

Since the start of the European Semester in 2014, 51 % of all country-specific recommendations addressed to Croatia have recorded at least ‘some progress’⁽⁴⁾. The remaining 49 % of these CSRs recorded ‘limited’ or ‘no progress’ (see Graph 2.1). Reform action in key structural policy areas stalled over the past years, also in the context of a protracted period of political instability. Most progress has been seen in the areas of fiscal policy, labour market and, recently, the pension system.

Graph 2.1: Overall multiannual implementation of 2014-2018 CSRs to date



(1) The overall assessment of the country-specific recommendations related to fiscal policy excludes compliance with the Stability and Growth Pact.
(2) The multiannual CSR assessment looks at the implementation until 2019 Country Report since the CSRs were first adopted.

Source: European Commission.

Having fully corrected its excessive general government deficit, Croatia continued with a prudent fiscal policy. It exited the Excessive Deficit Procedure in June 2017 after having durably corrected its excessive deficit in 2016, with respect to both the general government deficit and the debt rule. Prudent fiscal policy needed to decrease the public debt ratio continued in 2017.

Croatia has taken measures to enhance flexibility of the labour market, while weaknesses in the promotion of employability and social protection remain. Two successive reforms, implemented in 2013 and 2014, facilitated the use of fixed-term contracts and flexible types

of work (distance work, part-time work, seasonal work and agency work), and simplified the procedures for terminating employment contracts. The coverage and effectiveness of active labour market policies however remains low. In 2015, the assessment of disability claims was harmonised and moved to a new Single Expert Evaluation Body. There has been limited progress in consolidating social benefits and improving their poverty reduction capacity.

Some steps have been taken to improve the judiciary, business environment and resilience of the financial sector. Insolvency procedures have been thoroughly revised, and the reformed judicial map is improving the efficiency of the system. Backlogs in the courts are decreasing, especially those of oldest cases, but remain sizable. The reduction of parafiscal charges has been slow while the administrative burden on businesses from other impediments was reduced more significantly. In 2014, the comprehensive portfolio screening of the banking sector confirmed its robustness, and some identified weaknesses have been addressed. The Croatian Bank for Reconstruction and Development has undergone an asset quality review indicating several areas in need of improvement, some of which are being addressed.

Reforms of healthcare, state-owned enterprises and the implementation of EU funded projects have progressed slowly. The long-planned functional integration of hospitals, aimed at rationalising operations and improving access to healthcare, has started, while their inadequate financing has yet to be addressed. Some measures to improve corporate governance in state-owned enterprises have been implemented, but activation and sale of assets have advanced only slowly, without a clear privatisation strategy in place. Constrained administrative capacity and insufficient strategic planning hinder a more efficient implementation of projects co-funded from EU funds, although there have been improvements over the past years, especially in terms of increased staffing.

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

Croatia has made some ⁽⁵⁾ progress in addressing the 2018 country-specific recommendations (see Table 2.1). After a protracted period of reform standstill, policy action has picked up in 2018. Most notably the Parliament adopted a package of important pension

system reforms, which came into force in 2019. Similarly, the fiscal framework was strengthened at the end of 2018. Other policy measures in the area of public sector governance and the business environment have been initiated and are at different stages of progress, awaiting full parliamentary adoption or effective implementation.

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

Table 2.1: 2018 country-specific recommendations (CSRs) assessment

Commitments	Summary assessment
CSR 1: <i>Strengthen the fiscal framework, including by strengthening the mandate and independence of the Fiscal Policy Commission. Introduce a recurrent property tax. (MIP relevant)</i>	Croatia has made Some Progress in addressing CSR 1: <ul style="list-style-type: none"> Substantial progress in strengthening the fiscal framework No progress introducing a recurrent property tax
CSR 2: <i>Discourage early retirement, accelerate the transition to a higher statutory retirement age and align pension provisions for specific categories with the rules of the general scheme. Deliver on the reform of the education and training system to improve its quality and labour market relevance for both young people and adults. Consolidate social benefits and improve their poverty reduction capacity. (MIP relevant)</i>	Croatia has made Some Progress in addressing CSR 2: <ul style="list-style-type: none"> Substantial in pensions system reform measures Some progress in delivering on the reform of the education and training system Limited progress in consolidating social benefits
CSR 3: <i>Reduce the territorial fragmentation of the public administration, streamline the functional distribution of competencies and enhance the capacity to design and implement public policies. In consultation with social partners, introduce harmonised wage-setting frameworks across the public administration and public services. (MIP relevant)</i>	Croatia has made Limited Progress in addressing CSR 3: <ul style="list-style-type: none"> Some progress in the public administration reform Limited progress harmonising wage-setting frameworks in the public sector
CSR 4: <i>Improve corporate governance in state-owned enterprises and intensify the sale of state-owned enterprises and non-productive assets. Significantly reduce the burden on businesses arising from parafiscal charges and from cumbersome administrative and legislative requirements. Enhance competition in business services and regulated professions. Reduce the duration of court proceedings and improve electronic communication in courts. (MIP relevant)</i>	Croatia has made Some Progress in addressing CSR 4: <ul style="list-style-type: none"> Limited progress in improving corporate governance and divestment in state-owned enterprises Some progress in reducing the burden on businesses Limited progress in enhancing competition in business services and regulated professions Some progress in the judicial system reform

Source: European Commission.

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

Croatia is one of the largest beneficiaries of EU solidarity. The financial allocation from the EU funds, aiming to support Croatia in facing development challenges, amounts to up to EUR 10.7 billion for 2014-2020, potentially equivalent to above 3 % of GDP annually. The additional national co-financing will be approximately EUR 2 billion, so the country budget amounts to almost EUR 12.6 billion. As of the end of 2018, some EUR 6.8 billion (around 64 % of the total EU funds) was already allocated to specific projects. In addition to ESIF, EUR 424 million was allocated to specific projects on strategic transport networks through a dedicated EU funding instrument, the Connecting Europe Facility. Furthermore, numerous Croatian research institutions, innovative firms and individual researchers benefited from other EU funding instruments, notably Horizon 2020 which provided EUR 62 million.

EU funding is helping to address policy challenges identified in the 2018 CSRs. Primarily by investing in the establishment of VET centres of competence and providing support to the implementation of the integral curricular reform, ESIF funds (including the European Social Fund) will further improve a link between vocational education and labour market needs. Through the pilot project e-Schools, elementary schools in Croatia have been equipped with LAN and two digital classrooms, with the intention of covering all elementary schools with the second phase of the project and establishing a system of digitally mature schools. In addition, ESIF also contributed to improving innovative performance of Croatia by supporting projects selected under the smart specialisation strategy. In environmental services, around half million people received access to newly built waste-management centres and around half million people already gained access to modern water treatment and supply services, all amounting to a cleaner and healthier environment for citizens. In transport, new sections of the road and rail network on the TEN-T are being developed alongside the improved island connectivity.

In addition, the Commission can provide tailor-made technical support upon Member State's request via the Structural Reform Support Programme to help implement growth-sustaining reforms to address challenges identified in the European Semester process or other national reforms. Croatia for example is receiving support to implement a curriculum reform. The Commission is also assisting the authorities in their efforts to remove unnecessary restrictions to regulated professions, to harmonise terminology and improve transparency of social benefits, and to monitor the implementation of restructuring plans for state-owned enterprises. In addition, in 2018, work has started on enhancing the administrative capacity of the tax authorities to detect fraud and conduct audits, on improving human resources management in the public administration and contributing to the efficient implementation of the public administration reform, and on developing a strategy for Croatia's Bank for Reconstruction and Development (HBOR).

EU funding contributes to mobilisation of private investment through both grants and financial instruments. Around EUR 522 million (8.3 % of the total) is earmarked to be delivered in the form of loans, microloans, portfolio guarantees and equity. The investments carried out via Financial instruments will be focused on SMEs and energy efficiency. Furthermore, the overall volume of approved operations by the EIB with the European Fund for Strategic Investment backing amounts to EUR 203 million, which is set to trigger a total of EUR 903 million in additional private and public investments. Croatia ranks 12th as to the overall volume of approved operations as a share of GDP. Under the Infrastructure and Innovation window, 8 projects financed by the EIB with EFSI backing were approved, for a value of about EUR 109 million in total financing set to trigger EUR 571 million in total investment. Under the SMEs component, 8 agreements were approved with intermediary banks financed by the EIF with EFSI backing, for a total of EUR 94 million set to trigger approximately EUR 332 million in investments. Some 1 178 SMEs and mid-cap companies are expected to benefit from improved access to finance. An example of EFSI-backed project in Croatia is "EL TO Zagreb", for which the EIB is lending Hrvatska Elektroprivreda DD EUR 150 million to build a new combined cycle gas turbine, heat and electricity cogeneration plant to replace less environmentally-friendly plants in Zagreb.

EU actions strengthen national, regional and local authorities and the civil society. EUR 522.6 million (from ESIF) has been allocated for strengthening capacity of public administrations at different levels by

prompting close cooperation with stakeholders. The Catching up Regions Initiative delivers targeted technical assistance and financing for developing five counties in the Eastern Croatia – Slavonija, Baranja and Srijem Project. The importance of this project is twofold, on the one hand, it enables a more focused use of EU funds in the Slavonian counties, and on the other hand, it helps strengthening administrative capacity on local and regional level in order to prepare and implement projects needed for socio-economic development in the current programming period.

[More information at: https://cohesiondata.ec.europa.eu/countries/HR](https://cohesiondata.ec.europa.eu/countries/HR)

3. OVERALL FINDINGS REGARDING IMBALANCES, RISKS AND ADJUSTMENT ISSUES

The 2019 Alert Mechanism Report concluded that a new in-depth review should be undertaken for Croatia to assess the persistence or unwinding of the imbalances (European Commission, 2018b). In spring 2018, Croatia was identified as having excessive macroeconomic imbalances (European Commission, 2018a). The imbalances identified related to high levels of public, private and external debt, all largely denominated in foreign currency, in a context of low potential growth. This chapter summarises the findings of the analyses in the context of the Macroeconomic Imbalances Procedure in-depth review that is contained in various sections in this report ⁽⁶⁾.

Imbalances and their gravity

Government debt continues decreasing. During the protracted recession, large budget deficits and costs induced by state-owned enterprises contributed to a significant accumulation of government debt, which peaked in 2014 at 84 % of GDP. Following that, robust growth and a prudent fiscal stance gradually reduced government debt to 77.5 % of GDP in 2017. The steady kuna appreciation since 2014 also facilitated debt reduction by depressing the value of the significant portion of debt denominated in foreign currency. The decrease of public debt resulted in improved debt sustainability (see Section 4.1) and was picked up by credit agencies, which rate Croatia's long-term prospects with BB+, a rating just below investment grade, with positive outlook. Nevertheless, public debt remains high and exposed to interest and exchange rate risks.

Private sector debt keeps decreasing despite the recovery in lending. In the second quarter of 2018, consolidated corporate and household debt amounted to 63.2 % and 34.1 % of GDP, respectively – some 20 and 8 percentage points below the peak registered in 2010. By mid-2018,

both household and non-financial corporations debt were below their respective prudential thresholds, but still above the levels suggested by fundamentals, indicating scope for further deleveraging. Furthermore, non-financial corporations' debt is high relative to their gross financial assets or equity, signalling solvency risks for the corporate sector. Exposure to the exchange and interest rate risk are moderating. The share of private sector debt exposed to foreign exchange rate risk decreased from 78 % in 2012 to 64.5 % in Q2 2018, as both corporates and households took advantage of high liquidity in the domestic financial sector to partially refinance their liabilities denominated in foreign currencies in national currency. Similarly, lower interest rates and non-interest charges due to strong competition in the domestic banking sector allowed corporates and households to refinance their variable interest rate loans with cheaper loans of longer interest rate fixation periods.

The ongoing deleveraging of both the public and private sector is reflected in Croatia's continued current account surplus. The current account surplus increased significantly in 2017 to 3.9 % of GDP. This resulted largely from a one-off increase in the primary income balance as banking sector profitability was affected by higher provisioning associated with the Agrokor crisis. With strong domestic demand supporting import growth, the trade surplus declined slightly in the first half of 2018. In turn, the current account surplus also decreased to 3.3 % of GDP ⁽⁷⁾. The net international investment position improved to -61.9 % of GDP in 2017 and declined further to -58.3 % by the second quarter of 2018, almost 40 percentage points above its record low in the third quarter of 2011. By mid-2018, gross external debt decreased to 80 % of GDP, over 32 percentage points below its peak in 2015. While declining rapidly, in 2017 Croatia's net external liabilities were still significantly in excess of their prudential and fundamentals based benchmarks ⁽⁸⁾.

⁽⁶⁾ Analyses relevant for the in-depth review can be found in the following sections: Government debt (Section 4.1); Private sector debt and the financial sector (Section 4.2); Labour market (Section 4.3); and Business environment, investment and public sector governance (Section 4.4). An asterisk indicates that the analysis in that section contributes to the in-depth review under the Macroeconomic Imbalances Procedure.

⁽⁷⁾ 4-quarter moving average

⁽⁸⁾ The country-specific prudential threshold denotes the NIIP level beyond which an external crisis becomes likely. The NIIP level explained by fundamentals represents the NIIP that would result if a country had run its current account in line with fundamentals since 1995. For Croatia, the prudential and fundamental-based benchmarks are

However, the net external position excluding non-defaultable instruments was only -15 % of GDP, similar to some of the peer countries and above its respective benchmarks.

Croatia's potential growth is increasing, but remains relatively low for a catching-up economy. After plummeting during the crisis years, potential output growth increased to an estimated 1.8 % in 2018, just above the EU average but well below that for other catching-up economies. Labour is no longer detracting from potential growth, mainly thanks to the decline in the structural unemployment rate, but adverse demographic trends and low activity rates continue to restrain it. The contribution of total factor productivity remains relatively low compared to that recorded by the economies of Central and Eastern Europe. This is largely explained by low allocative efficiency, which is also related to the strong presence of state-owned enterprises in the economy (see Section 4.4.1). Furthermore, Croatia does not perform well on indicators of efficiency of goods and service markets, and public sector governance (see Section 4.4).

Evolution, prospects, and policy responses

Fiscal surpluses are expected to support the further reduction in public debt. Public debt is projected to dip to 68.2 % of GDP by 2020. The government balance is expected to remain in surplus in both 2019 and 2020 despite the expected shift towards a pro-cyclical fiscal stance and the materialisation of some contingent liabilities. A continued low interest rate environment should continue supporting the refinancing of maturing debt at lower interest rates and with longer maturities. The adoption of the new Fiscal Responsibility Act is expected to improve Croatia's fiscal framework by giving more autonomy to the Fiscal Policy Commission, prescribing numerical fiscal rules and strengthening the short and mid-term budgetary framework at central and local level.

Private sector debt is expected to continue decreasing despite the expected stronger credit growth. Debt reduction in the private sector in

estimated to have been around -38 % and -23 % of GDP in 2017, respectively.

2017 and throughout 2018 was driven by nominal GDP growth and the moderate appreciation of the kuna. Write-offs also contributed to debt reduction. At the same time, credit flows turned positive in 2016 for households and further strengthened in 2017 and 2018. New lending was driven by kuna-denominated non-housing loans. Credit flows to non-financial corporates have resumed as well, whereby some firms have been partially refinancing their external debt through domestic borrowing. Non-financial sector credit growth will likely remain moderate given the still high debt-to-gross financial assets and the debt-to-equity ratios of Croatian corporates. Furthermore, many corporates remain burdened with high non-performing loans (20.5 % of total loans to non-financial corporations), especially in the construction sector (47.6 %). The agreement between Agrokor's creditors, confirmed by the High Commercial Court in Zagreb in October 2018, should lead to an orderly restructuring of the conglomerate. Large risks to the financial and private sector from Agrokor thus appear to be contained. The operational and financial stability of the company and its suppliers now depend on the successful implementation of the agreement.

Croatia's current account surplus is expected to continue supporting the reduction in external imbalances. According to the Commission 2018 Autumn Forecast, the current account surplus is projected to gradually decline to 1.8 % of GDP by 2020. The trade surplus is expected to narrow, with strong domestic demand fuelling imports and export market share gains declining. Nevertheless, the expected current account balances will remain significantly above the level suggested by fundamentals –estimated at around -0.6 % of GDP in 2017. This should enable the continued rapid reduction of external imbalances. Even with gradually slowing growth, the net international investment position is expected to rise above -50 % of GDP by 2020, and move closer to more sustainable levels e.g. the levels suggested by the prudential and fundamentals-based benchmarks (-39 % of GDP and -22 % of GDP, respectively, in 2018).

Potential growth remains relatively low to support fast convergence. Since peaking in mid-2013, the unemployment rate is estimated to have fallen to its pre-crisis levels, 9.1 % in 2018. It is expected to decline further to 6.6 % by 2020,

also due to persistent employment growth. However, ageing and emigration will continue to detract from the labour contribution to potential growth. The ageing impact should be partially offset by the adopted pension reform, which will extend working lives. The contribution of total factor productivity to potential growth remains low compared to peers⁽⁹⁾. However, the proposed streamlining of government agencies, the reduction in the backlog of court cases and improvements in the management of state-owned assets could contribute to higher productivity gains. Overall, the positive output gap is projected to further expand by 2020, supported by pro-cyclical tax cuts and an expected recovery of public investment towards the end of the multiannual programming period for EU funds.

utilisation while several policy initiatives, in different stages or preparation, aim at improving public sector governance and the business environment. The ambitious reform agenda presented by the authorities could help increase potential growth, although thorough implementation of the planned reforms remains crucial to achieving growth rates and accelerating the process of real economic convergence.

Overall assessment

The private and public sectors are continuing to reduce their debt and its exposure to currency and interest rate risks. High debt levels still burden the economy, although the situation has been improving substantially with private debt falling below prudential levels and public debt following a sustained declining path. However, the corporate sector remains over-leveraged and burdened by non-performing loans. External imbalances narrowed due to high current account surplus. Overall foreign currency denominated liabilities are decreasing, implying lower exposure to exchange rate risk. The unemployment rate has reduced sharply, also but not exclusively due to employment growth. However, labour market participation lags significantly behind the EU average.

Low potential growth hampers a durable adjustment of imbalances. Economic growth is projected to be robust over the forecast horizon. Nevertheless, low potential growth limits Croatia's shock absorption capacity. To increase its growth potential, Croatia needs to increase labour utilisation and address its weak productivity growth.

Recent policy actions should help to address Croatia's structural weaknesses but their implementation remains crucial. The adopted pension reform could contribute to higher labour

⁽⁹⁾ Slovenia, Hungary, the Czech Republic, Slovakia, Poland

Table 3.1: MIP matrix

	Gravity of the challenge	Evolution and prospects	Policy response
<i>Imbalances (unsustainable trends, vulnerabilities and associated risks)</i>			
Public debt	<p>In 2017 the government debt ratio decreased to 77.5 % of GDP, which is still above the Treaty reference value of 60 %. A large portion of the debt is exposed to foreign currency risk. The debt sustainability analysis indicates low risks in the short term but medium risks in the medium and long term.</p>	<p>Between 2008 and 2014, public debt rose from 39 to 84 % of GDP on account of large government deficits and changes in the scope of general government. The debt ratio started declining in 2015, thanks to substantial improvements in the government balance and recovering GDP growth.</p> <p>The general government balance recorded a surplus of 0.9 % of GDP in 2017. The budget balance is expected to remain mildly positive throughout 2020, allowing the debt ratio to continue decreasing.</p> <p>The Commission 2018 autumn forecast expects the debt-to-GDP ratio to decline to 73.5 % of GDP in 2018 and to reach 68.2 % of GDP by 2020.</p>	<p>In 2018 debt continued to be refinanced at lower rates, lowering debt servicing costs. Maturities were extended and the share of debt issued in foreign currency declined.</p>
Household and corporate debt and the financial sector	<p>In 2017, consolidated corporate and household debt stood at 64.3 % and 34.1 % of GDP, respectively, down from 70.1% and 35.1% in 2016. Both decreased further in the first half of 2018 and stand below prudential thresholds but still above the levels suggested by fundamentals</p> <p>Around 48 % of household debt and approximately 76 % of (domestic and external) corporate debt was exposed to foreign currency risk (predominantly EUR) in mid-2018.</p> <p>In the second quarter of 2018, the NPL rate in the Croatian banking sector reached 8.7 %, down from 11.7% one year earlier and slightly below 8.9% in the previous quarter. The rate is still relatively high in both the corporate and household sector – 20.7 % and 7.6 % respectively.</p>	<p>The pace of deleveraging in both the household and corporate sector is set to continue but abate, as credit flows turned positive.</p> <p>Despite improvements, the still high exposure to currency risks and interest rate hikes may put at risk the repayment capacity of some households and non-financial corporations and translate into credit risk for the banking sector.</p> <p>Non-performing loans in the corporate sector decreased markedly in 2017, thanks to their sales and improving economic conditions. However, figures by the Croatian National Bank for September 2018 show a slowdown in NPL sales compared to 2017 and a lower reduction of overall NPLs.</p>	<p>The revised corporate insolvency legislation led to the closure of thousands of illiquid companies without assets. The authorities also plan to enhance the monitoring of the reformed personal insolvency framework.</p> <p>In July 2018 a settlement between Agrokor's creditors was reached and on 26 October 2018, the Croatian High Commercial Court dismissed all of the appeals lodged by several of the remaining debtholders, effectively removing the final obstacle on the implementation of the deal. A smooth implementation of the agreement remains crucial for the operational and financial recovery of the firm and its suppliers.</p>

(Continued on the next page)

Table (continued)

External liabilities and trade performance	<p>The NIIP improved to -62.4 % of GDP in 2017, but remained well below its fundamental level and prudential thresholds. However, the stock of foreign liabilities net of less risky financial instruments (NENDI) is estimated at only - 15 % of GDP in 2018, above both benchmarks. The current account balance stood at 3.9 % of GDP in 2017. It decreased to 3.3 % of GDP in the first half of 2018. Gross external debt declined below 80 % of GDP by June 2018.</p>	<p>The NIIP continued improving in the first half of 2018, rising to - 58.3 % of GDP, more than 30 pps above its record low in 2010. The NIIP is projected to keep improving on account of continued current account surpluses and GDP growth.</p> <p>The current account has moved from a record deficit of 9 % of GDP in 2008 to a surplus in 2013. After reaching 3.9 % of GDP in 2017 it is expected to start declining again to 2.5 % of GDP in 2018. Nevertheless, it should remain in a surplus throughout the forecast horizon, also thanks to continued strong performance of exports.</p> <p>The economy has more than recovered the previously lost market shares, while tourism boasts record physical indicators year after year despite signs of capacity constraints.</p>	<p>Croatian firms still have to bear a high administrative burden.</p> <p>Persisting weaknesses in the business environment result in limited attractiveness of Croatia for FDIs and high costs of doing business for Croatian enterprises.</p> <p>Many reform initiatives aimed at improving the business environment are in the pipeline.</p>
Potential output	<p>The unemployment rate has contracted to 9.1 % in 2018. However, at 70.9 % and 65.4 % in Q2 2018, activity and employment rates remain among the lowest in the EU.</p> <p>The contribution of total factor productivity to potential growth remains low for a catching-up economy.</p> <p>Low potential growth undermines the durability of the adjustment process.</p>	<p>After having attained a record high of 17.6 % in early 2014, unemployment continues to reduce rapidly. Until 2018, part of the reduction was driven by the shrinking population of working age, due to negative migration flows and population aging. Following the rapid growth rates in pre-crisis years, wages stagnated or decreased in the post-crisis period. They have started growing again in 2017, under the impact of the stipulated increase of public wages. They are expected to continue growing as the labour market tightens.</p>	<p>A comprehensive pension system reform entered into force in 2019, which among others, will extend working lives thus contributing to higher labour utilisation. Active labour market measures remain largely underutilised.</p> <p>Some measures addressing the efficiency of the public administration have been initiated, while the harmonisation of the wage-setting system across the public administration is planned for early 2019.</p> <p>Some steps have been taken to simplify the business environment, with regards to the administrative burden and regulated professions, while the reduction of parafiscal charges has stalled.</p>

Conclusions from IDR analysis

- Private sector debt declined substantially, however some corporates are still overleveraged and burdened with NPLs. Also Government debt is also on a downward path, thanks to sustained GDP growth and a prudent fiscal policy, but sustainability risks in the medium and long term remain at medium level. Vulnerabilities to potential currency and interest rate shocks are being contained due to an increasing share of fixed interest rate loans and domestic currency loans. A well-capitalised financial sector with improved profitability facilitates the recovery of lending to the private sector. The net international investment position is improving, but remains at levels that exceed the prudential threshold, although net of less risky financial instruments it reached prudential levels. Persistently low activity rates and the shrinking labour force hold back the growth potential.
 - The robust economic growth is expected to contribute to a further reduction in the private and public debt-to-GDP ratios. The pace of private sector deleveraging is set to abate as credit activity intensifies, supporting investment. The current account is expected to remain in surplus, supporting a further narrowing of external liabilities. In the medium term, low potential growth limits Croatia's shock absorption capacity.
 - Recently undertaken policy actions and planned measures in the areas of business environment, public administration and the pension system should help increase potential growth. A thorough implementation of reforms remains crucial for supporting the process of real economic convergence.
-

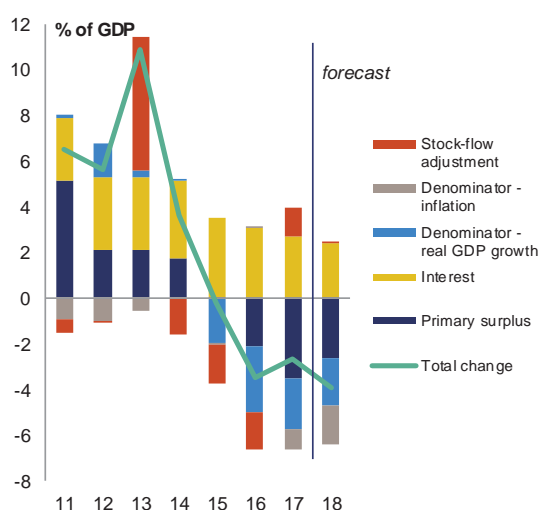
Source: European Commission.

