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COMMISSION STAFF WORKING DOCUMENT

Country Report Austria 2018

Accompanying the document

**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**

{ COM(2018) 120 final }

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EXECUTIVE SUMMARY

Austria's strong economic performance offers a window of opportunity to improve potential growth and address remaining challenges. The sound economic outlook provides a supportive environment to further strengthen public finances, social outcomes, and innovation. Austria could also benefit from further measures to improve the sustainability of healthcare and pension expenditures and to enhance labour market and educational outcomes for specific groups where vulnerabilities still exist. Together with additional efforts to reduce restrictive regulations, this could help to boost productivity and potential growth, making Austria more resilient to future challenges ⁽¹⁾.

The Austrian economy is growing robustly, supported by strong private consumption and investment. After several years of subdued progress, GDP growth accelerated to 1.5 % in 2016 and is expected to have doubled to around 3 % in 2017. The 2016 tax reform triggered a pick-up in private consumption that also acted as a boost to investment, strengthening domestic demand in 2017. On the back of improved developments in neighbouring countries and in world trade, investment also benefitted from markedly increasing exports, reversing in 2017 the trend of falling export market shares since the financial crisis in 2008. At the same time, the strong private consumption and investment growth increased imports, leading to only a marginal contribution by the external sector to GDP growth. For 2018 and 2019, the economic outlook remains favourable. GDP growth is expected to be broadly unchanged, driven mainly by stable domestic demand despite a slightly decreasing contribution from investment. The unemployment rate decreased from 6.0 % in 2016 to 5.5 % in 2017. The upswing phase is also reflected in higher headline and core inflation, which remained above the euro area average in 2017.

Good economic conditions and the fade out of bank support costs are expected to benefit

⁽¹⁾ This report assesses Austria'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.

public finances in a no-policy-change scenario. After widening in 2016 due to the tax relief, headline deficit is expected to improve progressively at unchanged policies, with revenues benefiting from strong employment and consumption growth. Following the financial crisis Austria's government debt increased significantly, peaking at 84.3 % of GDP in 2015, due to the impact of support measures for the banking sector. Government debt declined to 83.6 % of GDP in 2016 and is expected to continue decreasing to below 74 % of GDP in 2019, helped by the divestment of impaired assets from asset management companies.

Austria has made some progress in addressing the 2017 country-specific recommendations.

With regard to ensuring financial sustainability, some progress was made on healthcare but no progress was made on the pension system. Limited progress was made towards reforming fiscal relations between the various levels of government. Austria has made some progress in improving the labour market participation of women, but childcare provision is still below the targets for the under 3 years old and regional differences persist. Limited progress has been made in improving the educational achievements of disadvantaged young people. Some progress was made in reducing investment barriers in the services sector.

Regarding progress in reaching the national targets under the Europe 2020 strategy, Austria has already reached its targets on tertiary education attainment and limiting early school leaving. It is on track to meet the employment and the renewable energy targets. However, more effort is needed to raise research and development expenditure, cut greenhouse gas emissions, decrease energy consumption and reduce poverty and social exclusion.

Austria performs relatively well on the indicators of the Social Scoreboard supporting the European Pillar of Social Rights. Austria has robust policies to facilitate labour market access and to ensure fair working conditions. Policies to reduce poverty and social exclusion risks are generally effective. Austria has well developed institutional social dialogue mechanisms.

