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Country Report Hungary 2018

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

**2018 European Semester: Assessment of progress on structural reforms, prevention and
correction of macroeconomic imbalances, and results of in-depth reviews under
Regulation (EU) No 1176/2011**

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EXECUTIVE SUMMARY

Hungary's steady economic recovery offers a window of opportunity to ensure sustainable growth in the coming decade.⁽¹⁾ The country's financial vulnerabilities seen in the aftermath of the crisis have been markedly reduced and the economy has been staging a steady recovery. Real GDP surpassed its pre-crisis peak in 2014, whereas domestic demand and investment reached similar levels by 2017. The growth potential has been gradually recovering, albeit it still remains moderate for a catching-up economy. Reflecting also the costs of economic adjustment, the income convergence of the country has been relatively slow lagging behind regional peers. The main challenge now is to bolster economic convergence by well-designed structural reforms, while maintaining a balanced growth path.

After a temporary lull, the Hungarian economy grew strongly in 2017. GDP is estimated to have grown above potential helped by a supportive external environment and accommodative domestic policies. Household consumption was boosted by double-digit wage growth. Investment picked up strongly also due to the resumption of EU fund absorption. Corporate investment by large firms gained momentum, while household investment increased sharply albeit from a low level. Healthy export growth mirrored global developments, but the contribution of net exports to growth turned negative as imports grew even faster. Inflation increased and approached the central bank's target. In 2018, growth is projected to remain strong as supporting factors are expected to prevail.

Employment reached record-highs. While the economic upturn is the main driving force, policy measures also helped to improve the labour market situation. Cross-border labour migration and adverse demographic trends however reduced labour supply, particularly among skilled workers. The unemployment rate thus fell to its lowest level on record in 2017, and in certain segments labour shortages emerged.

⁽¹⁾ This report assesses Hungary's economy in the light of the European Commission's Annual Growth Survey published on 22 November 2017. In the survey, the Commission calls on EU Member States to implement reforms to make the European economy more productive, resilient and inclusive. In so doing, Member States should focus their efforts on the three elements of the virtuous triangle of economic policy — boosting investment, pursuing structural reforms and ensuring responsible fiscal policies.

Bank lending picked up. New lending grew strongly, while banks rapidly reduced the stock of non-performing loans in 2017. As a result, credit stock grew at a rate close to nominal GDP growth and asset quality improved significantly. The economic recovery and central bank measures facilitated the process. Banks comfortably met capital requirements and returned to profitability.

The fiscal stance is loosening. Despite buoyant domestic demand, the headline deficit is forecast to increase from 1.9 % of GDP in 2016 to around 2.5 % in 2018. Hence, the structural fiscal balance is projected to deteriorate well below the country's medium-term objective. This results mainly from significant cuts in social contributions and taxes. The government debt-to-GDP ratio has been decreasing gradually and is expected to decline further in the next two years thanks to high nominal GDP growth. However, in the absence of future fiscal adjustment, this positive trend is at risk in the medium term

Albeit contained at this stage, risks to a balanced growth path may start to emerge. High capacity utilisation suggests that the economy is now moving above potential. Particularly, labour supply may soon reach its limits, adding to the already considerable wage pressure. House prices have been increasing rapidly since 2014. Nevertheless, domestic demand in real terms only reached the pre-crisis level in 2017, and real house prices stayed below pre-crisis levels. Moreover, the current account remained in surplus. However, the pressure on consumer prices may accumulate if consumption growth accelerates further on the back of fast wage growth, falling precautionary savings and strong lending.

Hungary made limited progress in addressing the 2017 country-specific recommendations. Whereas some progress was made in reducing the tax wedge for low-income earners, less was achieved in reducing the complexity of the tax system. Some progress was made in strengthening transparency and competition in public procurement, but progress was limited in strengthening the anti-corruption framework. Limited progress was made in improving the regulatory environment in services. There was some progress in better targeting the public work scheme and reinforcing other active labour market

policies. The progress was limited in increasing the participation of disadvantaged groups, in particular Roma, in inclusive mainstream education and in improving the adequacy and coverage of social assistance and unemployment benefits.

Regarding the progress on reaching the national targets under the Europe 2020 Strategy, Hungary is performing well in reducing greenhouse gas emissions, increasing renewable energy, tertiary education and the employment rate; while more effort is needed to increase R&D intensity and reduce early school leaving and poverty.

Hungary performs well on a number of indicators of the Social Scoreboard supporting the European Pillar of Social Rights, but challenges remain. The gender employment gap merits attention, together with the low share of children under the age of 3 enrolled in formal childcare. The share of early school leavers increased further from an already high level. Employment outcomes have been buoyed by the recovery. Income inequality is relatively low and the effectiveness of social transfers in reducing poverty remains comparatively high despite some deterioration recently.

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

- **Several measures have been implemented to improve the tax system, but some problems remain.** The country's high tax burden is set to moderate due to sizable tax cuts. Moreover, the lowering of social contributions helps to ease the impact of wage increases on labour costs. Nevertheless, without offsetting measures, these tax cuts pose medium-term fiscal risks. While decreasing, the tax wedge on labour, especially for certain low-income groups, is still high in EU comparison. The complexity of the tax system, coupled with the continued presence of sector-specific taxes, remains a weakness. Administrative burdens of tax collection are still significant, but considerable efforts have been made to address this. Some indicators suggest that Hungary's tax rules may be used by multinationals in aggressive tax planning structures. It is shown by the large capital flows as a share of GDP through special
- purpose entities, combined with the absence of withholding taxes.
- **Hungary faces a pronounced productivity challenge.** Productivity growth has been slow for a decade now compared to peer countries. Although potential growth estimates show some recovery, the challenge is becoming more pressing as labour reserves diminish. There are wide and persistent productivity differences between export-oriented, mainly foreign-owned companies and smaller domestic firms, with limited positive spill-overs from the high-productivity segment. The propensity of SMEs to innovate is low and Hungary remains a moderate user of digital technologies. Regulatory barriers in services and retail trade and unpredictability of regulation hamper the efficient reallocation of resources. Institutional weaknesses and human capital inadequacies also constrain productivity growth.
- **Weaknesses in institutional soundness and governance could weigh on the country's economic convergence.** Limited transparency and quality of policy making is a source of uncertainty for investors. There are deficits in evidence-based policy formulation and stakeholder engagement. Social dialogue structures and processes remain underdeveloped. Hungary performs weakly on the accessibility and quality of public information. Challenges concerning the functioning of the justice system require close monitoring. Available indicators point to notable corruption risks, and there are gaps in the anti-corruption framework. Important measures were taken regarding public procurement, but there remains scope to further improve transparency and competition in tendering processes.
- **The education and healthcare systems reveal shortcomings in fostering the development of human capital.** Education outcomes in basic skills are significantly below the EU average. The impact of socioeconomic background on education outcomes is among the highest in the EU. Disadvantaged students, in particular Roma, remain concentrated in certain schools. The health system is faced with high risks from unhealthy lifestyles, uneven

quality of care and disparities in access. While showing improvements, health outcomes lag behind most other EU countries reflecting also the limited effectiveness of healthcare provision. Despite reform efforts, the setup of service delivery remains strongly hospital centred, with weaknesses in primary care and care coordination of chronic disease patients.

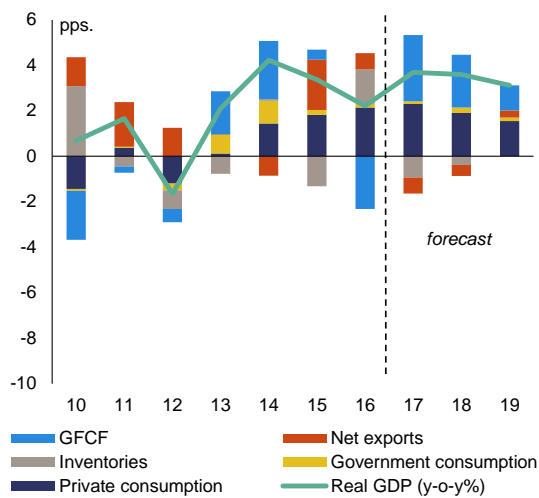
- **Employment policies face the challenge of mobilising labour reserves fast enough to meet strong labour demand.** While the public work scheme still remains the main active labour market policy, it has had limited success in bringing participants back to the labour market. Nevertheless the number of its participants started to diminish thanks to the strengthened recovery. The government is taking further steps to facilitate this process, while other active labour market policies are gradually expanding. However, an evidenced-based system that would help jobseekers to receive services tailored to their particular needs is not yet in place. The high gender employment gap points to untapped labour reserves. To utilize this reserve, measures were taken to improve the availability of childcare facilities. The low employment rate of Roma remains an important challenge.
- **Overall, the situation regarding poverty improved notably, but vulnerable groups continue to face high risk of poverty.** While the share of population at risk of poverty and social exclusion is falling, it is still above the EU average. Children and the Roma remain much more exposed to the risk of poverty than the rest of the population. Changes in the tax and benefit system contributed to rising income inequality. There has been a clear shift from social benefits towards work-related family supports and in-kind benefits, which are not sufficiently targeted to the poor. At the same time, the adequacy of social assistance and unemployment benefits declined. While home-ownership subsidies expanded, there is no improvement in social housing.

1. ECONOMIC SITUATION AND OUTLOOK

GDP growth

Following a temporary lull in 2016, growth picked up in 2017 due to a supportive external environment. GDP is expected to grow above potential on the back of the resumption of EU-funded investment, fiscal stimulus, negative real interest rates and the strong recovery of the global economy. As a result, real GDP is expected to have increased by 3.8 % year-on-year in 2017 (Graph 1.1). Economic growth continued to be primarily driven by domestic demand. Gross fixed capital formation is expected to have grown above 20 % in 2017 and household consumption was also picking up. Trade flows accelerated in 2017, while import growth outpaced export growth. As a result, net exports contributed negatively to real GDP growth in 2017.

Graph 1.1: Contributions to real GDP growth

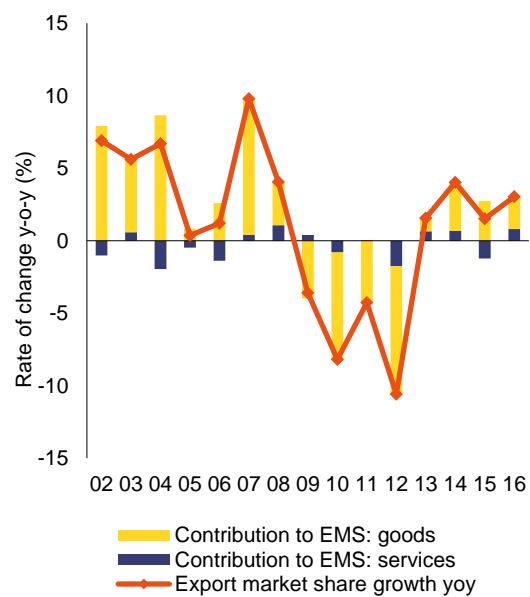


Source: DG ECFIN, Autumn 2017 Economic Forecast

Strong growth is set to continue. Real GDP growth is projected to increase by 3.7 % in 2018, but to slow to 3.1 % in 2019 as capacity constraints emerge on the back of a gradually widening positive output gap. Household consumption and investment are projected to expand strongly in 2018, boosted by government-initiated and market-driven wage increases, and supported by a strong recovery in bank lending. Corporate and public investments are forecast to continue to grow by double digits as EU-funded projects are implemented. At the same time, strong domestic demand is set to result in rapid import

growth and thus the growth contribution of net exports is expected to remain negative. In 2019, economic growth is projected to slow as a result of a build-up in capacity constraints, slowing growth of real disposable income and moderating trade as economic recovery matures in the EU.

Graph 1.2: Export market shares



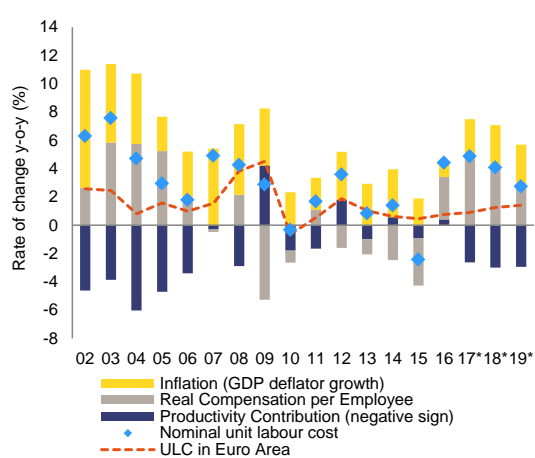
Source: Eurostat

Hungary's export market share continues to recover. The aftermath of the financial crisis resulted in a cumulative loss for the country's export market share, which totalled 24 %. Since 2013, Hungary has increased its export market share and by the end of 2016 it regained one third of the previous losses (Graph 1.2). New export capacities and improved cost competitiveness supported the recovery. Additional export capacities are in the pipeline, in particular in the automotive sector, which is expected to facilitate improvements in export performance. However, increasing unit labour costs pose a risk in the years ahead.

Hungary's unit labour costs increased further in 2017. The deterioration in cost competitiveness started in 2016, when the increase in labour costs was coupled with relatively low GDP growth. However, following the crisis, cost competitiveness steadily improved, which may provide some room for increasing labour costs. In 2017, nominal unit labour costs grew by 4.9 %,

which was 4 pps. above the EU average. This increase was mainly driven by wage growth. Productivity gains were only about half as strong as real compensation gains by employees. Inflation also contributed to the nominal unit labour costs increases (Graph 1.3). Looking ahead, real wage growth is set to slow down. Real unit labour costs are therefore expected to stabilise by 2019.

Graph 1.3: Unit labour cost developments in Hungary



Source: Eurostat

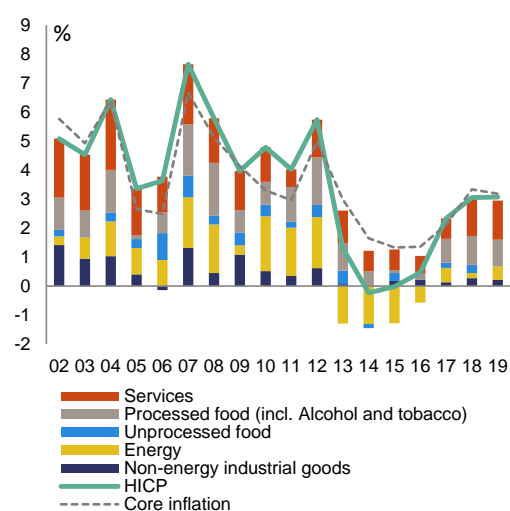
Inflation and monetary policy

Inflation picked up in 2017 and is projected to accelerate further as domestic price pressures increase. Headline inflation remained muted between 2014 and 2016 as falling energy prices fully offset limited inflation in services and food. However, core inflation remained stable at around 1.3 %. Inflation is forecast to accelerate towards the central bank's target of 3.0 %. Price growth is expected to be broad based, as energy prices rise further and prices of services accelerate on the back of strong wage growth (Graph 1.4).

Price pressure may re-emerge against the backdrop of pro-cyclical fiscal and monetary loosening. Gross wages grew by more than 12 % in 2017 and are expected to grow rapidly in 2018 as well, affected also by minimum wage hikes. Asset prices are rising, which also improves the wealth of households. All these would point to strong consumption. However, in 2017 consumption lagged behind wage developments, probably as a result of cautious behaviour rooted in

the crisis. Moreover, wages are increasing from a historically low level (see Box 1.1), which may explain the gradual pick-up in consumption. There is a risk that inflation will accelerate as households' confidence rises and the previously delayed consumption of durable goods recovers. In addition, negative real interest rates may induce an increased take up of loans. These risks are expected to be exacerbated by fiscal loosening.

Graph 1.4: Contribution to inflation



Source: European Commission calculations

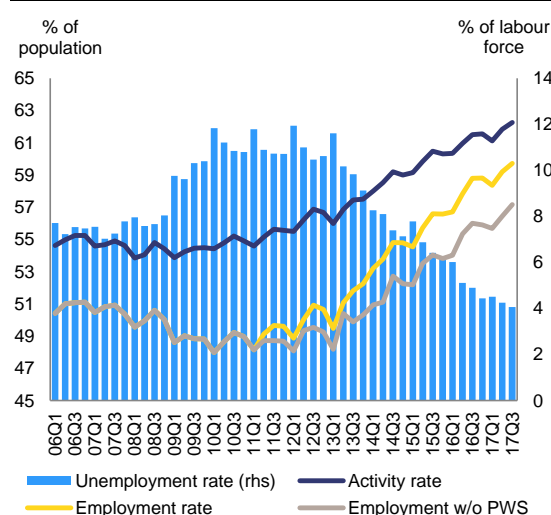
Monetary policy remains accommodative. The base rate has been unchanged at 0.9 % since May 2016. Moreover, the volume of the deposit facility was gradually limited to HUF 75 billion by the end 2017. This gave an impetus to banks to lend, or as an alternative buy domestic sovereign debt, which now represents a large share of their assets. In recent years unconventional policy tools played a key role to support monetary loosening. As a result of global developments and measures of the central bank, long-term interest rates declined to a historic low, below 2 % by the end 2017.

Labour market

The Hungarian labour market performance continued to improve, while the market became increasingly tight. Employment continued to expand to hit new all-time-highs in 2017, and unemployment rate fell close to 4 % in 2017 (Graph 1.5). These developments were due to structural factors (the increasing education level,

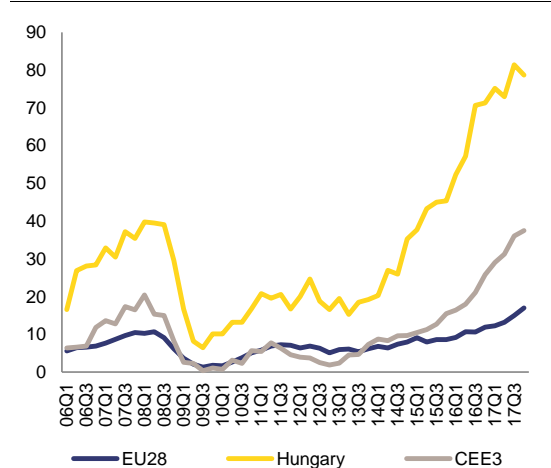
past reforms closing early retirement pathways), as well as to improving cyclical position of the economy. Participation in the public works scheme (PWS) declined, yet the scheme still employed about 4% of the labour force in 2017 (see Section 3.3).

Graph 1.5: Activity, employment and unemployment



Source: Hungarian Central Statistical Office (HCSO)

Graph 1.6: Labour as a limiting factor in industry



(1) y-axis: Percentage of managers reporting labour as a limiting factor for their business. CEE3: Czech Republic, Slovakia and Poland

Source: European Commission

Labour shortages generate strong wage growth and limit the prospects for further employment growth. The economic sentiment indicator shows that the Hungarian labour market is far tighter than in its regional peers (Graph 1.6). Cross-border

labour migration and adverse demographic developments withdraw a sizeable amount of well qualified workforce from the labour market, which has contributed to labour shortages. Outward labour migration started to intensify after 2010 (Hárs, 2016). Between 2010 and 2014 the net effect of cross-border migration amounted to a loss of around 200 000 people. Labour migrants tend to be more educated than the average population in both the home and destination countries (SEEMIG, 2014). Demographic developments reduced active population further by 100 000 during the same period. Scarce labour drives up wages, while higher wages may ease the tightness of the labour market by discouraging emigration.

Social developments

The economic recovery and higher wages have contributed to the overall improvement of the poverty situation. The share of population at risk of poverty or social exclusion is decreasing, returning to pre-crisis level, but remains above the EU average. This positive development is mainly driven by falling severe material deprivation and decrease of jobless households, thanks to increasing employment level and higher labour related income of households. However, the incidence of poverty decreased to lesser extent compared to the improvement of the labour market situation, particularly for children.

Income inequalities grew at the beginning of the decade but have remained below the EU average. In 2010, the richest 20 % of households had income that was 3.4 times higher than that of the poorest 20 %. By 2016 this ratio had increased to 4.3. Over the same period, the income of households has not grown as fast as GDP, raising questions about the inclusiveness of growth. Changes to the tax and benefits system also contributed to rising income inequality (see Section 3.3).

Public finances

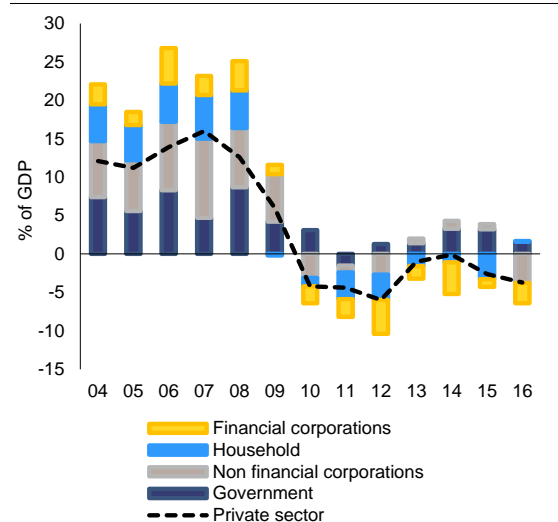
Accelerating economic growth is also supported by fiscal loosening. After hitting a historic low of 1.9 % of GDP in 2016, the headline deficit is forecast to increase to 2.1 % of GDP in 2017 and then further to 2.6 % in 2018 before receding to

2.3 % in 2019. These developments mainly reflect substantial tax cuts (see Section 3.1) and partly also spending increases. The expansionary fiscal stance is expected to result in a sharp deterioration in the estimated structural balance, reaching $-3\frac{1}{2}$ % of GDP in 2018 and 2019, well below the country's medium-term objective of -1.5 % of GDP.