4. REFORM PRIORITIES

4.1. PUBLIC FINANCES AND TAXATION*

Croatia's public debt ratio has been decreasing strongly for 3 years in a row as a result of a prudent fiscal policy and robust GDP growth. The debt-to-GDP ratio reached 74.5 % in the third quarter of 2018, from a 2015-Q1 high of 86.2 %. The decrease was mainly driven by a combination of GDP growth and significant improvements in the general government balance (see Graph 4.1.1). With a structural surplus of 0.7 % of GDP in 2017, Croatia remained well above its medium term budgetary objective (-1.75 % of GDP). However, the activation of contingent liabilities is expected to have a strong (in excess of 1 % of GDP) yet temporary negative effect on the government balance over 2018 and 2019, adding also to the debt. In addition, as the government uses fiscal space to cut taxes, fiscal policy is expected to shift towards a pro-cyclical stance. Still, the decrease in the debt ratio is expected to continue – albeit at a slower pace – dipping to 68.2 % in 2020, driven by small surpluses and GDP growth.

Graph 4.1.1: Drivers of change in the debt ratio



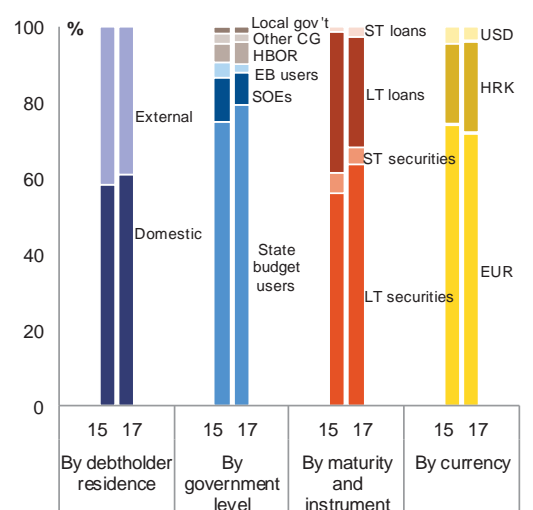
Stock-flow adjustments include differences between cash and accrual recording, the (net) accumulation of financial assets, valuation effects and some remaining statistical adjustments (e.g. sector reclassifications).

Source: AMECO, European Commission 2018 autumn forecast, own calculations.

The structure of Croatia's debt has improved in many respects. In recent years, Croatia used the low interest rate environment to refinance maturing bonds and loans at lower interest rates. In 2017, the implicit interest rate on public debt was

at a record low of 3.4 %, down from 4.2 % in 2015. In addition, an extension of the average maturity of outstanding debt and increased issuances of debt in national currency have somewhat decreased the vulnerabilities associated with government debt. Similarly, the share of fixed-rate debt increased, reducing exposure to interest-rate shocks.

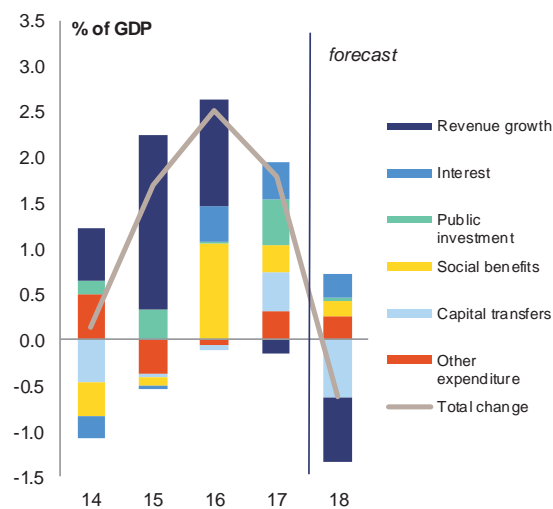
Graph 4.1.2: Structure of public debt



(1) Other CG (central government) includes mainly PPPs.
 (2) EB users = extra-budgetary users classified under central government.
 Source: Croatian National Bank, Ministry of Finance, own calculations.

Expenditure restraint was driven by cuts in investment and savings in interest spending. The improvement in the general government balance in 2017 was achieved by a combination of growing revenues and a minor decrease in total expenditure in nominal terms, in spite of public sector wage hikes. Most notably, public investment was cut by more than 12 % while savings in interest paid amounted to almost 10 % compared to 2016. Since public investment as a share of GDP is at a record low of 2.7 % and interest rates are projected to rise, creating fiscal space through these categories in the coming years is unlikely to be possible.

Graph 4.1.3: Drivers of change in government balance



Source: AMECO, own calculations.

Long delayed measures aimed at strengthening the fiscal framework are progressing. In December 2018, the Parliament adopted the Fiscal Responsibility Act while the State Audit Office Act was passed for the second reading in January 2019. The new Fiscal Responsibility Act is aimed mainly at reinforcing the set-up and mandate of the Fiscal Policy Commission and laying down numerical fiscal rules, including a structural budget balance rule. The new State Audit Office Act aims to address the low implementation of its instructions and recommendations by introducing sanctioning mechanisms. It also increases the scope of the State Audit Office audits, including the Croatian National Bank. The Budget Act — aimed at specifying the short and mid-term budgetary framework at central and local level — is scheduled for adoption by the government in early 2019.

Budgetary control is set to tighten at the central level and ease at the local level. The planned rationalisation of government agencies and harmonization of wage setting (see section 4.4.4) have the potential to strengthen budgetary control at central government level. On the local level, the fiscal capacity of government units was strengthened by the new law on the financing of local government units, which streamlined the system of central government transfers and introduced a new system of fiscal equalisation. The new system is no longer based on geographical criteria, but on the fiscal capacities of the local

units. However, it no longer ties revenue allocation for decentralised functions to the number of functions a unit commits to perform.

Debt sustainability analysis and fiscal risks

Croatia faces low fiscal sustainability risks in the short term in spite of the expected calls on government guarantees. Based on the S0 indicator ⁽¹⁰⁾, Croatia faces low fiscal risks mainly due to its solid primary balance, declining debt and financing needs (see Annex B). The sovereign yield spread, although higher than in most member states at 150-200 basis points, has been decreasing steadily. The improved perception of Croatia's sovereign credit risk was also reflected in rating agencies' reports. Although the ratings remain a notch below investment grade, the outlook is deemed positive by most agencies.

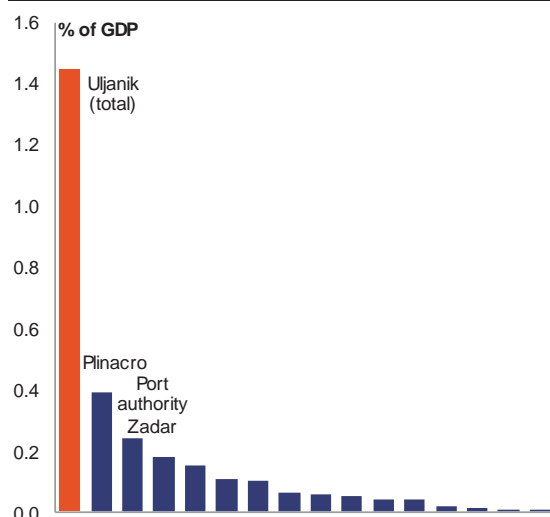
While significant, the expected materialisation of contingent liabilities in the shipbuilding industry should not substantially increase short-term risk. ⁽¹¹⁾ However, the fact that also the guarantees pertaining to projects still in the early stages were called, points to flaws in the monitoring of the proper use of issued guarantees. As a result of these guarantee calls, the stock of active guarantees is expected to halve in 2019 compared to 2017 (see Graph 4.1.4), thereby also reducing the concentration of remaining guarantees ⁽¹²⁾.

⁽¹⁰⁾ An early-detection indicator of short-term fiscal stress stemming from the financial-competitiveness or the fiscal side of the economy.

⁽¹¹⁾ The S0 indicator takes into account the Commission's 2018 Autumn Forecast (European Commission, 2018j), which projects the materialisation of contingent liabilities to occur in both 2018 and 2019. The S0 indicator by design captures the effect in 2018, but not 2019. Nevertheless, Croatia's performance across indicators leaves substantial margin.

⁽¹²⁾ The Herfindahl-Hirschman concentration index should improve to around 0.14 in 2019 from 0.28 in 2017. The index is calculated as the sum of the squares of shares and ranges from 0 to 1, where lower values mean less concentration.

Graph 4.1.4: Active government guarantees by companies, 2017



(1) 'Uljanik (total)' does not include guarantees issued to the '3. Maj shipyard'

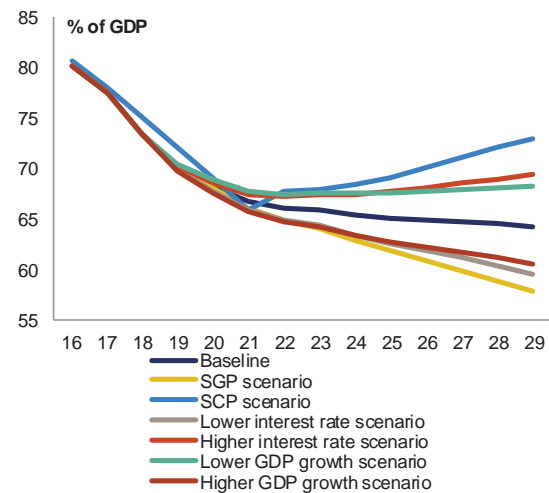
Source: Ministry of Finance, 2017 Budget execution report.

In the medium and long term, Croatia faces medium fiscal sustainability risks. The medium-term sustainability gap indicator S1⁽¹³⁾ has a value just above the medium risk threshold (0.2 % of GDP), which means that a small additional effort would be needed on top of current policies to bring the debt ratio down to 60 % of GDP in 2033. The sustainability gap indicator S2⁽¹⁴⁾ indicates low risks in the long term on account of the projected decrease in ageing-related expenditure, in particular pension benefits. The debt sustainability analysis also points to medium risk, mainly related to the high stock of debt and the unfavourable debt projections under alternative scenarios, in particular historical (see graph 4.1.5). Therefore, the DSA confirms the medium risk assessment produced by the S1 indicator for the medium term and drives the overall assessment of medium risk in the long term.

⁽¹³⁾ The medium-term indicator which shows the cumulative improvement in the structural primary balance over five years (starting from 2021) required to reach a 60 % debt-to-GDP ratio by 2033.

⁽¹⁴⁾ The long-term fiscal sustainability indicator which shows the upfront adjustment of the current structural primary balance (kept constant thereafter) required to stabilise the debt-to-GDP ratio.

Graph 4.1.5: Public debt ratio baseline and scenarios



(1) SCP scenario is based on the projections presented in Croatia's 2018 Convergence programme.

(2) SGP scenario is based on the provisions of the Stability and Growth Pact.

Source: European Commission, Debt Sustainability Monitor 2019.

The pension reform is set to improve pension adequacy while not endangering long-term sustainability. While the aforementioned S2 indicator does not take into account the 2018 pension reform, based on a preliminary assessment, the reform does not involve severe risks to Croatia's long-term fiscal sustainability. Namely, the 2018 Ageing report's baseline scenario projected a steady decrease in public pension expenditure by as much as 3.8 % of GDP in 2070 compared to 2016. Although the supplement granted to multi-pillar perspective pensioners will increase public pension spending compared to that baseline, the long-term downward trend appears confirmed. At the same time, the supplement is projected to somewhat improve the low pension adequacy, which should also improve as longer working lives result in higher benefits (see Section 4.3).

Taxation

After the tax reform that entered into force in 2017, the authorities will enforce further tax cuts effective largely as of 2019. The cuts are projected to cost roughly 0.6 % of GDP in foregone revenue. Most notably, they entail a shift of several foodstuffs from the standard (25 %) to the reduced (13 %) VAT rate, a slight decrease (-0.7 pp) in social insurance contributions and a

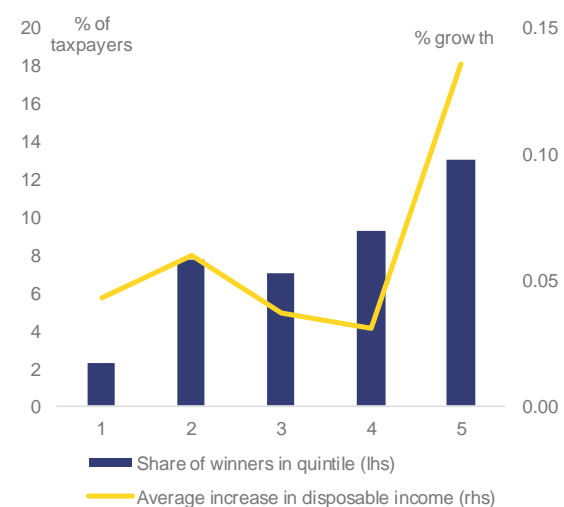
widening of the first personal income tax bracket (24 %). In 2020, the standard VAT rate should be reduced from 25 % to 24 %. In addition, the government has abandoned plans to introduce a recurrent tax on immovable property, while the real property transfer tax will be reduced from 4 % to 3 %. At the same time, the maximum amount at which local governments can set the tax on short-term accommodation rentals has been increased.

The tax cuts should spur consumption and slightly increase households' disposable income.

The decreases in VAT rates are expected to support consumption to the extent that they are passed through to consumers. In addition, being largely concentrated on essential goods, the reductions have the potential to particularly benefit (in relative terms) lower income households. Euromod simulations ⁽¹⁵⁾ show that the changes to the personal income tax and social insurance contributions should marginally increase mean disposable income for households in all income deciles. The increase in disposable income will be the highest in upper income quintiles, although still very small (see Graph 4.1.6). This is a result of the fact that lower income households in most cases already pay no personal income tax. As a result of these changes, the progressivity of the personal income tax and social insurance contributions (as measured by the Kakwani index) is projected to decline very slightly, but remain relatively high in comparative terms. Meanwhile, the positive effects of the changes to social insurance contributions and personal income tax on employment may be limited, as they do not appear to be sufficiently targeted at making work pay and insofar as employment growth is restrained by other factors unrelated to labour income taxation (e.g. skills mismatches and the availability of alternative sources of income). In this context, the proposed increase in the ceiling for the tax on short-term accommodation rentals could help reduce the large discrepancy between the tax burdens on different sources of income (see Box 4.1.1). After the 2014 abolition of tax

incentives for R&D (which were not in line with EU State aid rules), new input-based tax incentives ⁽¹⁶⁾ were legislated in July 2018. They are expected to have a positive impact on R&D performance and innovation as they focus on the most segments with the most pronounced deficit of R&D investment – SMEs and basic research (see section 4.4).

Graph 4.1.6: **Distributional effects of changes to the PIT and contributions by income quintiles**



Source: European Commission Joint Research Centre, calculations based on the EUROMOD model based on EU-SILC 2016.

Dealing with taxes in Croatia remains burdensome.

The time it takes to comply with corporate, labour and consumption taxes in Croatia was the 9th highest among EU countries in 2017 (World Bank, 2018a) and has remained unchanged since 2014 while the average for the other 27 EU MS has been reduced by about 3 %. Nonetheless, the number of payments required per year decreased from 35 in 2016 to 24 in 2017. By further digitalizing its tax administration, Croatia could reduce both the number of payments required and average hours needed to comply.

⁽¹⁵⁾ Simulations were done by the European Commission Joint Research Centre, based on the EUROMOD model using 2016 EU-SILC data. EUROMOD is the tax-benefit microsimulation model for the EU which can simulate individuals' and households' benefit entitlements and tax liabilities (including social security contributions) according to the rules in place in each Member State. Incomes reported in the EU-SILC of 2016 refer to 2015.

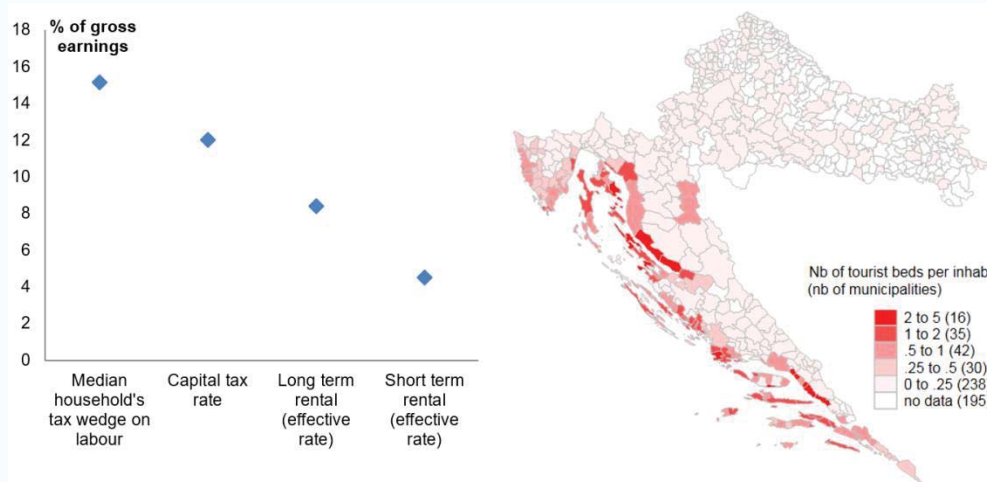
⁽¹⁶⁾ The maximum tax relief: 100 % of eligible R&D costs for basic research, 50 % for industrial research and feasibility studies and 25 % for experimental development. There are ceilings per project and entity, and deduction rates can be increased by 20 percentage points for small enterprises and 10 percentage points for medium sized enterprises.

Box 4.1.1: Taxation of labour, capital and property income of households

There is a substantial variation in the tax burden on Croatian households depending on the source of their income. With one of the highest home ownership rates in the EU ⁽¹⁾, Croatian households appear heavily skewed towards owning and investing in immovable property at the expense of more liquid and tradable asset classes. This may be partly linked to historical causes and low financial literacy, but it may also owe to the relatively low costs of property ownership. Tax rates on income earned from immovable property are substantially lower than on capital or labour (see Graph 1).

In particular, revenue from short-term accommodation rental is only subject to a lump sum per-bed tax, and is not added to the base for standard personal income tax or contributions. In addition to being highly regressive, it may provide a disincentive to work. Such a framework further narrows the already constrained long-term property rental market, particularly in the coastal areas. This disproportionately affects lower-income households and young families, and harms worker mobility. Furthermore, it incentivises the already booming private accommodation sector, crowding out investment in hotels ⁽²⁾, the segment with higher added value and lower seasonality. Similarly, the design of this tax provides a disincentive to scaling up ⁽³⁾.

Graph 1: Tax rates on income by sources (lhs) and tourist beds per inhabitant by municipalities (rhs), 2017



Effective tax rate on short-term accommodation rental equals the sum of flat-rate tax per bed and the sojourn tax, divided by gross revenue.

Source: EUROMOD simulation 2017, Croatian Tourist Board, Ministry of Finance, Croatian Bureau of Statistics, own calculations.

In addition to addressing the aforementioned drawbacks, a more balanced approach in the taxation of income from immovable property (compared to labour and capital) could also help reduce regional disparities in the taxation of household income and housing prices. The tax reform passed in 2018 brought some changes, but retained the lump-sum approach: since 2019, local government units are allowed to establish the per-bed tax on their own, albeit within broadly pre-set limits, which makes the effects of this change difficult to forecast.

⁽¹⁾ In 2016, 89.9 % of Croatian nationals residing in the country lived in their own home, equal to Slovakia, and second only to Romania (95.6 %)

⁽²⁾ In 2017, households accounted for almost two thirds of all tourist accommodation capacity in Croatia. The share of tourist overnight stays in hotels is by far lower than in any of Croatia's competitors in the Mediterranean, and is decreasing.

⁽³⁾ If a taxpayer registers more than 20 beds, the lump sum per-bed tax is replaced with the standard personal income tax, i.e. the income adds to the tax base.

Healthcare

The healthcare system remains a source of risk for public finances. While the number of contributing individuals is increasing steadily, still only around one third of those entitled to use the public health system pay full premiums, which reflects the low employment rate. Insurance for non-paying individuals (some 42 % of all insured) is covered through state budget transfers, which, however, have been consistently below the levels required for full coverage, adding to accumulation of debt in the healthcare system. In September 2018, the total debt was some 4 % higher than the year before, with roughly half classified as arrears.

A higher health insurance premium is expected to improve the financial situation of the health care system. Since January 2019, the health contribution rate has increased by 1 percentage point, increasing the reliance of the system's financing on the working population. According to the authorities' estimates, this should raise contribution revenue by 0.4 % of GDP (an increase of roughly 6 % of the Croatian Health Insurance Fund's total revenue). No measures are currently planned to broaden the base of paying users. Similarly, no specific plans have been disclosed to address the current stock of arrears.

Expenditure on health care in Croatia remains well below the EU average. In 2016, total health expenditure in the country was 7.2 % of GDP, compared to 9.9 % on average in the EU. When considering only public expenses, the amounts were 5.6 % vs 7.9 % of GDP. In recent years, the decreasing trend in total per-capita spending on health was reversed, but, at EUR 1 307 in 2017, the level remains less than half the EU average.

Health outcomes are generally below average in the EU. At 78.2, life expectancy in Croatia is substantially shorter than the EU average (81). Healthy life expectancy at the age of 65 is 5 years, which is one of the lowest in the EU. Smoking and alcohol consumption are above the EU average, which is reflected in cardiovascular and cancer mortalities being responsible for around 75 % of all deaths in the country. In access to health care, Croatia fares better than many other Member States. In 2017, the proportion of reported unmet medical needs due to waiting times, cost or distance was at the EU average. However, the high

proportion of unmet needs only due to distance (much greater than the EU average) remains a concern.

The system's structure appears misaligned with the needs of the population. Expenditure on outpatient pharmaceuticals and other medical goods is well above the EU average (25 % vs 19 % of total health expenditure), which contradicts the relatively high number of patients referred to hospitals. By contrast, inpatient care accounts for 25 % of total expenditure, 5 percentage points lower than the EU average, but the number of hospital beds per inhabitant is higher (European Commission, 2018e). Some hospitals in the country provide services in excess of the limits set by the Croatian Health Insurance Fund, while some maintain capacities greater than the needs of the population they serve. While the authorities have announced plans to increase the spending limits in hospitals across the board, the system is likely to remain prone to accumulation of arrears as long as the spending limits are not brought closer in line with types and amounts of services provided in each of the hospitals.

The National Hospital Development Plan was finally adopted in September 2018. Building on a previous document for 2015-2016, it sets functional integration as one of the main principles in facilitating modernisation and restructuring of hospitals, as well as in improving the quality of care they provide. Initiated already in 2017, the functional integration has progressed slowly and is set to continue without a specific timeline. Furthermore, this reform of the hospital system does not take full consideration of the parallel initiatives in strengthening outpatient care (see below). The two processes do not appear to be well coordinated, posing risks of unsatisfactory outcomes.

The primary care strengthening is on the government's agenda. Recent amendments to the Health Care Act give the counties possibility to buy certain types of equipment for the health centres on their territories. The intention is to give these centres a crucial role in the health care system in Croatia. Other measures include increasing the number of general practitioners, which is currently below the EU average (17 % of all medical doctors vs 23 % in the EU).

Specialisation will be paid for general practitioners who remain in specified locations in the country for at least 5 years. This should contribute to addressing the problem of uneven distribution of health resources in Croatia and the resulting difficult geographical access.

E-health solutions have the potential to improve the efficiency of the health care system in Croatia. There are projects like e-prescriptions, which have been already operational and successful — 80 % of prescriptions in community pharmacies are electronic. On the other hand, e-referrals or electronic health records (the latter used by only 3 % of general practitioners) are still under development. Investment in equipment planned in the health centres is expected to improve the system's capacity for further development of e-health services.

Croatia lacks a long-term care strategy that would cater to the needs of older people. The currently low public expenditure (0.88 % of GDP in 2016) on long-term care is projected to rise to 1.22 % in 2070 (European Commission, 2017h), as a result of the rapidly aging population. The number of people experiencing problems in everyday life increases with age. In the younger elderly group (65-74 years) the share is 38.4 %, while in the older elderly group (85+) this share is as high as 67.9 %. Taking into account all state and county homes for the elderly, other homes and foster care, there are places for only 3.68 % of those older than 65. In addition to long waiting lists, differing prices in state, county and private homes, there is an uneven regional distribution of available places. Since 2012, the main 'assistance at home' service has been steadily decreasing ⁽¹⁷⁾. As a result, the burden of care falls mainly on family members, both as a financial cost and a barrier to gainful employment.

⁽¹⁷⁾ In 2015 it was provided to 3 300 persons older than 65, compared to 15 500 beneficiaries in 2012.

4.2. PRIVATE SECTOR DEBT AND FINANCIAL SECTOR*

Corporate debt

The consolidated debt-to-GDP ratio of the corporate sector has declined by more than 20 percentage points since 2010. Following a sharp contraction by 5.9 percentage points in 2017, the corporate debt-to-GDP ratio further decreased by 1.1 percentage points in the first half of 2018, to 63.2 % of GDP, still highest among peer countries. Since 2016, the reduction has been driven primarily by a significant contraction of the external debt of both private and public non-financial corporations (by 4.2 percentage points of GDP and 1.4 percentage points, of GDP respectively). With an improved sovereign risk premium and the credible exchange rate management and stabilisation policies pursued by the Croatian National Bank, reduced overall exposure to external financing has mitigated the foreign exchange rate risk of the non-financial corporations.