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

- **Austria's fiscal framework provides only weak incentives to improve cost efficiency.** In 2016 the different levels of government agreed on several initiatives that could improve the quality of public spending at subnational level. These include spending reviews, more task-oriented financing, benchmark systems, a reform of subnational competencies and discussions on increasing tax autonomy at subnational level. While these initiatives are promising, their effectiveness depends on being implemented in full. Currently, the spending powers of municipal and federal state governments remain far greater than their revenue-raising responsibilities, giving them little incentive to contain costs.
- **The overall tax burden on labour is comparatively large, while more growth-friendly sources of revenue are underused.** Despite the 2016 tax reform, the burden on labour remains high and is set to increase as tax brackets are not indexed to inflation. This is especially true for low-income earners with adverse effects on labour supply incentives. Social security contributions represent a relatively large share of the tax wedge. Conversely, revenues from recurrent property taxes are significantly below the EU average due to the outdated tax base.
- **The projections for medium- and long-term pension and healthcare expenditures point to a challenge for fiscal sustainability.** Current pension expenditure is comparatively high and is expected to rise further as life expectancy increases while the statutory retirement age remains fixed. Closing the gap between the effective and statutory retirement ages would reduce public spending, but the potential savings are lower than for measures affecting the statutory retirement age. For the healthcare sector, the main driver of the high expenditure is an over-sized hospital sector, which is the result of a fragmented financial and organisational structure. There are efficiency gains to be made both at the system level, by shifting services to the less costly outpatient sector, and within the hospital sector itself by improving the use of public procurement. In this context, implementing the ongoing reform aimed at strengthening primary healthcare in full could contribute to reduce the size of the hospital sector. Enforcing expenditure ceilings may also help containing the projected spending increase.
- **Banking sector resilience continues to improve, but some pockets of vulnerability still warrant monitoring.** The capitalisation of Austrian banks increased substantially in 2016 but profitability in the domestic market remains under pressure. Foreign-currency loans granted by banks on the local market have further declined but are still a matter of concern. The asset quality and profitability of subsidiaries in central, eastern and south-eastern Europe continue to improve, whereas the exposure of Austrian banks to several markets has declined following the restructuring of UniCredit. Despite several challenges over recent years, Austrian insurance companies have managed to adjust relatively well to the low interest rates. The winding-down of the asset management companies is proceeding better than expected and overall risks are limited.
- **House prices have grown considerably in recent years but overall risks to financial stability seem contained.** Prices have risen particularly strongly in the Vienna region, where some overvaluation can be observed. Housing investment has been subdued in recent years compared to the relatively strong population growth, but picked up in 2017. Nevertheless, the price increases do not appear to be credit-driven as the level of household mortgages remains relatively low. Furthermore, the rental market and social housing play a strong role in Austria, so that the house price increase mainly affects wealthier households as well as tenants in the private urban rental market. The macro-prudential toolkit has been strengthened and can be activated to contain potential risks from real estate.
- **Austria's labour market performance is improving but challenges for specific groups remain.** Over several years, immigration and overall increasing labour market participation

led to a rapid expansion of the labour force that outpaced strong employment growth, causing moderate increases in the unemployment rate. In 2017 the unemployment rate started to fall on the back of a further acceleration in employment growth. Austria has reached a high employment rate of 75.3 % in Q3 of 2017, thus meeting the Europe 2020 target. Wage increases were moderate, improving Austria's competitive position. The high proportion of women in part-time work and the high gender pay gap remain issues of concern. This is partly due to the still comparatively scarce and uneven provision of childcare for children below 3 years. The labour market integration of people with a migrant background including refugees is also a policy challenge. So is the digital transformation of the economy.

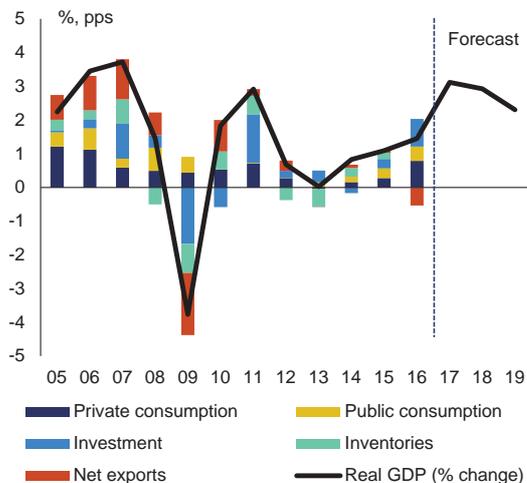
- **Overall, social indicators reflect the good economic conditions, but vulnerabilities for certain groups still exist.** The number of people at risk of poverty and social exclusion has continued to decline. By contrast, in-work poverty is rising, especially among foreign workers. In addition, while benefit adequacy has been overall favourable, the cuts in means-tested minimum income implemented in several federal states may put larger families at risk of poverty. The risk of poverty and social exclusion for women above 65 years is higher than for men, also due to a gender gap in pensions. Wealth inequality is particularly high.
- **Learning outcomes of disadvantaged students have not improved.** New reforms in education were introduced but their impact has yet to materialise. The second package of the reform agenda has increased schools' autonomy, the regional coordination of schools and the availability of all-day schools. Nevertheless, recent national and international testing both point to a comparatively weak performance by Austrian students. Students' educational outcomes also continue to depend heavily on their socio-economic background and on whether they have a migrant background. At the same time, Austria's tertiary education attainment rate has reached the national and Europe 2020 target. Several policy initiatives have been launched to help
- integrate refugees and people with a migrant background into the education system, as well as to encourage adult learning and improve digital education.
- **Restrictive regulation in Austria's services markets hampers productivity and discourages innovation and investment.** Austria has high access barriers and restrictive rules on the exercise of key trades and professions. These include specific shareholding requirements, extensive reserved activities and interdisciplinary restrictions. High regulatory burdens also bear on the retail and tourism sectors. These barriers, burdens and restrictions are limiting investment, job creation and innovation in the services sector itself. They also affect other parts of the economy for which competitive and innovative services are a crucial input.
- **Stagnating productivity requires a strong focus on boosting innovation results and supporting innovative businesses.** Austria is investing heavily in research and innovation but has not yet managed to overcome the stagnation in total factor productivity. Strengthening science-business links and supporting knowledge-intensive sectors remain therefore important. Austria's eco-system for starting and, even more so, for scaling-up innovative businesses remains a policy challenge. Apart from regulatory barriers, the lack of later stage funding options, such as venture capital, play a role, as well as skill shortages in some professions.
- **Austria faces a challenge in spreading digital technologies including broadband and business models among small and medium-sized enterprises (SMEs).** Austria is well-advanced in digitalising its public administrations and larger companies are well placed to exploit the opportunities of the digital economy. SMEs, the backbone of the Austrian economy, and micro-enterprises, are lagging behind. Austria has only started to address this issue with initiatives supporting digitalization of SMEs. High-speed connectivity in rural areas is also an issue. Austria's national digitalization strategy still lacks monitoring and systematic performance review tools.