The gradual decline of public debt is expected to continue in 2017-2019. It is supported by the forecast for high nominal GDP growth, while the pre-financing needs of EU funds result in a temporary debt-increasing effect. The government debt-to-GDP ratio is projected to decrease from 73.9 % in 2016 to below 70 % by the end of 2019. However, the deterioration of the structural balance poses a risk to the debt-reduction path in the medium term (see Section 3.1)

Financial sector

Graph 1.7: Breakdown of Credit Flows by sector



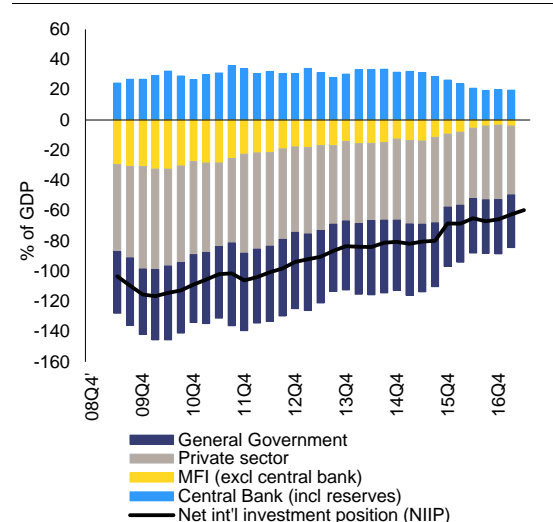
Source: Eurostat

Private sector debt ratios continued to contract on account of cross-border loans of corporations. Private debt was reduced to around 78 % of GDP in 2016 from its peak of 117 % of GDP in 2009. The credit flows turned positive for households in 2016 as the new government housing support scheme and rising property prices started to spur household borrowing (Graph 1.7). The growth in credit to non-financial corporations contracted. The contraction was due to inter-

company loans and loans from foreign financial institutions, while the credit stock in domestic financial institutions increased. Overall, credit growth in 2016 remained limited by banks' cautious lending strategies. However, the situation improved markedly in 2017. The year-on-year growth in credit to non-financial corporations provided by domestic institutions outpaced the nominal GDP growth in Q3 2017 (see Section 3.2).

External position

Graph 1.8: Net international investment position



Source: Eurostat

External balances continued to improve. Negative net international investment position (NIIP) is expected to have improved to around 58 % in 2017 from its peak of 115 % in 2009, although it remains above the prudential and fundamentally explained thresholds for NIIP⁽²⁾ (Graph 1.8). Net external debt declined from above 78 % of GDP in 2009 to below 10 % of GDP in 2016, acting as a mitigating factor in external sustainability risks. The economy was rebalanced by maintaining high current and capital account surpluses. EU funds kept the capital account in a sizeable surplus, while the private investment rate and consumption of durable goods were below

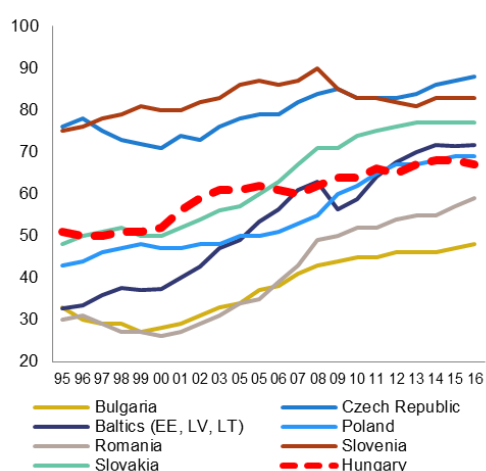
(²) The country-specific NIIP explained by fundamentals is the NIIP level that would occur if a country had run its current account since 1995 in line with its fundamentals. The country-specific prudential threshold identifies the NIIP level at which the risk of an external crisis emerges. The threshold varies with relative income per capita.

their historical averages. Hungary's strong net lending position is expected to sustain as supporting factors remains in place. However, the surplus is expected to fall slightly in 2018 and 2019 as domestic demand will pick up.

Real convergence and potential growth

The convergence towards the average income level in the EU continued, albeit at a relatively slow pace. Hungary's GDP per capita in purchasing power parity terms increased from around half of the EU average in 1995 to two thirds by 2016 (Graph 1.9). However, the country's real convergence has been lagging behind most of its regional peers, even after taking into account differences in starting positions. In 1995, Hungary had the third highest GDP per capita among the EU countries in Central and Eastern Europe, and was 15 % above their average. By the end of this 21-year period, the country had fallen to the seventh place with a level somewhat below the regional average. While the post-crisis period saw a general deceleration in real convergence in the region, Hungary's catching-up had slowed down noticeably already after 2003. Moreover, wide internal disparities remained with an increasing gap between the most and least developed regions in Hungary.

Graph 1.9: GDP per capita based on purchasing power parity (% of EU average)

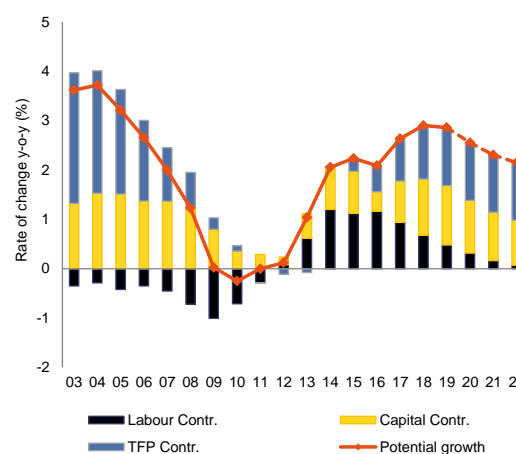


Source: Eurostat

Hungary's growth potential is picking up, but productivity growth still remains moderate for

a sustained improvement. Following a sharp fall after 2008, the recovery of the country's potential GDP growth is expected to accelerate, rising to an average of 2.8 % in 2017-2019 (Graph 1.10). It is already close to the average of regional peers, albeit still remains some 0.5 pps. below the level seen before the crisis. After several years showing a negligible growth contribution, total factor productivity (reflecting the quality and efficient utilisation of resources) has also started to recover. However, the estimated productivity growth still remains moderate both historically and in regional comparison. As labour's contribution to potential growth is expected to diminish in the future, the estimated improvement in growth potential may not persist in the medium term unless total factor productivity is enhanced further. Based on the forecast trends, potential growth is projected to drop to below [xx]% again after 2019. (The productivity challenge is also discussed in Boxes 1.1 and 3.4.2, while some key constraining factors are highlighted in Sections 3.3, 3.4. and 3.5)

Graph 1.10: Development of potential GDP growth



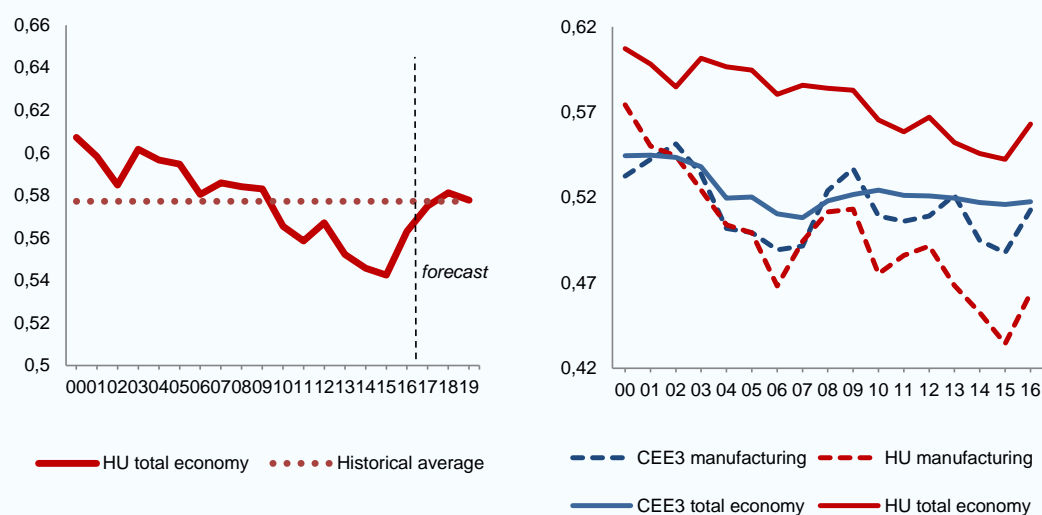
Source: European Commission calculations,

Box 1.1: Steep wage growth: realignment or overshoot?

In 2017-2018, Hungary is expected to experience sharp increases in nominal wages, due to the tight labour market and further propelled by significant minimum wage hikes. From a historical perspective, the wage share (i.e. the ratio of labour cost per employee to the gross value added per total employment) in the total economy declined during the post-crisis years and fell below the long-term average. This shows that wages were lagging behind productivity developments over this period. In 2016, the wage share started to increase sharply and is expected to rise further, reaching its historical average in 2018. It is then expected to stabilise as wage dynamics slow and GDP growth remains strong.

Large firms and foreign-owned firms are likely able to cope well with increasing labour costs as the wage share in manufacturing, where many such firms operate, is much lower than in the total economy. A study (Palócz, 2016) found that foreign companies are three times more productive than domestic firms, which makes them more resilient against some loss in price competitiveness. Firms may also be able to react to increasing wage costs by dislocating part or all of their production. However, wage levels in Hungary are still low among peer countries and they also enjoy fast wage growth.

Graph 1: Change in the wage share in the total economy in the manufacturing sector



Source: Eurostat, Commission's calculation

Less productive firms, in particular SMEs, face challenges to be able to cope with rapid wage rises. The Hungarian wage share in the total economy is higher than in the regional peers. This suggests that there is little room to increase labour costs in SMEs. SMEs could potentially adapt to wage increases with the help of preferential and simplified tax schemes for SMEs or informal economy practices. In addition, the rate of social contribution was cut by 7.5 pps. in two years, which mitigates the effect of increasing wages. In the past, part of salaries may have been paid informally, so the effective increase in labour costs could have been smaller than indicated by wage statistics. In labour-intensive service sectors firms may also pass on rising wage costs in output prices. Inflation in such services jumped to above 4% in 2017. Overall, the sharp wage increases in 2017-2018 can be considered realignment rather than an overshoot. However, higher labour costs affect firms differently. In manufacturing there may be more room to increase wages. Due to the tight labour market, there is a risk of a faster wage rise than forecast, which would lead to a further loss in cost competitiveness and price pressure.

Table 1.1: Key economic and financial indicators - Hungary

	2004-07	2008-12	2013-14	2015	2016	forecast		
						2017	2018	2019
Real GDP (y-o-y)	3.4	-1.1	3.2	3.4	2.2	3.8	3.7	3.1
Potential growth (y-o-y)	2.9	0.3	1.5	2.2	2.1	2.6	2.9	2.9
Private consumption (y-o-y)	2.0	-2.4	1.5	3.6	4.3	.	.	.
Public consumption (y-o-y)	-0.1	0.6	4.6	1.1	0.8	.	.	.
Gross fixed capital formation (y-o-y)	4.0	-4.3	11.1	1.9	-10.6	.	.	.
Exports of goods and services (y-o-y)	16.6	2.0	6.6	8.5	3.4	.	.	.
Imports of goods and services (y-o-y)	13.6	0.1	7.7	6.4	2.9	.	.	.
Contribution to GDP growth:								
Domestic demand (y-o-y)	2.0	-2.1	3.9	2.5	0.0	.	.	.
Inventories (y-o-y)	-0.1	-0.5	-0.4	-1.3	1.5	.	.	.
Net exports (y-o-y)	1.5	1.6	-0.4	2.2	0.7	.	.	.
Contribution to potential GDP growth:								
Total Labour (hours) (y-o-y)	-0.4	-0.5	0.8	1.1	1.2	0.9	0.7	0.5
Capital accumulation (y-o-y)	1.5	0.6	0.6	0.9	0.4	0.8	1.1	1.2
Total factor productivity (y-o-y)	1.8	0.3	0.0	0.3	0.5	0.9	1.1	1.2
Output gap	2.8	-2.5	-1.8	0.3	0.4	1.5	2.1	2.4
Unemployment rate	7.1	10.2	9.0	6.8	5.1	4.2	4.0	4.0
GDP deflator (y-o-y)	4.1	3.4	3.2	1.9	1.0	2.8	2.9	3.1
Harmonised index of consumer prices (HICP, y-o-y)	5.5	4.9	0.9	0.1	0.4	2.4	2.8	2.9
Nominal compensation per employee (y-o-y)	7.3	2.4	1.3	-1.5	4.0	7.6	7.2	5.8
Labour productivity (real, person employed, y-o-y)	3.6	0.0	0.2	0.9	-0.4	.	.	.
Unit labour costs (ULC, whole economy, y-o-y)	3.6	2.4	1.1	-2.4	4.4	4.9	4.1	2.7
Real unit labour costs (y-o-y)	-0.5	-1.0	-2.0	-4.2	3.4	2.0	1.2	-0.4
Real effective exchange rate (ULC, y-o-y)	2.7	-2.7	-2.3	-5.1	3.1	4.8	3.2	0.8
Real effective exchange rate (HICP, y-o-y)	3.1	-0.8	-2.5	-2.0	0.8	1.3	2.0	.
Savings rate of households (net saving as percentage of net disposable income)	4.6	3.0	5.0	4.3
Private credit flow, consolidated (% of GDP)	13.3	0.8	-0.5	-2.6	-3.6	.	.	.
Private sector debt, consolidated (% of GDP)	81.6	110.5	93.1	84.3	77.0	.	.	.
of which household debt, consolidated (% of GDP)	24.8	36.4	26.7	21.3	20.3	.	.	.
of which non-financial corporate debt, consolidated (% of GDP)	56.8	74.0	66.4	63.0	56.7	.	.	.
Gross non-performing debt (% of total debt instruments and total loans and advances) (2)	.	9.8	14.1	11.0	8.1	.	.	.
Corporations, net lending (+) or net borrowing (-) (% of GDP)	-1.4	3.5	4.9	4.1	3.3	3.7	3.4	3.5
Corporations, gross operating surplus (% of GDP)	23.8	24.4	25.9	26.4	26.1	25.8	26.0	27.1
Households, net lending (+) or net borrowing (-) (% of GDP)	0.8	1.6	3.9	5.2	5.0	4.8	4.6	3.7
Deflated house price index (y-o-y)	.	-6.9	-0.6	13.3	13.6	.	.	.
Residential investment (% of GDP)	4.4	3.1	1.9	2.2	2.4	.	.	.
Current account balance (% of GDP), balance of payments	-7.4	-1.0	2.6	3.4	6.1	4.3	3.3	3.2
Trade balance (% of GDP), balance of payments	-1.2	4.5	6.7	8.9	10.1	.	.	.
Terms of trade of goods and services (y-o-y)	-0.7	-0.5	0.8	0.9	1.1	-0.6	0.2	0.2
Capital account balance (% of GDP)	0.5	1.9	3.6	4.6	0.1	.	.	.
Net international investment position (% of GDP)	-89.4	-104.9	-81.7	-67.8	-65.0	.	.	.
Net marketable external debt (% of GDP) (1)	-33.8	-49.0	-32.7	-18.9	-12.2	.	.	.
Gross marketable external debt (% of GDP) (1)	75.2	112.3	91.4	77.6	71.0	.	.	.
Export performance vs. advanced countries (% change over 5 years)	47.1	13.7	-13.8	-6.4	-3.2	.	.	.
Export market share, goods and services (y-o-y)	4.9	-4.6	2.9	1.5	3.6	.	.	.
Net FDI flows (% of GDP)	-2.5	-1.6	-1.4	-2.2	-1.9	.	.	.
General government balance (% of GDP)	-7.2	-4.1	-2.7	-2.0	-1.9	-2.1	-2.6	-2.3
Structural budget balance (% of GDP)	.	-2.9	-2.0	-2.1	-2.0	-3.2	-3.6	-3.5
General government gross debt (% of GDP)	61.8	77.1	75.6	74.7	73.9	72.6	71.5	69.4
Tax-to-GDP ratio (%)	37.4	38.2	38.1	38.9	39.4	38.7	37.4	37.2
Tax rate for a single person earning the average wage (%)	35.6	35.5	34.5	34.5	33.5	.	.	.
Tax rate for a single person earning 50% of the average wage (%)	19.6	26.4	34.5	34.5	33.5	.	.	.

(1) NIIP excluding direct investment and portfolio equity shares

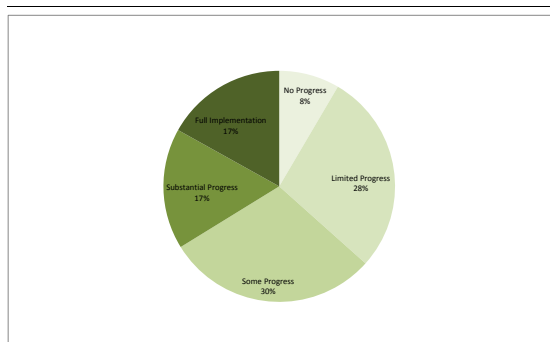
(2) Domestic banking groups and stand-alone banks, EU and non-EU foreign-controlled subsidiaries and EU and non-EU foreign-controlled branches.

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

2. PROGRESS WITH COUNTRY-SPECIFIC RECOMMENDATIONS

Progress with the implementation of the recommendations addressed to Hungary in 2017 has to be seen in a longer term perspective since the introduction of the European Semester in 2011. Looking at the multi-annual assessment of the implementation of the CSRs since these were first adopted, 64 % of all the CSRs addressed to Hungary have recorded at least 'some progress'. 36 % of these CSRs recorded 'limited' or 'no progress' (see Figure 2.1). Substantial progress has been achieved in fiscal policy as the country exited from the excessive deficit procedure and the debt ratio has been put on a firm downward path. Similarly, substantial progress has been made in the financial sector, for instance improving the asset quality of the banks and access to finance.

Graph 2.1: Hungary - Level of implementation today of 2011 - 2017 CSRs



* The assessment of the country-specific recommendations related to fiscal policy excludes compliance with the Stability and Growth Pact

** The multiannual CSR assessment looks at the implementation until 2018 Country Report since the CSRs were first adopted.

Source: European Commission

Since 2011 the government has achieved considerable progress in strengthening public finances. The government implemented measures including structural reforms to decrease budgetary deficit below 3 % of GDP in a durable manner. As a result, in 2013, the decision on the existence of an excessive deficit was abrogated. However, recently, structural deficit deteriorated.

The labour market situation has improved considerably since 2011 supported by the measures implemented by the government. Recommendations on labour taxation, tax compliance, active labour market policies, education and social assistance have been adopted repeatedly since the launch of the European

semester. In the last 7 years the authorities have implemented several measures to reduce tax burden on labour. The tax wedge has decreased, especially for families and selected groups. However, it remains high, in particular for low income earners. Some progress can be observed regarding active labour market policies. For years, the authorities' main focus was the public works scheme, despite its limited efficiency. Recently, the number of public workers started to decline reflecting improving labour market conditions. Efforts of the government to increase tax compliance yielded significant results, in particular due to the introduction of the online cash registers.

Hungary has received recommendations to improve the business environment every year since the European Semester started. Recommendations cover several fields including administrative burdens; public procurement; the legislative process; competition; regulatory environment and corruption. While the complex tax system and high compliance cost remains a challenge for firms, several promising measures were developed building on digitalisation. The authorities implemented a number of measures to strengthen transparency and competition in public procurement. Hungary adopted a new legislation and introduced the e-procurement system which is a big step towards further increasing transparency and competition in public procurement.

The quality of the banking sector assets has greatly improved and lending activity has picked up recently. Between 2013 and 2015 Hungary received yearly recommendations to take measures to restore lending to the real economy to reduce burdens on banks and improve asset quality. Since then banking tax has been reduced significantly and the level of non-performing loans held by banks has dropped considerably.

Following the 2016 country report and the in-depth review, Hungary was found to no longer experience macroeconomic imbalances. Hungary was assessed to be on a balanced, albeit still relatively moderate growth path, while the public debt ratio declined since the beginning of the decade. The indicators of net international investment position had rapidly improved.