Several other factors have contributed to the reduction in corporate debt since 2016. Economic growth continued facilitating the reduction in corporate debt, supported by the pick-up in inflation, along with stock-flow adjustments, in the form of debt write-offs and the continued appreciation of the domestic currency. Sales of non-performing loans reduced the indebtedness of non-financial corporations towards the domestic banking sector. However, non-performing loans sales seem to have slowed in 2018 due to both supply and demand factors. Lending transactions by the domestic banking sector to non-financial corporations turned positive in 2016 and throughout 2017 and 2018. A large roll-up loan to Agrokor agreed during the settlement preparation process and the widespread refinancing of the external debt of non-financial corporations in the domestic market supported recovery of debt transactions.

Financing conditions for enterprises continued improving in 2018 and are expected to remain favourable. Ample liquidity provided by an expansionary monetary policy allowed for further reduction of interest rates on new loans to enterprises. In September 2018, interest rates on new loans to non-financial corporations across almost all maturities, loan sizes and currency denominations were on average 50 basis points lower than at the end of 2017. However, owing to

the still relatively high-risk premium for Croatia, interest rates for non-financial corporations remain above those in some peer countries, despite the gradual reduction in country spreads for both long-term and short-term loans. Furthermore, reduction in bank margins and non-interest charges due to strong competition in the banking sector led to a strong increase in new business loans. Overall, the volume of new business loans to non-financial corporations grew by 12 % year-on-year in the 12-months up to September 2018, driven primarily by foreign currency loans and the loans denominated in a foreign currency. A significant share of these loans was used to refinance older loans, now under more favourable terms. This partially explains the negative nominal growth of the total non-financial corporation loan-stock of 2.0 % in the same period.

Corporate debt level is decreasing, but remains high with a number of vulnerabilities. Overall, by mid-2018 the corporate debt ratio was 6.8 percentage points below its prudential threshold but 18.2 percentage points above the level suggested by fundamentals ⁽¹⁸⁾, indicating remaining risks. Foreign currency exposure of non-financial corporations remains significant; around 76 % of overall corporate debt (48.2 % of GDP) is either contracted abroad, or denominated in foreign currency. However, given ample loan refinancing options due to currently favourable financing conditions this risk should be manageable even for non-exporting firms with larger open foreign currency positions. Interest rate risk further subsided as average fixation periods for new loans increased in 2017 and throughout 2018. The share of new loans issued with a variable interest rate or with a fixation period up to 3 months fell from 93 % in 2012 to 67 % during the first three quarters of 2018. However, the ‘debt-to-gross financial assets’ and the ‘debt-to-equity’ ratios of the non-financial corporate sector remain relatively high, highlighting potential solvency risks.

⁽¹⁸⁾ Fundamentals-based benchmarks are derived from regressions capturing the main determinants of credit growth and taking into account a given initial stock of debt. Prudential thresholds represent the debt threshold beyond which the probability of a banking crisis is relatively high, minimising the probability of missed crisis and that of false alerts. Methodologies are describe in European Commission (2017b) and updates to the methodology have been subsequently proposed in European Commission (2018l).

Household debt

Household debt as a percentage of GDP stagnated in 2018 as new borrowing picks up.

By June 2018, the debt-to-GDP ratio of the household sector stood at 34.2 %, 7.7 percentage points below its 2010 peak value. Since 2017, the debt level has largely stagnated despite strong economic activity, due to a moderate upswing in credit flows. In the first 9 months of 2018, new credit to households increased by 3 %. Unlike in 2017, credit standards for granting housing and consumer loans tightened in 2018, because of legislative changes to the enforcement framework. However, strong competition in the banking sector, decreasing costs of bank financing, and growth expectations still facilitate credit supply. Demand for household loans remained strong in 2017 and throughout 2018 as the improving labour market and rising wages helped to strengthen consumer confidence.

The foreign exchange and variable interest rate exposure of households has substantially changed in the last 5 years.

In September 2018, the share of outstanding kuna denominated loans stood at 51 % of total loans, double their share at the end of 2013. During the same period, the share of kuna loans in new loans rose from around 40 % in 2013 to 73 % in 2018. The shift started following the Swiss franc loan conversion, when many clients refinanced their newly converted euro denominated loans with kuna denominated ones. With the overall fall in interest rates, households seem to be less willing to take on exchange rate risk. This is especially noticeable for non-house purchase loans. Interest rate spreads for such loans between loans in kuna and those denominated in foreign currency were around 30 basis points higher in 2018 than in 2013. On the other hand, availability of kuna financing for banks, due to expansionary monetary policy, and a noticeable shift in the composition of deposits towards short-term kuna deposits, allowed banks to increase the supply of kuna loans significantly. Households also reduced their exposure to interest rate risk. Average interest rate fixation periods for new house purchase loans are estimated to have increased by around 32 months between 2013 and 2018. Similarly, the share of new long-term consumer and other purpose loans with interest rate fixation periods of up to 1 year fell from 46 % to 29 %.

The household debt ratio is not particularly high and its risk profile is improving.

In mid-2018, the household debt ratio was almost 20 percentage points below the prudential country-specific threshold (54 % of GDP), but was still around 8 percentage points above the fundamentals-based benchmark (26 % of GDP), suggesting that risks are limited, although there remains scope for some deleveraging. Despite improvements, a significant share of the stock of loans is still exposed to exchange rate shocks or interest rate hikes. Following recommendations to credit institutions issued by the Croatian National Bank in September 2017, banks have been extending their offer of loans at fixed rates and minimising the cost for consumers of refinancing existing loans at variable rates into loans with fixed rates. Interest rates have been decreasing since the end of 2015 and are expected to stay at low levels. Credit risk remains moderate given the relatively low level of households' non-performing loans and still moderate aggregate credit growth. However, consumer lending, especially kuna cash loans, have been growing at a much higher rate.

Housing market

Despite a strong recovery in 2017, real housing prices remain significantly below the peak in 2007.

Because of strong growth since 2016, real housing prices recovered to 2012 levels, but in June 2018, they were still more than 25 % below the peak in 2007. Average real house prices in Croatia grew by 6.6 % in 2017. However, in the first half of 2018 prices stagnated, despite a continued drop in interest rates for housing loans. Prices of existing dwellings have grown significantly faster since 2016 than prices of newly built ones, 7.4 % and 2 % respectively. According to the price-to-rental indicator, housing prices are still significantly below their long-term average in Croatia. This can partly be explained by a combination of negative demographic trends and an already high rate of home ownership.

There are significant regional disparities in housing price developments.

In the 18 months up to June 2018, housing prices in Zagreb grew by 11.8 %, followed by prices along the Adriatic coast, which grew 5.9 %. The rest of the country recorded an average 1.1 % decline in housing prices. The number of recorded housing purchase transactions also confirms large regional

disparities, as more than 76 % of transactions occurred within only five counties and the city of Zagreb (Tkalec and al., 2018). Furthermore, the analysis of housing affordability suggests higher housing prices relative to income in the coastal areas and the city of Zagreb. This is in line with expectations given the large share of housing used for renting to tourists along the coast (see Box 4.1).

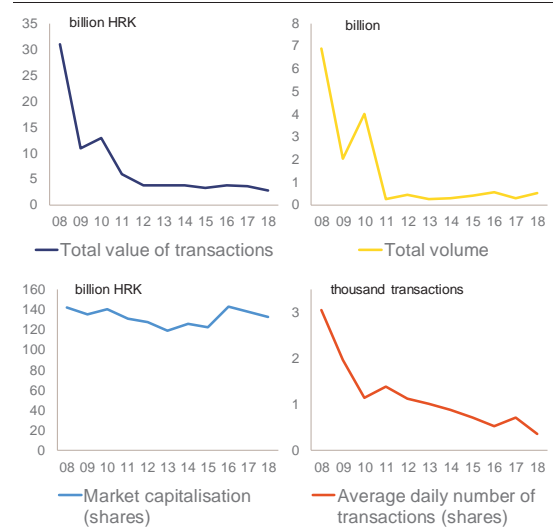
Access to finance

Access to bank loans is improving, also for small and medium-sized enterprises. Bank lending traditionally represents the most important source of external financing for enterprises in Croatia. However, it remains subdued, especially for small and medium-sized enterprises, despite improvements in lending conditions. According to the bank lending survey, credit standards on loans to enterprises have continued to ease throughout 2018, especially for short-term loans and loans to small and medium-sized enterprises. According to the latest findings from the Survey on the Access to Finance of Enterprises, access to finance remained a challenge for enterprises in Croatia in 2018. Around 11 % of small and medium-sized enterprises in Croatia reported access to finance as their most important problem, compared to the EU average of 7 %. Around 67 % of the companies that applied for a bank loan were granted a loan of a full requested amount, compared with the EU average of 73 %. Furthermore, 7 % of all surveyed small and medium-sized enterprises did not apply for a bank loan due to fear of rejection, compared to the EU average of 5 %. The Croatian Bank for Reconstruction and Development and the Croatian Agency for small and medium-sized enterprises, Innovations and Investments help improve access to finance by providing credit lines with subsidised interest and specific loans for innovation and innovation commercialisation.

Croatian bond markets remain underdeveloped and the stock market has been characterised by relatively low turnover. The corporate bond market remains very small, limited to a few large issuers. At the end of 2018, there were seven active corporate issuers, including financial institutions, which had bond listing on the on the Zagreb Stock Exchange, with an average market capitalization of about 1 % of GDP. The outstanding government bonds, in turn, had a

market capitalization of around 25 % of GDP. The average market capitalization of the local stock exchange represents a healthy share of 35 % of GDP in 2018, despite Agrokor related losses. However, average turnover was low, around 0.75 % and investors held only one third of the listed shares as portfolio investments.

Graph 4.2.1: Trading volumes at Zagreb Stock Exchange



Source: Zagreb Stock Exchange, own calculations.

Other sources of financing for companies are being developed. In 2018, the Zagreb Stock Exchange launched a new market, with less restrictive listing and reporting requirements, for small and medium sized enterprises. This market enables small and medium-sized enterprises to make initial public offerings in order to finance inclusive, long-term growth and development. With the establishment of the equity crowdfunding platform for small firms and start-ups, the Zagreb Stock Exchange has become a company-financing hub providing its services to companies at all stages of development.

Several new initiatives should help increase the availability of venture capital financing. Over the past few years, there has been little progress in developing new venture capital funds in Croatia. This could be explained in part by the small size of the Croatian market, as well as the financial crisis. However, raising funds on the capital markets is particularly relevant for innovative start-ups with high growth potential. The recently established Venture Capital Fund supported by EUR 35 million from the European Regional Development

Table 4.2.1: Financial soundness indicators, all domestic and foreign banks

	2014	2015	2016	2017q1	2017q2	2017q3	2017q4	2018q1
NPL ratio (all sectors)	13.6	13.0	10.7	12.1	11.7	10.8	8.8	8.9
NPL ratio (NFC and households sectors)	20.0	19.1	16.0	17.3	16.5	15.8	13.6	13.6
NPL ratio (NFC sector)	31.2	29.9	24.2	26.7	26.3	25.0	21.2	21.1
NPL ratio (household sector)	12.0	11.8	9.7	9.9	8.8	8.4	7.7	8.0
Coverage ratio⁽¹⁾	54.3	59.1	65.8	62.7	60.5	61.3	62.6	61.2
Return on equity⁽²⁾	3.9	-6.8	8.9	3.5	4.3	6.1	5.9	11.0
Return on assets⁽²⁾	0.5	-0.9	1.2	0.5	0.6	0.8	0.8	1.5
Total capital ratio	20.4	19.2	20.8	21.0	20.9	20.2	21.4	20.7
CET 1 ratio	19.4	17.7	19.4	19.7	19.6	19.1	20.2	19.6
Tier 1 ratio	19.4	17.7	19.4	19.7	19.6	19.1	20.2	19.6
Loan to deposit ratio	92.0	89.2	85.3	85.2	85.0	84.8	82.1	82.4

(1) Defined as accumulated impairments / NPLs.

(2) For comparability reasons, annualized values are presented.

Source: ECB - CBD2 - Consolidated Banking data; own calculations.

Fund, should help improve access to the equity funding for start-ups⁽¹⁹⁾. However, the selection of the fund manager was delayed. The recently adopted pension reform allows mandatory pension funds (Pillar II) to invest part of their managed assets into funds supporting small and medium enterprises and start-ups. Exposure to such investments is limited to 0.2 % and 0.1 % of the total assets of A and B-risk category funds respectively. This should free up around 100 million kuna for investment in venture capital. Moreover, EU funding from COSME has recently supported two private equity fund initiatives that are currently raising funds focusing on small and medium enterprises in Croatia and the region.

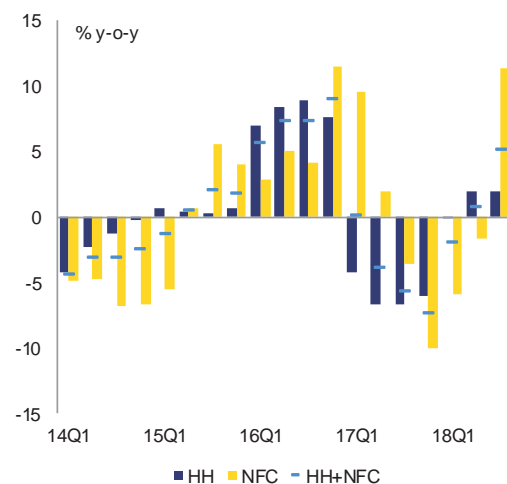
Financial sector

Croatian banks' profitability and solvency have continued to improve since 2015. With a return on equity of 5.9 % at end-2017, banks' profitability was lower than in end-2016, largely because of losses on exposures to the Agrokor Group (see Table 4.2.1). Profitability increased again in the first half of 2018, as provisioning levels are returning to levels comparable to those of 2016. While healthy profits and local rules continue to help banks maintain relatively high solvency ratios, the ending of the preferential 0 % risk weighting for the non-kuna exposures to the Republic of Croatia at end-2017 led to a one-off reduction in capital ratios in early 2018. The share of direct bank financing from mother banks, predominantly in Italy and Austria, is low and

⁽¹⁹⁾ Croatia is in 20th position in the EU (Cyprus, Malta not included) for Venture Capital as a % of GDP (Invest Europe, 2018).

decreasing while domestic sources of financing, mostly deposits, increase. Lending to the private sector, excluding financial corporations, grew in the 12 months up to September 2018 on a year-on-year basis, reversing its downward trend since 2017. In particular, the overall annual credit growth rate was driven by renewed growth in new loans to non-financial corporations; especially non-kuna loans (see Graph 4.2.2).

Graph 4.2.2: Growth of new business loans (in annual volumes)



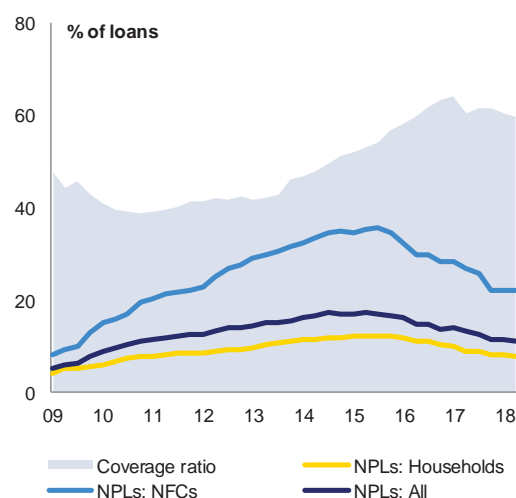
New business loans only cover all contracts that specify for the first time the interest rate of the loan, including renegotiations of the terms and conditions of existing loan contracts. The data includes all loans other revolving loans, overdrafts, and credit card claims.

Source: Croatian National Bank.

Progress in reducing non-performing loans has been significant. In September 2018, the stock of

locally defined non-performing loans ⁽²⁰⁾ stood at HRK 26.1 billion, representing 10.3 % of gross loans, down from HRK 32.5 billion, or 12.5 % of gross loans, a year ago (see Graph 4.2.3). Most of this reduction has been thanks to loan sales in 2017, and despite the inflow of non-performing loans from Agrokor and related exposures (see Graph 4.2.4). Two-thirds of this stock continues to be concentrated in the non-financial corporate sector, resulting in a non-performing loan ratio of 20.5 %, down from 25.9 % a year ago. Among the various corporate sectors, the construction sector continues to account for a significant proportion of the non-performing loans stock, with a non-performing loan ratio of 47.6 %, down from 63 % a year ago. The non-performing loan ratio for the household sector is 7.3 %, down from 8.1 % in 2017.

Graph 4.2.3: Asset quality evolution



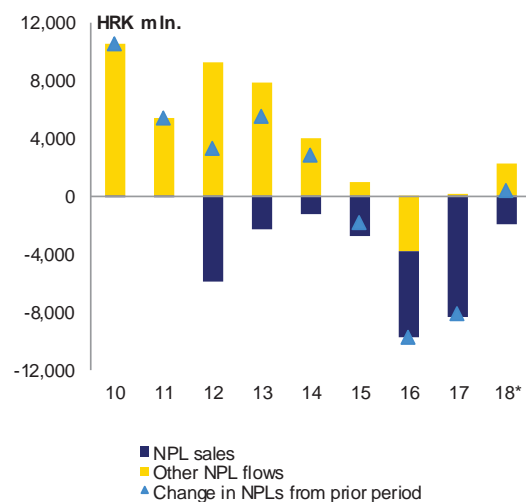
NFC: non-financial corporations. Local NPL definition is used.
Source: Croatian National Bank.

Despite these improvements, there are signs that non-performing loans reduction may be slowing down. Non-performing loan reduction slowed down in early 2018, due to two key factors. First, there are early indications of reduction in the

⁽²⁰⁾ Up to 2017 the non-performing loans definition was based on the local loan classification rules. Non-performing loans cover partly recoverable loans (i.e. loans for which there exists objective evidence of partial impairment) and fully irrecoverable loans (i.e. loans for which there exists objective evidence of full impairment) in line with IAS39. In 2018 IFRS9 was introduced and local rules were fully aligned with EBA reporting requirements for non-performing loans (ITS 680/2014)..

volume of non-performing loan sales, (see Graph). This is partly due to the reduced willingness of banks to sell and the investors to buy the remaining assets on the banks' balance sheets, which include assets that are easier to work out and thus with a lower internal rate of return. More importantly, a number of measures that entered into force on 1 January 2018 have lowered the provisioning coverage ratio and resulted in the recognition of new non-performing loans. While the later factor is clearly a one-off, slowing sales, if sustained, raises concerns that the non-performing loan ratio may remain moderately high for an extended period.

Graph 4.2.4: Evolution of NPL flows



Local NPL definition is used.
* June 2018.

Source: Croatian National Bank.

The impact of the Agrokor crisis on the banking system appears to be contained for the moment. In particular, most of the non-performing loans arising from Agrokor's difficulties in paying its creditors and suppliers have been incorporated in 2017 results. A settlement was agreed in July 2018 by the firm's largest creditors, representing nearly 80 % of the outstanding debt. On 26 October 2018, the Croatian High Commercial Court dismissed all of the appeals lodged by several of the remaining debtholders, effectively removing the final obstacle to implementation of the deal. The settlement involves a debt-to-equity swap applicable to most of the firm's outstanding debt, and corresponding write-offs to ensure that the firm remains solvent. This has not resulted in a significant rise in non-performing loans, since

most banks had already provisioned for such losses. However, the refinancing of Agrokor's remaining debt, which was issued after the Law on Emergency Administration in Companies of Systemic Importance for the Republic of Croatia in April 2017, nevertheless remains a concern.

The interest rate exposure of households remains high, but continues to subside as fixed-rate loans become increasingly common.

The share of loans with fixed rates is increasing. At end-2017, 39 % of outstanding loans granted to households were loans with fixed interest rates, up from 25 % 3 years ago. This is in line with recommendations published by the Croatian National Bank in October 2017 to mitigate the exposures of consumers to interest rate risk by offering them the possibility to switch to fixed-rate loans. The wider use of fixed-rate loans, however, has shifted the interest rate risk to banks. Some banks are hedging against potential losses from higher interest rates. However, interest rate hedging derivatives in kuna remain scarce and costly.

Banks are exposed to indirect credit risk, stemming from the significant currency mismatches in the private sector balance sheets.

While the earnings of most households are in kuna, in June 2018 nearly half (49 %) of their outstanding loans was either in a foreign currency or indexed to a foreign currency, mostly euro. Households do have significant foreign currency deposits, representing two-thirds of the total, which, if matched, could lower risks. However, foreign currency deposits have been declining; down from 75 % at end-2014, sight kuna deposits have become increasingly popular as a result of lower interest rates on term and savings accounts. In turn, the open financial positions of non-financial corporations are quite large, with non-kuna loans and deposits amounting to 67 % and 36 %, respectively.

The Croatian Bank for Reconstruction and Development is taking a number of measures to implement recommendations from the 2017 Asset Quality Review

(PricewaterhouseCoopers, 2017) exercise, but there are no immediate plans to address deficiencies in its supervisory framework. The management of the Croatian Bank for Reconstruction and Development is currently

implementing some of the issues identified as operational inefficiencies during last year's 'asset quality review' exercise. Along these lines, the Croatian Bank for Reconstruction and Development has taken a number of measures to improve its core IT system, implement International Financial Reporting Standard 9 and the European Banking Authority guidelines on non-performing loans, and introduce a new credit risk management procedures, including collateral valuation. The ongoing project, which was kicked off in early October 2018, also aims to help produce a mid-term strategy and ensure that the institution has tools to identify market gaps and prevent any competition with commercial institutions. Despite these developments, authorities have not yet engaged in any concrete plan to subject the Croatian Bank for Reconstruction and Development to prudential supervision.

The conversion of CHF-loans remains subject to legal challenges.

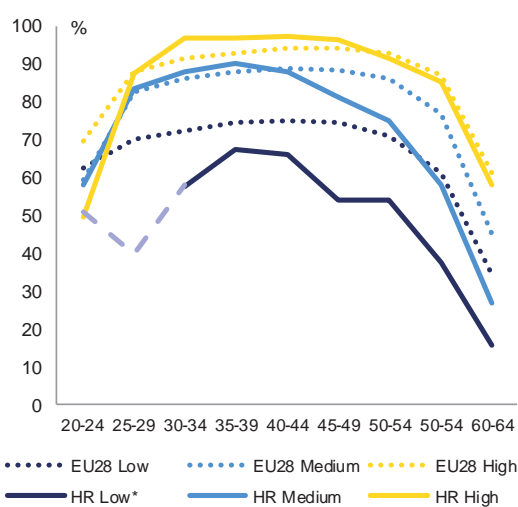
Following Croatia's Supreme Court ruling in October 2017, the High Commercial Court upheld in July 2018 the ruling on the legal nullity of: (i) unilateral interest rate increases, and (ii) the foreign currency clause in the case of the Swiss franc-indexed loans. Questions arise as to how lower-instance courts will interpret the ruling. For example, it is not clear whether it applies only to non-converted Swiss franc-indexed loans or more broadly. Moreover, it is not clear whether the decision covers only the outstanding or also the paid out loans. These sources of uncertainty may affect the operating environment for banks.

4.3. LABOUR MARKET, EDUCATION AND SOCIAL POLICIES*

4.3.1. LABOUR MARKET DEVELOPMENTS

The labour market has further improved with a rapid fall of the unemployment rate. On the back of solid GDP growth, the unemployment rate in Croatia fell further over the past year – to 7.8 % in Q4 2018 – almost reaching its pre-crisis level. In 2018, long-term unemployment dropped compared to the previous year, reaching 3.3 % in Q3 2018. The youth unemployment rate and the share of young people (aged 15-24 years) not in employment, education or training also decreased considerably, but remain high (at 22.7 % in Q4 2018 and 15.4 % in 2017, respectively). Overall, despite the recent positive developments, Croatia still displays high unemployment rates relative to the EU average, especially for young people.

Graph 4.3.1: Activity rate by age and educational attainment level, 2017



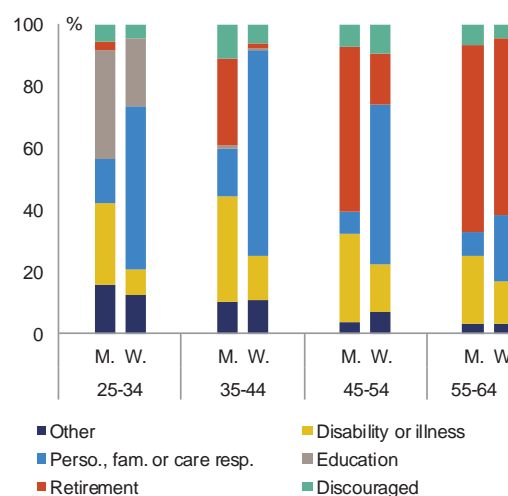
Low reliability of data for low-skilled between the ages 20-29 in Croatia.

Source: Eurostat.