1. ECONOMIC SITUATION AND OUTLOOK

GDP growth

Austria's economy is growing robustly and has entered an upswing cycle. In 2016, GDP grew by 1.5 % and is expected to have doubled to around 3 % in 2017. Stable demand from private consumption and strong investment are supporting GDP growth. According to the European Commission 2018 winter interim forecast (European Commission, 2018a), they are expected to continue doing so in the coming years, although the contribution from investment is expected to slightly decrease (Graph 1.1). Austria's exports increased markedly in 2017, benefiting from the acceleration in overall world trade and good conditions in neighbouring countries. However, as imports have also increased on the back of strong private consumption and investment, net trade is contributing only marginally to economic growth.

Graph 1.1: GDP growth and contributions



(1) Winter forecast 2018 for real GDP growth, otherwise Autumn forecast 2017

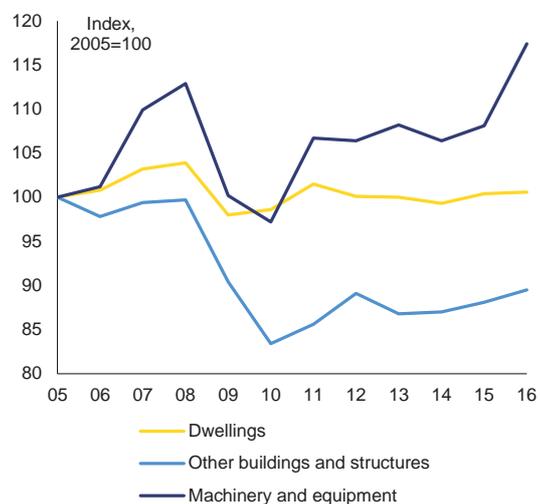
Source: European Commission

Investment

Investment is contributing strongly to GDP growth. In 2016, investment increased by 3.7 %, ending a period of subdued investment since 2012. After years of postponing investment, companies cleared their investment backlog and acquisitions in machinery and equipment grew particularly strongly with an increase of 8.6 % (Graph 1.2). In 2017, investment growth further accelerated, reflecting the overall economic upswing. The

better economic climate is also felt in the construction sector. Residential housing and non-residential construction investment have both grown noticeably in 2017 after several years of subdued growth. Thanks to strong exports and imports, investment in machinery and equipment continued its solid growth in 2017. Austria now faces the challenges of ensuring that investment makes a sustained contribution to growth and of channelling it to the uses that increase productivity most.

Graph 1.2: Investment by asset

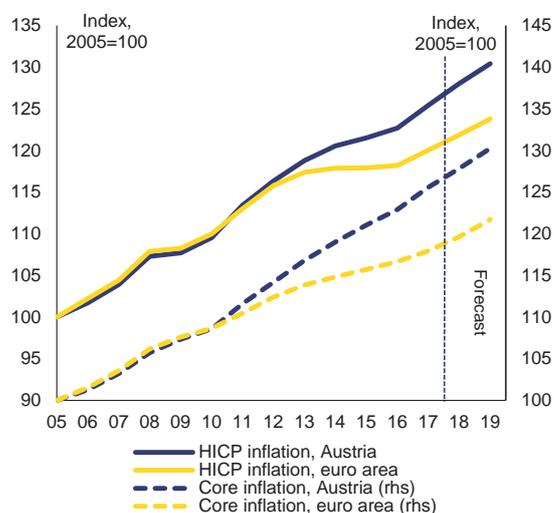


Source: Eurostat

Inflation

Austria's inflation rate has reached 2.2 % in 2017 and remains above the euro area average of 1.5 %. The strengthening of the economy can be felt in robust headline and core inflation, which have both reached 2.2 % in 2017. Increasing rents and the thriving tourism sector are contributing to continuously rising service prices (e.g., for hotels and restaurants). The new government programme announces a reduction of the VAT rate from currently 13 to 10 % for hotel accommodations, which may counteract the price development in the tourism sector. So far, Austria's inflation rate remains above the euro area average for headline and core inflation, continuing the trend seen since 2012. Based on higher inflation, wages can also be expected to rise more strongly in the coming years (Graph 1.3).