Table 2.1: Summary table in 2017 CSR assessment

<p>CSR1: <i>Pursue a substantial fiscal effort in 2018 in line with the requirements of the preventive arm of the Stability and Growth Pact, taking into account the need to strengthen the ongoing recovery and to ensure the sustainability of Hungary's public finances.</i></p>	<p>CSRs related to compliance with the Stability and Growth Pact will be assessed in spring once the final data are available.</p>
<p>CSR2: <i>Complete the reduction of the tax wedge for low-income earners and simplify the tax structure, in particular by reducing the most distortive sector-specific taxes. Strengthen transparency and competition in public procurement, by implementing a comprehensive and efficient e-procurement system, and strengthen the anti-corruption framework. Strengthen regulatory predictability, transparency and competition in particular in the services sector, notably in retail.</i></p>	<p>Limited progress</p> <ul style="list-style-type: none"> • Some progress has been made on reducing the tax wedge of low income earners. • Limited progress has been made regarding the complexity of the tax structure. • Some progress has been made on strengthening transparency and competition in public procurement. • Limited progress has been made on strengthening anti-corruption framework. • Limited progress has been made on improving the regulatory environment in the services sector.
<p>CSR3: <i>Better target the public works scheme to those furthest away from the labour market and provide effective support to jobseekers in order to facilitate transitions to the labour market, including by reinforcing active labour market policies. Take measures to improve education outcomes and to increase the participation of disadvantaged groups, in particular Roma, in inclusive mainstream education. Improve the adequacy and coverage of social assistance and the duration of unemployment benefits.</i></p>	<p>Limited progress</p> <ul style="list-style-type: none"> • Some progress has been made to better target the public work scheme and reinforce other active labour market policies. • Limited progress has been made to improve educational outcomes and to increase the participation of disadvantaged groups, in particular Roma, in inclusive mainstream education. • Limited progress has been made in improving the adequacy and coverage of social assistance and unemployment benefits.

Source: European Commission

Hungary has made limited progress in addressing the 2017 country-specific recommendations (see table 2.1). Whereas, some progress has been made in reducing the tax wedge for low-income earners, there has been less so in reducing the complexity of the tax system. Some progress has been made in strengthening transparency and competition in public procurement as the authorities implemented a number of measures, especially the amendment to the Public Procurement Act. The new e-procurement system has been introduced as of 1

January 2018, which is a big step towards further increasing transparency and competition. Its efficiency and impact is still to be seen in the coming years. On the regulatory environment in the services and retail sector, limited progress has been achieved. Regarding labour market, education and social policies, some progress has been made in better targeting the public work scheme and reinforcing other active labour market policies reflecting the efforts made by the authorities in this area.

European Structural and Investment Funds are pivotal in addressing key challenges in Hungary. Notably, the funds support innovative SMEs, energy efficiency, the promotion of R&D in the private sector as well as the reduction of labour market mismatches through enhancing employability of disadvantaged groups, vocational education and lifelong learning. They also contribute to the modernisation of the public

education system, including the combating of early-school leaving and segregation. European funding is also instrumental for supporting public administration reform and the improvement of efficiency and transparency of the public sector (see Box 2.1).

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

Hungary is a beneficiary of significant European Structural and Investment Funds (ESIF) support and can receive up to EUR 25 billion until 2020. This represents around 3 % of GDP annually over the period 2014-2018 and 43% of public investment ⁽¹⁾. By 31 December 2017, an estimated EUR 23.5 billion (94 % of the total) was allocated to projects on the ground. This has paved the way for 11 000 enterprises to improve their capacity and over 200 firms to introduce new products to the markets they operate in; for the increase of the urban transport system's sustainability and the decrease of annual primary energy consumption of public buildings. Out of the EU financing, EUR 2.3 billion is planned for delivery via financial instruments (a substantially higher amount than in the 2007-2013 period).

ESIF help address structural policy challenges and implement country-specific recommendations. Actions financed cover the promotion of R&D in the private sector via targeted incentive schemes to support innovative SMEs. A substantial share of funds is devoted to ensuring the sustainability of Hungary's transport infrastructure. Funds are targeted to the modernisation of public education (including combatting early-school leaving and segregation), the reduction of labour market mismatches (through enhancing employability of disadvantaged groups, vocational education and lifelong learning) and the improvement of the effectiveness of the justice system. Early childhood care and social inclusion measures, especially for Roma, are also important areas of investment. The funding will also support Hungary's efforts to improve the quality of its public administration. To combat youth unemployment, Hungary received support from the Youth Employment Initiative (YEI), which – accompanied by ESF funding under the same project – benefited over 63 000 young people until the end of 2017 in the respective YEI regions. Support is provided for modernising the agricultural and the agri-food sector, enhancing environment friendly farming and investments in resource efficiency, and fostering local development in rural areas.

Several reforms were undertaken already as precondition for ESIF support ⁽²⁾. The compliance with the ex-ante conditionalities assured that the necessary national structures exist to efficiently implement ESIF funded projects. This includes targeted investments in R&D via smart specialisation, the improvement water pricing policy; the elaboration of a transport plan, the development of an employment profiling system and a monitoring system of early school leaving, the enhancement of higher education and health policies as well as measures in the area of public procurement.

Hungary is advancing the take up of the European Fund for Strategic Investments (EFSI). As of December 2017, overall financing volume of operations approved under the EFSI amounted to EUR 73 million, which is expected to trigger total private and public investment of EUR 1.2 billion. No project involving Hungary has been approved so far under the Infrastructure and Innovation Window. Under the SME Window, 7 agreements with financial intermediaries have been approved so far. Over 12 000 smaller companies or start-ups will benefit from this support. Funding under Horizon 2020, the Connecting Europe Facility and other directly managed EU funds are additional to the ESIF. By the end of 2017, Hungary has signed agreements for EUR 1.1 billion for projects under the Connecting Europe Facility.

<https://cohesiondata.ec.europa.eu/countries/HU>

(1) Public investment is the sum of gross fixed capital formation, investment grants and spending on agriculture.

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

3. REFORM PRIORITIES

3.1. PUBLIC FINANCES AND TAXATION

Taxation

Hungary's high tax burden is set to moderate.

According to the latest data for 2016, Hungary's total tax burden amounted to 39.3% of GDP, somewhat higher than the EU average and well above the level of regional peers. The tax burden is forecast to decrease by some 2 pps. by 2018 reflecting considerable tax cuts. These most notably include a substantial reduction of employer's social contributions, the lowering of the corporate income tax rate to 9% from 19% and the application of reduced VAT rates for selected goods and services. While the tax-to-GDP ratio remained persistently high, there were notable changes in the tax structure. The share of tax revenues from the taxation of labour decreased, while the weight of consumption and other forms of indirect taxes increased. With the most recent tax package, this trend continues. At the same time, the medium-term fiscal risks could increase in the absence of sufficient compensating measures.

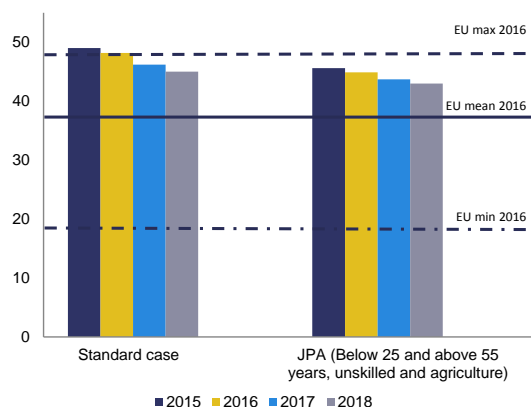
A long-standing challenge has been the high tax wedge on labour, particularly for low-income earners.

With the introduction of a uniform tax rate in 2011 and the phase-out of tax credits at low incomes in 2012, progressivity in the personal income tax system was eliminated. At the same time, labour taxation has incorporated various elements that moderated the tax wedge on low income levels. These include targeted social security allowances for certain groups of disadvantaged workers under the Job Protection Act (JPA), and family tax credits, which were made increasingly generous (see also European Commission, 2017a, pp 14-15). Nevertheless, the tax wedge for low-income earners remained generally high. In 2016 (the last year with comparable figures), Hungary still had the highest tax wedge within the EU for single earners both at 50 % and 67 % of average wage levels.

As part of the multiannual programme to reduce the tax wedge, employers' social contribution rate was lowered altogether by 7.5 pps. in 2017-2018. With the rate of 19.5% applicable from 2018, the measure is estimated to

reduce the tax wedge of single earners at 67 % of the average wage by some 3 pps. to 45 % (and to 43 % for workers eligible for the contribution allowances of the Job protection Act). Despite the noticeable reduction, the tax wedge for low income earners without children still remains well above the EU average of 37% (Graph 3.1.1). At the same time, for low income household categories with two children, the reduction in the tax wedge is more substantial due to the continuing increase of child tax credits. For such households, the tax wedge decreases to a level around the EU average.

Graph 3.1.1: The evolution of tax wedge for a single worker earning 67% of average wage



(1) The tax wedge is calculated as the ratio of all taxes and total labour costs. (2) The reduction of the tax wedge in 2016 reflects a 1 pp. reduction of the personal income tax rate. Source: OECD (2017a), European Commission calculations

There remains a scope to shift the tax burden to relatively growth-friendly taxes. Revenues from environmental taxes stood at around 2.5% of GDP in recent years, in line with the EU average (European Commission, 2017b). Available assessments suggest that there is a potential to increase the reliance on environmental taxes (Eunomia 2016). Receipts from car taxation stagnated in recent years, while tax-subsidies persist favouring the private use of company cars. Household energy consumption remains exempt from energy taxation. Recurrent taxes on immovable property amounted to 0.6% of GDP in 2015 compared to the EU average of 1.6%. As the tax base typically does not depend on market value, revenues from property taxes do not benefit from recent increases in property prices.

Sector-specific taxes imposed on several businesses still complicate the tax system. Such taxes raise concerns on account of creating distortions, and weakening the investment climate in general (European Commission, 2017a, p. 14). Some sector-specific taxes have been reduced or phased out (partly in response to legal actions by the Commission). However, revenues from sector-specific taxes were still around 1.5 % of the GDP in 2016 (down from the peak at 2% in 2013). In 2017, the upper rate of the bank levy was lowered further. At the same time, the advertisement tax paid by companies publishing or broadcasting ads was increased. The public utility tax is levied on infrastructure ⁽³⁾ and thus creates a clear disincentive for investments. In addition, this tax is not recognised in regulated prices as a cost item with a direct impact on the profitability of the concerned companies.

The complexity of the tax system generates administrative burdens. Hungary operates some sixty tax modalities, with a multitude of small taxes, which yield only minimal proceeds. Several goods and services are simultaneously subject to a number of tax levies often applying different tax bases. The most recent example is the introduction of a sector-specific sales tax ("tourism development contribution") for restaurants in parallel with the reduction of the VAT rate on restaurant meals to 5 %. While the standard VAT rate (at 27 %) is the highest in the EU, reliance on reduced VAT rates as a way to lower consumer prices and boost spending has recently increased.

Considerable efforts have been made to reduce high compliance costs. According to a 2015 Eurobarometer survey, 39% of SMEs considered that the costs of tax compliance posed a major obstacle to their business and 55% reported that dealing with tax administration became more difficult over the past five years (European Commission, 2015a). Based on the latest estimate for 2016, the average time spent to meet main tax obligations amounted to 277 hours a year for an SME, the second highest figure in the EU (WB-PWC, 2018). Recent developments seem to indicate an improvement in this regard (GHCIC, 2017). Simplified corporate taxation regimes for small businesses ('KATA' and 'KIVA') have been

⁽³⁾ This includes telecom and energy cables and water and sewage pipelines.

modified to increase the number of eligible taxpayers. From 2018, draft tax returns for excise duties will be prepared by the tax authority and taxpayers classified as 'reliable' will benefit from a shorter (30 days) refund period for VAT. In 2017, the government launched a modernisation programme of the tax authority to adopt a more client-centred approach in tax collection through digitization and process redesign.

Measures implemented over the past years to reduce tax avoidance and fraud produced significant revenue yields. In particular, the introduction of online cash registers starting in 2014 contributed to increased VAT revenues. The VAT gap (i.e. revenue loss relative to total tax liability) is estimated to decline from 21% in 2013 to 14% in 2015, close to the EU average (CASE, 2017). In 2017, the use of online cash registers was extended to further services. From July 2018, a system of online invoicing is scheduled to operate, which will allow the real-time monitoring of invoices issued between businesses.

There are some indications that the country's corporate tax rules are used by companies that engage in aggressive tax planning (ATP). Hungary records relatively high capital inflows and outflows through special purpose entities, which have no or little effect on the real economy (OECD 2016a) ⁽⁴⁾. The absence of withholding taxes on dividend, interest and royalty payments made by companies based in Hungary may lead to those payments escaping tax altogether, if they are also not subject to tax in the recipient jurisdiction. This may facilitate ATP (ZEW (2016). It is important to note that Member States will have to transpose the provisions of the Anti-Tax Avoidance Directives into national law by the end of 2018 and 2019. In that respect, Hungary modified its rules on controlled foreign companies in 2017. Hungary recently revised its patent box regime (i.e. preferential treatment of incomes from intellectual property), which has been approved by the Code of Conduct on Business Taxation Group. The old regime will be fully phased out by June 2021. While the evidence on the effectiveness of patent boxes as a means to encourage R&D

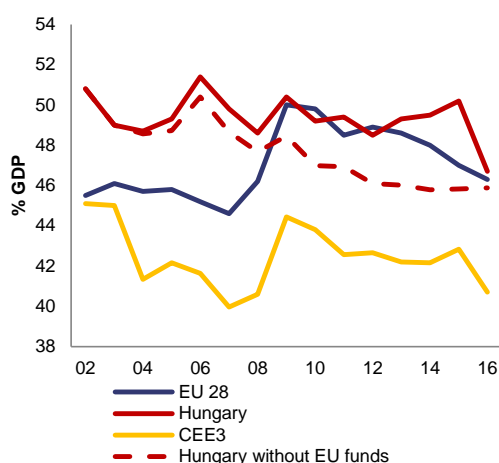
⁽⁴⁾ A new study on ATP indicators shows that the country's high inward and outward FDI stock (199% and 155% of GDP in 2016) can only be partly explained by real economic activities taking place in Hungary (IHS, 2018).

remains limited (CPB, 2014), they may be used as a tax competition tool (Alstadsæter et. al. (2017)). It will be important to assess to what extent the new measures, in conjunction with the effect of the transposition of the Anti-Tax Avoidance Directives, will limit the scope for aggressive tax planning in Hungary.

Quality of public expenditure

Hungary's public expenditure is high relative to its income level. The government expenditure-to-GDP ratio was hovering around 50% of GDP in the last decade, somewhat above the EU average (Graph 3.1.2). EU fund absorption has played an increasing role in shaping the level public spending since 2004. However, Hungary's level of public expenditure remained well above its regional peers even after filtering out the effect of EU funds. At the same time, public expenditure without EU funds moderated decreasing below the level seen in the pre-crisis period. This was primarily a result of contained spending on social transfers and the public wage bill. Declining interest outlays also contributed to this trend.

Graph 3.1.2: Evolution of public expenditure as share of GDP

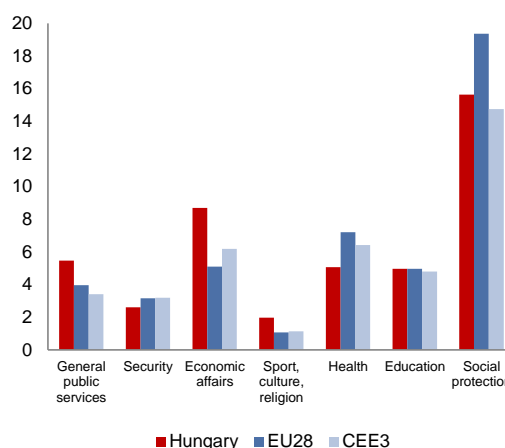


Source: Eurostat and Commission calculations

The Hungarian budget spends relatively little on social protection and health care. Against the general trend in the EU, spending on social protection decreased in Hungary in terms of GDP on the back of effective parametric pension reforms and nominal freezing of several social

benefits (Graph 3.1.3). The latter contributed to the weakening of social safety net (see Section 3.3). Public expenditure on healthcare has also declined since 2005, albeit the most recent data point to some reversal of this trend (see Section 3.4). The largest fall occurred in the pharmaceutical budget reflecting a series of cost-containment measures. Spending on healthcare is markedly lower than the EU average, which may add to the country's unfavourable health outcomes. Over the last decade, public expenditure on education decreased by around 1 % of GDP to the level of EU average, since 2014, however, some increase took place. This was driven by shrinking government spending on primary education, while administration costs in the sector increased.

Graph 3.1.3: Composition of general government spending in the average of 2013-2015



(1) General public services exclude interest payments (2) CEE3: Czech Republic, Poland and Slovakia

Source: Eurostat COFOG statistics

Spending on public administration and economic affairs is comparatively high.

Expenditure on economic affairs is well above the EU average and has risen noticeably since 2010. This development is linked to increased state involvement in the economy, the extension of the public work scheme and elevated infrastructural investments. Extensive state involvement in the economy may lead to lower competition and hinder productivity improvements especially if accompanied by a limited effectiveness and quality of public institutions (Fournier and Johansson, 2016; see also Section 3.4). Spending on general public services is well above the EU and regional

average. It has even increased despite the centralisation of public administration.

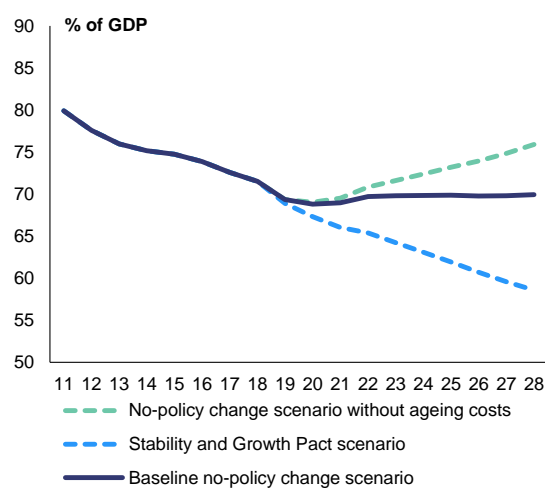
Public debt sustainability

Hungary's public debt ratio has been declining since 2011, but remains high for a middle income economy. In 2016, the government debt-to-GDP ratio reached 73.9, decreasing by 6 pps. from the peak in 2011. Sovereign risks have been contained thanks also to the declining share of foreign owned and foreign currency denominated debt. The debt reduction was mainly driven by fiscal consolidation, with the primary balance reaching a healthy surplus level above 1.5 % of GDP. The takeover of mandatory second-pillar private pension assets (around 10% of GDP) by the state was also a supporting factor. However, its impact was largely offset by other below-the-line effects, most notably the revaluation of foreign currency debt. Overall, the "snowball" effect (i.e. the combined effect of interest rate on debt and nominal growth) still made a debt-increasing contribution during 2012-2016.

In the short term, government debt is forecast to decline further, while the primary balance deteriorates. The public debt ratio is projected to decrease by more than 3 pps. during 2017-2019, falling below 70 %. The decline is primarily due to a supportive "snowball" effect reflecting the continuing decline of interest outlays and accelerating nominal GDP growth. As a result of fiscal loosening, however, the primary balance is forecast to deteriorate significantly, to a minimal nominal surplus and structurally into a deficit position (i.e. -1 % of GDP).

The debt trajectory could flatten out in the medium term without further fiscal adjustment. According to the Commission's no-policy-change scenario, the public debt ratio is projected practically to stagnate at somewhat below 70% over 2019-2028 (Graph 3.1.4) (European Commission, 2018a). The debt reduction is hindered by an estimated slightly negative primary balance throughout the nine-year period. The closing of the positive output gap (and thus the cyclical fiscal component) contributes to an increasing primary deficit.

Graph 3.1.4: **Gross government debt ratio: the baseline scenario and alternative trajectories**



Source: European Commission calculations

However, the deterioration of the primary balance is projected to be moderated by declining age-related public expenditure. This reflects savings due to parametric pension reforms. The debt-increasing impact of the primary balance is calculated to be offset by a favourable, albeit modest snow-ball effect. By contrast, if the structural balance was gradually improved to the country's medium-term objective, the debt ratio would fall below 60% by 2028 (see the "SGP scenario", Graph 3.1.3).

Based on the Commission's assessment framework, fiscal sustainability risks in Hungary are high in the medium term, while in the long term they have a medium level. The country's medium-term sustainability gap (the "S1 indicator") is estimated at 1.8 % of GDP, pointing to medium-level risks. This is the size of fiscal adjustment to be implemented over the next five years, which would bring down the debt ratio to 60% by 2032. Overall, however, the medium-term sustainability risks are assessed to be high as the debt ratio is expected to remain above 60% in 2028 and still displays high sensitivity to shocks. The long-term sustainability gap (S2) is at 4.5 % of GDP, implying medium-level risks. This is the upfront fiscal adjustment ensuring that the debt ratio would not move on an ever-increasing path.