Activity and employment rates in Croatia remain low, especially for certain groups. In 2017, the overall activity and employment rates (for people aged 20-64 years) were at 71.2 % and 63.6 % (64.9 % in Q3 2018), respectively, well below the corresponding EU averages of 78.0 % and 72.1 % (73.2 % in Q3 2018). Labour market participation is low among both men and women, with a gender activity gap of 10.6 percentage points in 2017, which is still below the EU average (12.1 percentage points). High-skilled workers are more active in the labour market than on average in the EU. By contrast, at 43.4 % in 2017, the

activity rate of low-skilled workers is one of the lowest in the EU and has even declined over the period 2014-2017. Low-skilled workers have significantly lower participation rates than medium and high-skilled workers across all age groups. Among medium skilled workers, those aged over 40 years display much lower activity rates compared to the EU average. Since the medium skilled represent a much larger share of the working-age population than on average in the EU, this largely drives the overall lower activity rate in Croatia, as well as the much lower activity rate of older workers (55-64), which remains at 43.6 % (compared to an EU average of 60.6 %), despite some improvement in recent years. There are also marked differences in employment rates of the low-skilled as compared to medium- and high-skilled, and this gap keeps increasing ⁽²¹⁾ (see Graph 4.3.3).

Graph 4.3.2: Reasons for inactivity by age and sex, 2016



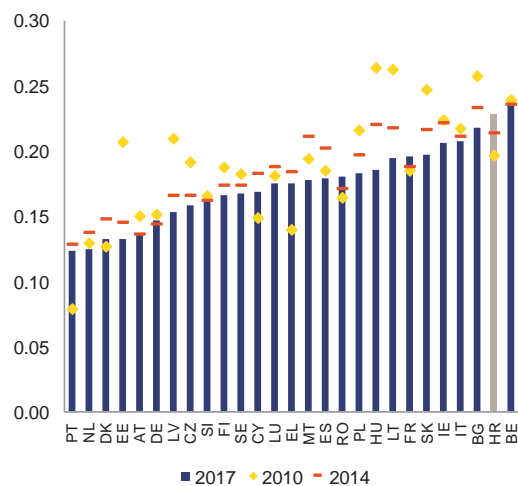
Source: LFS, own calculations.

Early labour market exits and care responsibilities play an important role for inactivity. According to Labour Force Survey data on self-declared reasons for not seeking work, the main reason for low activity of older inactive people (55-64 years) in 2016 was early retirement (see Graph 4.3.2). For older women, personal, family or care responsibilities also played a role (22 %). Disability or illness is a frequent reason across all age groups for both sexes, while

⁽²¹⁾ The employment rate of low-skilled was at 34.7 % in 2017 significantly lower than the employment rates of medium- (64.1 %) and in particular high-skilled persons (81.5 %).

personal, family or care responsibilities are the main reason for inactivity of women in the age group 25-54. At 35 %, the employment rate of people with disabilities is well below EU average (48.1 %).

Graph 4.3.3: **Relative dispersion of employment rates of different skills groups in EU**



(1) Annual indicator based on the average of four quarters.
 (2) The relative dispersion of employment rates is equal to the ratio of the absolute dispersion and the overall employment rate. The absolute dispersion of employment rates is measured as the sum of the differences of employment rates for each skill group from the overall employment rate, weighted by the size of each group.
Source: Eurostat, own calculations.

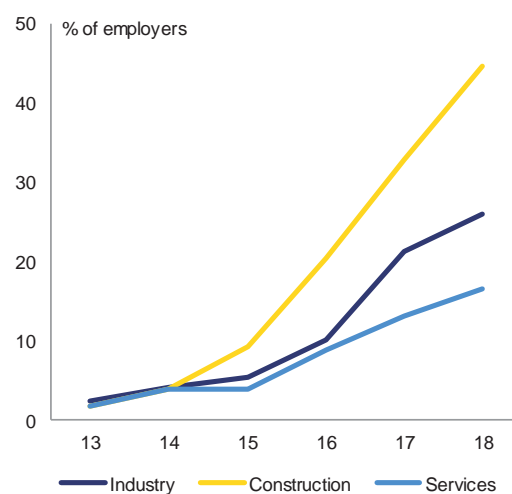
Undeclared work absorbs part of the labour input. Estimates of the size of the shadow economy in Croatia vary across studies ⁽²²⁾. A substantial share of the shadow economy is related to a rather large incidence of undeclared work, which refers to wages that workers and businesses do not declare to avoid taxes and social contributions or labour market regulation. Undeclared work not only negatively affects government revenues (in terms of uncollected taxes and social contributions) and businesses by affecting the level playing field, but also individuals through breaches of workers' rights ⁽²³⁾

⁽²²⁾ According to Stefanov et al. (2017), the shadow economy accounted to 27.7 % of GDP in 2015, the third highest share in the EU. Medina and Schneider (2018) estimate the shadow economy to account for between 17.2 % and 26.5 % of GDP in 2017, the second highest share among EU members.

⁽²³⁾ 61 % of employees receiving envelope wages in 2015 were asked to accept additional work conditions to those stated in the written contract or terms of employment, such as longer working hours (34 %), additional tasks (27 %) and

(Williams and Horodnić, 2017). It ranges from work with partly undeclared pay (envelope wages ⁽²⁴⁾) to fully undeclared employment. Despite efforts by the authorities to address the issue ⁽²⁵⁾, in the private sector undeclared work accounted for 14.2 % of total labour input in 2013, of which 66 % referred to employees and 34 % to the self-employed (Williams and Horodnić, 2017).

Graph 4.3.4: **Share of employers reporting labour shortages as the main factor limiting their activity by sector**



Source: European Business and Consumer Survey, European Commission.

Employers increasingly report labour shortages, despite the still relatively high unemployment rate. The share of employers reporting labour shortages as a major factor constraining their production has increased substantially (European Business and Consumer Survey). In 2017, this share was 16.9 %, compared to only 1.9 % in 2013, but it is broadly in line with the EU average of 16.8 % (in 2017) ⁽²⁶⁾. Over the same period, the number of vacancies recorded by

underutilisation of statutory entitlement to annual leave (19 %).

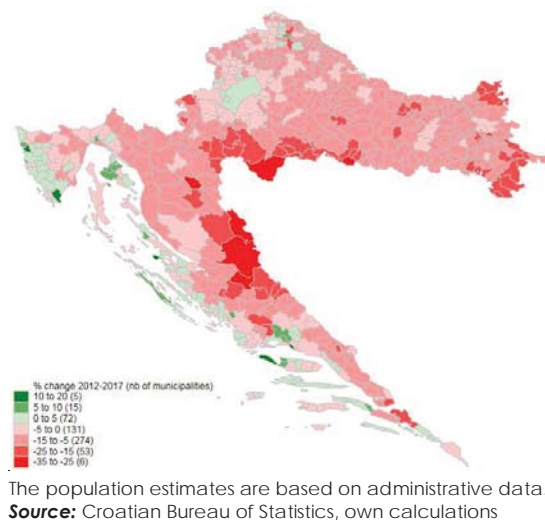
⁽²⁴⁾ In Croatia, in 2015 at least 6.6 % of declared employees received an additional undeclared ('envelope') wage from their formal employer. The officially declared wage of nearly half of these workers was the minimum wage (Stefanov et al. 2017).

⁽²⁵⁾ Targeted incentives to register employees, seasonal work vouchers, awareness-raising campaigns on the harmful effects of undeclared work on the economy and simplification of registration procedures (European Commission, 2016e; Williams et al. 2017b).

⁽²⁶⁾ Average of three sectors (industry, construction and services sector), weighted by their share in employment.

the Croatian Employment Service also increased substantially, from 143 000 to more than 250 000. As illustrated by Graph 4.3.4, labour shortages are most pronounced in the construction sector and in industry. Within services, evidence points at shortages in tourism and IT.

Graph 4.3.5: **Evolution (% change) of the population by municipalities, 2012-2017**



Various factors contribute to the increase of labour shortages. The increased labour demand induced by the pickup in economic activity is not matched by labour force growth, also due to combined effects of ageing and emigration. Skills gaps also appear to be an important driver of the shortages. Finally, low job quality may also play a role in discouraging labour supply. Indeed, Croatia has the highest share of employees in the EU with a contract not exceeding a duration of three months (7.1 % vs EU28: 2.3 % in 2017), likely reflecting also the relevance of the (very seasonal) tourism sector in the economy. The emerging labour shortages are expected to contribute to upward pressure on wages (see Chapter 1). Addressing these challenges calls for prioritising investment aimed at improving access to employment for all jobseekers and to anticipate skills needs.

Increasing emigration flows contribute to the challenges in the labour market. The negative net migration flows over the last decade (see Graph 4.3.6) have become more pronounced after Croatia's accession to the EU in 2013, as it happened for other Central and Eastern European Countries in the early 2000s. This phenomenon

appears to affect the country unevenly (see Graph 4.3.5). Between 2012 and 2017, most counties recorded negative population change, presumably also as a result of emigration. Some parts of inland Croatia and the eastern counties lost 25 % or more of their resident population. By contrast, some municipalities from the coastal counties and the city of Zagreb recorded an increase in their population. Labour Force Survey data show that in 2017 Croatians living abroad had a higher employment rate than Croatian residents (79.8 % and 63.6 %, respectively); they also had a lower share of tertiary educational attainment (17.4 % and 22.4 % respectively), which is not a common feature among migrants from other Member States. A combination of factors influences mobility flows, including differences in per capita income levels, quality of institutions, and employment prospects (Atoyán and al. 2016). In addition, Croatia has one of the highest shares of its working age population (20-64) living in another EU Member State (14 % vs 3.8 % average of EU Member States, in 2017), which may also play as a pull factor. The migration outflows clearly contribute to, and are set to aggravate if they continue, the emerging labour shortages discussed in the paragraphs above. While there is awareness at political level of the challenges posed by the current migration trends and demographic developments, a coordinated policy response is still missing, with current measures mostly focused towards improving the situation of young families and their children.

Concerns remain on the efficiency of active labour market policy measures in reaching vulnerable groups. In 2016, the coverage of active labour market policies remained low, at just 7 % of persons wanting to work. Similarly, the coverage of unemployed youth remains very low and worsened in 2017, when the share of people not in employment, education or training (aged under 25 years) supported by the Croatian Youth Guarantee scheme declined to 45 %, 9 percentage points less than the previous year. The 2018 package of active labour market policies introduced a number of improvements, including increased subsidies for employment and self-employment and simplifications in procurement procedures for the provision of education and training. Access to "occupational training for work without commencing employment", originally designed for young people aged 18-29 years, has

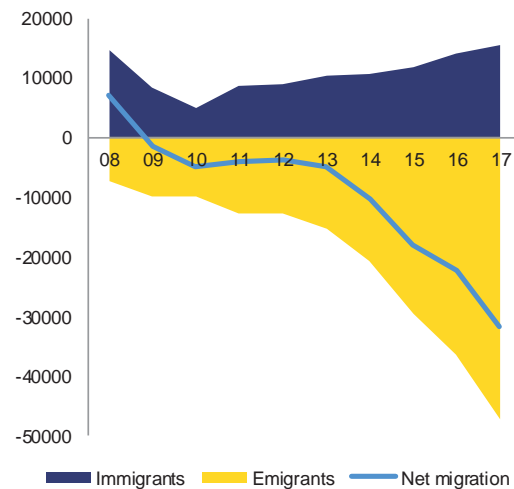
been extended to people aged 30+ without work experience targeting occupations in social care, education, health and culture. Overall, however, some of the most used measures (such as public works), as well as the underutilised reskilling/upskilling measures, have not yet proven to significantly increase the employability of their participants, which may indicate lack of efficient targeting ⁽²⁷⁾ (Munta, 2018). The capacity of the Croatian Employment Service to provide adequate assistance to vulnerable groups remains limited ⁽²⁸⁾. There is no structured cooperation between employment and social services in the provision of integrated support. Further support to active labour market policy measures and investments in modernising labour market institutions have a potential to improve access to employment for vulnerable groups.

While showing signs of improvement, the impact of social dialogue on policy preparation and implementation exhibits weaknesses. Social dialogue within the framework of the National Economic and Social Council is an established and gradually developing practice. However, it appears of mostly formalistic nature, with low impact of social partners on design and implementation of legislative proposals (Eurofound, 2018). Not all relevant regulations and policies are included in the work plan of this Council and social partners are sometimes excluded from working groups on topics of interest (e.g. legislation on student employment). The fragmentation of trade unions also poses a challenge and limits their capacity to engage efficiently in social dialogue.

⁽²⁷⁾ For example, in 2017 public works, which are primarily intended for the low-skilled and the long term unemployed, saw increased participation by medium skilled unemployed persons and by people with shorter unemployment spells.

⁽²⁸⁾ Croatia has one of the highest rates of registration and utilization of job searching services offered by the Public Employment Service (PES). Still, the percentage of total PES staff directly servicing clients is low (at 64 %). Next to that, there are large regional disparities in the capacity of local PES offices and quality of services offered by them.

Graph 4.3.6: Population migration



The migrations are registered at local level. Emigrants include persons who left permanently the country or who were absent for more than one year from their permanent residence and who reported their absence. However, based on data collected in the main recipient countries, it appears that the figures provided by the CBS probably underrepresent the actual migration numbers, even taking into account the differences between nationality and country of previous residence.

Source: Croatian Bureau of Statistics, own calculations.

4.3.2. SOCIAL PROTECTION SYSTEM

The proportion of the population at-risk-of poverty or social exclusion is declining, but remains above the EU average. In 2017, it stood at 26.4 %, compared to 22.5 % in the EU, following improvements in the two sub-indicators on severe material deprivation and people working in low work intensity households (see Graph 4.3.7). The poverty gap ⁽²⁹⁾ and the persistent at-risk-of poverty rate ⁽³⁰⁾ remain steadily high (in 2016, at 30.7 % and 14.5 %, respectively). The capacity of social transfers (other than pensions) to reduce poverty decreased from 35.5 % in 2015 to 24.8 % in 2017. As labour market conditions improved, household incomes and their relative poverty threshold increased, whereas social benefits remained largely unchanged over the period. Government spending on social protection amounted to 15.3 % of GDP in 2015 (EU average:

⁽²⁹⁾ The poverty gap measures 'how poor' the poor actually are. It is calculated as the difference between the median equalized disposable income of people below the at-risk-of-poverty threshold and the at-risk-of-poverty threshold.

⁽³⁰⁾ Share of people who are currently poor and were poor also two out of the three previous years.

19.1 %). The largest fraction is spent on contributory social insurance benefits (disability pensions, sickness benefits and old age pensions), whereas less than 10 % of total social protection expenditure is available for non-contributory programs (families and children, housing and social exclusion). Investments to foster active inclusion could play an important role in promoting equal opportunities and addressing material deprivation.

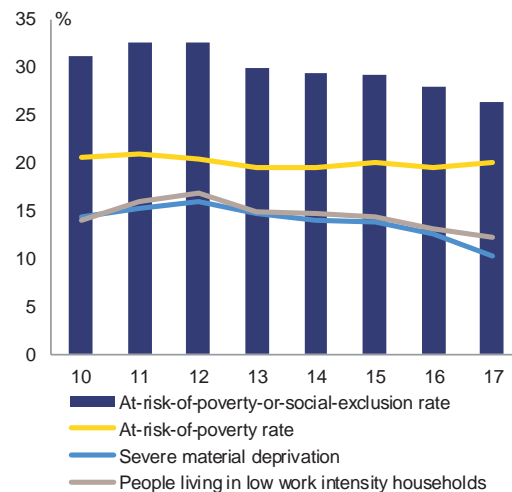
Labour market outcomes are important determinants of poverty in Croatia. In-work poverty stood at 5.5 % in 2016 and is below the EU average (9.6 %) indicating a strong negative correlation between the presence of some work in the household and its exposure to the risk of poverty. In 2016 the at-risk-of-poverty rate for households with low work intensity was 30 % in Croatia (EU average of 40.1 %), and much higher for households with very low work intensity (63.4 % in Croatia vs 57 % EU average) ⁽³¹⁾. The labour market therefore continues to be an important channel for escaping poverty: more than 70 % of poor people who get a job also escape from poverty, and this is the highest transition rate in the EU (based on 2011-2013 data, ESDE, 2016). The Croatian unemployment benefit (calculated for people previously earning 67 % of the average wage) does not appear to provide adequate protection from poverty, given its short duration and its reduction by more than 50 % after 6 months of unemployment.

Age, gender and disability are factors that have an impact on poverty levels. The poverty rate is higher in households where a woman is the only earner of labour market income. The at-risk-of-poverty or social exclusion rate for persons above 65 in Croatia is much higher compared to the EU average (32.8 % vs 18.2 %, respectively), especially for women, pointing to the adequacy challenge of current and future pensions. Persons with disabilities face one of the highest at-risk-of-poverty or social exclusion rates in the EU (38.8 %), probably reflecting their very low

⁽³¹⁾ Very low work intensity is defined as working less than 20 % of the total work potential of a household during the past year. Low work intensity 20-45 %; medium 45-55 %; high 55-85 % and very high 85-100 %.

employment rate compared with the EU average (35 % in Croatia vs. 48.1 % in the EU). Measures aimed at including persons with disabilities in the labour market or education should be stepped up.

Graph 4.3.7: **At-risk-of-poverty or social exclusion rate and its components (AROP, SMD, LWI)**



Detailed definitions of the indicator and its components are available in annex C.

Source: Eurostat.

The poverty reduction capacity of the Guaranteed Minimum Benefit remains weak.

The income of a Guaranteed Minimum Benefit beneficiary, expressed as a share of the poverty threshold, was at 55 % in 2016 ⁽³²⁾. The benefit does not appear to pose financial disincentives to work, as the income of a beneficiary was 41 % of an average low wage earner (vs 46.1 % EU average). The beneficiaries, on average, have low levels of educational attainment and modest employment experience. Based on 2015 data, only one quarter of Guaranteed Minimum Benefit recipients found a job within one year, reflecting the need for more targeted support to facilitate labour market inclusion and better coordination between social services providers and the Croatian Employment Service. The likelihood of transitioning into employment is almost double for recipients who have 3-year vocational education (Matković and Caha, 2017).

⁽³²⁾ According to the Benchmarking Framework on Minimum Incomes conducted within the SPC Committee. For details, see European Commission, 2018g.

Box 4.3.1: Monitoring performance in light of the European Pillar of Social Rights

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

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

Members States are classified according to a statistical methodology agreed with the EMCO and SPC Committees. The methodology looks jointly at levels and changes of the indicators in comparison with the respective EU averages and classifies Member States in seven categories (from "best performers" to "critical situation"). For instance, a country can be flagged as "better than average" if the level of the indicator is close to EU average, but it is improving fast. For methodological details, please consult the draft Joint Employment Report 2019, COM (2018)761 final. Data update of 29 January 2019. NEET: neither in employment nor in education and training; GDHI: gross disposable household income.

of such system, together with the already established Career Guidance Centres (CISOK centres) and the local level youth organizations would allow designing prevention activities and targeting specific interventions.

The implementation of the curricular reform takes first steps with the pilot initiative School for Life in the year 2018/2019. The experimental implementation of the curricular reform was launched in March 2018 with the selection of 74 pilot schools (around 6 % of all schools in Croatia). During the pilot period, Croatia will invest around EUR 25 million in school equipment upgrades, part of which comes from EU funds, and the reform rollout will include new textbooks to be delivered in both paper and digital format. The new curricula, developed through a comprehensive drafting and assessment process, adopt the 'learning outcomes approach', which shifts the classroom focus to the pupils' experience.

Croatia faces several challenges with regards to a number of indicators of the Social Scoreboard supporting the European Pillar of Social Rights. Despite improvements in the labour market as reflected by a decreasing (long-term) unemployment rate, challenges related to equal opportunities, access to the labour market and social protection and inclusion remain. The employment rate is still critically low, in particular for youth, older workers, low skilled and people with disabilities. This reflects the widespread use of early retirement and challenges regarding the efficiency of active labour market policies. Although the share of early school leavers in Croatia is well below the EU average, challenges remain with regard to the quality of education, both for young people and adults. While improving, the share of people at-risk-of poverty or social exclusion is still above the EU average, partly related to the limited poverty reduction capacity of social benefits.

Although improving, the rate of young people (15-24) not in employment, education or training (NEET) remains very high. The share of NEETs increased between 2014 and 2017, further distancing this population from the labour market. The majority of NEETs in Croatia have secondary education, in particular from vocational schools. There is no national tracking system for VET graduates which could help analyse the performance of new graduates in the labour market, identify skills needed and ultimately help improving the quality and labour market relevance of VET programmes. The introduction

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

The authorities have taken steps to categorise social benefits provided at the local level. Social protection expenditure of sub-central government units, at local and county level, accounted for less than 0.9 % of GDP in 2017. However, there are large differences in per capita social spending across counties, reflecting different fiscal capacities of the local government units. Around 60 % of total expenditure was allocated to finance pre-school education, whereas less than 20 % was spent on cash or means-tested benefits. The authorities are aligning the classification of data on social benefits at the local level with the nomenclature of the European System of Integrated Social Protection Statistics. This would result in an improved information flow and more efficient monitoring of the benefits administered at the local and the central level, in turn allowing a more efficient distribution of funds and better targeted social policies.

The move from a model based on institutional care to one relying on support for family- and community-based care for children who cannot stay with their families and the disabled faces challenges. In 2017, there was an increase in the number of children deprived of a family environment or with families in socio-economic hardship who were living in residential care institutions, as the number of adoptions decreased⁽³³⁾. The newly adopted Act on Foster Care is expected to improve the situation. Some progress has been made in the deinstitutionalisation of adults, including of those with disabilities. However, relevant legislative initiatives such as the Family Act and the Act on Social Welfare have not yet been adopted. The main concerns with respect to the deinstitutionalisation process relate to the co-operation between health, education and social services (in particular at the local government level) and the long-term sustainability of community-based care services, which require a more efficient funding model. Further challenges

⁽³³⁾ This refers also to the age category below 3, despite the law stating that children below the age of 3 should be placed in institutions only exceptionally and for the shortest period of time. The average duration of placement for children lasts four years.

relate to establishing a systematic approach to deinstitutionalisation, rather than implementing individual projects, and to the need for increased investments.

The Croatian pension system faces a significant adequacy challenge, partly addressed by the recent pension system reform. According to the Croatian Pension Insurance Institute, the ratio of contributing workers to pension beneficiaries was very low, at 1.2 in August 2018. This reflects the unfavourable demographic trends (ageing and emigration) as well as the existence of many pathways to early retirement⁽³⁴⁾. Around 41 % of pensioners have less than 30 years of service, whereas less than 15 % of them in 2016 received a pension based on 40 or more qualifying years. The benefit ratio (average pension as a share of the average wage) is set to decline from 32 % in 2016 to 22 % in 2070 (European Commission, 2017h). Moreover, in 2017, the aggregate replacement ratio⁽³⁵⁾ stood at 41 %, one of the lowest in the EU. This results in a significant drop in pensioners' living standards upon retirement, as reflected in a high risk of poverty or social exclusion. The net theoretical replacement rate of pensions is expected to further decrease by 2056⁽³⁶⁾. For an average earner with as many as 40 years of contributions, their rate will have fallen by 16.4 pp (from 56.6 %). Two additional working years would increase the theoretical replacement rate by 1.6 percentage points. Therefore, an increase in retirement age and career length results in higher pension entitlements. The pension system reform adopted in December 2018, among other objectives, aims at increasing the length of working lives – see Box 4.3.2.

⁽³⁴⁾ Employment rate of older workers (55-64) at 40.3 % in 2017 is far below the EU average of 57.1 %.

⁽³⁵⁾ The ratio of income from pensions of persons aged between 65 and 74 years and income from work of persons aged between 50 and 59 years.

⁽³⁶⁾ Theoretical replacement rates are calculated as the level of pension income in the first year after retirement as a percentage of individual earnings at the moment of take-up of pensions. For further details, see European Commission, 2018m.

Box 4.3.2: The 2018 Pension System Reform

In December 2018, the parliament adopted an important package of pension system reforms that entered into force in 2019. The purpose of the reforms is multifaceted and can be summarised in three main objectives: first, addressing structural design inconsistencies, which resulted in an unfair treatment of certain cohorts of pensioners; second, improving pension system adequacy through longer working lives; and third, strengthening the institutional setup and performance of the 2nd pillar. On the first objective, the government proposes to extend the 27 % supplement of the pension entitlement (that is currently paid out to individuals receiving a pension from the 1st pillar only) to all pensioners in a proportional way ⁽¹⁾, while retaining the possibility for all to opt-out of the 2nd pillar and shift savings to the 1st pillar at retirement. The aim of the authorities was to find an equitable solution that would avoid severely undermining the 2nd pillar. According to government's estimates, mainly low-wage earners would find it convenient to move back to the 1st pillar, as well as workers that have a short contributory period under the 2nd pillar. The authorities also plan to increase the minimum pension by 3.13 % from mid-2019, and enable the accumulation of a supplementary contribution period of six months per child for the calculation of the pension entitlement of the parent. On the second objective, the reform proposal includes: (i) accelerating the planned increase in the statutory retirement age to 67, bringing it forward from 2038 to 2033; (ii) accelerating the equalisation of retirement age for men and women, brought forward to year 2027; (iii) increasing penalties for early-retirement and bonuses for deferred retirement, while retaining the relatively large gap of five years between early and statutory retirement age; (v) widening the possibility to work part-time while receiving a pension; and (vi) streamlining the list of arduous and hazardous professions benefitting from more favourable pension entitlements, while preserving a number of special pension schemes (e.g. for military personnel and police).