Fiscal framework

The authorities recently adjusted their domestic regulation to ensure compliance with the budgetary frameworks directive. In autumn 2017, amendments were adopted to the Public Finance and the Economic Stability Acts. These legislative improvements have taken place, most notably, in the following areas: (i) reinforcing the domestic budget balance rules by clarifying their binding effect and ensuring their monitoring by the Fiscal Council for the entire budgetary process; and (ii) enhancing the multi-annual perspective of budgetary planning by the systematic use of a no-policy change scenario as a numerical benchmark. Despite these steps, most of the gaps in the fiscal governance system identified in previous Country Reports do not appear to be resolved. Those include the limited role of the medium-term budgetary framework in fiscal policy decisions and the imbalance between the analytical remit of the Fiscal Council and its strong veto competence.

The weak transparency of public finances does not help in improving the quality of fiscal policy-making. On the basis of the Open Budget Indexes in 2015 and 2017, which measure the availability and information content of key fiscal planning and oversight documents, Hungary had consistently the lowest rank among the surveyed EU Member States (IBP, 2015; 2018). Moreover, there are other factors not covered by this index, which weigh on transparency. Budget documents do not contain the updated official estimates for the current year's expenditure and revenue items (i.e. the basis for next year's planning). There are frequent within-the-year amendments of the budget law, scheduled on a rather discretionary manner. It is worth pointing out that the brought forward calendar of budget-making (with the final vote by mid-June on next year's budget) could not fully realise its primary objective of increasing the predictability of fiscal policy. The government repeatedly announced new measures with major impacts on public finances outside this policy cycle.

3.2. FINANCIAL SECTOR

Economic risks for the banking sector appear to be contained mirroring the improving economic situation. Hungarian banks comfortably meet regulatory requirements. While asset quality has further improved the ratio of non-performing loans is still high, bringing to the fore the importance of well-functioning insolvency frameworks. Operating costs remain high. The improved profitability in 2016 was largely due to one-off items. On account of higher bank profits and improved credit demand, new loans picked up and have contributed moderately to the GDP growth. The five largest credit institutions still hold around half of total banking sector assets, which gives the sector a medium concentration ratio in the EU. The domestic banks account for around 50% of total banking sector assets.

Financial soundness indicators across the sector further strengthened. The banks' capital position was materially enhanced by major improvements both in the Tier 1 and overall capital adequacy ratio which amounted to 15.1 % and 17.2 % respectively in June 2017 (see Table 3.2.1). However, these ratios are still rather low compared to other EU countries. The loan to deposit ratio has been largely rebalanced from almost 140 % in 2010 to around 75 % in June 2017. Hungarian banks' funding position has shifted from market funding in the crisis to deposits, which accounted for 62 % of the total assets in June 2017.

Table 3.2.1: **Financial soundness indicators, all banks**

(%)	2010	2011	2012	2013	2014	2015	2016	2017Q2
Non-performing loans	10,9	12,8	14,1	14,0	14,2	11,0	8,1	6,9
Coverage ratio	51,0	52,2	59,0	63,8	66,0	62,4	65,7	60,1
Loan to deposit ratio*	136,9	128,0	110,6	102,1	94,8	80,9	73,3	75,3
Tier 1 ratio	11,5	11,3	13,3	14,7	13,8	13,9	14,2	15,1
Capital adequacy ratio	14,1	13,8	16,3	17,4	17,0	16,9	16,3	17,2
Return on equity	-0,3	-12,0	-5,1	-0,4	-21,9	0,3	12,1	-
Return on assets	0,0	-0,9	-0,4	0,0	-2,0	-0,1	1,3	-

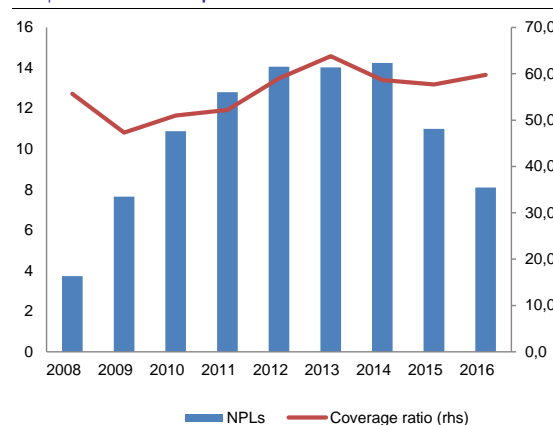
(1) * ECB aggregated balance sheet: loans excl to gov and MFI / deposits excl from gov and MFI

Source: ECB, CBD

Banks are making rapid progress in cleaning up their balance sheets. While the level of non-performing loans (NPLs) held by banks dropped further to 6.9 %, it still exceeds the EU average of 3.5%. The coverage ratio was around 60 % in mid-2017 (Graph 3.2.1). The improvement in the NPL ratio was primarily due to significant portfolio cleaning over the last 24 months. In June 2017, the ratios of both corporate and household NPLs were half of the overdue portfolio held 2 years before. While the remaining NPLs do not pose a major

risk to the stability of the sector, it may still be costly for banks to divest them. These are low-quality assets in general and their book values largely exceed market prices.

Graph 3.2.1: **Development of the NPL ratios**



(1) Gross non-performing debt instrument, non-performing loans with 90+ days delinquency

Source: ECB

Hungarian banks generated large profits thanks to one-off items. All major banks closed 2016 and H1 2017 with outstanding profits. In 2016, the return on equity of the eight largest banks reached levels of between 19.6 % and 6.6 %, far exceeding the EU average of around 5 %. However, profits were mostly made thanks to one-off items such as reversed provisions and the sale of shares in VISA Europe. Low competition and therefore relatively high interest rates on the household credit segment contributed to the large profits as well. However, recently interest margins have started to compress partly on the back of the certified consumer-friendly housing loan scheme introduced by the authorities. Moreover, the sector booked losses on portfolio cleaning. To compensate for these, banks have increased their revenues on fees and commissions in 2017.

Banks put an end to a long period of deleveraging as new lending picked up. The banking system's total assets-to-GDP ratio decreased from 124% in 2010 to 100% in June 2017 (see Graph 3.2.2). In 2016, the decline in outstanding household loans was halted and new household loans grew in annual terms by 43% in Q3 2017. As a result, in H1 2017, the stock of household loans expanded by 3.3% in annual terms. Similarly, the stock of corporate loans increased by more than 8%, with SME lending up

13%, in Q3 2017 (see Graph 3.2.3). The three sources of financing most commonly used by Hungarian SMEs recently are credit lines (29 %), leasing (21 %) and grants (12 %) (European Commission, 2017c). Loans to Hungarian firms and household continued to benefit from supportive measures. However, the Funding for Growth Scheme was discontinued to make room for market lending. The sector's aggregate exposure to the booming real estate and construction sector has been growing again. In Q3 2017, it accounted for 25 % of total loans to corporates (still below the record of 36 % in 2011).

Graph 3.2.2: Banking system assets to GDP



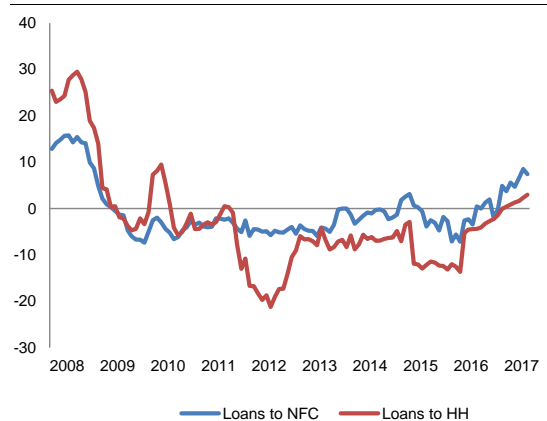
Source: ECB

With a new credit cycle on the horizon, the central bank aims to improve the quality of lending. It is encouraging banks to offer fixed interest rates loans to households rather than variable ones which are considered less safe. According to the central bank, many corporate loans are offered with too short maturity making the access to credit by businesses more burdensome.

The efficiency of the Hungarian banking sector remains an issue. The banking sector has shed a fourth of its branches since 2008 and operates with 11 % less staff. However, the economy remains overbanked in EU comparison. The uptake of digital banking services is one of the lowest in the EU. The banking sector struggles to hire experts to bolster their digital arms. The operating expenses of Hungarian banks amounted to over 3 % of total assets on average at the end of 2016, unchanged since 2015. The cost-to-income ratio is close to 74 %, over 10 pps. higher than the already high

average of euro area banks and 20 pps. higher than some of the regional peers. Low efficiency of the sector may give rise further consolidation.

Graph 3.2.3: Corporate and household loans growth rate (y-o-y)



Source: ECB

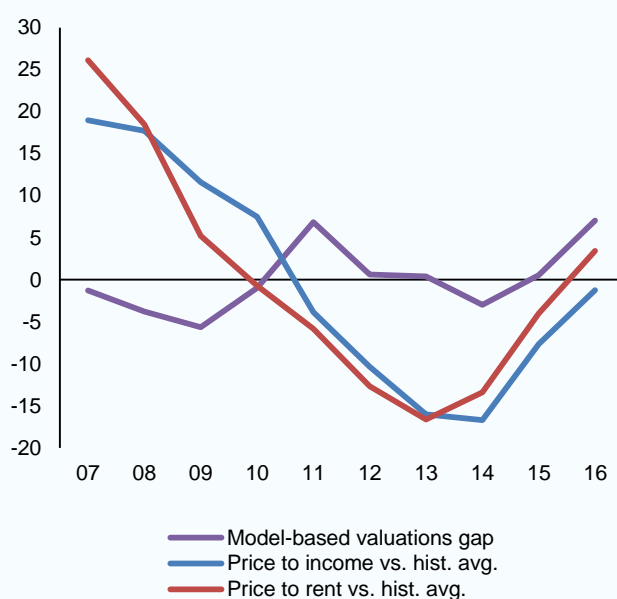
The state remains an active player in the financial sector. It maintains a high presence across the sector and is proceeding slowly with privatisation. The state continues to be a majority shareholder in a few local commercial banks. It also owns the fast-growing Eximbank whose lending business goes beyond its traditionally supported export activity of corporates. At the same time, the Hungarian Development Bank and the financial arm of the state-owned Hungarian Post are expanding their lending activities by targeting SMEs and retail clients. The state remains the main shareholder of the Budapest Stock Exchange (BSE) through the central bank. Given that the BSE is also supervised by the central bank, the current ownership setup raises governance issues. As part of its capital market development strategy, the BSE launched a dedicated multilateral trading facility for medium-sized companies in 2017. It offers lower fees and regulatory requirements.

The government also promotes the domestic ownership of banks. This process and high government involvement in the banking sector create new challenges for the banking supervision. As the experiences of other countries in the region also show, these types of banks are more vulnerable to corporate governance problems, which in turn can lead to problems with credit allocation, credit risk control and asset quality.

Box 3.2.3: Housing prices in Hungary

Hungary experienced the strongest rise in house prices in the EU in 2015 and 2016 with an annual increase of around 13.5% in real terms. At the regional level, house prices in Budapest show a much stronger increase than in the rest of the country. In spite of the recent increase, house prices remain below the peak reached in 2007 and valuation metrics such as the price-to-income and price-to-rent ratios are below their long-term average. Taking into account the various macroeconomic fundamentals driving house prices (Philipponnet et al., 2017) over-valuation risk appears limited, although recent price increases have been stronger than what fundamentals would suggest. Recent data indicates that house price growth has slowed down in the course of 2017, possibly signalling a more mature market.

Graph 1: **Overvaluation gap with respect to price/income, price/rent and fundamental model valuation gaps**



(1) Long term values are computed over 1995-2016.

Source: Commission services calculations.

Beyond development in prices, the number of building permits also increased sharply since 2015. The number of building permits granted in 2017 is now close to the levels reached before the financial crisis. Still, supply is very heterogeneous across regions. In particular, the number of houses built in Budapest in 2016 is close to three times lower than the pre-crisis level (MNB, 2017), suggesting that lagging supply may impact price dynamics in the capital.

The steep increase in house prices was supported by several factors. The relatively large undervaluation of the Hungarian real estate market attracted foreign buyers in a low yield environment. Domestic buyers who delayed their purchase for many years after the crisis suddenly stepped in using their accumulated savings. In addition, new fiscal measures of the government also boosted the demand. In the first period of the price increase, the transactions were mainly credit free. More recently mortgage loans play an increasing role. However, the ratio of outstanding mortgage to GDP stood at 9% in the second quarter 2017 well below the EU average and below peers in the region.

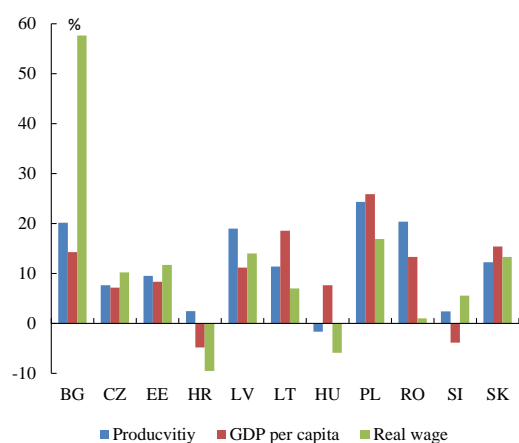
Overall, given the strong correction in house prices recorded between 2007 and 2013 and the recovering economic fundamentals, there is limited indication of overvaluation on the residential real estate market at the aggregate level. In addition, the consequence of a potential correction would be mitigated by the low indebtedness of households. However, the developments should be carefully monitored.

3.3. LABOUR MARKET, EDUCATION AND SOCIAL POLICIES

Labour Market

While the employment is at a record high level, some challenges remain. The Hungarian labour market has markedly improved since 2013, with the employment rate for the age group 20-64 reaching 73.0% for Q1-Q3 2017 and the unemployment rate falling to 4.3%. Increasing shortages in the labour market are coupled with large differences in employability of various skills groups. The Social Scoreboard supporting the European Pillar of Social Rights (Box 3.3.1) suggests a number of challenges: a relatively high rate of early school leaving, high gender employment gap, and low participation in formal childcare below the age of 3.

Graph 3.3.1: **Change in real productivity, real GDP per capita and real wages (2008-2016)**



Source: European Commission calculations

Wage convergence has restarted. The period between 2009 and 2015 saw strong wage moderation, helping to regain cost competitiveness amid the crisis, but making Hungary lag behind in terms of wage convergence (Graph 3.3.1). Based on 2016 data, the compensation of employees was significantly below EU average. The high wage dynamics, which already started in 2016, signifies a turnaround in this trend. However, wage acceleration carries the risk that imbalances start building up again, if it does not remain in line with productivity over the medium term. Wage growth is driven by labour market tightening and sharp minimum wage increases (15 % in 2017 and 8 % in 2018). To ease the impact of wage increases on labour costs, social security contributions were reduced (see Section 3.1).

The duration of unemployment benefits is still the shortest in the EU at maximum 3 months.

With the average duration of unemployment is close to 12 months, this does not give enough time to find an adequate job (European Commission 2017d, p. 40). The level of unemployment benefits (i.e. the net replacement rate at 2 and 12 months) is among the lowest in the EU, as shown by the benchmarking exercise of the Employment Committee (European Commission, 2017e).

The size of the public works scheme (PWS) has started to diminish and the government is taking further steps in this direction.

Participation in the PWS dropped by about 15 % in the first half of 2017, but the scheme remained the dominant form of active labour market policy (ALMP). The PWS is less effective than other tools in bringing participants back to regular employment and may even reduce the probability of finding a job (Molnár et al., 2014; Fazekas and Varga, 2015). According to data from the Interior Ministry, only 12.4 % of participants were in regular employment six months after leaving the scheme in the first quarter of 2017. A recent government decree aims to limit the participation in the scheme in favour of other ALMP measures. The 2018 budget allocation on PWS is reduced by around 20%, while still absorbing more than a half of all spending on labour market policies.

Other active labour market policies, co-funded by the European Social Fund, are progressing well.

The two flagship ESF and YEI programmes aiming to improve the employability and labour market entry for jobseekers and inactive people, covered more than 173 000 persons between 2015 and 2017. Results on the effectiveness of those measures are not available yet.

The Public Employment Service (PES) profiling system is improving.

Currently, the classification of jobseekers into different profiles is strongly affected by targets set for various employment programmes. This distortion is likely to decrease along with the size of PWS. The system will be also extended to cover competences and employability potential of individuals. However, the dispersed management structure of the PES hinders efficiency, leading to difficulties in the coordination of different ALMPs and insufficiently targeted interventions.

Box 3.3. 1: Monitoring performance in light of the European Pillar of Social Rights

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

HUNGARY		
Equal opportunities and access to the labour market	Early leavers from education and training (% of population aged 18-24)	To watch
	Gender employment gap	To watch
	Income quintile ratio (S80/S20)	Better than average
	Share of population at risk of poverty or social exclusion (%)	Better than average
	Youth NEET (% of total population aged 15-24)	On average
Dynamic labour markets and fair working conditions	Employment rate (% population aged 20-64)	Better than average
	Unemployment rate (% population aged 15-74)	Better than average
	GDHI per capita growth	On average
Social protection and inclusion	Impact of social transfers (other than pensions) on poverty reduction	Better than average
	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	To watch

Member States are classified according to a statistical methodology agreed with the EMCO and SPC Committees. The methodology looks jointly at levels and changes of the indicators in comparison with the respective EU averages and classifies Member States in seven categories (from "best performers" to "critical situations"). For instance, a country can be flagged as "better than average" if the level of the indicator is close to EU average but it is improving fast. For methodological details, please consult the draft Joint Employment Report 2018, COM (2017) 674 final.

European Social Fund, are delivered via the network of Public Employment Services (PES) providing a country-wide coverage. These programmes involved more than 74 thousand young people between January 2015 and November 2017 and most participants 2016 received training or an employment offer within 4 months of registering with the PES. Recent government legislation (20/3/2017) extends further the outreach of the YG by imposing stricter limitations for young people to be involved in the Public Works Scheme. On the back of these initiatives the youth unemployment rate and the share of young people not in education, employment or training (NEETs) have been decreasing.

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

Hungary performs well on a number of indicators of the Social Scoreboard⁽¹⁾ supporting the European Pillar of Social Rights, but challenges remain. It has relatively high employment, and low unemployment and income equality. On the other hand, the share of early leavers from education was already at high levels and increased further in the last period. The shares of early leavers from education and of NEETs are particularly high for Roma. A large part of population faces severe housing deprivation.

The gender employment gap is the highest for the age group 25 to 39 years, showing a high impact of motherhood on labour market participation. The sources of this problem include little flexibility in working schedules, the low take up of family leaves by fathers and the scarcity of childcare facilities for children under 3 years of age. ESIF resources have been allocated to address the last of those challenges.

Active labour market programmes targeting young people have been successful in Hungary. The Youth Guarantee (YG) and the Youth Employment Initiative, supported by the

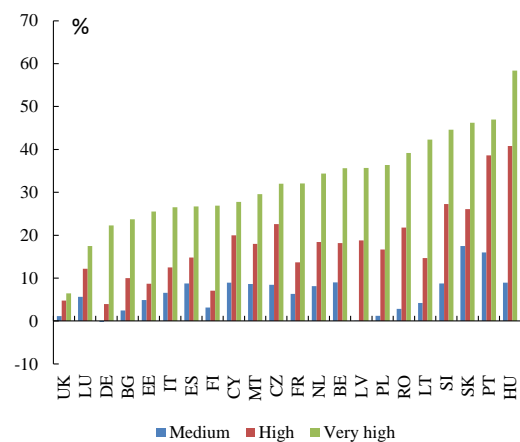
Low-skilled workers continue to face low employment rates and prospects, as well as low wages. The gaps between the employment rates of low-, medium- and high-skilled workers have been higher in Hungary than elsewhere in the EU (European Commission, 2017a). Wage differences across various skills levels are also very high in an international comparison (Graph 3.3.2). Despite

the high skills premium, few adults decide to upskill.

Recent employment growth has been uneven for men and women. In 2016, the gender employment gap amounted to 15.2 pps. (above the EU28 average of 11.5 pps.), pointing to an untapped reserve to address labour shortages. The gap

slightly increased in recent years. This occurred mostly among the 25-39 old age, despite a recent reform of the long parental leave system, which aimed to facilitate the return of young parents (mainly mothers) to work. On the other hand, main earners (often men) are not encouraged to take up the leave. This is coupled with a short supply of quality childcare. The enrolment in formal childcare of the 0-3 year old stands at 15.3 %, which is well below the EU average of 30.3 %. The coverage is even lower in the poorest counties with a high ratio of disadvantaged population. From January 2017, new types of childcare facilities have been introduced. European Social and Investment Funds (ESIF) were allocated to increase the capacity of day-nursery facilities, which should lead to supply increases in the years to come. Funds dedicated to cover operational costs are to be increased from HUF 17 bn in 2017 to 37 bn in 2018.