A dedicated set of measures addresses the design of the compulsory funded 2nd pillar. The measures aim at increasing the efficiency and performance of the compulsory funded 2nd pillar, as well as the voluntary 3rd pillar. The legislative acts introduce more stringent rules to tackle potential conflict of interest arising in the private funds and lower caps on membership management fees paid by 2nd pillar members. The amended Acts also modify some of the investment rules, introducing a new investment category, which allows pension funds to invest in infrastructural projects in Croatia within prescribed limits. Furthermore, all 2nd pillar members can choose the risk profile of their pension fund ⁽²⁾, though a new default option is foreseen for those who do not express their choice upon first employment. The amended Acts enable the Croatian Pension Insurance Institute to establish a public pension insurance company that would be in charge of the payout of annuities from the 2nd and 3rd pillar. On pension insurance companies, the proposed legislation also introduces new governance rules for cross-border transactions and for managers (in terms of fitness and probity), new requirements in terms of capital shares and technical reserves, a cap on certain administrative costs and the obligation for the insurance companies to adjust the annuity payments to the consumer inflation rate twice a year. The new legislation allows life insurance companies to pay-out 3rd pillar annuities (under certain conditions of compliance with the relevant legislative rules). Furthermore, among other measures, 2nd pillar pensioners can request a lump-sum payment of 15 % of their 2nd pillar savings upon retirement, provided their pension is at least 15 % higher than the 1st pillar minimum pension.

⁽¹⁾ Pensioners covered by both the 1st and 2nd pillar would receive a supplement 27 % for the contribution period until December 2001 and a supplement of 20.25 % for the years after 2002 when they started paying also into the 2nd pillar. For an explanation of how the 27 % supplement in the current system works, see European Commission 2018e and 2018f.

⁽²⁾ Under the 2nd pillar, pension funds in Croatia are required to offer three different funds known as A, B and C categories. They differ by their investment and risk profile with A-funds having the highest risk level and C-funds the lowest.

4.3.3. EDUCATION, TRAINING AND SKILLS

There are pronounced systemic regional differences in the coverage of early childhood education and care in Croatia. In the period between 2014 and 2016, 7.2 % of all kindergarten-aged children in Croatia lived in municipalities that did not have a kindergarten programme, and this was the case for 17.4 % of all nursery-aged children (Dobrotić et al. 2018). In 2016, formal childcare enrolment in Croatia for the 0-3 age group stood at 15.6 %, one of the lowest in the EU (29.9 % EU average), and for children 4-6 years old it was 75.1 % (EU average of 95.5 %). Croatia has earmarked investments in the area of early childhood education and care from both national and EU funds. Yet, the challenge will be to ensure a lasting effect of these investments, particularly in areas that do not have sufficient resources to provide early childhood education and care to all children in need. Given the current trends, in the absence of a review of the early childhood education and care funding model, Croatia is likely to remain below the 95 % Education and Training 2020 benchmark⁽³⁷⁾.

Educational attainment in Croatia is influenced by socio-economic differences as well as by disabilities. The variation in scores in science of Croatian 15-year-olds, by the educational background of parents, was relatively limited, according to the OECD's Programme for International Student Assessment. However, a number of other indicators show a significant link between the socio-economic status and educational attainment (European Commission, 2018h). In the assessment, the share of pupils who had participated in early childhood education and care is 20 pp. lower for families with low education levels compared to that of families with at least one highly-educated parent (the gap at the EU average is 7 pp) (European Commission/EACEA/Eurydice/Eurostat, 2014). The gap between the at-risk-of-poverty or social

exclusion rate for children by educational attainment of their parents, at 70.9 pp. in 2016, is one of the highest in the EU, indicating substantial inequality of opportunity⁽³⁸⁾. The early school leavers' gap between people with and without disabilities remains higher than the EU average (15.7 % vs the EU average of 12.6 %). In higher education, students from better-educated family backgrounds tend to be overrepresented in the student population (Doolan et al. 2018). However, the number of students with lower socio-economic status has increased and measures to increase it further have been outlined for 2019-21 in *'National Plan for Promoting the Social Dimension in Higher Education'* adopted by the Government on 3 January 2019. Further funding of e.g. scholarships, transportation or infrastructure for tertiary education would support access that is more equal. Additional investments would be required, in particular for vulnerable groups and in less developed areas to ensure equal access to and provision of quality education at all levels.

The implementation of the curricular reform has been launched in the form of a pilot project.

In order to increase the overall quality of education and teaching, a set of reformed general education curricula have been introduced in 74 schools in Croatia as part of the pilot project 'School for Life', and 36,000 teachers have already received online and face-to-face training. The results of the pilot phase are monitored and evaluated on the 'School for Life' website and the national rollout of the reform is planned for autumn 2019. Investing in teachers' training and increasing the attractiveness of the profession is needed to ensure their engagement in planned school reforms, and especially to enable the necessary increase of teaching staff where needed. In terms of digital skills, Croatia ranks as one of the lowest in the EU. Despite recent improvements and government initiatives⁽³⁹⁾, further efforts will be needed in this area.

⁽³⁷⁾ Kindergarten costs account for, on average, more than 80 % of the expenditures under the relevant function in cities and municipalities. However, there are significant differences in kindergarten expenditures, particularly among municipalities from developed and less developed counties. In the most developed counties, municipalities spend more than 90 % of their Family/Children expenditures on kindergartens, while this share drops to less than 30 % in municipalities from the poorest counties.

⁽³⁸⁾ The gap is calculated as the percentage point difference between the AROPE for children of low-skilled parents (less than primary, primary and lower secondary education) and of children whose parents are high-skilled (have tertiary education). This calculation is affected also by the employment levels of parents, which are lower for the low-skilled.

⁽³⁹⁾ According to LFS data, the proportion of ICT specialists in total employment remained stable at 3.3 % in 2017 after having increased from 2.7 % in 2015. The share of

Fragmentation and lack of transparency hinder the efficiency of the tertiary education system.

Croatia has among the highest numbers of tertiary education institutions per capita in the EU (European Commission/EACEA/Eurydice, 2018). Despite the efforts made through the Croatian Qualifications Framework, the link between labour market needs and tertiary education enrolment remains weak. The legal framework that regulates admissions grants autonomy to universities, which have an incentive to keep enrolment quotas high because of tuition fees revenues. In addition, faculties and universities have no obligation to report the use of their budgets beyond what is needed for national accounts reporting, which reduces the capacity of the government to target investments in tertiary education and reduces the systems' efficiency, despite the efforts made through the performance agreements and scholarship schemes.

Vocational education and training is not aligned with labour market needs.

In 2016, the share of vocational education and training students at upper secondary level remained stable at 70 %, 20 pp. above the EU average. However, the employment rate of vocational education and training graduates decreased from 70.3 % in 2016 to 59.4 % in 2017 (despite an overall improvement of the labour market in this period), pointing to the need of modernising the vocational education and training sector in Croatia. In 2016, the percentage of students undertaking programs, which included work based learning was at 27.3 %, in comparison to the 43.8 % EU average. Amendments to the Vocational Education and Training Act were adopted in March 2018. They introduced a new national framework for Vocational Education and Training curricula, foreseeing the National curriculum for vocational education and training, adopted in July 2018, the development of modular and outcome-based sectorial curricula and greater autonomy for vocational education and training schools in the design of school-level curricula. The establishment of 25 sectoral councils is supporting the implementation of the Croatian Qualifications Framework. In particular, stepping up the adoption

graduates in Science, Technology, Engineering and Mathematics (STEM) in the 20-29 years old cohort went up, (17.1 graduates per 1000 individuals (CBS, 2016), compared to EU average of 19.1 (2015)). To improve further, Croatia plans to offer 17 000 STEM scholarships by the end of 2021.

of occupation and qualification standards should lead to the creation of new programmes better aligned with labour market needs.

Reform efforts in vocational education and training include the establishment of regional competences centres and a pilot project of dual vocational education and training.

In May 2018, the authorities established a national Network of Regional Centres of Competences in vocational education and training. Their objective is to designate places of excellence that will offer regular vocational education and training programmes, but also lifelong learning and other forms of formal and non-formal education. Following adoption of the Network, in July 2018, 25 vocational education and training schools were appointed to the Regional Centres of Competences⁽⁴⁰⁾. A strong cooperation with vocational education and training schools from the regular network and employers at the local level will be important to ensure the long-term sustainability of the centres. In addition, the authorities have also presented a new model for the Croatian dual education and an experimental programme called "*Dual Education in VET*". The programme is to be delivered in 11 vocational education and training schools across Croatia and aims at addressing challenges related to inadequate practical training and insufficient attention to entrepreneurial competences.

Challenges related to the quality and access to adult education have not been addressed.

Croatia performs below the EU average within the benchmarking framework on adult skills and learning. The participation rate in adult education is steadily decreasing, at 2.3 % in 2017, compared to the EU average of 10.9 %. In particular, there are extremely low participation rates for those most in need of additional education, such as low-qualified (0.6 %) and unemployed persons (1.5 %). In line with the objectives of the EU Council Recommendation on Upskilling Pathways, there is a need in Croatia to establish a framework for the assessment, provision and validation of skills aligned with labour market needs, including a clear re-definition of responsibilities across public

⁽⁴⁰⁾ They will cover the following sectors / sub-sectors Tourism and Hospitality, Mechanical Engineering, Electrical Engineering and Computing, Agriculture and Health, the aim being to achieve a balance between regional presence and high levels of quality.

institutions. However, the adoption of the Adult Education Act, aimed at addressing some of these challenges, has been further postponed. It is foreseen for the Act to regulate the self-assessment and external evaluation of adult education institutions, the professional licensing system for teaching staff, the development of adult education programmes (in line with the Croatian Qualifications Framework), and non-formal and informal learning programmes.

4.3.4. INVESTMENT NEEDS

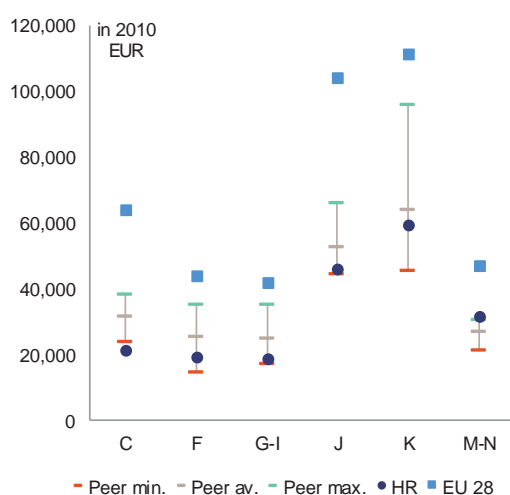
Increased investment in skills, education and training, aimed at promoting employability and social inclusion are important for raising Croatia's productivity and long-term inclusive growth. Employment rates remain low, especially for vulnerable groups, pointing to the need to improve access to employment for all jobseekers and to anticipate skills needs. This also includes aligning education and training with the labour market needs. The share of the population at risk of poverty or social exclusion remains high emphasising the need to foster policies of active inclusion with a view to reducing poverty and promoting equal opportunities with regard to child and long-term care services.

4.4. COMPETITIVENESS REFORMS AND INVESTMENT*

4.4.1. PRODUCTIVITY

Croatia's labour productivity is still low in most sectors. Labour productivity in professional, scientific and technical activities, ICT and finance is broadly in line with that of peers, though below the EU average (see graph 4.4.1). By contrast, labour productivity in manufacturing lags behind. However, it has improved in recent years, and in parallel with employment growth, underscoring genuine improvements in the efficiency of production. Measured productivity in agriculture has also been rising, but mostly on account of a strong decline in employment.

Graph 4.4.1: **Labour productivity (GVA per worker) by sector, 2017**



(1) NACE sectors: C = Manufacturing; F = Construction; G-I = Trade, transport; J = ICT; K = Finance and M-N = Professional, scientific and technical activities

(2) Peers: SI, HU, SK, CZ, PL

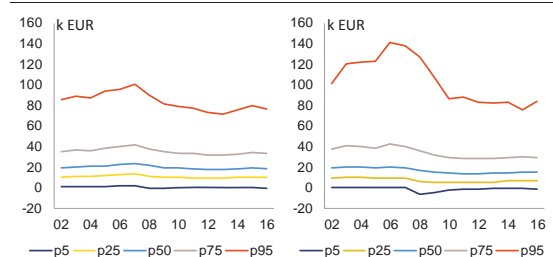
Source: Eurostat, own calculations

At firm level, productivity slumped during the crisis in the largest and most productive firms and has not yet recovered. In manufacturing and construction, labour productivity peaked in 2007 in real terms across the entire distribution of firm sizes, particularly in the largest firms, which tend to be the most productive ones (see graph 4.4.2). Following the financial and economic crisis, it declined year-on-year for almost a decade. The largest productivity losses took place among the most productive firms, leading to a gradual downward convergence of firm-level productivity.

Obstacles to productivity growth in the least productive sectors and to re-allocation of labour

and capital away from such sectors result in low productivity growth. Productive resources are concentrated in sectors with relatively low labour productivity, as reflected in one of the lowest scores in the efficiency of labour allocation in the EU (European Commission, 2018c). This means that overall labour productivity could be substantially improved by fostering productivity growth in such sectors and by facilitating labour reallocation to more productive sectors. Structural impediments to the reallocation of the factors of production, ranging from skill gaps to the high presence of the state in the economy and excessive product and service market regulation, help explain Croatia's low allocative efficiency score.

Graph 4.4.2: **Real labour productivity in manufacturing and construction by firm size**



(1) Average real GVA by employee in selected quantiles of the firm size distribution, from smallest firms (P5) to largest ones (P95), through median-sized firms (P50).

(2) Construction (right graph), manufacturing (left graph)

Source: CompNet.

Business environment and digitalisation

Croatia largely maintained its level of competitiveness but continues to lag significantly behind peers. The real effective exchange rate⁽⁴¹⁾ appreciated by 4.2 % since 2016, largely driven by continuous nominal exchange rate appreciation. Nevertheless, substantial cost competitiveness gains made during the recession are largely preserved as the real effective exchange rate remains significantly below its pre-crisis level. Nominal unit labour costs increased in 2018 for the first time since 2009 reflecting modest productivity growth and rising wages due to labour market pressures. Furthermore, the sharp growth in export market shares (by 19.9 % cumulatively in the five years

⁽⁴¹⁾ The real effective exchange rate is a measure of a country's price competitiveness relative to its principal competitors. It is deflated by the HICP index against a panel of 42 countries. A rise in the index means a loss of competitiveness.

since 2012), slowed to 0.4 % in 2018, reflecting the fading impact of Croatia's EU accession. The World Economic Forum's Global Competitiveness Index, which looks at the broader non-cost competitiveness of countries, shows Croatia is significantly less competitive compared to peers. This implies that Croatia's institutions, labour market and business dynamism are particularly in need of improvement.

Croatia's business environment remains burdensome, but the identified best practices within the country offer scope for improvement.

When looking at the subnational indicator of Doing Business in Croatia, there are substantial differences in regulatory performance among the five studied cities (Zagreb, Rijeka, Split, Varaždin and Osijek). Therefore there is potential to lift the national average by replicating good identified practices within the country, such as starting a business in Split or dealing with construction permits in Varaždin ⁽⁴²⁾. As part of the efforts to facilitate doing business in Croatia, the authorities have committed to reducing the administrative burden on companies. Based on the Standard Cost Model, the burden in the economy is estimated to correspond to 3 % of GDP. The completion of the burden reduction in 2019 is expected to lift around 20 % of the cost-equivalent burden.

Croatian enterprises are slowly integrating digital technologies. With 15.5 % of enterprises at a high and very high level of digital intensity, Croatia is behind the EU average of 18 %. However, Croatian companies are above-average users of cloud technologies and take advantage of the opportunities offered by online commerce: 17.1 % of small and medium-sized enterprises sell online, similar to the EU average of 17.2 % (European Commission, 2019a). Croatia is taking several initiatives that will help small and medium-sized enterprises digitise further (such as eBusiness and eFees), for example by enabling electronic payment of administrative fees and charges and access to tax administration files, health insurance, the pension system. More investment efforts could be made to foster digitisation among small and medium-sized enterprises, including by ensuring that the education and training system responds to

the growing need for information technology specialists expressed by small and medium-sized enterprises (European Commission, 2019a) (see Section 4.3).

State-owned enterprises

Slow progress in management and disposal of state-owned enterprises entails their continued strong impact on the economy.

Their large presence in many sectors of the economy continues hampering allocative efficiency and productivity growth (European Commission, 2017c). The new act on the management of state-owned assets was adopted in June 2018. However, the substantial delay in its adoption postponed the planned introduction of measures aimed at speeding up the activation of assets and disposal of minority shares in state-owned enterprises. In 2018, the sale of assets has thus continued mostly through standard public tendering procedures, with fewer successfully completed calls and lower revenue than the year before.

The list of companies ineligible for privatisation has been reduced and streamlined.

These companies are now included in a single list of 39 entities of special interest. Most of them maintain strong presence, and even dominant positions, in their sectors. In particular, state-owned companies fully dominate the rail sector; where there is large scope to improve efficiency, productivity and quality of services (see Section 4.4). The number of companies eligible for privatisation continues expanding, but no clear privatisation strategy is in place. This has resulted in companies being privatised only as a measure of last resort at times of severe financial distress or need for recapitalisation.

Measures to improve corporate governance in state-owned enterprises are progressing slowly.

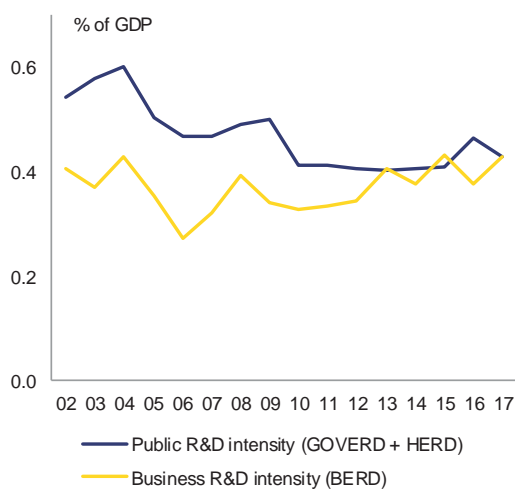
The new Code of Corporate Governance has been adopted in all majority state-owned enterprises, and mid-term planning and performance reporting have been made obligatory. Yet, a clearer commitment to improving governance in state-owned enterprises is needed, as their performance remains weak.

⁽⁴²⁾ Doing Business in the European Union 2018 (Subnational series): Croatia, the Czech Republic, Portugal and Slovakia (World Bank, 2018a). See also Section 4.4.3.

Research and development

Croatia's R&D intensity is low and its small and medium-sized enterprises are weak innovators. The overall R&D intensity in 2017 amounted to 0.86 % of GDP, equally split between the public and private sectors. Based on recent trends, Croatia will not reach its national target of 1.4 % of GDP by 2020, though the reintroduction of tax breaks for R&D in 2018 (see section 4.1) may contribute to filling the gap. Business investment in R&D is low and largely concentrated in large companies in pharmaceutical, telecommunications, agriculture and food industries. Meanwhile, the 2018 European Innovation Scoreboard shows a decline between 2010 and 2017 in all three aspects of small and medium-sized enterprises innovation: product and process innovations; marketing and organisational innovations; and small and medium-sized enterprises innovating in-house. As a result, the overall score of Croatia in this area was 72 % of the EU level in 2017 (European Commission, 2018k).

Graph 4.4.3: **Business and public R&D intensity**



R&D intensity measures spending on research and development as a share of GDP.

Source: Eurostat, own calculations.

Excessive fragmentation of the science base and policy shortcomings affect the quality of public research. The share of Croatia's total scientific publications that are among the top 10 % most cited publications worldwide is rising slightly, but compared to the EU average (11.1 %) it remains very low at 4.2 %. Lack coordination and effective management in research and innovation policies leads to poor targeting and inadequate prioritisation of support instruments. In addition, some of the undertaken reforms of public research institutes and universities remain unfinished. With every faculty having a separate legal entity status, it is difficult to develop a university-wide vision or set a strategic direction (Kralj and al., 2011). Performance criteria for institutional funding, formally introduced in 2013, are still not being used, and as a result, project-based funding allocation is not competitive. Internationalisation and international co-publications are rare ⁽⁴³⁾. Still, some excellence niches in ICT, biomedical and natural sciences exist at the Universities of Zagreb (Faculty of electrical engineering), Rijeka and the Ruđer Bošković Institute, and the increasing numbers of graduates in the field of computing places Croatia among the best performing Member States ⁽⁴⁴⁾. The Ericsson-Nikola Tesla partnership with the University of Zagreb on ICT is a good yet isolated example of science-business cooperation.

⁽⁴³⁾ Croatia ranks 24th in the EU by international co-publications as a share of total (European Commission, 2018k).

⁽⁴⁴⁾ Croatia ranks 9th in the EU by computing graduates per thousand population aged 25-34 (Eurostat)

Box 4.4.1: Investment challenges and reforms in Croatia

Macroeconomic perspective

The protracted recession made a lasting effect on investment activity in Croatia, in both the private and public sector. While still well below the pre-crisis level, private investment has been recovering steadily since 2015, in line with the positive macroeconomic outlook and supported by increasingly favourable financing conditions. With the halting of the large infrastructure campaign in the aftermath of the financial crisis, public investment has been more than halved to date, and is expected to continue relying on the so-far limited absorption of EU funding. Overall, investment in Croatia is expected to continue recovering at moderate pace over the forecast horizon.

Assessment of barriers to investment and ongoing reforms

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

Legend:

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

As broadly positive macroeconomic trends continue, the business environment remains insufficiently conducive to investment. Fragmented public administration, as well as insufficient administrative capacity at regional and local level, weighs on the overall capacity to attract and implement investment, particularly as regards the absorption of EU funding (see Section 4.4). The high corporate sector debt still constrains financing, while capital markets remain underdeveloped and alternative sources of equity financing are largely underutilised (see Section 4.2).

Selected barriers to investment and priority actions underway

(1) Some measures have been implemented to reduce parafiscal charges and administrative burden, but the persisting weaknesses in the public administration and the judiciary hamper service delivery to businesses, including the still cumbersome business registration and lengthy proceedings in civil and commercial litigation. (2) Investment in the digital economy is constrained due to low take-up of high-speed broadband, despite wide availability, and extremely low take-up of ultrafast broadband.

In Croatia, the national development bank is *Hrvatska banka za obnovu i razvitak* (HBOR). Its main activities include promoting exports and supporting the development of SMEs. Roughly, 76 % of newly approved loans in 2017 were used to finance investment. HBOR's loan portfolio amounted to around 6.8 % of GDP in Q12018.

Measures to reduce fragmentation and improve the efficiency of research and innovation policies are lagging. As a precondition to access ESIF-funding, in 2016 Croatia introduced the 'smart specialisation' strategy 2016-2020 (RIS3),

aimed at fostering innovation, overcoming fragmentation in the system and ensuring that R&D activities are organised around key economic priorities. However, its implementation is lagging. Centres of Competence and Centres of Excellence

are in the process of being established or are still to deliver clear outcomes. Both schemes implemented along other measures, which are lagging behind are intended to improve connections between academia and businesses. As a result, the funding for policies to support businesses and innovation (EUR 1.665 billion from the ERDF) has not yet been used in full⁽⁴⁵⁾. In an effort to overhaul the RIS 3 governance, in July 2018, an inter-ministerial National Innovation Council was set up to oversee its implementation. Thematic Innovation Councils formally established in September 2018 are yet to bring any concrete results. In addition, there is the intention to strengthen the monitoring of smart specialisation strategy and other policy instruments with a view to creating a basis for evidence-based policymaking. Recent analysis done by the Croatian government together with the World Bank could be used to prioritise interventions under the smart specialisation strategy and reform innovation environment.

4.4.2. MARKET FUNCTIONING AND INVESTMENT

Investment gaps are pronounced in research and development, environment and transport. Better-targeted government investment in research and development can spur progress towards a more innovative economy. Similarly, investments are required to improve the quality and connectivity of the underdeveloped railway infrastructure, but also urban transport. Croatia also requires substantial investment in waste and water management, which are underdeveloped.

Regulated professions and business services

Some restrictions in the regulation of professional services are being relaxed. Commission analysis (European Commission, 2016z) shows that restrictiveness of regulation in Croatia remains higher than the EU average for six of the seven analysed professions. This is especially the case for lawyers (most restrictive in the EU), architects and engineers. Some reform measures, such as the loosening of marketing restrictions for lawyers, abolition of exclusive

rights for architects and a significant liberalisation of taxi services have been implemented recently. Also, residence restrictions for certified tax advisors have been removed and the 2017 accounting law, which introduced compulsory, licensing for accountants was repealed. Finally, Croatia is now working with the World Bank on the preparation of two national action plans covering around 20 regulated professions. Meanwhile, the key big restrictions remain in place.

Environment and energy

The shift away from landfilling towards separate collection and recycling is slow. Landfilling of municipal waste accounts for 77 % of total waste, considerably above the EU average (24 %). Croatia also scores low in terms of recycling, with only 21 % of waste materials recycled, compared to an EU average of 46 % (Eurostat). Therefore, Croatia is at risk of not reaching the 50 % preparation for re-use/recycling target on municipal waste by 2020 (European Commission, 2016x). Reaching the even more ambitious and binding target of 65 % by 2035 will require shifting investments further up the waste hierarchy. In 2017, the long-awaited national Waste Management Plan 2017-2022 was adopted, but its implementation faces delays. Improving Croatia's performance in waste management requires substantial investment in waste infrastructure.

While water supply networks are relatively developed, sanitation in general is lagging. Data available only up to 2011 shows that around 86 % of the population was connected to the public water supply system (Eurostat). The key issue remains a high leakage rate, at 44 % compared to the EU average of 23 % (European Commission, 2017w). Moreover, some areas do not meet the quality requirements for drinking water, for instance Eastern Slavonia. The development of public sewage systems lags considerably behind as in 2015 only 54.6 % of the population was connected to the sewage systems (Eurostat). The estimated investment needed to ensure appropriate collection and treatment of wastewater is considerable (around 2.9 billion euro) (European Commission, 2017y). The size of the challenge calls for an effective prioritization strategy (within a National Investment Plan).

⁽⁴⁵⁾ Only 5.5 % of ERDF allocations earmarked for the implementation of RIS3 have been spent by beneficiaries by the end of 2018 (SFC 2014 reporting system).

The economy in general and tourism in particular depend on the sustainable management of natural resources. With its advantageous location and natural attractions, Croatia is an important tourist destination. Excessive reliance on tourism, however, can have negative impact on the environment, in turn affecting the sector and the economy as a whole (Orsini and Ostojić, 2018). Croatia has the second largest Natura 2000-protected network in the European Union, covering more than one third of its terrestrial surface, as well as a significant marine area of 4986 km². The management of Natura 2000 sites will require efficient cooperation across economic sectors to optimise and channel the necessary investments into concrete site-level conservation measures,

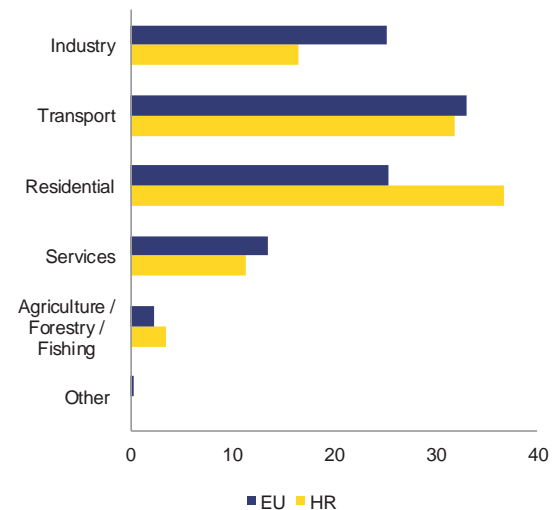
Croatia is increasingly vulnerable to climate risks. With average annual damage costs from extreme weather (Jelavić and EKOBERG, 2017) estimated at 80 million EUR in the period from 1980 to 2016, climate change is likely to pose increasing challenges. It exacerbates the threat of flooding in the Danube river basin and of storm surges on the coast, while heightening Croatia's vulnerability to forest fires. The recently developed climate change adaptation strategy (Trumbić and al., 2017) has identified priority sectors in need of further action. The decarbonisation of Croatia's economy will require significant investment as well as a structural shift of activities especially in the energy and transport sectors. In its National Energy and Climate Plan to be adopted by end of 2019, Croatia will provide an overview of its investment and policy needs until 2030 for renewable energy, energy efficiency, security of supply, and climate mitigation and adaptation.

Increasing energy efficiency is crucial to reduce energy intensity. Croatia uses a third less energy per capita than the EU average, but its energy intensity (energy use as a share of GDP) is 61 % higher. In 2015, the residential sector accounted for 36.7 % of total energy consumption, well above the EU average (25.4 %). While this is largely due to the smaller share of the energy-intensive industry sector in the economy, it must be noted that the majority of the 1.42 million dwellings in Croatia are older than 20 years and thus tend to be less energy efficient. Croatia is the third biggest consumer of energy for cooling in the

EU (Eurostat). All of the above indicates potential to scale up energy efficiency (World Bank, 2018b), in particular by increasing efficiency of district heating and supporting smart grids and metering.

Croatia has reached its 2020 target for renewable energy, but there is potential to further exploit wind and solar power. In 2016, the share of renewable energy was 28.3 % (against 17 % on average in the EU), notably thanks to Croatia's strong hydropower industry. The 2020 target for the share of renewable energy in energy consumption (20 %) has therefore been reached. Still, Croatia has potential to further develop renewable energy sources in a cost-effective way, as in 2016 intermittent wind and solar capacity accounted for just 11 % of installed grid-connected power generation capacity (against a EU average of 26 %). Developing renewables could in particular benefit Croatia's island regions.

Graph 4.4.4: Final energy consumption in 2015



Source: Eurostat, own calculations.

There is further scope to increase competition and customer choice in retail electricity and gas markets. Starting from 2016, energy price regulation for households for electricity has been phased out. Further liberalisation notwithstanding, price regulation for gas still exists for retail consumers, while it will be phased out at wholesale level in 2021. The retail market remains highly concentrated, in particular in the electricity sector, where most of the new entrants have

already exited the market, citing as reasons lack of access for them to generation capacity, anti-competitive practices by the incumbent and lack of a stable investment environment in particular due to frequent changes in the support framework for renewable energy sources. The independence and capacity of the National Energy Regulatory Authority is key to improving competition.

The Projects of Common Interest currently being developed, in particular the Krk LNG terminal and the SINCRO large-scale smart grid project, are essential to Croatia's security of supply of electricity and gas. In this context, the implementation of bidirectional capacity gas projects with the neighbouring countries – Hungary in particular – is of great importance for the viability of the Krk LNG project and for security of supply of the region in general. This requires a consistent regional approach with neighbouring countries.

Transport and connectivity

The transport network is unbalanced, with railway infrastructure lagging significantly behind the EU average. Completion of the core TEN-T rail network in Croatia stands at just 5-6 %, compared to the EU average of 60 % (European Commission, 2018p). The outdated and limited rail infrastructure results in low competitiveness, low quality of service and a general preference for other transport modes, in particular road transport. Based on an analysis of the comprehensive traffic model and the investments taking place in the 2014–2020 period, the most critical missing components of the rail TEN-T corridors are Zagreb–Rijeka, development of the Zagreb node and the Dugo Selo–Novska section. By contrast, the quality of road infrastructure is overall good as intensive investments have resulted in a dense motorway network of high quality⁽⁴⁶⁾. At the same time, there remain bottlenecks on state roads, which are often exacerbated by peaks in the tourist season. Finally, while road deaths were reduced by 28 % between 2010 and 2016, Croatia remains among the worst performing Member States in terms of road safety (European Commission, 2017a).

⁽⁴⁶⁾ At 23.1 km of motorway per thousand km², Croatia is above EU average (17 km) (Eurostat).

Urban transport is developed only in a few major cities, while others lack even basic infrastructure. In 2014–2020, investments are taking place in Zagreb and Osijek, but public transport in two other major cities, Split and Rijeka, as well as smaller cities, remains outdated and unable to satisfy existing needs, let alone increased future demand, or cope with seasonal fluctuations.

The share of renewable energy sources in the transport sector (1.3 % in 2016) is one of the lowest among EU Member States and below the 2020 target of 10 %. In 2018, the Croatian Government introduced incentives to the purchase of electric cars. Additional efforts and investments are nonetheless needed to effectively reduce the high share of fossil fuel passenger cars, promote inter-modality and more generally curb the rising GHG emissions in the transport sector.

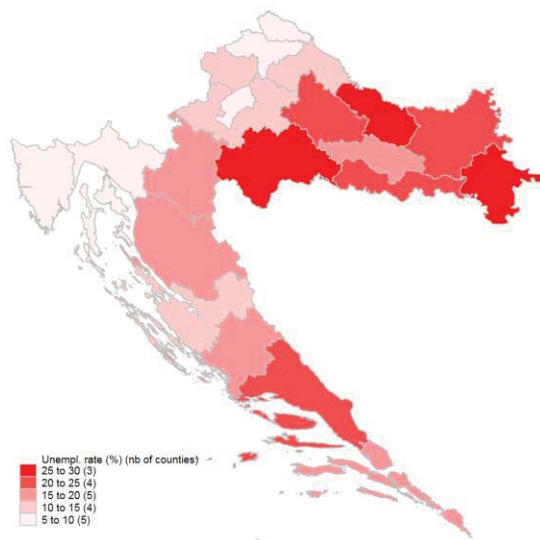
Take-up of broadband is low in Croatia. In 2018, broadband connections were available to 80 % of households – an improvement from 2017 (77 %) towards the EU average (86 %). Meanwhile, the fast broadband take-up also improved a lot (from 14 % to 19 % of households), but remains well below the EU average (41 %) (European Commission, 2019x). Factors contributing to the low take-up include low internet use and high prices for (fast) broadband. Achieving the European Gigabit Society targets for 2025 (European Commission, 2016q) is uncertain without public support. Effective deployment of the 5G networks could improve fast connectivity in rural and remote areas.

4.4.3. REGIONAL DISPARITIES

Croatia is characterised by marked territorial disparities. Similarly to the great variation of GDP per capita across the territory (see Chapter 1), labour market outcomes also display large territorial differences, with the unemployment rate in 2017 ranging from a 4.6 % low in Istria county to a high of 26 % in Sisak-Moslavina county (see Graph 4.4.5). Almost 40 % of the country's unemployed population live in Eastern and Central Croatia, even though these regions only host a quarter of Croatia's total population, also as a

result of strong emigration flows ⁽⁴⁷⁾. In addition, similarly to other Member States, the urban-rural divide is marked, as cities offer better labour opportunities and attract higher skilled individuals. Namely, 69.5 % of the workforce in cities is in employment, contrary to a 59.2 % in rural areas. Only 18.8 % of the rural areas population has tertiary education, compared to a 43.5 % in cities, which is higher than the EU average (see graph 4.4.6).

Graph 4.4.5: **Registered unemployment rate (%) by county, 2017**



Source: Croatian Bureau of Statistics.

Significant regional differences in terms of resource endowments suggest different investment needs across the territory. Industrial production is highly concentrated in the Zagreb and Primorje-Gorski Kotar counties (World Bank, 2018b), while large cities (Zagreb, Split, Rijeka, Osijek) display the highest potential for innovation, including poles of world class excellence in information and communication technology, biomedical and natural sciences in both the capital and Rijeka. Eastern Croatia relies on agriculture and wood industry and its geographical proximity to Central Europe could be used as a competitive advantage. Regions from the Adriatic coast and islands draw most of their relative prosperity from tourism. They face problems with connectivity and access to clean

⁽⁴⁷⁾ The population in Central and Eastern Croatia's seven counties has shrunk by more than 5 % in the period 2014-2017, compared to a national decline of 2 %.

energy, water and wastewater services and natural protection in islands, which are exacerbated during seasonal population influx peaks.

Investment decisions supported by EU funds need to take due consideration of regional specificities. Targeted investments with a focus on human capital and competitiveness would help to strengthen the endogenous growth potential of lagging regions. They could address weaknesses in terms of transport connectivity (islands) and/or access to healthcare and quality social services (border regions). However, experience in implementing sustainable urban development strategies ⁽⁴⁸⁾ with EU funded assistance is so far inconclusive. Cities have made valuable efforts to define strategies integrating the wider needs of their neighbouring municipalities, but there have been considerable delays in their implementation. Furthermore, the absence of a comprehensive national urban policy framework over the past years resulted in multiple standalone projects in cities, with limited impact. Cities could in the future strengthen their role of engines of growth at regional level.

Graph 4.4.6: **Employment, unemployment and tertiary education rates, by level of urbanisation, 2015-2017**



Source: Eurostat, own calculations.

⁽⁴⁸⁾ In Zagreb, Osijek, Rijeka, Split, Zadar, Slavonski Brod and Pula

4.4.4. PUBLIC ADMINISTRATION

Regional disparities are exacerbated by a high degree of fragmentation in the efficiency of the public administration. Previous country reports highlighted that many small local governments units have devolved competencies and responsibilities in providing public services, but often lack the adequate financial, administrative and personnel resources to carry out their duties. This creates large disparities in public service provision between financially and administratively strong and weak local units across Croatia. The situation is aggravated by the fact that the division of competencies and responsibilities in terms of service provision by local units (municipalities, cities, counties) are not clearly spelt out (European Commission, 2016b) ⁽⁴⁹⁾. The current territorial organisation raises costs and reduces the quality and effectiveness of the services delivered (World Bank, 2018b).

Efforts are being made to improve coordination within the central level state administration.

The 2015 Strategy for Public Administration, setting out a number of objectives for the modernisation of the state administration, has been implemented only in few areas. In particular, measures related to upgrading human resources management and introducing modern systems for the improvement of service quality are lagging. Similarly, inter-ministerial coordination of policy proposals has until recently been limited, as is the involvement of academic experts in the policymaking process (Petak et al. 2018). The 2018 country report recognised also the need to strengthen the administrative capacities related to design and implementation of public policies, as well as more efficient and effective use of EU funds. In order to strengthen policy-making, coordination and implementation, the authorities are preparing a National Development Strategy 2021–2030. The Strategy should result in the streamlining of many small and non-aligned sectorial and territorial strategies, and help to

establish clear connections between priorities and goals on the one hand, and budget planning on the other. It will include a shared IT platform securing transparency and facilitating aggregation of data and information and reporting.

A number of other measures addressing the efficiency of the public administration are making progress.

In August, the government adopted a Decision on a substantial rationalisation of the cumbersome state agencies system, which is a step towards simplification and efficiency. A total of 54 state agencies, state institutions and state-owned enterprises will be either suppressed or merged with agencies or within line ministries. For the remaining agencies, the authorities plan to establish a new framework introducing a higher degree of homogeneity across the system. The authorities have also prepared the legislation for the transfer of competences from branch-offices of the central administration (e.g. ministries) operating at local level to the county-level administration. The legislation is planned for adoption in April 2019 (and implemented in 2020), and it would in part address the fragmentation of the state administration system. The impact of these measures however remains highly dependent on their effective implementation. Finally, the provision of e-public services has improved with the further development of the eCitizens systems (currently, 54 electronic services available), eIDAS (electronic Identification, Authentication and trust Services) and various other eGovernment systems ⁽⁵⁰⁾.

New legislation on civil service wage-setting is planned for the first quarter of 2019.

The new legislation, which has been postponed several times by the government, will cover civil servants, while wages of other public sector employees will be addressed in a second phase. The aim of the law is to achieve a greater harmonisation of wage setting across the public administration through the introduction of common wage grids and job complexity coefficients, based on more consistent job descriptions and competences frameworks. The

⁽⁴⁹⁾ The absence of clear national standards, applicable by all local units, is felt particularly in the field of social policy. Here, the implementation of central government regulation has differed strongly among municipalities. In some cases, legal requirements such as the provision in the Act on Social Welfare that municipalities should use 5 % of their budgets for housing allowances for socially marginalized groups have not been complied with.

⁽⁵⁰⁾ eGovernment includes eNewborn (online registration of children), eTax (various tax-related activities), mSignature and mStamp (electronic signing, stamping or validation of documents) are planned to be developed. With the establishment of the Shared Services Centre, all public sector bodies will be able to use joint, reliable and scalable infrastructure on the 'cloud' paradigm.

new legislation would also cover areas of the employment relationship of civil servants that are currently negotiated through collective bargaining, conditional upon the implementation of a new performance evaluation system for civil servants. As for state-owned enterprises, for the time being no further steps have been taken in setting up a coordinated system for collective bargaining.

The overall institutional setup for public procurement needs strengthening. A State Audit report in 2018 (State Audit Office, 2018) noted overall delays and shortages of staff in most institutions involved in public procurement, including the Central State Office for Public Procurement and the bodies working in the area of ESIF. The report emphasised the key role of the Central Finance and Contracting Agency and other second level intermediate bodies ⁽⁵¹⁾ as dedicated services to provide non-obligatory checks and input to draft tender documents. These services are understaffed yet they are crucial in assisting the final beneficiaries of EU funds and must maintain a high level of technical knowledge and resistance to corruption and undue influence. Further work in public procurement could include wider development and implementation of policies (some existing in specific cases) using public procurement as a strategic policy instrument (social, green and innovative procurement).

Justice system

Despite progress in the reduction of backlogs, the quality and efficiency of the justice system and the personal insolvency framework remain to be improved. With the exception of the High Commercial Court, the continued reduction of backlogs ⁽⁵²⁾ was mainly due to a lower caseload. The focus on resolving the oldest cases (10 years and older) was effective, but the 2019 EU Justice Scoreboard (European Commission, forthcoming) shows that the duration of court proceedings and backlogs in Croatia remain among the highest in the EU. As of 1 January 2019, the Financial Agency will be authorised to initiate *ex officio* certain personal insolvency cases (e.g. for people with blocked accounts) and the mediation before

FINA is no longer a procedural step before reaching the court. While this is expected to lead to an increased use of the personal insolvency procedures and help reduce the over-indebtedness of some households, the average duration of insolvency and restructuring proceedings further increased in all categories.

Electronic communication in courts and implementation of the judicial map reform are advancing. All commercial courts are now equipped for e-communication with lawyers, notaries and prosecutors. The same is expected to follow for insolvency administrators, court experts and municipal courts. Online payment of Court fees are being incentivised by offering a 50 % discount in case of immediate payment and online submission of a claim. As of 2019, personal and corporate insolvency documents should be delivered from the Financial Agency to the courts electronically. A pilot project is testing the central postal delivery of court documents. The Supreme Court has fully adopted the e-case system and plans to increase the number of published first and second instance court rulings, also to improve the consistency of case law. The reform of the judicial map (in force from January 2019) will merge nearly all misdemeanour courts into municipal courts. This is expected to increase efficiency and quality by better distributing workload.

Challenges in efficiency and quality in criminal justice may hamper effective fight against economic and financial crime. Backlogs increased at all criminal court instances and proceedings remained lengthy (650 and 400 days at Municipal and for first instance cases at County courts, respectively). The State Attorney's Office received some additional human resources, but its capacity to fight economic and financial crime remains limited.

Concerns about judicial independence remain. According to a ruling by the Constitutional Court (Constitutional Court of the Republic of Croatia, 2018), the State Judicial Council did not provide sufficient reasoning in certain decisions on the career of judges, which led to legislative amendments that decreased the Council's power in selecting judges and could interfere with its institutional role. A Eurobarometer survey shows that the perceived judicial independence in Croatia decreased further from an already very low level

⁽⁵¹⁾ Bodies in direct charge of grant contracts of ESIF projects

⁽⁵²⁾ 18 % in first instance litigious civil and commercial and enforcement cases and 23 % in the High Commercial Court (2018 compared to 2017) (Ministry of Justice)

(European Commission 2019b).

Fight against corruption

Corruption is perceived to be widespread. Croatia is amongst the worst performing Member States in terms of perception and control of corruption, with no improving trend⁽⁵³⁾. Over half of respondents to the 2017 Special Eurobarometer on Corruption feel affected by corruption in their daily lives (59 %) and Croatia has the largest proportion of respondents (16 %) exposed to corruption of all Member States (European Commission, 2017g). Similarly, the 2017 Eurobarometer survey on businesses' attitudes towards corruption in the EU (European Commission, 2017d) reports that Croatia registered the lowest proportion of businesses (5 %) of the view that people who take bribes are adequately punished, a drop of 14 percentage points compared to previous results. Also, only 15 % of businesses agree that measures against corruption are applied impartially and without ulterior motive, a considerable drop by 24 percentage points from 2015⁽⁵⁴⁾.

Some legislative initiatives do not offer adequate enforcement tools against corruption. Despite some progress through the partial implementation of the anti-corruption action plan, Croatia's capacity to prevent and sanction instances of corruption remains limited. Two legislative proposals, on the protection of whistle-blowers and on the prevention of conflicts of interests, are pending adoption by Parliament⁽⁵⁵⁾, but the latter does not fully address post-employment issues ("revolving doors"). The draft law also makes it difficult for the Commission for Determining Conflicts of Interest to initiate proceedings and impose sanctions on officials who submit inaccurate asset declarations. It also does not apply to chairmen and board members of companies majority-owned by local government units, which manage significant financial resources and thus could be exposed to corruption. Finally, no progress has been made on the adoption of a

code of ethics for Members of Parliament and plans to regulate lobbying have stalled.

Control and sanction mechanisms at the local level are weak. Changes to the framework for the functioning of local government units are not accompanied by improvements to control corruption at the local level. The Law on Local and Regional Self-Governance gives elected local officials considerable discretion in decision-making. Their discretionary powers to decide on disposing of assets and finances of up to HRK 1 million and to appoint board members of public local companies are considerable risk factors as these board members are not subject to the same form of oversight. The 2017 Special Eurobarometer on corruption shows that 90 % of Croatians think that corruption is present in local or regional public institutions, and 72 % of companies think corruption is widespread in public procurement managed at the local or regional level, an increase by six percentage points from 2015. Studies also indicate that competitive advantage on the market at local level is achieved mainly because of political connections rather than competence (Vuković, 2017).

Strengthening ex-ante scrutiny and e-procurement can support the fight against corruption. E-procurement in Croatia is advanced and provides a good basis for further developments in transparency through further use of data, integration with other e-government solutions, and deployment of emerging technologies. Positive steps were taken with the development of the contract register and the possibility to lodge complaints electronically before the State Commission for Supervision of Public Procurement Procedures⁽⁵⁶⁾.

⁽⁵⁶⁾ This will soon become mandatory and it is crucial that adequate resources be dedicated to any technical challenges.

⁽⁵³⁾ Transparency International, Corruption Perceptions Index; World Bank, Control of Corruption Indicator.

⁽⁵⁴⁾ Question: "To what extent are public officeholders prevented from abusing their position for private interests?" (Petak and al. 2018).

⁽⁵⁵⁾ The laws are planned for adoption by end of 2018.

ANNEX A: OVERVIEW TABLE

Table A.1: 2018 country-specific recommendations (and subparts) assessment

<p>CSR 1: Strengthen the fiscal framework, including by strengthening the mandate and independence of the Fiscal Policy Commission. Introduce a recurrent property tax.</p>	<p>Croatia has made Some Progress in addressing CSR 1</p>
<p>Strengthen the fiscal framework, including by strengthening the mandate and independence of the Fiscal Policy Commission.</p>	<p>Substantial Progress in strengthening the fiscal framework. After a long delay, in December 2018 the Parliament adopted a new Fiscal Responsibility Act and a new State Audit Office Act. The adoption of the new Budget Act remains delayed.</p>
<p>Introduce a recurrent property tax.</p>	<p>No Progress The introduction of a recurrent value-based property tax is no longer planned.</p>
<p>CSR 2: Discourage early retirement, accelerate the transition to a higher statutory retirement age and align pension provisions for specific categories with the rules of the general scheme. Deliver on the reform of the education and training system to improve its quality and labour market relevance for both young people and adults. Consolidate social benefits and improve their poverty reduction capacity.</p>	<p>Croatia has made Some Progress in addressing CSR 2</p>
<p>Discourage early retirement, accelerate the transition to a higher statutory retirement age and align pension provisions for specific categories with the rules of the general scheme.</p>	<p>Substantial Progress. In December 2018 the parliament adopted an important package of pension system reforms aimed at addressing design inconsistencies in the system, improving pension adequacy through longer working lives, and strengthening the institutional setup and performance of the 2nd mandatory pillar.</p>
<p>Deliver on the reform of the education and training system to improve its quality and labour market relevance for both young people and adults.</p>	<p>Some Progress in delivering on the reform of the education and training system. A number of measures have been set in motion, such as the launch of newly developed general education curricula as a pilot project. Other objectives set in the Education and Training 2020 Strategic Framework await adoption and implementation.</p>
<p>Consolidate social benefits and improve their poverty reduction capacity.</p>	<p>Limited Progress in consolidating social benefits. A categorisation of the types of benefits granted at the local government level following the European System of integrated Social Protection Statistics nomenclature was completed. However, most policy measures remain in a preparatory phase.</p>

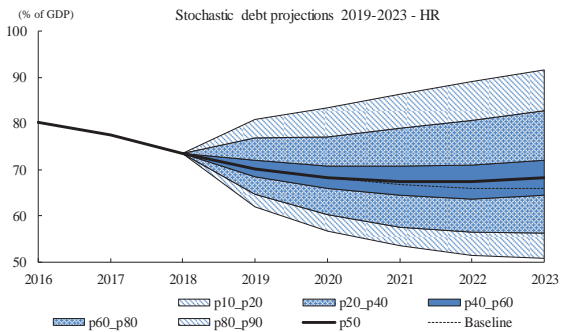
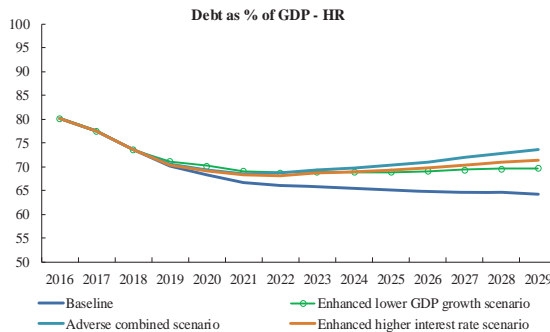
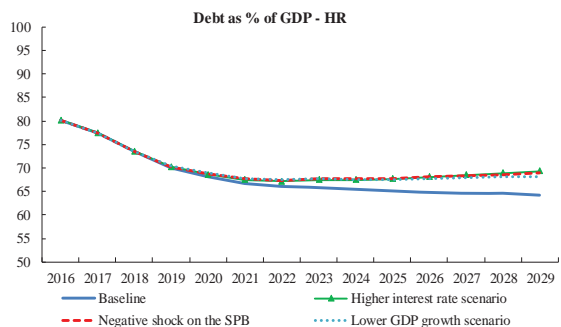
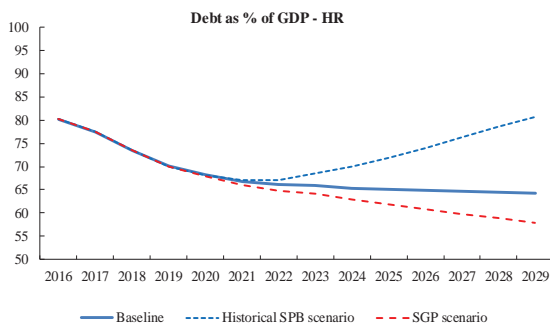
<p>CSR 3: Reduce the territorial fragmentation of the public administration, streamline the functional distribution of competencies and enhance the capacity to design and implement public policies. In consultation with social partners, introduce harmonised wage-setting frameworks across the public administration and public services.</p>	<p>Croatia has made Limited Progress in addressing CSR 3</p>
<p>Reduce the territorial fragmentation of the public administration, streamline the functional distribution of competencies and enhance the capacity to design and implement public policies.</p>	<p>Some Progress in the public administration reform. A substantial rationalisation of the cumbersome state agencies system – as a step towards simplification and efficiency – is ongoing. The territorial fragmentation at the local government level remains a challenge.</p>
<p>In consultation with social partners, introduce harmonised wage-setting frameworks across the public administration and public services.</p>	<p>Limited Progress in harmonising wage-setting frameworks across the public administration and public services, as the relevant legislation remains in a preparatory phase</p>
<p>CSR 4: Improve corporate governance in state-owned enterprises and intensify the sale of state-owned enterprises and non-productive assets. Significantly reduce the burden on businesses arising from parafiscal charges and from cumbersome administrative and legislative requirements. Enhance competition in business services and regulated professions. Reduce the duration of court proceedings and improve electronic communication in courts.</p>	<p>Croatia has made Some Progress in addressing CSR 4</p>
<p>Improve corporate governance in state-owned enterprises and intensify the sale of state-owned enterprises and non-productive assets.</p>	<p>Limited Progress. A new Corporate Governance Code has been implemented, and obligatory reporting on business plans and performance has been introduced in all major state-owned enterprises. Disposal of state assets has progressed slowly due to delays in adoption of required legislation.</p>
<p>Significantly reduce the burden on businesses arising from parafiscal charges and from cumbersome administrative and legislative requirements.</p>	<p>Some Progress in reducing the burden on business. There has been some progress with the continuation of removal of identified administrative burden and limited progress with the removal of parafiscal charges.</p>
<p>Enhance competition in business services and regulated professions.</p>	<p>Limited Progress in enhancing competition in business services and regulated professions. The implementation of some measures to remove excessive restrictions has finally started, most notably in passenger transport, audit and education.</p>