Graph 3.3.2: **Wage premium of educational attainment as compared to low education**



(1) The graph shows the impact of the level of education as a percentage of the wage of a low skilled estimated on the basis of a linear regression. The education levels included in the analysis are: low (ISCED 0-2), medium (3-4), high (5-6) and very high (7-8). (2) Data refer to 2014

Source: European Commission calculations

People with disabilities are under-represented in the labour market. Their participation in employment is one of the lowest in the EU (39.6 % vs. the EU average of 47.4 %). This hampers social and employment integration, leading to high risk of poverty or social exclusion for this group (32.2% vs. the EU average of 29.9 %). Several measures have been launched to incentivise employers to hire people with disabilities, but their

impact is still to be seen. Measures to improve integrated living conditions (replacing institutional long-term care) supported by local community-level public services do not seem to be sufficient.

Integration of Roma in the labour market remains a challenge. Between 2011 and 2016 the employment rate among Roma increased from 25 % to 36 %, but a large share of those in employment (41.6 %) work in the PWS. The NEET rate of young Roma has significantly increased (by 13 pps.) and stands now at 51 % (COM-FRA 2017). With only 26 % of Roma women in paid work, the gender employment gap among Roma reaches 19 pps. (FRA, 2016).

Social dialogue structures and processes in Hungary remain underdeveloped. The weaknesses of existing structures of social dialogue at bipartite and tripartite levels do not allow for a proper and meaningful involvement of social partners in the design and implementation of relevant policy reforms. The National Economic and Social Council (involving also civil society organisations and other stakeholders) cannot be considered an adequate forum for tripartite social dialogue, as it does not include the government. The Permanent Consultation Forum of the Private Sector has only a narrow scope of competences and agreements concluded are legally non-binding. In consequence, social partners are not involved in the preparation of inputs to the European Semester or in the implementation of the relevant country specific recommendations. Cutbacks in government-provided resources further reduced the institutional capacity of social partners.

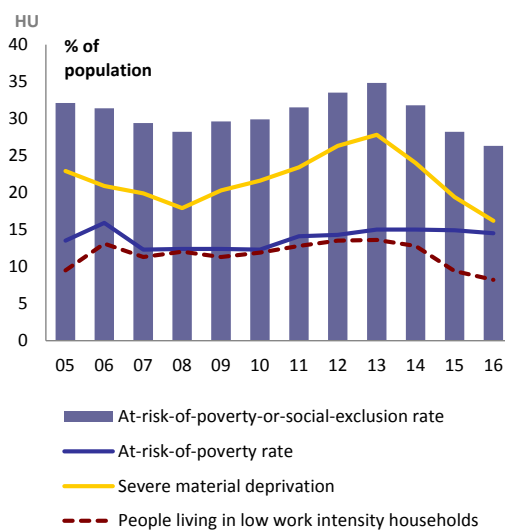
The collective bargaining system is weak and takes place mostly at company level. Recent studies by Eurofound (2016, 2017) note that social partners are rarely consulted by government beyond wage matters. Collective bargaining coverage rate stood at 22%, the fifth lowest in the EU (Visser, 2016).

Poverty and social inclusion

The overall poverty situation is notably improving, but poverty risks faced by vulnerable groups remain high. The share of population at risk of poverty or social exclusion (AROPE) was at 26.3 % in 2016, 1.9 pps. lower than a year earlier, approaching the EU average

and closing the gap to the national EU 2020 target. This positive development is mainly due to falling severe material deprivation and a decrease of the number of people living in low work intensity households. On the other hand, relative monetary poverty remains unchanged (Graph 3.3.3), particularly affecting Roma, whose exposure to poverty is three-four times higher than for the rest of the population.⁽⁵⁾

Graph 3.3.3: **Main poverty indicators since 2005**



AROP: People who are at risk of poverty (AROP) and/or in severe material deprivation (SMD) AROP: People with equivalent disposable income below 60% of the median).
Source: Eurostat, EU-SILC

While remaining below the EU average, income inequalities rose during the crisis and have not yet started to decrease following the recovery (see Section 1). In 2010, the richest 20 % of the population received 3.4 times as much income as the poorest 20 %. By 2013 this ratio grew to 4.3 and then stabilised. In parallel, the poorest quintile of households saw their share in total income to decrease from 9.5 % in 2007 to 8.8 % in 2016 (see also GKI, 2017). Changes in the tax and benefit system significantly contributed to rising income inequality (De Agostini et al. 2016, European Commission, 2017b, pp. 60-62).

⁽⁵⁾ The rate of Roma at risk of poverty declined from 80% to 75% (COM-FRA 2017), while according to national statistics monetary poverty rate decreased from 67.9% to 54.7% between 2014 and 2016. Roma at risk of poverty and social exclusion declined from 89.9% to 82.8%, but remained three times higher than for rest of the population.

Children in general are more exposed to poverty than other age groups in Hungary. In 2016, 33.6 % of the young aged was at risk of poverty or social exclusion compared to 26.3 % of the total population and above the EU average of 26.5 %. Households with children are more likely to be poor than those without children (29.6 % vs. 23 %). Risk of poverty affects 38.4 % families with more than 3 children and 62.3 % for lone parent families. Child poverty is linked with a significant inequality of opportunity. Parental background has a strong impact on educational performance and children of low-skilled face a high risk of poverty.

A considerable part of the population faces severe housing deprivation. The respective rate stood at 16.9 % of the population in 2016 compared to the EU average of 4.8 %. This proportion reaches one-third among those at risk of poverty or social exclusion, and one-fourth under 18 years of age. Housing deprivation among Roma persists with 33 % of Roma living in households without access to drinking water and 38 % lacking other basic amenities such as toilet, shower or bathroom (COM-FRA 2017). No significant improvement is visible in the field of social housing (Habitat, 2017).

The social safety net is weak as social policies put an emphasis on meeting needs by work related income. Meanwhile, as demonstrated by a benchmarking exercise (European Commission, 2017e), the adequacy of minimum income benefit (*FHT*) is one of the lowest in the EU, below 50 % of the poverty threshold. There is no indexation system for the social assistance benefits and the reform of cash benefits led to a high degree of discretion by municipalities (European Commission, 2017a). The low wage provided by PWS (one-third below minimum wage) is not sufficient to reach the poverty threshold for many participants. In fact, PWS might be a key factor behind the increased in-work poverty of workers with temporary contracts (from 14 % in 2010 to 29 % in 2016).

There has been a clear shift from social benefits toward family support and in-kind benefits (e.g. free or discounted school meals, holiday programs, free school textbooks). Most of the in-kind benefits are not targeted at low income families, or the applied means tests are high enough to cover

middle income families as well. The largest expenditure growth affected child tax credits, home-ownership supports (*CSOK*) and work-related child-care allowances, which benefit only those at work. By contrast, public spending on means-tested social allowances and universal family and childcare benefits decreased in real terms with nominally frozen benefit levels.

Education and skills

The basic skills outcomes of 15-year-olds are significantly below the EU average. According to the OECD's 2015 Programme for International Student Assessment (PISA), performance in reading and science deteriorated significantly compared to 2012. Hungary saw the highest increase in the share of low achievers in science in the EU. More than one in four pupils did not meet the basic required level in reading or mathematics. According to an empirical study (Thum and Raciborski, 2017) better PISA results contribute to higher growth potential, highlighting the economic importance of educational quality. In 2016 Hungary announced that the national curriculum would be revised by the end 2017 with ESF support, in part as a response to the declining performance shown by PISA 2015. However, to date no further details regarding the direction of the reform and the involvement of stakeholders in its preparation have been made public.

The impact of pupils' socioeconomic background on education outcomes is the strongest in the EU. The impact of school type on outcomes is also very significant, reflecting early selection in secondary education (Educational Authority 2017). Pupils are tracked into different schools according to their performance starting from the age of 10. Amongst the three types of secondary school, pupils of vocational secondary schools (*szakközépiskola*), which have the highest concentration of disadvantaged pupils, performed particularly poorly in PISA (Educational Authority 2016). This type of schools shows limited capacity to counterbalance the socio-economic disadvantage that large numbers of their pupils face (Civil School Education Platform, 2016).

In 2016, the early school leaving (ESL) rate increased to 12.4 %, above the EU average of 10.7 %. While ESL has been decreasing steadily across the EU, it has not fallen in Hungary since

2010. The problem is especially acute among Roma, for whom the ESL rate stands now at 59.9 % compared with 8.9 % among non-Roma (data provided by the Hungarian CSO). In November 2016 the government adopted an action plan to reduce ESL and introduced mandatory data collection on pupils' progress at school, which feeds into a digital early warning and pedagogical support system. However, there is no monitoring system for young people who have already dropped out of school.

Disadvantaged pupils, including Roma, increasingly attend schools where they are the dominant majority. As a result, the likelihood of contacts between disadvantaged and non-disadvantaged pupils at school declined between 2008 and 2016 (Hungarian Academy of Sciences, 2018). Increasing residential separation and the effect of parental choice on local school enrolment have contributed to this outcome. Despite the state taking over the management of public schools from municipalities in 2013 with the aim of reducing inequalities, 61 % Roma children still attend schools where all or most children are Roma. High concentration of Roma children in certain schools is also present in urban settings, outside of ethnically segregated areas (FRA 2016).

Although successful pedagogical models for inclusive education have been developed, only a limited number of mainstream schools actually use them. Amendments to the Equal Treatment and Public Education Acts to prevent segregation were adopted in summer 2017, but they can only have an impact as of the 2018/2019 academic year. ESIF-funded projects were launched in 2017 to support 300 schools in combating school failure and introducing inclusive teaching methods. Teachers are entitled to a salary supplement if working under difficult conditions as of January 2018. However, measures to systematically address existing segregation in mainstream education are lacking.

The extension of early childhood education may positively impact the later school performance of disadvantaged pupils. Between 2011 and 2016, participation of Roma children in early childhood education and care significantly improved, increasing from 81% to 91%. This is the highest participation rate in the region.

Teacher salaries have increased faster than the public sector average since 2013, but were still 31% lower than those of other tertiary graduates in 2015 (OECD 2017b). In parallel with the increase of the base salary levels, most salary supplements for replacement and supplementary teaching hours were abolished and the number of weekly teaching hours increased from 20-22 to 22-26. In addition, teachers are obliged to stay in school premises for tasks defined by their headmaster for at least 32 hours a week.

The growing demand for highly-skilled workforce is not matched by the performance of the higher education. The number of university applicants has been shrinking since 2010, which can only be partially explained by demographic changes. The tertiary educational attainment rate for 30-34 year-olds stood at 33 % in 2016, well below the EU average of 39.1 %. The dropout rates have been declining (35.3% on average) but remain high especially in bachelor and undivided programmes. The 2014 Higher Education Strategy established the position of the ‘chancellor’, who is nominated by the government and takes decisions on strategic and economic matters. This measure earned Hungary the lowest score in the ranking of financial autonomy of higher education institutions across the EU (EUA, 2017a). The recent amendment of the Higher Education Act in April 2017 raised further concerns about decreasing academic freedom (EUA, 2017b).

The employment rate of recent vocational education and training (VET) graduates, at 84.4 %, is well above the EU average of 75 %, but shows a wide gap between the two types of VET. VET has two pathways: vocational grammar schools (*szakgimnázium*) with a higher element of general education and vocational secondary schools (*szakközépiskola*) for less academically inclined students. General education content in vocational secondary schools is limited. This, together with the concentration of children of low socioeconomic status in those schools, explains the heavy deficit in basic skills measured in PISA. This is further reflected in the high dropout rates. In 2016, the dropout rate in vocational secondary schools was 15.3%, against a 6.5% in vocational grammar schools and 1.1% in general upper-secondary schools (*gimnázium*) (Hungarian Academy of Sciences, 2018). Their graduates face

more difficulties in finding a job and earn lower wages than other secondary school graduates.

Promoting adult participation in learning remains a challenge, especially among the unemployed. The overall participation figure was 6.3 % in 2016, well below the EU-28 average of 10.8 %. People in employment were about four times more likely to participate in trainings than unemployed, which contributes to further segmentation of the labour market and increasing skills mismatches at a time when employers are having growing problems in attracting skilled workers. The situation is expected to improve thanks to EU and national funded training programmes, but the substantial gap is unlikely to close.

Healthcare

Poor health outcomes aggravated by high risks from unhealthy lifestyles, uneven quality of care and inequalities in access are the key challenges faced by the health system. In 2015 life expectancy was 75.7 years in Hungary, almost five years below the EU average. Although life expectancy rose by close to 4 years over the past 15 years, the gap relative to the EU has narrowed only a little (by 0.2 years since 2002, the earliest data point for EU28). Significant inequalities prevail in health status across socioeconomic groups (Orosz and Kollányi, 2016). The gap in life expectancy between Hungarians with the highest and lowest level of education reached 11.7 years for men and 6.7 years for women in 2015. These wide disparities are linked to health risk factors and inequalities in access to care.

While showing a decreasing trend, mortality rates remain high reflecting also the limited effectiveness of the healthcare system. Cardiovascular diseases and cancer account for three-quarters of all deaths, with the third highest mortality rate from ischaemic heart diseases and the highest one from cancer in the EU. The amenable mortality rate for Hungarians is about double the EU average. This suggests shortcomings in the provision of timely and quality care. Based on amenable and preventable deaths in 2014, a recent comprehensive assessment estimated that one quarter of total mortality could have been potentially avoided by a more effective healthcare provision (14 %) and health risk

prevention (12 %) (Gyenes et al., 2016, see also Box 3.5.1). To address some of these problems, more emphasis has been put on screening programs lately to detect certain types of cancers at an early stage. Recently, a national colorectal screening programme has been launched.

Health risks associated with unhealthy lifestyles remain high. While decreasing from 30% in 2000, still more than one-fourth of adults were daily smokers in 2014, the third highest figure in the EU. Recorded alcohol consumption per adult is about 10 % higher than the EU average, and the prevalence of obesity increased from 18 % in 2000 to 21 % in 2014, becoming the third highest rate in the EU. Nearly 40 % of the total disease burden in Hungary, as measured by the impact on disability-adjusted life years, can be attributed to unhealthy lifestyles (IHME, 2016). Several public health measures were implemented over the past years showing some positive results (Joó et al., 2017).

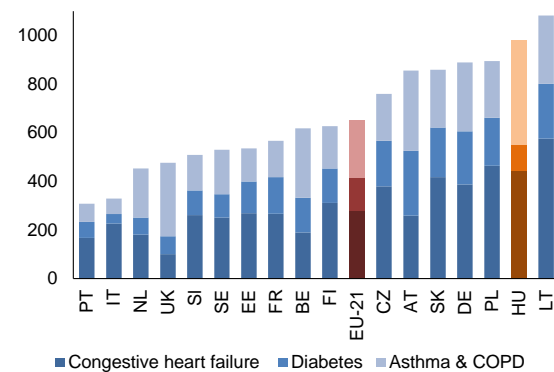
Spending on healthcare is comparatively low. In 2015, total (current) spending on healthcare amounted to 7.2 % of GDP in Hungary compared to the EU average of 9.9 %. In per capita terms, health expenditure is about half of the EU average and the gap widened over the past decade. This was driven by shrinking public spending. Unlike in most EU countries, spending from public sources declined as a share of GDP, from 5.7 % in 2005 to 4.8 % in 2015 (see also section 3.1) (OECD, 2017c). Provisional figures indicate that public health expenditure went up to 5.2 % of GDP in 2016, which was still considerably lower than the EU28 level of 7.8 % (calculations based on OECD (2017c) and the Eurostat Database).

Equity in healthcare is put at risk by the high reliance on out-of-pocket payments. Out-of-pocket payments account for 29% of total health expenditure, nearly twice as high as the EU average. This includes informal “gratuity” payments, which adversely affect access to public healthcare and distort incentives for providers (see Section 3.4) While the share of Hungarians reporting unmet needs for medical care due to financial reasons is relatively low (about 2% and similar to the EU average), more than 6% people with low income reported unmet needs because of cost compared with a mere 0.2% in the highest income group (2015 EU-SILC survey). Moreover, 7.4 % of households faced catastrophic out-of-

pocket payments in 2014 ⁽⁶⁾. This proportion reached more than 27% in the lowest income quintile (OECD/EOHSP, 2017).

Efficiency problems also seem to play a role in the limited effectiveness of the healthcare system. Unhealthy lifestyles and the relatively low levels of health spending and economic wellbeing are all important factors behind Hungary's unsatisfactory health outcomes. However, an analysis by Medeiros and Schwierz (2015) suggests the presence of considerable efficiency reserves. The study estimated that Hungary performed in the bottom quarter within the EU regarding health system efficiency as measured by the relationship between resources allocated to healthcare and outcomes achieved. Inefficiencies are related to structural features. The setup of service delivery remains strongly hospital-centred, with notable weaknesses in primary care and care coordination for chronic disease patients (OECD/EOHSP, 2017).

Graph 3.3.4: Hospitalisations for ambulatory care-sensitive conditions (per 100.000 population)



(1) Data refer to 2015 or the latest year
Source: OECD (2017c)

Key efficiency gains are still to be made in the primary care sector. Data on avoidable hospitalisations point to significant opportunities to strengthen primary care (Graph 3.3.3). Except for a few team-based primary care pilots, GPs operate in solo practices (Sinkó et al., 2017). This setting, together with weak incentives and often limited professional capacities to avoid

⁽⁶⁾ Defined as out-of-pocket outlays exceeding 40 % of total household spending net of subsistence needs.

unnecessary utilisation of specialist care, hinder the effectiveness of primary care. Concerns for future accessibility and effectiveness of primary care are exacerbated by the fact that nearly half of GPs are over 60 years old (OECD/EOHSP, 2017). Moreover, the system of marketable practicing rights, coupled with the absence of team-based organisations, create high entry cost for doctors intending to work in primary care. While financial support schemes have been put in place to subsidise the entry of new GPs, around 5% of GP districts were permanently vacant in 2017 (ÁEEK, 2017). The 2015 Primary Health Care Act marked a renewed attempt to reinforce primary care, most notably by redefining tasks of GPs, promoting group practices and revising payment schemes. The impact of these measures still remains to be seen as their implementation progressed slowly so far.

The hospital-centred health system has further scope for improvement. The reorganisation of the hospital sector executed in two major phases (in 2007 and 2012) reduced acute in-patient capacities, especially in smaller hospitals, and resulted in the closure of around 10 000 beds overall. However, the number of hospital beds remained far above the EU average (699 compared to 515 beds per 100 000 population), as well as hospital activity rates (OECD, 2017c). There is still room for streamlining in-patient services in order to better concentrate resources for cost-intensive treatments, while shifting less severe cases to ambulatory care settings. As a key step in this direction, the government adopted the Healthy Budapest Programme in 2017 aiming at the modernisation of the highly fragmented hospital network in the capital. In addition, the e-health system launched recently can serve as a valuable tool for improved coordination across levels of care and specialties. The greater use of one-day surgery also offers efficiency gains. The share of day cases in surgical interventions was rising over the past decade and the government has started to incentivise further penetration. However, Hungary still lags behind most EU countries in this regard (Gyenes et al., 2016; OECD, 2017d).

While the use of services appears to be more even than the geographic distribution of capacities, important inequalities in access exist. As shown by the above mentioned comprehensive health system assessment (Gyenes et al., 2016), the

dispersion of per capita public health spending across regions is relatively narrow. However, this does not account for differences in needs and the fast growing private care. More significant inequalities were found regarding some key aspects of the healthcare process, especially at sub-regional levels. The use of specialist services by people in disadvantaged areas is 20% below the national average, and four-fivefold differences occur in waiting times for elective care between counties. There are also wide geographic variations in mortality rates within 30 and 365 days following stroke or heart attack, which give an indication about the uneven quality of care. Regarding unmet medical needs (related to all reported reasons), inequalities by income are markedly higher in Hungary than generally in the EU.⁽⁷⁾ The odds of unmet needs are also estimated to increase significantly for low education level and the Roma (Gyenes et al., 2016 pp. 528-542).

Although recent salary increases have a mitigating effect, workforce shortages continue to hamper access to care. Hungary has a somewhat lower number of doctors than the EU average (3.1 per 1000 population vs. 3.6), but shows a larger difference in the number of nurses (6.5 per 1000 population vs. 8.4). The past decade saw a significant outflow of health professionals leaving to work abroad (Varga, 2015). Outward migration, coupled with the expansion of private healthcare, resulted in staff shortages in the public sector. This has restricted access to care, particularly in rural areas. In response, a number of staff retention measures were introduced over the past six years. In 2016, a multi-annual pay-raise programme was launched covering doctors, nurses and other health workers. Recent data on certification requests needed to work abroad show that the emigration of doctors has slowed down (Velkey and Gaál, 2017). At the same time, the age composition of health workers continues to raise concerns about rising future replacement needs (ENKK, 2016).

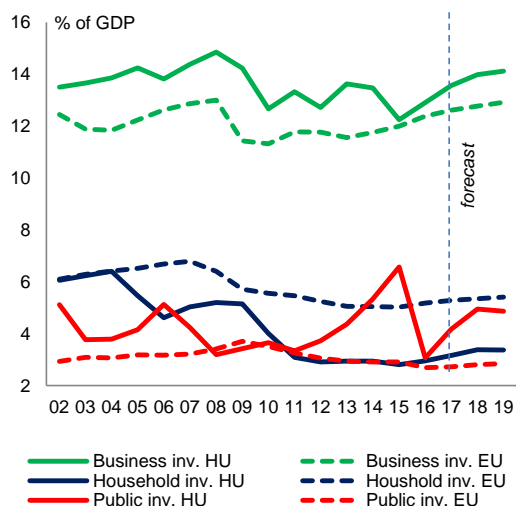
⁽⁷⁾ In 2015, 14.4% of people in the poorest quintile reported unmet medical needs, while only 3.5% in the highest income group. The same figures for the EU28 were 7.6% and 3%, respectively (2015 EU-SILC survey).

3.4. INVESTMENT

Investment trends

Total investment surpassed its pre-crisis level in 2017, 3 years after real GDP exceeded its 2008 level. After the crisis, the investment to GDP ratio fluctuated around 20 %, which is 4 pps. lower than before the crisis. The weak investment performance was due to the drop in private investment reflecting deleveraging needs and weak demand. Business investment declined by almost 20% and returned to its 2008 level in 2017. Household investments practically dropped to half of their level in 2008 and are not expected to recover by 2019. Public investment has been volatile due to the timing of EU funds' absorption, which generates sizable volatility in total investment and GDP variables (see Box 3.4.1.)

Graph 3.4.1: Private and public investment



(1) Private investment = corporations + households
 (2) private + public investment = total investment
Source: Eurostat, European Commission calculations based on the Autumn 2017 Economic Forecast

Private investment is set to increase on the back of several supporting factors. Since 2016, a steady recovery has started in private investment. Households' willingness to consume has been gradually picking up, and financial conditions for firms have improved. In the current EU financial framework Hungary allocates around 55% of incoming EU funds to the private sector, which is higher than in the previous period. The reduction of the corporate income tax rate may also motivate firms to invest more. The global recovery improves the prospects of export-oriented companies to build new capacities. Several

investment plans have been announced in the manufacturing sector, including the car industry. The main short-term risk to invest is the labour shortage (see Section 3.2).

Household investment has started to increase steeply as many supportive elements are kicking-in. Housing investment has risen dynamically since 2016 from a very low level. The number of new homes built in 2015 was 0.8 per 1000 inhabitants, which was one of the lowest in the EU and three times lower than in the pre-crisis period. The growth is supported by the fading precautionary behaviour of households and by government initiated measures, such as Family Housing Subsidy Programme and the temporary cut in VAT for housing construction. The VAT cut will be phased out, which may induce a sudden decline in housing construction (see Box 3.2.1.).

Business investment has taken place mainly in large and foreign owned firms, in particular in the export sector (Kopint-Tárki, 2017). Large companies are in a better position to negotiate tailor-made conditions in a country, thus they can insulate themselves from domestic business environment to some extent. The government initiated bilateral strategic agreements with large companies, which are almost exclusively foreign-owned, also add to this disconnection. Other studies (Palócz, 2017) reveal that productivity differences between large firms and SMEs are higher than in other EU countries, which is related to the concentration of investment (see Box 3.4.2).

EU funds have a strong influence on investment in Hungary. In 2017, real gross fixed capital formation is forecast to have increased by more than 20 %, out of which around half was financed directly by EU funds. A recent study commissioned by the government (KPMG-GKI, 2017) also suggests that investment would have been much lower without EU funds in the last decade. Between 2009 and 2016, the absorption of EU funds amounted to nearly 4 % of GDP per year, which is one of the highest ratios in the EU. The high level of EU support creates a dependency culture as it involves less risk for the recipient, and a greater risk that funds are not used on productivity-increasing investment. A study by the central bank (Banai et al, 2017) concludes that investments using EU money did not improve firm level productivity. EU grants were used by already

productive firms to extend their capacity as opposed to implementing technological upgrades. After 2019, the investment dynamics may fade and a supportive business environment will be the key to the future prospects of investment.

Net foreign direct investment (FDI) flows fluctuated at a relatively low level in the post-

crisis years. In comparison to regional peers, Hungarian net FDI inflows were at a low level already before the crisis. Hungary's net FDI stock declined from 50 % of GDP before the crisis to around 45 % in 2016. Recent data show some improvement as both net FDI inflows and stock increased in 2016.

Box 3.4.5: Investment challenges and reforms in Hungary

Total investment in Hungary has been weak since the financial crisis mainly on account of declining private investment. While considerable export capacities have been built up, business investment overall remained below the pre-crisis levels until 2017 reflecting decreased profitability, deleveraging pressures and weak demand. The drop in household investment was even more pronounced as households delayed home purchases facing the contraction of their disposable income. In 2017, both business and household investments picked up on the back of strong global and domestic economic recovery. Fiscal policy measures and negative real interest rates facilitated this development. Public investment, which has been very volatile, also increased sharply in 2017. However, increasing labour shortages, coupled with skill and geographic mismatches, have started to pose a major macroeconomic constraint to investment growth.

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

While the macroeconomic environment is overall supportive for investment, the weak quality of institutions and human capital inadequacies remain important constraining factors. In particular, institutional weaknesses and insufficiently qualified workforce may impede investments with a high value-added. The following investment barriers and the related policy actions deserve a particular attention:

1/ The most important barrier to invest is the short supply and inadequate quality of labour force. The Hungarian labour market became one of the tightest in the EU as shown by labour shortages reported by firms (see Section 1). Weak educational and health outcomes also add to the challenge (see Section 3.3). The authorities recently implemented measures to free up labour reserves and improve mobility. The government started to decrease the size of the public work scheme, while other, potentially more effective active labour policies are extended.

2/ Weaknesses in the institutional and regulatory environment result in uncertainty for investors. Limited transparency in policy making increases the costs of investment and it may deter viable projects. Limited competition in public procurement and corruption risks in general can distort the allocation of resources as they are not necessarily channelled to most productive firms. Regulatory barriers, especially in services, have a similar effect (see Section 3.5). Some measures have been recently implemented to improve transparency and competition of public procurement. However, less progress was made in reviewing the regulatory environment in the service sector.

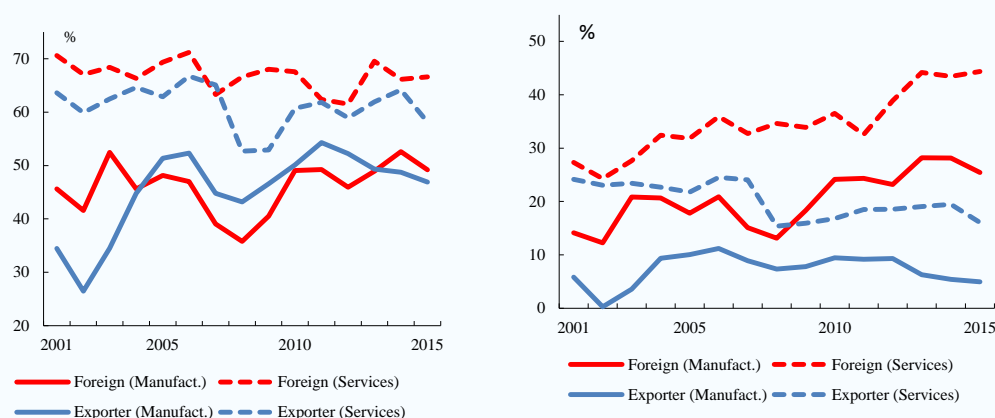
Box 3.4.6: Interfirm productivity differences and the duality of the economy

Over the last decade, productivity growth in Hungary has been slow for a catching-up economy. ⁽¹⁾ This is unlikely to be explained by the sectoral composition of the Hungarian economy as the share of services or high-tech industries in the GDP is similar to most advanced economies (European Commission, 2017f). However, even within same industries, high-productivity, internationally competitive firms coexist with low-productivity firms serving only the domestic market. Large and persistent within-industry productivity differences can explain low aggregate productivity growth via two channels. First, this pattern may imply that low-productivity firms are not upgrading their technology to catch up with their more productive peers. This is certainly a possibility in Hungary, where the share of innovative SMEs is one of the lowest in the EU (see section 3.5). Second, persistent differences may also imply that the economic environment does not facilitate the reallocation of resources to more efficient firms.

In Hungary, within-industry differences constitute about 85 percent of firm-level labour productivity differences, while the industry affiliation of firms explains only about 15 percent. To take the example of two important industries, the difference between high-productivity firms (90th percentile) and relatively low-productivity firms (10th percentile) is 8-fold in food manufacturing and 13-fold in wholesale trade. On average, dispersion is 7-fold in manufacturing and 9.5-fold in services. While these numbers are not drastically different from findings in other OECD countries, Hungary's within-industry productivity differences are at the higher end of the distribution (OECD, 2016c).

When considering these differences, a key question is to what extent they reflect the “duality” between small, domestic-oriented firms and larger, globalized firms. The answer to this question is twofold. On the one hand, size, foreign ownership and exporting do not have an overwhelming explanatory power: these factors explain about 10 percent of within-industry productivity differences. In other words, there are still substantial differences even between smaller domestic firms; the duality is less deterministic than often imagined. On the other hand, the disparities between globalized and non-globalized firms are substantial and persistent.

Graph 1: Labour productivity advantage of foreign-owned firms and exporters.
LHS: Controlled for employment size; RHS: Controlled for employment size and capital intensity



The productivity advantage for foreign and exporter firms shows how much more productive these firms are relative to domestic, non-exporter firms of similar employment size and capital intensity in the same industry estimated on the basis of regression analysis for each year. The sample includes firms with at least 10 employees.

Source: Muraközy et al., 2017

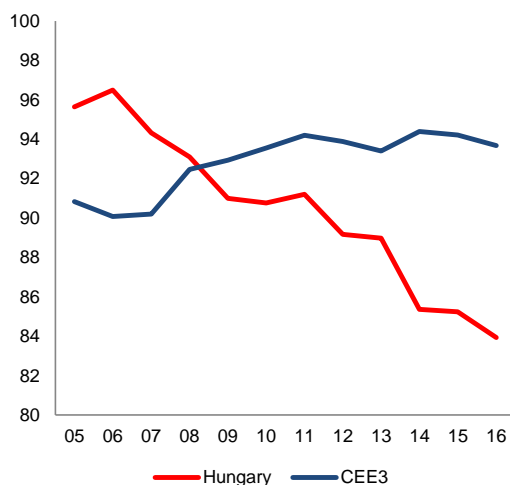
The left panel of Graph 1 shows the estimated average labour productivity advantage of exporters and foreign-owned firms compared to domestic non-exporters after controlling for employment size. Both variables command an advantage of about 60-70% in services and 40-50% in manufacturing. This implies that on average, an exporter foreign-owned firm is about 100-130% more productive than a domestic firm supplying only the domestic market. These results confirm that participating in international production or ownership networks has been and remains a key pivot in productivity. Naturally, a large part of these

differences result from the fact that employees of larger and internationalized firms operate more capital. The right panel of the Graph shows differences after controlling for this factor. On this basis, the productivity premiums become smaller, but remain statistically highly significant. The productivity difference between foreign-owned exporters and domestic-owned non-exporters was 30% in manufacturing and 60% in services. Significantly, the foreign advantage displays a clearly increasing trend in the last decade in both sectors.

The importance of within-industry productivity heterogeneity suggests that policies supporting productivity growth and reallocation within sectors can be more effective than policies aiming at inter-industry reallocation. The persistent and probably increasing productivity advantage of firms integrated into global ownership or production networks suggests that domestic-oriented firms lack the resources and motivation for upgrading their technology quickly enough. The findings consistently show that both productivity dispersion and the advantage of internationalized firms are larger in services. This indicates that domestically-owned firms and aggregate productivity may benefit even more from improving framework conditions in services than in manufacturing, where international competition has more disciplining effects.

(¹) The Box is based on a research report prepared for the European Commission (Muraközy et al.; 2017)

Graph 3.4.2: **Worldwide Governance indicator score: Hungary and regional peers (EU average=100)**



(1) Figures refer to the average scores of 6 broad indicators (on a scale of 0-5) (2) CEE3: Czech Republic, Poland and Slovakia

Source: WGI (2017)

Business environment and institutional performance

Hungary ranks relatively low in competitiveness scoreboards. In 2017, the World Economic Forum ranked Hungary 60th out of 137 countries and 24th in the EU (WEF, 2017). The country's position has not improved over the past decade despite the improved macroeconomic situation. Hungary ranks low in particular on institutional quality and business sophistication. Weaknesses are also highlighted in human capital adequacy. The 2017 IMD competitiveness yearbook ranks Hungary 25th among EU countries.

Both government and business efficiency are deemed comparatively low. The World Bank's Doing Business Report reveals an uneven performance for Hungary across the selected flagship indicators (World Bank, 2017). While the country scores well in enforcing contracts and property registration, the major bottlenecks include the taxation environment, getting access to public utilities and the high costs of insolvency procedures. In October 2016, Hungary set up a Competitiveness Council, which reviews barriers to businesses. On the initiative of the Council, measures were adopted to ease access to public utilities and permits.

Weak and declining institutional performance could be a drag on economic convergence. The Worldwide Governance Indicators shows that Hungary's performance declined in all six broad dimensions of governance over the past decade. The deterioration is particularly notable in voice and accountability, control of corruption and regulatory quality. In terms governance quality, Hungary's relative position worsened in the EU as well as in comparison with the regional peers (Graph 3.4.4.). A recent ECB (del Hoyo et al., 2017) study shows that weak and declining institutional performance contributes to the slowing down of economic convergence within the EU, which underlines the importance of institutions (see also Acemoglu and Robinson, 2010; Bruinshoofd, 2016 and section 3.5).

The limited quality and transparency of policy-making remains a key challenge. According to the World Economic Forum, the weak

transparency of policy-making continues to weigh on the country's competitiveness (WEF, 2017). Empirical research on legislative process revealed several problematic aspects of regulatory quality (CRCB, 2015; 2016; 2017a). The research shows that regulatory impact assessments are not available for a significant number of laws or contain only limited information on the effects of new policies. The cross-country comparison by the Bertelsmann Institute (2017) also points to the low quality of evidence-based policymaking practices in Hungary. There is also a deficit in appropriate stakeholder engagement. The length of time provided for public consultations on draft bills tends to be very short. The Open Government Index also highlights these problems, ranking the country in the bottom group in the EU regarding civic participation and transparency (WJP, 2015).

The judicial system faces some challenges. According to the Council of Europe's Group of States Against Corruption (GRECO, 2015 and 2017), more could be done to better balance the powers between the President of the National Office for the Judiciary and the National Judicial Council by giving a stronger mandate to the latter in appointments and promotions of judges. As noted by the Association of Hungarian Judges, the criticism by government officials of individual judges regarding specific court cases may undermine public confidence in the judiciary (MABIE, 2017). Although the efficiency of the justice system (length of civil, commercial and administrative proceedings) is in general above average, businesses' perception of judicial independence remains low (European Commission, 2018b). Recent amendments to the rules on the selection of judges (new points system favouring the recruitment of civil servants; IM, 2017) will be monitored as regards its potential impact on judicial independence. On a more positive note, new procedural codes were put in place as of 2018, which could facilitate the hearing of civil cases and judicial review of administrative decisions within a reasonable time. At the same time, effective remedies in cases of excessively lengthy proceedings are still lacking (European Commission, 2017, p. 35).

The organisation of the prosecution service to fight corruption should still be improved. In June 2017, GRECO established that Hungary's level of compliance with the 2015

recommendations was “globally unsatisfactory” (GRECO, 2017). According to GRECO, albeit in relation to prosecutors some progress has been made, adequate checks and balances are needed to prevent the potential for malpractice, corruption and political influence. Failure to comply with these recommendations could adversely affect the business environment as the proper functioning of the prosecution service is of crucial importance to fight corruption and money laundering.

Public procurement

In recent years, Hungary implemented a number of measures to improve public procurement practices. Good public procurement practices ensure that tendering authorities and tax payers get the best value for their money ⁽⁸⁾. Hungary managed to fulfil the commitments made in its public procurement action plan, which served as an ex-ante condition for the 2014-2020 multiannual financial framework. This included, among others, the adoption of a new public procurement act in November 2015 in order to transpose the 2014 EU public procurement directives ⁽⁹⁾. The new legal framework strengthened in particular the remit of the Public Procurement Authority in overseeing the legality of direct award procedures and increased the minimum number of invited participants for certain types of tenders. In addition, the 2017 amendment to the public procurement act introduced a non-obligatory option to declare public procurement procedures unsuccessful when only a single bid is received.

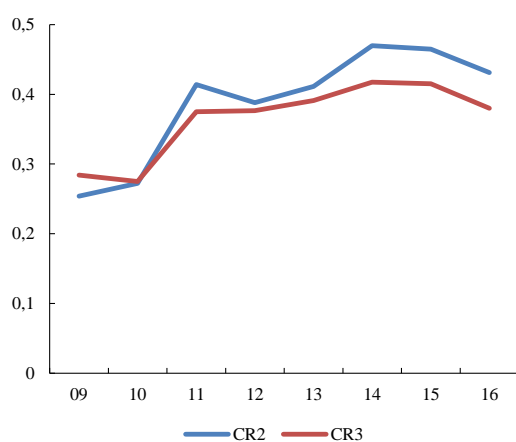
While recent data show some improvements, there is still a considerable scope to enhance competition and transparency in public procurement. Examining contract level data covering both the national regime and tenders above the EU threshold, a recent study found that the proportion of contracts with prior publication of calls (an indicator of transparency) and the average number of bidders somewhat increased between 2015 and 2016 (CRCB, 2017b). Overall, the frequency of contracts involving high risks of

⁽⁸⁾ A recent study by the CRCB (2017b) estimates that the social loss in Hungary in 2009-2016 due to weak public procurement practices could have reached 15-24 % of the total public procurement value.

⁽⁹⁾ The compliance check of the Hungarian transposition measures is ongoing.

potentially generating rents for contractors, as measured by the "corruption risk" indicators in the study, moderated but remained above the historic level (Graph 3.4.3). The Single Market Scoreboard evaluates public procurement practices on the basis of indicators derived for tenders above the EU threshold. On this account, Hungary shows an improvement in terms of a reduced use of negotiated procedures without prior publication of a call (Graph 3.4.4). The share of such tenders dropped from 14% in 2015 to 9% in 2016 and the reduction endured with 8% in 2017, falling below the European Economic Area (EEA) critical reference value of 10%. However, the prevalence of tenders attracting only a single bidder remained high. The share of one-bidder contracts stood at 35% in 2017 (compared with 37% in 2015 and 2016). This was the 7th highest figure in the EEA, well above the reference value of 20%.⁽¹⁰⁾

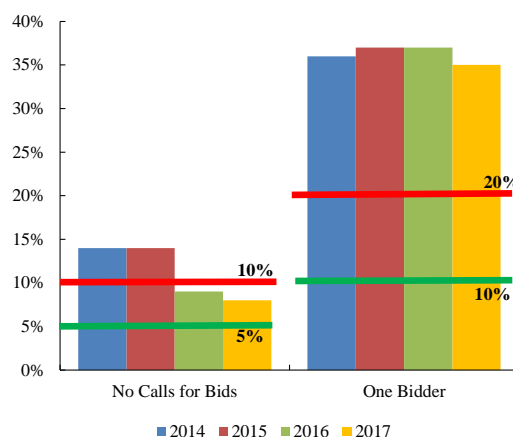
Graph 3.4.3: Risk scores related to low competition and transparency in Hungarian public procurement - corruption risk indicators



(1) Corruption risk scores show the frequency of contracts that potentially generate significant rents for contractors with a value between 1 (high risk) and 0 (low risk). CR2 is a composite index of two indicators taking a value of 1 for each contract with a single bidder and no prior publication of the tender. CR3 covers a third risk factor, assuming that rounded contract prices (zero values in last four digits) reflect low competition. For more details see the source.
Source: CRCB (2017b)

⁽¹⁰⁾ The picture seems to be more positive at a level of all tenders, including lower value procurements in the national regime and framework agreements, which are not covered by the Single Market Scoreboard. Available data for 2016 indicate that overall there was a noticeable decrease in single-bidder tenders both as a share of all contracts (CRCB, 2017b) and procedures (Nézópont, 2017).

Graph 3.4.4: Share of tenders without prior publication and with only a single bidder above EU threshold



(1) Lines refer to the Single Market Scoreboard reference values. Values above the red line are evaluated as "unsatisfactory", below the green line as "satisfactory" and between the two lines as "average" performance.

Source: European Commission (2018c)

The introduction of the e-procurement system is expected to give a new impetus for increasing the efficiency of the public procurement process. Hungary has made considerable efforts to put in place its e-procurement system before the deadline set in the European directives (i.e. 18 October 2018). The testing phase of the modules and system functions already started in 2017. The system became fully operational as of 1 January 2018 and its use will be mandatory for all contracting authorities as of mid-April. The impact of the e-procurement system on competition and transparency depends crucially on the quality of the actual functioning of the system, which is to be monitored in the coming years.