<p>Reduce the duration of court proceedings and improve electronic communication in courts.</p>	<p>Some Progress in the judicial system reform. Backlogs in courts have been reduced and progress was made with implementation of electronic communication. Mergers of courts effective as of January 2019 are expected to increase efficiency.</p>
<p>The following categories are used to assess progress in implementing the country-specific recommendations (CSRs):</p> <p>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:</p> <ul style="list-style-type: none"> • 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. 	
<p>Limited progress: The Member State has:</p> <ul style="list-style-type: none"> • 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. 	
<p>Some progress: The Member State has adopted measures:</p> <ul style="list-style-type: none"> • that partly address the CSR; and/or • that address the CSR, but a fair amount of work is still needed to fully address the CSR fully as only a few of the measures have been implemented. For instance, a measure or measures have been adopted by the national Parliament or by ministerial decision but no implementing decisions are in place. 	
<p>Substantial progress: The Member State has adopted measures that go a long way towards addressing the CSR and most of them have been implemented.</p> <p>Full implementation: The Member State has implemented all measures needed to address the CSR appropriately.</p>	

Europe 2020 (national targets and progress)	
Employment rate (age group 20 – 64) target set in the NRP: 65.2 %	The employment rate in Croatia has been slowly and steadily increasing (from 58.3% in 2013 to 66.3 % in Q3 2018). Croatia has achieved its national target, but the employment rate is still among the lowest in the EU, and well below the EU average.
R&D target set in the NRP: 1.4 % of GDP	In 2017, R&D intensity in Croatia was 0.86% of GDP composed of 50% private investment (0.43% of GDP) and 50% public investment (0.43% of GDP). Croatia is not on track to meet the target.
Greenhouse gas emissions, national target: +11% between 2005 and 2020	Total GHG emissions in Croatia were reduced by 23.3% from 1990 to 2017. Based on the latest national projections submitted to the Commission, and taking into account existing measures, Croatia is expected to meet its GHG emission target by a wide margin (-12.5 % between 2005 and 2020).
2020 renewable energy target: 20 % 2020 renewable energy source (RES) in transport target: 10 %	With a renewable energy share of 28.3 % in 2016, Croatia is well above its target for 2020. With a 1.3 % share of RES in transport in 2016, Croatia is well below its 2020 target.
Energy efficiency, 2020 energy consumption targets: <ul style="list-style-type: none"> • 11.2 Mtoe (primary energy consumption); • 7 Mtoe (final energy consumption). 	Croatia's primary and final energy consumption remains below the country's 2020 energy efficiency targets. <ul style="list-style-type: none"> • 8.07 Mtoe (primary energy consumption, 2016) • 6.64 Mtoe (final energy consumption, 2016)
Early school leaving (ESL) target: 4 %	At 3.1 % Croatia remained among the leading EU Member States in ensuring that its young people complete secondary education. Both the national target of 4 % and the EU-level target of 10 % were comfortably met.
Tertiary education target: 35 %	Croatia's tertiary education attainment rate has been slowly declining since 2014 and stood at 28.7 % in 2017. The enrolment rates of the corresponding student cohort, together with the overall drop-out rates, make it unlikely that Croatia will meet its national target by 2020.
Target for reducing the number of people at risk of poverty or social exclusion, expressed as an absolute number of people: by 150 000.	The number of people at risk of poverty or social exclusion fell from 1.384 million in 2011 to 1.085 million in 2017. Therefore, the national target has already been met.

ANNEX B: COMMISSION DEBT SUSTAINABILITY ANALYSIS AND FISCAL RISKS

General Government debt projections under baseline, alternative scenarios and sensitivity tests													
HR - Debt projections baseline scenario	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Gross debt ratio	77.5	73.5	70.1	68.2	66.7	66.0	65.9	65.4	65.1	64.9	64.7	64.5	64.3
Changes in the ratio (-/+2+3) of which	-2.7	-4.0	-3.4	-1.9	-1.5	-0.7	-0.1	-0.5	-0.3	-0.2	-0.2	-0.2	-0.3
(1) Primary balance (1.1+1.2+1.3)	3.5	2.7	2.6	2.2	1.7	1.3	0.9	0.9	0.8	0.8	0.9	1.0	1.1
(1.1) Structural primary balance (1.1.1-1.1.2+1.1.3)	3.3	1.9	1.6	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.9	1.0	1.1
(1.1.1) Structural primary balance (bef. CoA)	3.3	1.9	1.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
(1.1.2) Cost of ageing					0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.0	-0.2
(1.1.3) Others (taxes and property incomes)					0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1
(1.2) Cyclical component	0.3	0.8	1.1	1.2	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(1.3) One-off and other temporary measures	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2) Snowball effect (2.1+2.2+2.3)	-0.5	-1.4	-0.9	-0.6	0.2	0.7	0.8	0.4	0.5	0.6	0.7	0.8	0.9
(2.1) Interest expenditure	2.7	2.4	2.3	2.2	2.2	2.2	2.2	2.3	2.4	2.5	2.6	2.7	2.7
(2.2) Growth effect	-2.3	-2.1	-1.9	-1.7	-0.8	-0.3	-0.2	-0.7	-0.6	-0.6	-0.6	-0.6	-0.6
(2.3) Inflation effect	-0.9	-1.7	-1.2	-1.1	-1.2	-1.2	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3
(3) Stock-flow adjustments	1.3	0.1	0.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Short term	Medium term	S1	Debt sustainability analysis (detail)						DSA	S2	Long term	
			Baseline	Historical SPB	Lower GDP growth	Higher interest rate	Negative shock on SPB	Stochastic projections				
LOW (S0 = 0.2)	MEDIUM	MEDIUM (S1 = 0.2)	Risk category	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	LOW (S2 = -2.1)	MEDIUM
			Debt level (2029)	64.3	80.7	68.2	69.4	68.9				
			Debt peak year	2018	2029	2018	2018	2018				
			Percentile rank	38.0%	68.0%							
			Probability debt higher Dif. between percentiles					35.8%	40.8%			

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

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

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

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

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

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

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

ANNEX C: STANDARD TABLES

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

	2013	2014	2015	2016	2017	2018
Total assets of the banking sector (% of GDP) ⁽¹⁾	132,4	133,1	129,8	124,6	119,2	115,2
Share of assets of the five largest banks (% of total assets)	72,9	72,3	72,7	73,0	72,8	-
Foreign ownership of banking system (% of total assets) ⁽²⁾	89,9	90,2	90,5	90,1	90,8	90,7
Financial soundness indicators: ⁽²⁾						
- non-performing loans (% of total loans)	-	13,6	13,0	10,7	8,8	8,7
- capital adequacy ratio (%)	19,6	20,4	19,2	20,8	21,4	20,3
- return on equity (%) ⁽³⁾	0,6	3,9	-6,8	8,9	5,9	11,1
Bank loans to the private sector (year-on-year % change) ⁽¹⁾	-0,1	-1,7	-2,4	0,5	4,5	5,0
Lending for house purchase (year-on-year % change) ⁽¹⁾	-2,0	-2,8	-1,9	-2,1	2,7	3,3
Loan to deposit ratio ⁽²⁾	-	92,0	89,2	85,3	82,1	83,1
Central Bank liquidity as % of liabilities ⁽¹⁾	0,0	0,0	0,1	0,3	0,4	0,3
Private debt (% of GDP)	117,7	118,0	113,0	105,3	98,4	-
Gross external debt (% of GDP) ⁽²⁾ - public	32,5	35,5	35,7	31,7	29,1	27,7
- private	50,3	51,8	48,7	44,7	40,7	39,0
Long-term interest rate spread versus Bund (basis points)*	311,1	288,8	305,5	339,6	245,0	176,9
Credit default swap spreads for sovereign securities (5-year)*	303,7	276,1	273,1	240,1	148,4	94,5

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

(2) Latest data Q2 2018.

(3) Quarterly values are annualised.

* Measured in basis points.

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

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

	2013	2014	2015	2016	2017	2018 ⁽⁶⁾
Equal opportunities and access to the labour market						
Early leavers from education and training (% of population aged 18-24)	4,5	2,8	2,8	2,8	3,1	:
Gender employment gap (pps)	8,8	10,0	9,5	9,6	10,6	9,9
Income inequality, measured as quintile share ratio (S80/S20)	5,3	5,1	5,2	5,0	5,0	:
At-risk-of-poverty or social exclusion rate ⁽¹⁾ (AROPE)	29,9	29,3	29,1	27,9	26,4	:
Young people neither in employment nor in education and training (% of population aged 15-24)	19,6	19,3	18,1	16,9	15,4	:
Dynamic labour markets and fair working conditions[†]						
Employment rate (20-64 years)	57,2	59,2	60,6	61,4	63,6	65,2
Unemployment rate ⁽²⁾ (15-74 years)	17,4	17,2	16,1	13,4	11,0	8,5
Long-term unemployment rate ⁽³⁾ (as % of active population)	11,0	10,1	10,2	6,6	4,6	3,5
Gross disposable income of households in real terms per capita ⁽⁴⁾ (Index 2008=100)	:	:	:	:	:	:
Annual net earnings of a full-time single worker without children earning an average wage (levels in PPS, three-year average)	:	:	12789	13113	:	:
Annual net earnings of a full-time single worker without children earning an average wage (percentage change, real terms, three-year average)	:	:	:	2,3	:	:
Public support / Social protection and inclusion						
Impact of social transfers (excluding pensions) on poverty reduction ⁽⁵⁾	34,3	35,1	35,5	28,6	24,8	:
Children aged less than 3 years in formal childcare	11,0	17,1	11,8	15,7	15,9	:
Self-reported unmet need for medical care	3,3	3,3	1,9	1,7	1,6	:
Individuals who have basic or above basic overall digital skills (% of population aged 16-74)	:	:	51,0	55,0	41,0	:

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

AROPE: At-risk-of-poverty or social exclusion rate (% of total population). People who are at-risk-of poverty (AROP) and/or suffering from severe material deprivation (SMD) and/or living in household with zero or very low work intensity (LWI).

AROP: At-risk-of poverty rate (% of total population). People who have an equivalised disposable income below 60 % of the national equivalised median income.

SMD: Severe material deprivation rate (% of total population). People who experience at least 4 out of 9 deprivations: people cannot 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.

LWI: People living in low work intensity households (% of population 0-59). People living in households where the adults work less than 20 % of their total work-time potential during the previous 12 months.

AROPE, AROP: previous year income, SMD: current year, JLH: previous year.

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

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

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

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

(6) Average of first three quarters of 2018 for the employment rate, long-term unemployment rate and gender employment gap. Data for unemployment rate is annual (except for DK, EE, EL, HU, IT and UK data based on first three quarters of 2018).

Source: Eurostat.

Table C.3: Labour market and education indicators

Labour market indicators	2013	2014	2015	2016	2017	2018 ⁽⁴⁾
Activity rate (15-64)	63,7	66,1	66,9	65,6	66,4	66,3
Employment in current job by duration						
From 0 to 11 months	8,9	11,6	11,5	14,1	14,2	:
From 12 to 23 months	7,1	6,0	7,5	8,8	9,0	:
From 24 to 59 months	14,0	14,1	12,9	13,6	14,8	:
60 months or over	70,0	68,3	68,0	62,4	60,7	:
Employment growth*						
(% change from previous year)	-2,6	2,7	1,2	0,3	2,2	2,4
Employment rate of women						
(% of female population aged 20-64)	52,8	54,2	55,9	56,6	58,3	60,3
Employment rate of men						
(% of male population aged 20-64)	61,6	64,2	65,4	66,2	68,9	70,2
Employment rate of older workers*						
(% of population aged 55-64)	37,8	36,2	39,2	38,1	40,3	42,9
Part-time employment*						
(% of total employment, aged 15-64)	5,4	5,3	6,0	5,6	4,8	5,0
Fixed-term employment*						
(% of employees with a fixed term contract, aged 15-64)	14,5	16,9	20,2	22,2	20,7	20,2
Participation in activation labour market policies						
(per 100 persons wanting to work)	4,8	4,5	6,6	7,0	:	:
Transition rate from temporary to permanent employment						
(3-year average)	35,5	:	30,8	32,2	34,1	:
Youth unemployment rate						
(% active population aged 15-24)	49,9	44,9	42,3	31,8	27,2	24,5
Gender gap in part-time employment (aged 20-64)	1,7	2,7	2,6	2,7	2,2	2,6
Gender pay gap ⁽¹⁾ (in undadjusted form)	7,7	8,7	:	:	:	:
Education and training indicators	2013	2014	2015	2016	2017	2018
Adult participation in learning						
(% of people aged 25-64 participating in education and training)	3,1	2,8	3,1	3,0	2,3	:
Underachievement in education ⁽²⁾	:	:	32,0	:	:	:
Tertiary educational attainment (% of population aged 30-34 having successfully completed tertiary education)	25,6	32,1	30,8	29,3	28,7	:
Variation in performance explained by students' socio-economic status ⁽³⁾	:	:	12,1	:	:	:

* Non-scoreboard indicator.

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

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

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

(4) Average of first three quarters of 2018 for the activity rate, employment growth, employment rate, part-time employment, fixed-term employment. Data for youth unemployment rate is annual (except for DK, EE, EL, HU, IT and UK data based on first three quarters of 2018).

Source: Eurostat, OECD.

Table C.4: Social inclusion and health indicators

	2012	2013	2014	2015	2016	2017
Expenditure on social protection benefits* (% of GDP)						
<i>Sickness/healthcare</i>	7,4	6,9	6,8	7,1	7,0	:
<i>Disability</i>	2,7	2,7	2,6	2,5	2,3	:
<i>Old age and survivors</i>	8,7	9,0	9,3	9,1	9,0	:
<i>Family/children</i>	1,6	1,6	1,9	1,9	1,8	:
<i>Unemployment</i>	0,5	0,5	0,5	0,6	0,5	:
<i>Housing</i>	0,0	0,0	0,0	0,0	0,0	:
<i>Social exclusion n.e.c.</i>	0,2	0,2	0,3	0,3	0,3	:
Total	21,1	20,9	21,4	21,4	20,9	:
<i>of which: means-tested benefits</i>	1,1	1,1	1,1	1,1	1,0	:
General government expenditure by function (% of GDP, COFOG)						
<i>Social protection</i>	15,5	15,4	15,9	15,3	14,7	:
<i>Health</i>	7,2	6,5	6,6	6,4	6,5	:
<i>Education</i>	4,9	5,1	4,8	4,8	4,8	:
Out-of-pocket expenditure on healthcare (% of total health expenditure)	:	12,8	15,8	15,5	15,4	:
Children at risk of poverty or social exclusion (% of people aged 0-17)*	34,8	29,3	29,0	28,2	26,6	25,8
At-risk-of-poverty rate ⁽¹⁾ (% of total population)	20,4	19,5	19,4	20,0	19,5	20,0
In-work at-risk-of-poverty rate (% of persons employed)	6,0	6,2	5,7	5,9	5,6	5,8
Severe material deprivation rate ⁽²⁾ (% of total population)	15,9	14,7	13,9	13,7	12,5	10,3
Severe housing deprivation rate ⁽³⁾ , by tenure status						
<i>Owner, with mortgage or loan</i>	11,6	5,8	2,3	6,1	5,4	6,2
<i>Tenant, rent at market price</i>	17,6	7,1	16,0	15,0	7,6	5,5
Proportion of people living in low work intensity households ⁽⁴⁾ (% of people aged 0-59)	16,8	14,8	14,7	14,4	13,0	12,2
Poverty thresholds, expressed in national currency at constant prices*	20922	19330	19585	20544	21568	23293
Healthy life years (at the age of 65)						
<i>Females</i>	7,9	5,9	5,8	4,5	4,9	:
<i>Males</i>	7,7	5,5	6,0	4,7	5,2	:
Aggregate replacement ratio for pensions ⁽⁵⁾ (at the age of 65)	0,4	0,4	0,4	0,4	0,4	0,4
Connectivity dimension of the Digital Economy and Society Index (DESI) ⁽⁶⁾	:	:	29,9	35,4	42,0	45,0
GINI coefficient before taxes and transfers*	50,6	50,8	50,1	51,0	49,9	49,4
GINI coefficient after taxes and transfers*	30,9	30,9	30,2	30,6	29,8	29,9

* Non-scoreboard indicator.

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

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

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

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

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

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

Source: Eurostat, OECD.

Table C.5: Product market performance and policy indicators

Performance indicators	2012	2013	2014	2015	2016	2017
Labour productivity per person ⁽¹⁾ growth (t/t-1) in %						
Labour productivity growth in industry	-2,72	2,53	0,79	4,23	5,07	-0,39
Labour productivity growth in construction	-5,62	-2,51	0,92	-2,90	-0,86	6,18
Labour productivity growth in market services	-1,03	2,64	-4,35	-0,56	-0,35	-2,48
Unit Labour Cost (ULC) index ⁽²⁾ growth (t/t-1) in %						
ULC growth in industry	6,01	1,61	-2,66	-1,36	-3,77	1,33
ULC growth in construction	8,64	-2,42	-3,39	4,02	-1,00	2,02
ULC growth in market services	1,48	-1,33	1,73	-1,29	2,23	0,15
Business environment	2012	2013	2014	2015	2016	2017
Time needed to enforce contracts ⁽³⁾ (days)	572	650	650	650	650	650
Time needed to start a business ⁽³⁾ (days)	22,5	22,5	22,5	22,5	22,5	22,5
Outcome of applications by SMEs for bank loans ⁽⁴⁾	:	0,19	0,88	0,31	0,60	0,10
Research and innovation	2012	2013	2014	2015	2016	2017
R&D intensity	0,75	0,81	0,78	0,84	0,84	0,86
General government expenditure on education as % of GDP	4,90	5,10	4,80	4,80	4,80	:
Employed people with tertiary education and/or people employed in science and technology as % of total employment	32	36	37	38	38	38
Population having completed tertiary education ⁽⁵⁾	16	17	19	20	20	21
Young people with upper secondary education ⁽⁶⁾	94	94	96	96	96	96
Trade balance of high technology products as % of GDP	-1,27	-1,48	-1,52	-1,75	-1,85	-1,15
Product and service markets and competition				2003	2008	2013
OECD product market regulation (PMR) ⁽⁷⁾ , overall				:	:	2,08
OECD PMR ⁽⁷⁾ , retail				:	:	1,42
OECD PMR ⁽⁷⁾ , professional services				:	:	3,70
OECD PMR ⁽⁷⁾ , network industries ⁽⁸⁾				:	:	2,75

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

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

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

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

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

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

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

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

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

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		2012	2013	2014	2015	2016	2017
Macroeconomic⁽¹⁾							
Energy intensity ⁽²⁾	kgoe / €	0,20	0,20	0,19	0,19	0,18	0,19
Carbon intensity ⁽³⁾	kg / €	0,59	0,56	0,54	0,54	0,52	-
Resource intensity (reciprocal of resource productivity) ⁽⁴⁾	kg / €	0,92	0,97	0,88	0,92	0,91	0,84
Waste intensity ⁽⁵⁾	kg / €	0,08	-	0,09	-	0,11	-
Energy balance of trade ⁽⁶⁾	% GDP	-5,6	-5,1	-4,0	-3,4	-2,7	-2,9
Weighting of energy in HICP ⁽⁷⁾	%	14,5	15,7	16,5	14,9	10,8	11,6
Difference between energy price change and inflation ⁽⁸⁾	%	11,4	2,6	-0,2	-2,7	-4,4	-5,3
Real unit of energy cost ⁽⁹⁾	% of value added	9,4	9,0	8,7	9,0	9,3	-
Ratio of environmental taxes to labour taxes	ratio	0,18	0,20	0,22	0,23	0,24	-
Environmental taxes	% GDP	2,6	2,9	3,2	3,4	3,5	3,4
Sectoral							
Industry energy intensity ⁽¹⁰⁾	kgoe / €	0,12	0,12	0,12	0,11	0,11	-
Real unit energy cost for manufacturing industry excl. refining ⁽¹¹⁾	% of value added	5,6	5,5	5,4	5,5	5,6	-
Share of energy-intensive industries in the economy ⁽¹²⁾	% GDP	9,2	9,2	9,4	9,5	9,8	-
Electricity prices for medium-sized industrial users ⁽¹³⁾	€ / kWh	0,09	0,09	0,09	0,09	0,09	0,09
Gas prices for medium-sized industrial users	€ / kWh	0,04	0,04	0,04	0,04	0,03	0,02
Public R&D for energy ⁽¹⁵⁾	% GDP	0,00	0,00	0,00	0,00	0,00	0,00
Public R&D for environmental protection ⁽¹⁵⁾	% GDP	0,00	0,00	0,00	0,00	0,01	0,00
Municipal waste recycling rate ⁽¹⁴⁾	%	14,7	14,9	16,5	18,0	21,0	23,6
Share of GHG emissions covered by ETS ^{(16)*}	%	37,5	37,0	36,7	37,2	34,1	-
Transport energy intensity ⁽¹⁷⁾	kgoe / €	1,23	1,34	1,36	1,42	1,37	-
Transport carbon intensity ⁽¹⁸⁾	kg / €	3,45	3,75	3,81	4,00	3,91	-
Security of energy supply							
Energy import dependency ⁽¹⁹⁾	%	49,9	47,5	44,3	48,9	48,5	53,3
Aggregated supplier concentration index ⁽²⁰⁾	HHI	19,8	28,2	19,5	14,7	12,6	-
Diversification of energy mix ⁽²¹⁾	HHI	0,26	0,27	0,28	0,26	0,27	0,28

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

(2) Gross inland energy consumption (in kgoe) divided by GDP (in EUR).

(3) Greenhouse gas emissions (in kg CO₂ equivalents) divided by GDP (in EUR).

(4) Domestic material consumption (in kg) divided by GDP (in EUR).

(5) Waste (in kg) divided by GDP (in EUR).

(6) Balance of energy exports and imports, expressed as % of GDP.

(7) Proportion of 'energy' items in the consumption basket used for the construction of the HICP.

(8) Energy component of HICP, and total HICP inflation (annual % change).

(9) Real energy costs as % of total value added for the economy.

(10) Final energy consumption of industry (in kgoe) divided by gross value added of industry (in 2010 EUR).

(11) Real costs as % of value added for manufacturing sectors.

(12) Share of gross value added of the energy-intensive industries in GDP.

(13) Consumption band 500–20 000 MWh and 10 000–100 000 GJ; figures excl. VAT.

(14) Ratio of recycled and composted municipal waste to total municipal waste.

(15) Government spending on R&D for these categories as % of GDP.

(16) Based on GHG emissions (excluding aviation, land use, land use change and forestry) as reported by Member States to the European Environment Agency.

(17) Final energy consumption of transport activity (kgoe) divided by transport industry gross value added (in 2010 EUR).

(18) GHG emissions in transport activity divided by gross value added of the transport industry.

(19) Net energy imports divided by gross inland energy consumption incl. consumption of international bunker fuels.

(20) Covers oil, gas and coal. Smaller values indicate larger diversification and hence lower risk.

(21) Herfindahl index covering natural gas, total petrol products, nuclear heat, renewable energies and solid fuels.

* European Commission and European Environment Agency.