Fight against corruption

Corruption remains a major concern. The perception of corruption in Hungary is higher than in the EU overall ⁽¹¹⁾. The World Economic Forum (WEF, 2016; 2017) identifies corruption as one of the most problematic factors for doing business in Hungary. As measured by Transparency International's Corruption Perception Index, Hungary's exposure to corruption appears to have

⁽¹¹⁾ 56% of business representatives consider that corruption negatively affects the business climate in the country (EU average 37%), while 46% considered favouritism and nepotism a significant problem (EU average 38%). (European Commission, 2017g).

increased over the past years (TI, 2018). Risks of corruption could negatively affect the country's growth potential by distorting allocative efficiency in the economy (Gamberoni et al., 2016; del Hoye et al., 2017).

There are gaps in the anti-corruption framework. The government's strategic approach to fighting corruption continues to focus narrowly on integrity within public administration. There is no compelling evidence on the effectiveness of measures in preventing corruption. Shortcomings in whistle-blower protection and the asset declarations system of officials have still not been addressed. No measures have been taken to reduce favouritism by public officials. On the prosecution side, while measures to fight low-level corruption (such as integrity testing) appear to have been applied with some success, there is not enough focus on starting investigations into high-level corruption cases. This is reflected in the perception level ⁽¹²⁾. According to the latest available data for 2014, the proportion of suspended sentences out of the total number of final convictions for offences involving the bribery of public officials was 86 %. Concerns regarding prevention of corruption with respect to members of parliament, judges and prosecutors have not been sufficiently addressed yet (GRECO, 2017).

Limited transparency and restrictions on access to information hinder corruption prevention. International comparisons suggest that Hungary still has some way to go to rank among the well-performing countries in the EU regarding the accessibility and quality of public information (Bertelsmann, 2017; IBP, 2015; 2018; WJP, 2015). Hungary left the Open Government Partnership in December 2016. The recent legislation on NGOs receiving support from foreign sources adversely affects the operating environment for watchdog organisations (Venice Commission, 2017). According to several news portals that are regularly requesting information from government agencies, more and more institutions request fees, invoke exceptions to deny access, release information only after lengthy litigation procedures or sometimes even refuse to comply

with court orders on the matter (e.g. Átlátszó, 2017, 2018; G7, 2017; Index, 2017; Magyar Nemzet Online, 2017). The Data Protection Authority has taken a progressive position in such cases and so did courts, who generally decide in favour of public access to information (NAIH, 2017). The Constitutional Court rebuffed repeated attempts to restrict access by subsequent legislative modifications.

Informal payments in healthcare still persist. Visiting a doctor or a public healthcare institution may still mean having to offer a gift or pay above the official fee. Available estimates put the annual amount of gratuity payments in healthcare at 0.05-0.2% of GDP (Gaál et al, 2012; Lantos, 2017). At the same time, a large majority of doctors would like to work in a healthcare system free from gratuity payments (Szinapszis, 2017). No steps have been taken to introduce measures to clarify the legal status of gratuity payments. There remains a contradiction between the Labour Code, which authorises institutions to allow employees to take gratuity payments and the Criminal Code, which sanctions such transactions as bribery.

⁽¹²⁾ Only 15 % of business respondents consider that there are appropriate sanctions in Hungary for the bribery of senior officials as compared to the EU average of 30 % (European Commission, 2017g).

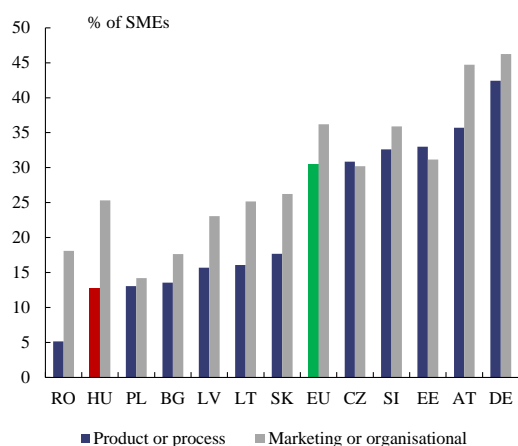
3.5. SECTORAL POLICIES

Research and Innovation

Hungary's innovative capacity remains low, especially for domestic enterprises and SMEs.

Hungary is considered a moderate innovator, with a declining innovation performance in EU comparison between 2010 and 2016. ⁽¹³⁾ The innovation capacity of SMEs is particularly low (Graph 3.5.1). Research and innovation activities are highly concentrated on foreign-owned enterprises and a few large Hungarian businesses (see Box 3.4.2). The pharmaceutical, ICT, machinery and automotive sectors represent the highest proportion of innovative companies (European Commission, 2016a).

Graph 3.5.1: The proportion of SMEs introducing innovations



Source: European Commission SBA database (2017)

Despite government measures, framework conditions do not sufficiently promote entrepreneurship and innovation. Boosting business R&D has been a strategic objective of the government in recent years through tax incentives and direct support measures, mainly from the European Regional Development Fund, but measures to support the demand side of innovation are lacking (Dőry, Csonka, Slavcheva, 2018). Public funding of private R&D is the third highest among the EU Member States with European Structural Funds playing a major role (OECD, 2016d). The government is supporting start-ups through accelerator and incubator initiatives, but entrepreneurship education is still weak and

⁽¹³⁾ According to the European Innovation Scoreboard, Hungary's innovation performance fell by 3.5 pps between 2010 and 2016 relative to EU performance in 2010.

administrative barriers often complicate the operations of start-ups.

After a gradual increase in recent years R&D intensity decreased to 1.2% of GDP in 2016. In previous years the increase in R&D intensity was mainly led by rising business expenditure. At around 0.4% of GDP in 2016, public R&D expenditure remains amongst the lowest in the EU, hampering the quality and efficiency of the public R&I system. The decrease in public R&D can partially be explained by slow initial implementation of funds from governmental programs co-funded by Structural Funds, which remain the major source of public spending.

Low expenditure and fragmentation hamper the quality and effectiveness of the public research and innovation system.

Hungary's public research system is underfunded and highly fragmented across universities, institutes of the Hungarian Academy of Sciences and sectoral institutes supervised by the different ministries. The system lacks an overall strategic vision and a structured involvement of stakeholders. Independent external evaluations are not yet systematically carried out. Despite measures in place, science-business partnerships are still not sufficiently supported and risk not being sustainable when public funding stops. The limited openness of the Hungarian research system is also a challenge (Jonkers and Wagner, 2017). These issues were identified in the peer review carried out under the Horizon 2020 Policy Support Facility and are being addressed by the government through the still on-going review of the national RDI strategies.

Skills shortages remain a major challenge for the Hungarian research and innovation system.

The number of researchers has been declining in recent years and is relatively low. This is partially explained by the more attractive conditions abroad for researchers that spur emigration. The share of research staff in the private sector is close to the EU average, but mobility of researchers between science and business is limited. A number of programmes are in place to provide better conditions for researchers, but these appear insufficient in the light of low salaries and more attractive career opportunities in the business sector and abroad. (Dőry, Csonka and Slavcheva, 2018)

Digital economy

Access to internet steadily improved in recent years. The country ranks well in the availability of fast fixed broadband network, albeit the take-up in mobile broadband remains low. At the same time, the business sector and public administration are not exploiting the opportunities offered by digital technology as much as other countries do (European Commission, 2017i).

Despite favourable trends, Hungary lags behind in the integration of digital technology by businesses. In 2017, 14.6 % of enterprises used social media (up from 13.4 % in 2016), 8.4 % sent e-invoices (8.1 % in 2016), 10.7 % applied cloud services (8 % in 2016) and 12.5 % of SMEs were selling online (11.7 % in 2016). However, on all of the above indicators, Hungary performs well below the EU average. The government launched the "Modern Businesses Programme" focusing on awareness-raising activities, which can help businesses becoming digital. In addition, within the frames of "Support of Business Digital Developments" project more than one thousand SMEs received grants and loan financing to carry out investment in ICT developments.

The country also scores below the EU average in key dimensions of digital public services, but important developments are in the pipeline. Hungary is assessed as a moderate performer in e-government services with considerable reserves to improve administrative effectiveness (European Commission, 2017j). Improvements are expected in this area due to ongoing e-government developments supported also by EU funds. Several digitisation programs have been launched or being implemented in the public sector (e.g. e-Health, e-Procurement, electronic tax declarations), which will have an important impact on businesses and citizen's life.

Regulation in the service sector

Hungary has relatively high regulatory barriers in services, which hampers productivity and innovation. Hungary scores below the average in 12 out of the 21 service sectors on the OECD's Services Trade Restrictiveness Indicator (OECD, 2017e). More recently, additional restrictive rules have been introduced, notably through changes to the rules on advertising. The authorities also

continue entrusting certain services to state-owned firms specifically created for these purposes (e.g. waste collection, regulated energy retail). Existing allocative inefficiencies in Hungarian service sector, as revealed by the persistently high inter-firm productivity differences (see Box 3.4.2), point to the adverse effects of regulatory barriers. The competitiveness of services also affects downstream industries using services as inputs. A recent study shows that tackling restrictive regulations in the upstream service sectors would increase the productivity of manufacturing industries in Hungary, particularly when coupled with improvements in governance quality (Curnis and Manjón Antolín, 2017), (see also section 3.4).

Unpredictability of the legal framework is a further problem, especially in the retail sector.

The past years saw frequent announcements of new restrictions affecting retailers. This can deter investment even if no concrete actions are taken. The ban on Sunday trading was introduced and later withdrawn. The authorities also backtracked on the collection of the progressive food chain inspection fee following legal action by the European Commission. In the spring of 2017, new plans were announced for yet another set of restrictive measures (OKSZ, 2017), which had not been introduced to date. As the proposed regulations are often tailored to turnover or floor size, they mainly affect foreign retail chains. The unclear application of rules for granting permit to set up shops above a certain size remains a source of uncertainty (European Commission, 2017a, p.32). Also, the prohibition of operating at loss continues to exist, increasing normal business risks.

Restrictiveness of regulation of professions remains high in Hungary.

The analysis performed as part of the 2017 Services Packages points to a high degree of regulatory restrictiveness among key professions, resulting in low business dynamics, for example, in accounting and legal services (European Commission, 2017k). In 2017, Hungary revised the legal rules for lawyers. This revision removed some restrictions on cooperation between lawyers and other professions, while allowed specific types of lawyers to provide a wider range of services than before. In parallel however, regulatory complexity increased with the creation of the additional regulated legal profession categories of "Legal Counsel" and

"Junior Lawyer". Hungary submitted a National Action Plan in the context of the mutual evaluation of regulated professions, but has not yet implemented the actions in the plan.

Hungary maintains a restrictive approach towards the collaborative economy. Regarding the transport sector, Hungary inter alia requires online platforms for passenger transport services to obtain a prior authorisation in the form of an operating permit, to comply with specific professional qualifications requirements and to obtain a financial security. These requirements could have a stifling effect on such services despite strong consumer interest. Citizens in Hungary are, on the other hand, allowed to share their properties with guests under certain conditions and subject to obtaining prior authorisations. The procedure for these authorisations however is complex and creates unnecessary obstacles to the development of this part of the collaborative economy.

Energy and Climate

Although wholesale electricity prices have decreased in the past years, they remain comparatively high. Hungary produces electricity at higher costs compared to its neighbours. This creates a structural exposure to imports, which could be alleviated if access to more competitively priced electricity from Western Europe was improved. However, the absence of a common solution for the definition of appropriate bidding zones in Central and Eastern Europe remains a limitation on cross-border electricity trade. Hungary has significant gas interconnection capacities to its neighbours and storage facilities, which enhance the regional security of gas supply.

Retail energy prices for households are comparatively low reflecting a restrictive price regulation. Regulated retail electricity and gas prices not reflecting the full costs of energy supply (including network costs and taxes) have resulted in losses to the service providers over several years. This prompted them to return their universal supply licences. The reduced profitability in the sector made a negative impact on investments in energy transmission and distribution, which decreased by around 30% between 2008 and 2016. The state-owned National Public Utility Company (NKM Zrt.) has taken over the universal service

segment for households in the natural gas sector, resulting in a de facto public monopoly. The present regulatory regime, which still does not recognise all cost components, bears the risk of accumulating financial losses, once wholesale energy prices start to rise again.

Although energy consumption decreased, there is still room for improving energy efficiency in the residential sector. Between 2005 and 2015, final energy consumption fell by 5%, albeit it started to increase again at the end of the period. There remains a considerable scope for energy savings in the residential sector, which accounts for one-third of total consumption.

The use of renewable energy sources improved over the past years; but to a large extent this was due to increased biomass use in heating and cooling.⁽¹⁴⁾ At the same time, the share of renewables electricity generation has not increased. Moreover, biomass also has a dominant share in renewable electricity generation, while other alternative sources (e.g.: solar, geothermal and wind) play a relatively minor role. This provides an untapped opportunity for better exploitation of clean energy sources in electricity generation to attain the climate objectives.

Environment policy

Current policies do not effectively support the achievement of the EU circular economy objectives, in particular the waste management targets. The government plans to develop new incineration capacities for the energy recovery of municipal waste. As new binding EU recycling targets will soon be introduced for 2025 and 2030, such infrastructural investments may entail some long term risk (e.g. structural overcapacities or stranded assets). No incineration tax exists and the landfill tax has not increased since 2013. The municipal waste recycling and composting rates remained significantly below the EU average in 2016 (34.7 % vs. 45.6 %). Hungary considerably lags behind regarding the recycling and recovery targets for packaging. To remedy this, glass recycling was made mandatory in retail premises

⁽¹⁴⁾ Biomass includes wood firing in households. The wood consumption statistics were recently implemented, resulting in increasing share of renewable sources in the final energy consumption.

above a certain floor size as of January 2018. under way to improve the management of construction waste and biodegradable waste.

Air pollution continues to be a challenge in Hungary. A recent report by the European Environment Agency (2017) estimated that premature deaths attributable to fine particulate matter exceeded the average mortality rate in the EU in 2014. Over the past decade, the particulate matter emission level increased by 40%, mainly from residential solid fuel combustion. In urban areas air pollution linked road transport is a significant public health hazard, and congestion is

Measures are also projected to increase. Policies to contain this risk (such as the introduction of low emission zones or road access charges in capital city) are missing or not followed up. Without further policy actions, commitments made in the National Emission Ceilings Directive will not be achieved. ⁽¹⁵⁾

⁽¹⁵⁾ The replacement of the old fleet with new passenger cars can help decreasing the level of emissions. In 2016, new car registrations increased by over 25%. At the same time, the motorisation rate is steadily rising, by 2-3% per year.

Box 3.5.7: Policy Highlights

Health system performance assessment as a new policy tool

Building on similar practices in other countries and policy principles promoted by the World Health Organisation (WHO), Hungary launched its health system performance assessment (HSPA) programme in 2013. This was led by the objective to provide a comprehensive, systematic and quantitative evaluation on key aspects of public health and healthcare provision. The decree of the Ministry of Human Capacities, which set forth the process, defined HSPA as a bi-annual exercise. The National Health Service Center was put in charge of coordinating the project, but the assessment itself has been based on a wide ranging collaboration in order to ensure an unbiased, critical approach. The representatives of the WHO are also invited participants in the HSPA Working Group, which oversees professional content and acts as a consultative forum.

The first comprehensive report became publicly available in mid-2017 (Gyenes et al., 2016). It contains 76 system-level indicators accompanied by detailed analyses examining 6 broad dimensions of health system performance. These include: (i) health determinants and public health risks; (ii) health outcomes; (iii) the structure of healthcare provision and access to care; (iv) adequacy of financial protection; (v) quality and safety of healthcare and (vi) efficiency of resource utilisation and financial resilience. In addition, an in-depth review is provided on two focus areas selecting myocardial infarction and tuberculosis care in the first assessment round. Equity considerations feature strongly with evidence on socio-economic and geographic disparities being highlighted along each policy dimension. Overall, the report presents the available diverse health-related data within a uniform framework and in a policy-relevant manner.

This new policy instrument offers several benefits. The HSPA holds up a critical mirror for the Hungarian authorities pinpointing both positive and negative trends as measured by the indicator system. While giving a snapshot of the performance of the health system, it helps to identify key priority areas for which improvement is needed in the future. It is also a valuable source of information for health professionals and the general public enhancing the accountability of policy making in the sector.

ANNEX A

Overview Table

Commitments	Summary assessment ⁽¹⁶⁾
2017 country-specific recommendations (CSRs)	
CSR 1: Pursue a substantial fiscal effort in 2018 in line with the requirements of the preventive arm of the Stability and Growth Pact, taking into account the need to strengthen the ongoing recovery and to ensure the sustainability of Hungary's public finances.	The compliance assessment with the Stability and Growth Pact will be included in Spring when final data for 2017 will be available.
CSR 2: Complete the reduction of the tax wedge for low-income earners and simplify the tax structure, in particular by reducing the most distortive sector-specific taxes. Strengthen transparency and competition in public procurement, by implementing a comprehensive and efficient e-procurement system, and strengthen the anti-corruption framework. Strengthen regulatory predictability, transparency and competition in particular in the services sector, notably in retail.	Hungary has made Limited Progress in addressing CSR 2
Complete the reduction of the tax wedge for low-income earners and	Some Progress Employer's social security contribution rate was lowered by 7.5 % pps. in 2017-2018. However, the tax wedge

⁽¹⁶⁾ The following categories are used to assess progress in implementing the 2017 country-specific recommendations (CSRs):

No progress: The Member State has not credibly announced nor adopted any measures to address the CSR. This category covers a number of typical situations, to be interpreted on a case-by-case basis taking into account country-specific conditions. They include the following:

no legal, administrative, or budgetary measures have been announced in the national reform programme,

in any other official communication to the national Parliament/relevant parliamentary committees or the European Commission, publicly (e.g. in a press statement or on the government's website);

no non-legislative acts have been presented by the governing or legislative body;

the Member State has taken initial steps in addressing the CSR, such as commissioning a study or setting up a study group to analyse possible measures to be taken (unless the CSR explicitly asks for orientations or exploratory actions). However, it has not proposed any clearly-specified measure(s) to address the CSR.

Limited progress: The Member State has:

announced certain measures but these address the CSR only to a limited extent; and/or

presented legislative acts in the governing or legislative body but these have not been adopted yet and substantial further, non-legislative work is needed before the CSR is implemented;

presented non-legislative acts, but has not followed these up with the implementation needed to address the CSR.

Some progress: The Member State has adopted measures

that partly address the CSR; and/or

that address the CSR, but a fair amount of work is still needed to address the CSR fully as only a few of the measures have been implemented. For instance, a measure or measures have been adopted by the national Parliament or by ministerial decision, but no implementing decisions are in place.

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

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

<p>simplify the tax structure, in particular by reducing the most distortive sector-specific taxes.</p>	<p>for low income earners remains the highest in the EU.</p> <p>Limited Progress The upper rate of the bank levy was decreased in 2017 from 0.24 % to 0.21 %. At the same time, the advertisement tax paid by companies publishing or broadcasting ads was increased. However, considerable efforts are made to reduce high compliance costs. Personal income tax return is prepared by the tax authority every year from 2017. Simplified corporate taxation regimes for small businesses have been modified increasing the number of eligible taxpayers. From 2018, draft tax returns for excise duties will be prepared by the tax authority and taxpayers classified as 'reliable' will benefit from a shorter (30 days) refund period for VAT. In 2017, the government launched a modernisation programme of the tax authority to adopt a more client-centred approach in tax collection through digitization, process redesign and professional upgrading.</p>
<p>Strengthen transparency and competition in public procurement, by implementing a comprehensive and efficient e-procurement system, and</p>	<p>Some Progress Hungary implemented a number of measures to strengthen transparency and competition in public procurement, especially the amendment to the Public Procurement Act. Some improvements are already visible but there is still room for enhancement. The new e-procurement system has been put in operation as of January 2018, which is a big step towards further increasing transparency and competition. Its efficiency and impact is still to be seen in the coming years.</p>
<p>strengthen the anti-corruption framework.</p>	<p>Limited Progress The government's strategic approach to fighting corruption continues to narrowly focus on integrity within state administration and there is no evidence as to the effectiveness of the measures in preventing corruption. No progress has been made as regards the transparency of asset declarations, whistleblower protection and informal payments in public healthcare. No measures have been taken to reduce favouritism among government officials and there are no indications as to stepping up efforts to investigate corruption allegations involving high level officials. The ESI Funds are financing a number of anti-corruption measures, however actions tackling high level, institutionalised corruption and increasing state transparency are lacking, such as the review the data subject to statutory disclosure or developing publicly available and easily searchable public procurement database with unique identifier linked to economic operators. On a positive note, the statute of limitation of prosecuting corruption was extended in 2017.</p>
<p>Strengthen regulatory predictability, transparency and competition in particular in the services sector, notably in retail.</p>	<p>Limited Progress The revision of the professional rules for lawyers removed some restrictions. However, Hungary made no progress in the general area of business services regulation nor in retail. The level of restrictiveness remains high and also legal uncertainty as regards additional restrictions, notably in retail,</p>

	remains an issue.
<p>CSR 3: Better target the public works scheme to those furthest away from the labour market and provide effective support to jobseekers in order to facilitate transitions to the labour market, including by reinforcing active labour market policies. Take measures to improve education outcomes and to increase the participation of disadvantaged groups, in particular Roma, in inclusive mainstream education. Improve the adequacy and coverage of social assistance and the duration of unemployment benefits.</p>	<p>Hungary has made Limited Progress in addressing CSR 3</p>
<p>Better target the public works scheme to those furthest away from the labour market and provide effective support to jobseekers in order to facilitate transitions to the labour market, including by reinforcing active labour market policies.</p>	<p>Some Progress As result of legislative changes, participation in the public works scheme is set to decrease under 150 000 by the year 2020, along with the decrease of the budget allocated for the scheme. In parallel with this decrease, the national expenditure for active labour market policies is being gradually increased and new national programmes have been initiated. Since 2016 several ESF co-financed programmes have been running and facilitating the transition from PWS to the primary labour market. 'Training of Low-skilled and Public Workers' programme targets public workers and by October 2017 it has had over 50 000 participants. Other ESF (and YEI) supported ALMP programmes initiated in 2015/2016 are being continued. The two major programmes are the 'Path to the labour market' and the Youth Guarantee with, respectively, 88 000 and 74 000 participants. Other ESF funded programmes supporting traineeships and entrepreneurship have also been launched.</p>
<p>Take measures to improve education outcomes and to increase the participation of disadvantaged groups, in particular Roma, in inclusive mainstream education.</p>	<p>Limited Progress Amendments to the Equal Treatment and Public Education Acts to prevent future segregation have been adopted but they can only have an impact as of the 2018-19 school year. ESIF-funded measures have been launched to support schools in fighting school failure and early school-leaving. As of January 2018 teachers are entitled to a salary supplement if working under difficult conditions. However, explicit active desegregation measures which would systematically address the existing segregation in mainstream education are lacking. In addition, some new measures such as the highly competitive entry exam to upper-secondary schools and the reduction of science and general education content taught at vocational grammar schools and vocational secondary schools have further strengthened differences between schools and thereby the selectiveness of the school system.</p>
<p>Improve the adequacy and coverage of social assistance and the duration of</p>	<p>Limited Progress The duration of unemployment benefits is still the lowest in the EU at maximum 3 months and the main income support scheme remained unchanged. However few</p>

unemployment benefits.	minor in kind benefits have been expanded and are expected to have some positive impact on child poverty alleviation.
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Europe 2020 (national targets and progress)	
Employment rate target: 75 %.	The employment rate continued to improve and reached 71.5 % in 2016.
R&D target: 1.8 % of GDP and 3 % by 2030	While R&D intensity has increased in recent years, the efficiency of the public R&I funding remained a challenge. With R&D intensity standing at 1.21 % of GDP, Hungary needs to make more efforts to meet the national target of 1.8 % of GDP.
Greenhouse gas emissions, national target: +10 % in non-ETS sectors compared to 2005	Non-ETS emissions were reduced by 12 % between 2005 and 2016, well above of the interim target of +12 %. According to the latest projections, the 2020 target is expected to be met by a wide margin.
2020 Renewable energy target: 13 %	With a renewable energy share of 14.2 % in 2016, Hungary is on track to meet its target for 2020 (13 %). With a 7.4% share of RES in transport in 2016, Hungary needs to make further efforts to reach the 10% target by 2020. In the case of electricity, share of renewables practically did not show an increase over the last seven-eight years.
2020 Energy efficiency target: 24.1 Mtoe in primary energy consumption and 14.4 Mtoe expressed in final energy consumption	While primary energy consumption in 2016 (23.9 Mtoe) was slightly below the indicative 2020 national target, further efforts are needed in order to attain the final energy consumption until 2020, which reached 17.9 Mtoe in 2016.
Reducing the rates of early school leaving below 10 %.	In 2016, the early school leaving rate increased to 12.4 %, above the EU average of 10.7 %.
34 % of 30-34-year-olds completing third level education (national target 34 %)	The tertiary educational attainment rate for 30-to 34-year-olds stood at 33 % in 2016, significantly below the EU average of 39.1 %.
Target on the reduction of population at risk of poverty or social exclusion in number of persons: 450 000.	In 2016, the population at risk of poverty and social exclusion was 253 000 lower than in 2008.

ANNEX B

Macroeconomic Imbalance Procedure Scoreboard

Table B.1: The MIP Scoreboard for Hungary (AMR 2018)

			Thresholds	2011	2012	2013	2014	2015	2016
External imbalances and competitiveness	Current account balance, % of GDP	3 year average	-4%/6%	0.1	0.9	2.1	2.3	2.9	3.6
	Net international investment position	% of GDP	-35%	-105.7	-93.6	-83.1	-80.3	-67.8	-65.0
	Real effective exchange rate - 42 trading partners, HICP deflator	3 year % change	±5% (EA) ±11% (Non-EA)	-4.2	-0.8	-3.8	-6.8	-7.1	-5.0
	Export market share - % of world exports	5 year % change	-6%	-2.2	-21.0	-22.5	-16.3	-7.8	-0.4
	Nominal unit labour cost index (2010=100)	3 year % change	9% (EA) 12% (Non-EA)	4.3	5.0	6.2	5.9	-0.2	3.3
House price index (2015=100), deflated	1 year % change	6%	-6.9	-9.2	-4.3	3.3	13.3	13.6	
Internal imbalances	Private sector credit flow, consolidated	% of GDP	14%	-4.4	-6.1	-0.9	-0.1	-2.6	-3.6
	Private sector debt, consolidated	% of GDP	133%	114.4	101.6	95.1	91.2	84.3	77.0
	General government gross debt	% of GDP	60%	79.9	77.6	76.0	75.2	74.7	73.9
	Unemployment rate	3 year average	10%	10.7	11.1	10.7	9.6	8.2	6.5
	Total financial sector liabilities, non-consolidated	1 year % change	16.5%	6.3	-5.8	-1.2	8.6	0.6	19.5
Employment indicators	Activity rate - % of total population aged 15-64	3 year change in pp	-0.2 pp	1.2	2.5	2.8	4.6	4.9	5.4
	Long-term unemployment rate - % of active population aged 15-74	3 year change in pp	0.5 pp	1.6	0.8	-0.6	-1.5	-1.9	-2.5
	Youth unemployment rate - % of active population aged 15-24	3 year change in pp	2 pp	6.5	1.8	0.2	-5.6	-10.9	-13.7

(1)) This table provides data as published under the Alert Mechanism Report 2018, which reports data as of 24 Oct 2017. Please note that figures reported in this table may therefore differ from more recent data elsewhere in this document. . 2) Unemployment rate: i = Eurostat back-calculation to include 2011 Population Census results. 3) Youth unemployment rate: i = Eurostat back-calculation to include 2011 Population Census results.

Source: European Commission 2017, Statistical Annex to the Alert Mechanism Report 2018, SWD(2017) 661.

ANNEX C

Standard Tables

Table C.1: **Financial Market Indicators**

	2012	2013	2014	2015	2016	2017
Total assets of the banking sector (% of GDP) ⁽¹⁾	118,5	113,9	107,5	101,5	103,1	98,6
Share of assets of the five largest banks (% of total assets)	54,0	51,9	52,5	53,3	53,4	-
Foreign ownership of banking system (% of total assets) ⁽²⁾	58,1	55,5	47,6	47,0	47,7	47,7
Financial soundness indicators: ⁽²⁾						
- non-performing loans (% of total loans) ⁽³⁾	14,1	14,0	14,2	11,0	8,1	6,9
- capital adequacy ratio (%)	16,3	17,4	17,0	16,9	18,0	17,2
- return on equity (%) ⁽⁴⁾	-5,1	-0,4	-21,9	0,3	11,7	8,2
Bank loans to the private sector (year-on-year % change) ⁽¹⁾	-5,5	-4,1	-3,5	-8,1	3,3	7,2
Lending for house purchase (year-on-year % change) ⁽¹⁾	-9,4	-5,4	-6,1	-10,3	-0,8	3,1
Loan to deposit ratio ⁽¹⁾	110,6	102,1	94,8	80,9	73,3	73,5
Central Bank liquidity as % of liabilities ⁽⁵⁾	0,7	3,1	3,8	4,9	5,1	4,9
Private debt (% of GDP)	101,6	95,1	91,2	84,3	77,0	-
Gross external debt (% of GDP) ⁽²⁾ - public	51,7	47,2	46,6	41,7	37,1	32,6
- private	79,1	75,3	79,4	72,5	68,6	61,2
Long-term interest rate spread versus Bund (basis points)*	639,6	435,3	364,6	293,7	305,3	272,5
Credit default swap spreads for sovereign securities (5-year)*	418,0	269,8	179,2	139,1	131,3	98,6

1) Latest data Q3 2017. Includes not only banks but all monetary financial institutions excluding central banks

2) Latest data Q2 2017.

3) As per ECB definition of gross non-performing debt instruments

4) Quarterly values are not annualised

5) Latest data April 2017.

* Measured in basis points.

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

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

	2012	2013	2014	2015	2016	2017 ⁵
Equal opportunities and access to the labour market						
Early leavers from education and training (% of population aged 18-24)	11.8	11.9	11.4	11.6	12.4	:
Gender employment gap (pps)	11.1	12.4	13.3	13.7	14.0	15.2
Income inequality, measured as quintile share ratio (S80/S20)	4.0	4.3	4.3	4.3	4.3	:
At-risk-of-poverty or social exclusion rate ¹ (AROPE)	33.5	34.8	31.8	28.2	26.3	:
Young people neither in employment nor in education and training (% of population aged 15-24)	14.8	15.5	13.6	11.6	11.0	:
Dynamic labour markets and fair working conditions[†]						
Employment rate (20-64 years)	61.6	63.0	66.7	68.9	71.5	73.0
Unemployment rate ² (15-74 years)	11.0	10.2	7.7	6.8	5.1	4.3
Gross disposable income of households in real terms per capita ³ (Index 2008=100)	:	:	101.0	103.3	:	:
Public support / Social protection and inclusion						
Impact of social transfers (excluding pensions) on poverty reduction ⁴	47.6	44.4	43.6	42.0	43.8	:
Children aged less than 3 years in formal childcare	8.0	10.0	14.4	15.4	15.6	:
Self-reported unmet need for medical care	2.9	2.6	2.5	2.6	1.3	:
Individuals who have basic or above basic overall digital skills (% of population aged 16-74)	:	:	:	50.0	51.0	50.0

† The Social Scoreboard includes 14 headline indicators, of which 12 are currently used to compare Member States performance. The indicators "participants in active labour market policies per 100 persons wanting to work" and "compensation of employees per hour worked (in EUR)" are not used due to technical concerns by Member States. Possible alternatives will be discussed in the relevant Committees.

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

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

(3) Gross disposable household income is defined in unadjusted terms, according to the draft Joint Employment Report 2018.

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

(5) Average of first three quarters of 2017, except for the indicator "individual who have basic or above basic digital skills" (annual data). Data for unemployment rate is seasonally adjusted.

Source: Eurostat

Table C.3: Labour market and education indicators

Labour market indicators	2012	2013	2014	2015	2016	2017 ⁵
Activity rate (15-64)	63.7	64.7	67.0	68.6	70.1	:
Employment in current job by duration						
<i>From 0 to 11 months</i>	13.7	14.5	14.4	13.8	14.0	:
<i>From 12 to 23 months</i>	9.0	9.1	9.0	9.2	9.5	:
<i>From 24 to 59 months</i>	18.4	18.4	19.7	18.6	19.1	:
<i>60 months or over</i>	58.9	57.9	56.6	58.2	57.4	:
Employment growth*						
(% change from previous year)	0.2	1.1	4.8	2.4	2.6	1.9
Employment rate of women						
(% of female population aged 20-64)	56.2	56.9	60.2	62.1	64.6	65.6
Employment rate of men						
(% of male population aged 20-64)	67.3	69.3	73.5	75.8	78.6	80.7
Employment rate of older workers*						
(% of population aged 55-64)	36.1	37.9	41.7	45.3	49.8	51.2
Part-time employment*						
(% of total employment, aged 15-64)	6.7	6.4	6.0	5.7	4.8	4.3
Fixed-term employment*						
(% of employees with a fixed term contract, aged 15-64)	9.5	10.9	10.8	11.4	9.7	9.0
Transition rate from temporary to permanent employment (3-year average)	37.8	37.0	38.0	38.5	37.2	:
Long-term unemployment rate ¹ (% of labour force)	5.0	4.9	3.7	3.1	2.4	1.7
Youth unemployment rate						
(% active population aged 15-24)	28.2	26.6	20.4	17.3	12.9	10.8
Gender gap in part-time employment	5.1	4.8	4.2	3.7	3.7	3.4
Gender pay gap ² (in undadjusted form)	20.1	18.4	15.1	14.0	:	:
Education and training indicators	2012	2013	2014	2015	2016	2017
Adult participation in learning (% of people aged 25-64 participating in education and training)	2.9	3.2	3.3	7.1	6.3	:
Underachievement in education ³	28.1	:	:	28.0	:	:
Tertiary educational attainment (% of population aged 30-34 having successfully completed tertiary education)	29.8	32.3	34.1	34.3	33.0	:
Variation in performance explained by students' socio-economic status ⁴	23.1	:	:	21.4	:	:

* Non-scoreboard indicator

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

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

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

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

(5) Average of first three quarters of 2017. Data for youth unemployment rate is seasonally adjusted.

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>	5.0	4.9	4.8	5.6	:	:
<i>Disability</i>	1.6	1.5	1.4	1.4	:	:
<i>Old age and survivors</i>	10.9	10.8	10.2	9.7	:	:
<i>Family/children</i>	2.6	2.5	2.3	2.4	:	:
<i>Unemployment</i>	0.6	0.5	0.4	0.3	:	:
<i>Housing</i>	0.3	0.3	0.3	0.3	:	:
<i>Social exclusion n.e.c.</i>	0.1	0.1	0.1	0.1	:	:
Total	21.1	20.5	19.6	19.7	:	:
<i>of which: means-tested benefits</i>	0.9	0.9	0.7	0.8	:	:
General government expenditure by function (% of GDP, COFOG)						
<i>Social protection</i>	16.7	16.4	15.3	14.8	14.3	:
<i>Health</i>	5.1	5.0	4.8	5.2	4.8	:
<i>Education</i>	4.7	4.6	5.1	5.1	4.9	:
Out-of-pocket expenditure on healthcare (% of total health expenditure)	29.4	28.4	28.3	29.0	:	:
Children at risk of poverty or social exclusion (% of people aged 0-17)*	41.9	43.9	41.8	36.1	33.6	:
At-risk-of-poverty rate ¹ (% of total population)	14.3	15.0	15.0	14.9	14.5	:
In-work at-risk-of-poverty rate (% of persons employed)	5.7	7.0	6.7	9.3	9.6	:
Severe material deprivation rate ² (% of total population)	26.3	27.8	24.0	19.4	16.2	:
Severe housing deprivation rate ³ , by tenure status						
<i>Owner, with mortgage or loan</i>	15.2	14.8	13.9	11.9	17.2	:
<i>Tenant, rent at market price</i>	26.6	30.9	24.2	32.2	23.7	:
Proportion of people living in low work intensity households ⁴ (% of people aged 0-59)	13.5	13.6	12.8	9.4	8.2	:
Poverty thresholds, expressed in national currency at constant prices*	607544	564058	577231	605976	636370	:
Healthy life years (at the age of 65)						
<i>Females</i>	6.4	6.1	6.1	5.9	:	:
<i>Males</i>	6.4	6.2	6.0	5.9	:	:
Aggregate replacement ratio for pensions ⁵ (at the age of 65)	0.6	0.6	0.6	0.6	0.7	:
Connectivity dimension of the Digital Economy and Society Index (DESI) ⁶	:	:	43.7	53.5	59.6	63.6
GINI coefficient before taxes and transfers*	51.0	50.9	52.5	49.9	49.8	:
GINI coefficient after taxes and transfers*	26.9	28.0	28.6	28.2	28.2	:

* Non-scoreboard indicator

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

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

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

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

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

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

Source: Eurostat, OECD

Table C.5: Product market performance and policy indicators

Performance Indicators	2010	2011	2012	2013	2014	2015	2016
Labour productivity (real, per person employed, year-on-year % change)							
Labour productivity in Industry	19,07	0,82	-0,22	2,46	2,51	9,01	-0,51
Labour productivity in Construction	9,07	4,70	-4,12	6,90	6,37	1,32	-12,97
Labour productivity in Market Services	14,01	-0,30	0,94	1,48	-3,74	0,50	-0,63
Unit labour costs (ULC) (whole economy, year-on-year % change)							
ULC in Industry	-4,87	7,06	4,77	4,01	1,11	-5,60	5,82
ULC in Construction	3,87	1,82	5,32	-3,48	-7,71	-14,27	14,46
ULC in Market Services	1,77	2,29	2,00	0,38	0,56	-2,91	2,07
Business Environment	2010	2011	2012	2013	2014	2015	2016
Time needed to enforce contracts ⁽¹⁾ (days)	395.0	395.0	395.0	395.0	395.0	395.0	395.0
Time needed to start a business ⁽¹⁾ (days)	5,0	5,0	7,0	7,0	7,0	7,0	7,0
Outcome of applications by SMEs for bank loans ⁽²⁾	na	1,04	na	0,67	1,01	0,39	0,38
Research and innovation	2010	2011	2012	2013	2014	2015	2016
R&D intensity	1,14	1,19	1,26	1,39	1,35	1,36	1,21
General government expenditure on education as % of GDP	5,50	5,10	4,70	4,60	5,10	5,20	na
Persons with tertiary education and/or employed in science and technology as % of total employment	33	35	36	37	36	36	36
Population having completed tertiary education ⁽³⁾	17	18	19	20	20	21	21
Young people with upper secondary level education ⁽⁴⁾	84	83	83	84	85	84	84
Trade balance of high technology products as % of GDP	2,21	2,97	0,94	0,46	0,28	-0,47	na
Product and service markets and competition					2003	2008	2013
OECD product market regulation (PMR) ⁽⁵⁾ , overall					2,11	1,54	1,33
OECD (PMR) ⁽⁵⁾ , retail					0,79	1,44	2,06
OECD (PMR) ⁽⁵⁾ , professional services					2,86	3,02	3,05
OECD (PMR) ⁽⁵⁾ , network industries ⁽⁶⁾					3,31	1,87	1,73

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

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

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

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

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

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

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

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

Table C.6: Green growth

Green growth performance		2011	2012	2013	2014	2015	2016
Macroeconomic							
Energy intensity	kgoe / €	0.26	0.25	0.24	0.23	0.23	0.23
Carbon intensity	kg / €	0.64	0.61	0.57	0.55	0.56	-
Resource intensity (reciprocal of resource productivity)	kg / €	0.99	0.87	0.98	1.21	1.01	0.96
Waste intensity	kg / €	-	0.17	-	0.16	-	-
Energy balance of trade	% GDP	-6.0	-6.3	-6.3	-6.1	-4.2	-3.2
Weighting of energy in HICP	%	15.47	16.78	17.04	16.99	15.97	15.40
Difference between energy price change and inflation	%	1.9	0.3	-11.7	-10.9	-2.7	-0.5
Real unit of energy cost	% of value added	19.1	18.8	17.7	17.7	-	-
Ratio of environmental taxes to labour taxes	ratio	0.15	0.15	0.15	0.15	0.15	-
Environmental taxes	% GDP	2.6	2.6	2.7	2.6	2.7	2.8
Sectoral							
Industry energy intensity	kgoe / €	0.15	0.16	0.19	0.18	0.18	0.18
Real unit energy cost for manufacturing industry excl. refining	% of value added	23.1	23.2	21.6	21.2	-	-
Share of energy-intensive industries in the economy	% GDP	10.22	10.15	9.22	9.15	9.30	9.50
Electricity prices for medium-sized industrial users	€ / kWh	0.10	0.10	0.10	0.09	0.09	0.08
Gas prices for medium-sized industrial users	€ / kWh	0.04	0.05	0.04	0.04	0.04	0.03
Public R&D for energy	% GDP	0.00	0.01	0.04	0.00	0.01	0.01
Public R&D for environmental protection	% GDP	0.01	0.01	0.02	0.01	0.01	0.01
Municipal waste recycling rate	%	22.0	25.5	26.4	30.5	32.2	34.7
Share of GHG emissions covered by ETS*	%	35.2	35.4	33.2	32.9	32.4	31.5
Transport energy intensity	kgoe / €	0.82	0.77	0.71	0.77	0.82	0.81
Transport carbon intensity	kg / €	2.25	2.16	1.97	2.14	2.31	-
Security of energy supply							
Energy import dependency	%	49.8	49.7	49.6	59.3	53.3	55.6
Aggregated supplier concentration index	HHI	54.2	59.2	63.8	75.5	51.1	-
Diversification of energy mix	HHI	0.24	0.23	0.22	0.21	0.21	0.22

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

* European Commission and European Environment Agency

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

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