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

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

Building on the Commission proposal for the next Multi-Annual Financial Framework for the period 2021-2027 of 2 May 2018 (COM (2018) 321), this Annex presents the preliminary Commission services views on priority investment areas and framework conditions for effective delivery for the 2021-2027 Cohesion Policy. These priority investment areas are derived from the broader context of investment bottlenecks, investment needs and regional disparities assessed in the report. This Annex ⁽⁵⁷⁾ provides the basis for a dialogue between Croatia and the Commission services in view of the programming of the cohesion policy funds (European Regional Development Fund, Cohesion Fund and European Social Fund Plus).

Policy Objective 1: A Smarter Europe – Innovative and smart industrial transformation
<p>The innovativeness of the Croatian economy is low and progress in improving innovation performance is very limited. High priority investment needs ⁽⁵⁸⁾ have been identified to enhance research and innovation capacities and the uptake of advanced technologies, by taking into account territorial differences, and in particular to:</p> <ul style="list-style-type: none"> • strengthen innovation performance and foster productivity growth by identifying smart specialisation areas on the basis of national and regional needs and potential; • increase the number of innovative firms in the smart specialisation areas with the highest growth potential; • develop universities' and research institutions' capacity to enhance market relevance of their research projects, build critical research mass and attract talent in the strategic smart specialisation areas; • support collaboration between universities and businesses, enabling transfer of technology and commercialisation of research outcomes; support cross-regional, transnational and interregional projects; • strengthen governance of the smart specialisation strategy.
<p>Croatia has made progress in digitalisation but further action is needed to exploit its potential. Priority investment needs have been identified to reap the benefits of digitalisation for citizens, companies and governments, and in particular to:</p> <ul style="list-style-type: none"> • support integration of digital technology in small and medium-sized enterprises including infrastructures and services, by taking into account territorial differences; • promote the range of interoperable e-services and their uptake by citizens; • upscale and accelerate Digital Public Services in a systemic way.
<p>Croatia ranks last among peers in business environment; Croatian firms are weakly integrated in global value chains. Business investment in research and development is low and concentrated in large companies, with low participation of small and medium-sized enterprises. High priority investment needs have been identified to enhance growth and competitiveness of small and medium-sized enterprises, and in particular to:</p> <ul style="list-style-type: none"> • move up the global value chains; • identify new markets, cooperation networks; stimulate potential for innovation clusters by looking into emerging trends, markets and concentration in high-performing sectors; • enhance quality of business support institutions and business environment.
<p>Skills shortages and mismatches are among the main barriers for further economic development of Croatia. High priority investment needs have been identified to develop skills for smart specialisation, industrial transition and entrepreneurship, and in particular to:</p> <ul style="list-style-type: none"> • reskill and upskill in smart specialisation areas, with a particular attention to supporting acquisition of key competences including digital skills; • strengthen education and training institutions including higher education and centres of vocational excellence to foster skills for innovation and stimulate entrepreneurship culture.

⁽⁵⁷⁾ This Annex is to be considered in conjunction with the EC Proposal for a Regulation of the European Parliament and of the Council on the European Regional Development Fund and on the Cohesion Fund COM(2018) 372 and the EC Proposal for a Regulation of the European Parliament and of the Council on the European Social Fund Plus COM(2018) 382, in particular as regards the requirements for thematic concentration and urban earmarking outlined in these proposals.

⁽⁵⁸⁾ The intensity of needs is classified in three categories in a descending order – high priority needs, priority needs, needs.

<p>Policy Objective 2: A low carbon and greener Europe – Clean and fair energy transition, Green and blue investment, circular economy, climate adaptation and risk prevention</p>
<p>The shift away from landfilling towards separate collection and recycling is stalling. High priority investment needs have been identified to promote the transition to a circular economy, and in particular to:</p> <ul style="list-style-type: none"> • support systems of separate collection, composting and sorting plants and other measures preparing for reuse and recycling, develop alternatives to raw materials and increase demand for recycled content; • modernise and upgrade existing recycling and waste treatment infrastructure to adapt to new long-term-recycling targets; • raise citizen awareness to sustainable consumption practices and behaviour and improve capacity for all stakeholders including through cooperation and share of experiences between Member States; • improve the knowledge base and monitoring of waste and material streams.
<p>While water supply networks are quite well developed, sanitation lags behind. High priority investment needs have been identified to promote sustainable water management, and in particular to:</p> <ul style="list-style-type: none"> • invest in the collection and treatment of wastewater in agglomerations above 2000 population equivalent; • invest in drinking water to reduce leakage of water networks and ensure quality requirements for drinking water where they are not met (e.g. Eastern Slavonia); • increase capacity of beneficiaries especially at local and regional level to ensure long-term sustainability of the sector.
<p>The economy in general and tourism in particular, depend on the sustainable management of natural resources. Priority investment needs have been identified to enhance biodiversity, green infrastructure in the urban environment, and reducing pollution, and in particular to:</p> <ul style="list-style-type: none"> • support biodiversity as well as ecosystem conservation and restoration projects, species protection measures and green infrastructure.
<p>Croatia faces considerable risks caused by extreme weather conditions, especially floods and forest fires. Priority investment needs have been identified to promote climate change adaptation, risk prevention and disaster resilience, and in particular to:</p> <ul style="list-style-type: none"> • address risks as identified in the national risk assessment and climate strategy; primarily floods and forest fires.
<p>High energy intensity could be decreased by increasing energy efficiency High priority investment needs have been identified to promote energy efficiency measures and developing smart energy systems, in particular to:</p> <ul style="list-style-type: none"> • reduce energy consumption in the building sector i.e. renovation of public and residential buildings; tackle the problem of energy poor and improve energy efficiency of district heating networks; • deploy solutions for smart electricity, distribution grids and storage linked to demand and supply.
<p>While in 2016, renewable energy was above EU average, notably thanks to its strong hydropower industry, the next phase of renewable energy projects, especially wind and solar have considerable development potential. Priority investment needs have been identified to promote renewable energy and in particular to:</p> <ul style="list-style-type: none"> • support transition to renewables in heating and cooling; • ensure further penetration of sustainable and clean energy primarily wind and solar energy addressing in particular energy self-reliance of islands in line with the “Clean Energy for EU islands” initiative.

<p>Policy Objective 3: A more connected Europe – Mobility and regional Information and Communications Technology connectivity</p>
<p>The railway and multi-modal infrastructure is still visibly lagging behind motorways in terms of quality and connectivity. High priority investment needs have been identified to develop a sustainable, climate resilient, intelligent, secure and intermodal Trans-European Transport Network, and in particular to:</p> <ul style="list-style-type: none"> • complete the Trans-European Transport Network core and comprehensive railway network with requirements on interoperability, including cross-border sections. The focus of investments will be on completing investments along the Med Corridor and the sub-urban rail network in the greater Zagreb functional area; • support investments in multi-modal transport with priority on improving the connectivity of different sustainable transport modes.
<p>The transport sector in Croatia is faced with an increasing energy consumption, decreasing share of renewable energy and a high road fatalities rate. Investment needs have been identified to develop sustainable, climate resilient, intelligent and intermodal national, regional and local mobility, including improved access to Trans-European Transport Network and cross-border mobility, and in particular to:</p> <ul style="list-style-type: none"> • address negative externalities from transport by investments into sustainable modes of transport (public transport, multi-modal transport, railways) as well as road safety measures; • develop a smart, connected and clean transport system and deploy related infrastructure; • improve access of national networks to the Trans-European Transport Network.
<p>Croatia is highly dependent on passenger cars, with other modes of transport visibly lagging behind, and the implementation of sustainable urban mobility plans remains a challenge. Priority investment needs have been identified to promote sustainable multimodal urban mobility, and in particular to:</p> <ul style="list-style-type: none"> • improve urban transport systems and related rolling stock (taking into account the relevant masterplans of functional regions) to reduce dependency on private cars and enable a shift towards sustainable and accessible modes of transport (e.g. low-carbon collective public transport, active modes of transport); • invest in intelligent transportation system solutions for improved infrastructure use and service quality; • invest in the commuter port infrastructure on the islands and floating stock in cases with a public service contract.
<p>Policy Objective 4: A more social Europe – Implementing the European Pillar of Social Rights</p>
<p>Labour market participation remains low, especially for vulnerable groups, while high net emigration and skills shortages pose a growing challenge. High priority investment needs have therefore been identified to improve access to employment for all jobseekers and to anticipate skills needs, and in particular to:</p> <ul style="list-style-type: none"> • modernise labour market institutions, including advanced equipment and infrastructure; • improve cooperation between employment and social services, employers and education providers; • assess and anticipate skills needs and develop outreach strategies and tracking systems; • improve coverage and targeting of Active Labour Market Policy measures; • tackle the drivers of inactivity, including undeclared work; • reduce territorial disparities in labour market outcomes; • develop mechanisms for quick adaptation to the new forms of work and stimulate mobility of workers; • create business incubators and invest in self-employment, small and medium-sized enterprises and business/jobs creation and develop social entrepreneurship.
<p>Croatia performs below the EU average in education outcomes. High priority investment needs have therefore been identified to improve the quality, effectiveness and labour market relevance of education and training, and in particular to:</p> <ul style="list-style-type: none"> • ensure equal access to and provision of inclusive quality education at all levels, including investments

<p>in infrastructure and equipment, but especially in early childhood education and care, in particular for vulnerable groups and in less developed areas;</p> <ul style="list-style-type: none"> • upskill and reskill the labour force through adult learning; modernise equipment and infrastructure; • provide support to education and training of teachers and trainers.
<p>The share of the population at risk of poverty or social exclusion remains high. High priority investment needs have therefore been identified to foster active inclusion with a view to promoting equal opportunities and addressing material deprivation, and in particular to:</p> <ul style="list-style-type: none"> • improve social services and infrastructure of centres to support vulnerable groups and families; • improve the transition from residential/institutional care to family and community-based care; • reduce territorial disparities in social outcomes; • address material deprivation through food and basic material assistance to the most deprived; • promote social innovation.
<p>Health outcomes remain weak and inefficiencies in the health care sector persist. High priority investment needs have therefore been identified to improve accessibility, effectiveness and resilience of healthcare and long-term care services, and in particular to:</p> <ul style="list-style-type: none"> • restructure inpatient care and strengthen outpatient services, particularly primary and long term care services, including infrastructure and equipment; • tackle geographical obstacles in access to healthcare and address gaps in healthcare infrastructure and shortages in workforce, based on mapping of needs; • support implementation of quality standards in healthcare; • develop health promotion and disease prevention programmes; • continue the rollout of e-health services and improve digital solutions as telemedicine.
<p>Policy Objective 5 – A Europe closer to citizens by fostering the sustainable and integrated development of urban, rural and coastal areas and local initiatives</p>
<p>Croatia faces noticeable territorial imbalances that weigh on its competitiveness and sustainable growth potential. High priority investment needs have been identified to foster integrated socio-economic development, including for rural, coastal areas or islands, in particular to:</p> <ul style="list-style-type: none"> • reduce inequalities between regions and urban-rural divide by unleashing the endogenous potential of lagging regions (e.g. Eastern Croatia), addressing geographical specificities (islands), boosting the economic activity and creating the necessary linkages with leading poles; • support community building by integrated territorial development strategies in rural/sparsely populated areas, empowering local stakeholders possibly through the use of Community-led local development.
<p>Croatia's urban centres offer better job opportunities for better qualified people but do not fully play their catalytic role as engines of regional growth. Priority investment needs have been identified and should be further specified in integrated urban development strategies to foster the integrated socio-economic development in urban areas, in particular to:</p> <ul style="list-style-type: none"> • reinforce the role of leading economic centres as drivers of regional growth and of sustainable and integrated development of their functional areas (university centres, places of innovation, urban-rural linkages, etc.); • support the regeneration of deprived urban neighbourhoods to increase attractiveness for business and social inclusion using Community-led local development when possible; • strengthen capacities of local authorities to develop sound integrated territorial strategies.
<p>Factors for effective delivery of Cohesion policy</p>
<p>Additional efforts are needed to increase the administrative capacity necessary for the effective administration and implementation of the Funds, in particular through:</p> <ul style="list-style-type: none"> • enhanced dialogue with stakeholders, including with social partners, and strengthened capacities of the final beneficiaries, and stakeholders at all levels to effectively implement projects and ensure long term sustainability of investments including through institutional consolidation; • reduced administrative burden, improved and simplified procedures, eliminating excessive documentation and over bureaucratic requirements to project proposals;

- consolidated and properly functioning management and control systems, as well as well working evaluation culture in order to enable proper monitoring and evidence-based decisions on implementation of EU funds;
- improved public procurement performance ensuring sufficient staff and its support;
- improved and more efficient measures to prevent and address conflict of interest, fraud and corruption;
- development and implementation of a roadmap on administrative capacity building on the pilot action on frontloading administrative capacity – to effectively manage and use EU funds;
- broader use of financial instruments and/or contributions to a Croatian’s compartment under InvestEU for revenue-generating and cost-saving activities.

REFERENCES

Atoyan, R. and al. (2016), *Emigration and its economic impact on Eastern Europe*, IMF Staff Discussion Note, International Monetary Fund, Washington (www.imf.org/external/pubs/ft/sdn/2016/sdn1607.pdf).

Constitutional Court of the Republic of Croatia (USRH) (2018), *Decision U-III-5074/2017 of 22 May 2018*, Zagreb.

Dobrotić, I. and al. (2018), *Analiza pristupačnosti, kvalitete, kapaciteta i financiranja sustava ranoga i predškolskog odgoja i obrazovanja u republici hrvatskoj*, Ministry of demography, family and social policies, Zagreb (<https://mdomsp.gov.hr/UserDocsImages/Publikacije/Analiza%20pristupačnosti%20%2C%20kvalitete%20%20kapaciteta%20i%20financiranja%20sustava%20ranog%20i%20predškolskog%20odgoja%20i%20obrazovanja%20u%20Republici%20Hrvatskoj.pdf>).

Doolan, K., and al. (2018), 'Social inequalities in access to higher education in Croatia: five decades of resilient findings', *Journal of further and higher education*, 42:4.

Eurofound (2013), *Tackling undeclared work in Croatia and four EU candidate countries*, Eurofound, Dublin (www.eurofound.europa.eu/publications/report/2013/labour-market/tackling-undeclared-work-in-croatia-and-four-eu-candidate-countries).

Eurofound (2018), *Involvement of the national social partners in the European Semester 2017: Social dialogue practices*, Eurofound, Luxembourg (www.eurofound.europa.eu/publications/report/2018/involvement-of-the-national-social-partners-in-the-european-semester-2017-social-dialogue-practices).

European Commission (2016a), *Connectivity for a competitive digital single market - Towards a European gigabit society*, European Commission, Brussels (<https://ec.europa.eu/digital-single-market/en/news/communication-connectivity-competitive-digital-single-market-towards-european-gigabit-society>).

European Commission (2016b), *Country report Croatia 2016. Including an in-depth review on the prevention and correction of macroeconomic imbalances*, European Commission, Brussels (https://ec.europa.eu/info/publications/2016-european-semester-country-reports_en).

European Commission (2016c), *Detailed information on the assessment of regulation in professional services*, European Commission, Brussels (<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016SC0436&from=DE>).

European Commission (2016d), *Employment and social developments in Europe*, European Commission, Luxembourg (<https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=7952&visible=0&>).

European Commission (2016e), *European platform tackling undeclared work: Member state factsheets and synthesis report*, European Commission, Brussels (www.ec.europa.eu/social/BlobServlet?docId=18860&langId=en).

European Commission (2016f), *The early warning report for Croatia*, European Commission, Brussels (http://ec.europa.eu/environment/waste/pdf/early_warning_report_HR.pdf).

European Commission (2017a), *Annual accident report 2017*, European Commission, Brussels (https://ec.europa.eu/transport/road_safety/sites/roadsafety/files/pdf/statistics/dacota/asr2017.pdf).

European Commission (2017b), *Benchmarks for the assessment of private debt. Note for the Economic Policy Committee*, European Commission, Brussels.

European Commission (2017c), *Country report Croatia 2017. Including an in-depth review on the prevention and correction of macroeconomic imbalances*, European Commission, Brussels (https://ec.europa.eu/info/publications/2017-european-semester-country-reports_en).

European Commission (2017d), *Flash Eurobarometer 457. Report. Businesses' attitudes towards corruption in the EU*, European Union, Brussels (<http://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/getSurveyDetail/instruments/FLASH/search/corruption/surveyKy/2177>).

European Commission (2017e), *Impact assessment*, European Commission, Brussels (<https://publications.europa.eu/en/publication-detail/-/publication/b2d53cb5-074f-11e8-b8f5-01aa75ed71a1/language-en>).

European Commission (2017f), *Ninth report on the implementation status and the programmes for implementation (as required by Article 17) of Council Directive 91/271/EEC concerning urban waste water treatment*, European Commission, Brussels (http://ec.europa.eu/environment/water/water-urbanwaste/implementation/implementationreports_en.htm).

European Commission (2017g), *Special Eurobarometer 470. Report. Corruption*, European Union, Brussels (<http://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/getSurveyDetail/instruments/SPECIAL/surveyKy/2176>).

European Commission (2017h), *The 2018 ageing report: Underlying assumptions and projection methodologies*, European Commission, Brussels (https://ec.europa.eu/info/publications/economy-finance/2018-ageing-report-underlying-assumptions-and-projection-methodologies_en).

European Commission (2018a), *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*, European Commission, Brussels (https://ec.europa.eu/info/sites/info/files/2018-european-semester-country-report-communication_en.pdf).

European Commission (2018b), *2019 Alert mechanism report*, European Commission, Brussels (https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-alert-mechanism-report_en_0.pdf).

European Commission (2018c), *Allocative efficiency in the euro area. Thematic discussion on growth and jobs. Note for the Eurogroup*, European Union, Brussels (https://www.consilium.europa.eu/media/36345/eg_ae_20180827.pdf).

European Commission (2018d), *Annual growth survey 2018*, European Commission, Brussels (https://ec.europa.eu/info/publications/2018-european-semester-annual-growth-survey_en).

European Commission (2018e), *Country report Croatia 2018. Including an in-depth review on the prevention and correction of macroeconomic imbalances*, European Commission, Brussels (https://ec.europa.eu/info/publications/2018-european-semester-country-reports_en).

European Commission (2018f), *Croatia — Review of progress on policy measures relevant for the correction of macroeconomic imbalances*, European Commission, Brussels (https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/macroeconomic-imbalance-procedure/specific-monitoring_en).

European Commission (2018g), *Draft joint employment report*, European Commission, Brussels (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1547650919951&uri=CELEX%3A52018DC0761>).

European Commission (2018h), *Employment and social developments in Europe. Annual review 2018*, Publications Office of the European Union, Luxembourg (<https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8110&furtherPubs=yes>).

European Commission (2018i), *ESIF 2014-2020 EU payments*, European Commission, Brussels (<https://cohesiondata.ec.europa.eu/2014-2020/ESIF-2014-2020-EU-payments-daily-update-/gayr-92qh>).

European Commission (2018j), *European Economic Forecast. Autumn 2018*, European Commission, Brussels (https://ec.europa.eu/info/publications/economy-finance/european-economic-forecast-autumn-2018_en).

European Commission (2018k), *European innovation scoreboard 2018*, European Commission, Brussels (https://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards_en).

European Commission (2018l), *Fundamentals-based private debt benchmarks: enhanced sample and robustness checks. Note to LIME*, not published.

European Commission (2018m), *Pension adequacy report. Current and future income adequacy in old age in the EU*, Publications Office of the European Union, Luxembourg (<https://publications.europa.eu/en/publication-detail/-/publication/f0e89c3f-7821-11e8-ac6a-01aa75ed71a1/language-en>).

European Commission (2018n), *Transport in the European Union. Current trends and issues*, European Commission, Brussels (<https://ec.europa.eu/transport/sites/transport/files/2018-transport-in-the-eu-current-trends-and-issues.pdf>).

European Commission (2019a), *Digital Scoreboard 2019*, European Commission, Brussels (<https://ec.europa.eu/digital-single-market/en/digital-scoreboard>).

European Commission (2019b), *EU Justice scoreboard 2019*, European Commission, Brussels (https://ec.europa.eu/info/policies/justice-and-fundamental-rights/effective-justice/eu-justice-scoreboard_en).

European Commission (2019c), *European Economic Forecast. Winter 2019*, European Commission, Brussels.

European Commission/EACEA/Eurydice (2018), *Structural Indicators for Monitoring Education and Training Systems in Europe – 2018. Eurydice Report*, Publications Office of the European Union, Luxembourg (https://eacea.ec.europa.eu/national-policies/eurydice/content/structural-indicators-monitoring-education-and-training-systems-europe-%E2%80%93-2018_en).

European Commission/EACEA/Eurydice/Eurostat (2014), *Key data on early childhood education and care in Europe. Eurydice and Eurostat report*, Publications Office of the European Union, Luxembourg (<https://ec.europa.eu/eurostat/documents/3217494/5785249/EC-01-14-484-EN.PDF/cbdf1804-a139-43a9-b8f1-ca5223eea2a1>).

Invest Europe (2018), *2017 European private equity activity*, Invest Europe, Brussels (www.investeurope.eu/research/activity-data/annual-activity-statistics/).

Jelavić, V. and EKOBERG (2017), *Strategija niskougljičnog razvoja Republike Hrvatske do 2030. godine, s pogledom na 2050. godinu*, Ministry of Environmental Protection and Energy, Zagreb (www.hgk.hr/documents/prezentacija-14759783310589eb.pdf).

Kralj, A. and al. (2011), *Institutional Evaluation Programme – Evaluation report*, University of Zagreb, Zagreb (www.iep-qaq.org/downloads/publications/iep%20zagreb%20report%20final.pdf).

Matković, T. and D. Čaha (2017), 'Patterns of welfare-to-employment transitions of Croatian Guaranteed Minimum Benefit recipients: a preliminary study', *Public Sector Economics*, 41:3.

Medina, L. and F. Schneider (2018), *Shadow economies around the world: What did we learn over the last 20 years?*, IMF Working paper, International Monetary Fund, Washington (www.imf.org/en/Publications/WP/Issues/2018/01/25/Shadow-Economies-Around-the-World-What-Did-We-Learn-Over-the-Last-20-Years-45583).

Munta, M. (2018), *Iako broj nezaposlenih pada broj uključenih u javne radove raste, čak i onih sa srednjom i višom školom. O čemu se tu radi, ideje*, Zagreb (<http://ideje.hr/iako-broj-nezaposlenih-pada-broj-ukljucenih-u-javne-radove-raste-cak-i-onih-sa-srednjom-i-visom-skolom-o-cemu-se-tu-radi/>).

Orsini, K. and V. Ostojić (2018), *Croatia's Tourism Industry: Beyond the Sun and Sea*, Economic Brief, European Commission, Brussels (https://ec.europa.eu/info/publications/economy-finance/croatias-tourism-industry-beyond-sun-and-sea_en).

Petak, Z. and al. (2018), *Sustainable governance indicators 2018 - Croatia report*, Bertelsmann Stiftung, Gütersloh (www.sgi-network.org/docs/2018/country/SGI2018_Croatia.pdf).

PricewaterhouseCoopers (PwC) (2017), *2017 Asset quality report*, not published.

State Audit Office (SAO) (2018), *Izješće o obavljenoj reviziji učinkovitosti provedbe operativnog programa konkurentnost i kohezija 2014. - 2020.*, Republic of Croatia - State Audit Office, Zagreb (www.revizija.hr/datastore/filestore/160/PROVEDBA-OPERATIVNOG-PROGRAMA-KONKURENTNOST-I-KOHEZIJA-2014-2020.pdf).

Stefanov and al. (2017), *Tackling undeclared work in Croatia: Knowledge-informed policy responses*, GREY Policy Brief (https://www.researchgate.net/publication/319289121_TACKLING_UNDECLARED_WORK_IN_CROATIA_KNOWLEDGE-INFORMED_POLICY_RESPONSES).

Tkalec, M. and al. (2018), *An overview of the real estate market in the Republic of Croatia*, Institute of Economics (EIZ), Zagreb (www.eizg.hr/publications/serial-publications/an-overview-of-the-real-estate-market-in-the-republic-of-croatia/4274).

Trumbić, I. (ed.) and al. (2017), *Draft Climate Change Adaptation Strategy in the Republic of Croatia for the period to 2040 with a view to 2070*, EPTISA ADRIA d.o.o. o. / Ministry of environment and energy, Zagreb (<http://prilagodba-klimi.hr/wp-content/uploads/docs/Draft%20CC%20Adaptation%20Strategy.pdf>).

Vuković, V. 'The political economy of local government in Croatia: Winning coalitions, corruption and taxes', *Public Sector Economics*, 41:4.

Williams, C.C. and al. (2017a), *An evaluation of the scale of undeclared work in the European Union and its structural determinants: Estimates using the Labour Input Method*, Publications Office of the European Union, Luxembourg (<https://ec.europa.eu/social/BlobServlet?docId=19002&langId=en>).

Williams, C.C. and al. (2017b), *Preventative policy measures to tackle undeclared work in Croatia*, Ministry of labour and pension system, Zagreb (www.researchgate.net/publication/318453335_Preventative_Policy_Measures_to_Tackle_Undeclared_Work_in_Croatia).

Williams, C.C. and I.A. Horodnić (2017), *Under-declaring work, falsely declaring work: Undeclared employment in the European Union*, European Commission, Brussels (<https://ec.europa.eu/social/BlobServlet?docId=18376&langId=en>).

World Bank (2018a), *Doing business 2019. Training for reform*, World Bank Group, Washington (www.doingbusiness.org/en/reports/global-reports/doing-business-2019).

World Bank (2018b), *The Republic of Croatia systematic country diagnostic*, World Bank Group, Washington (<http://documents.worldbank.org/curated/en/452231526559636808/Croatia-Systematic-Country-Diagnostic>).