Graph 1.3: Headline and core inflation



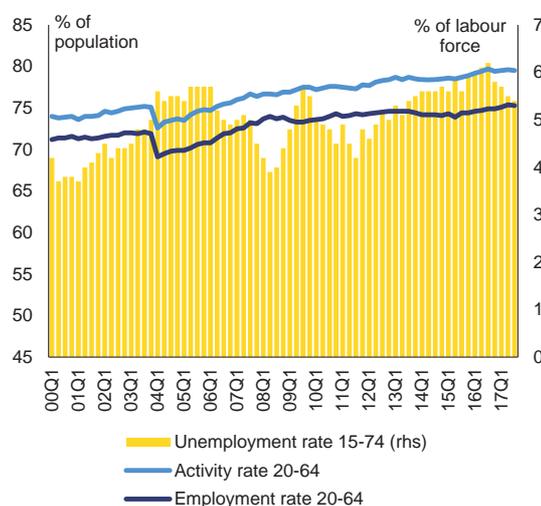
Source: Eurostat and European Commission

Labour market

On the back of solid economic growth, employment is growing faster than the labour force. The strong economic activity aided a rise in employment of 1.2 % in 2016 that exceeded growth in the labour force. Consequently, the unemployment rate is reversing its trend and dropping for the first time in several years. From 6.0 % in 2016, the unemployment rate has dropped to 5.5 % in 2017 and is expected to remain around that level (European Commission, 2017a). The youth unemployment rate (15-24 years) increased for several years but declined in 2017 to 9.7 %, below the EU average of 18.7 %. Despite the ageing of the population, the labour supply increased, mainly driven by increasing labour market participation of women, older workers and workers with migrant background. However, the long-term unemployment rate continues to increase (to 1.9 % in 2016), partly due to restrictions on early retirements.

Wages are responding to the favourable developments on the labour market. Nominal compensation per employee increased by 2.4 % in 2016 and is expected to grow by 2.3 % annually between 2017 and 2019 as inflation rises (European Commission, 2017a). Coupled with solid productivity gains, this will improve Austria's competitive position.

Graph 1.4: Labour market outcomes — Austria



(1) Activity rate and Employment rate(% of population), total, ages 20-64

(2) Unemployment rate (% of labour force), total, ages 15-74

Source: Eurostat

Despite the recent improvements, the labour market potential of older workers, the low skilled, women and people with a migrant background remains underused. The rate of female part-time employment, at 47.9 % in 2016, is one of the highest in the EU and well above the EU average of 31.4 %. However, the employment rate of women is considerably lower when expressed in full time equivalent. The gender pay gap of 21.7 % in 2015 remained persistently high, and above the EU average of 16.3 %, mainly due to the high proportion of women in part-time work and to low pay. The labour market integration of people with a disadvantaged socio-economic background and/or a migrant background remains a challenge. This is especially the case for women from non-EU countries. The employment rate of older workers is improving but at 49.8 % (2016) still below the EU average of 55.3 %.

Social developments

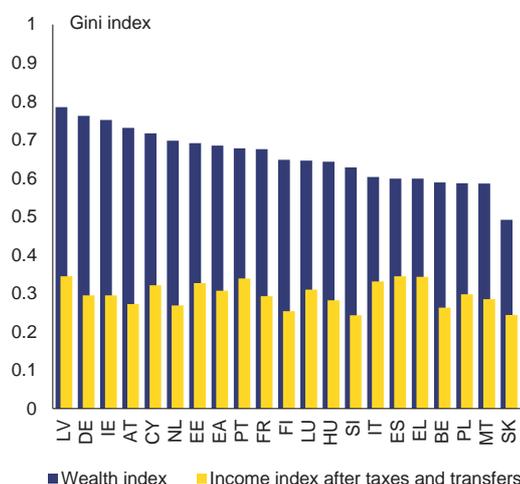
Income inequality remains low but opportunities are not equal. In 2016, the richest 20 % of households in Austria had an income 4.1 times greater than that of the poorest 20 %. This ratio has remained broadly stable over time and is below the EU average of 5.2. This is the combined result of a progressive income tax regime and a high level of spending on social protection which is effective in reducing high market income

inequality. Indeed, market incomes (i.e. before the effect of taxes and social transfers) are more unevenly distributed in Austria than in most EU countries. Educational inequalities linked to socio-economic status suggest social mobility remains low, particularly for children with a migrant background⁽²⁾ (see also Section 3.3).

Wealth inequality is high. The Gini coefficient⁽³⁾ on net wealth (assets minus liabilities) was 0.73 in 2014, among the highest in the euro area, according to the ECB's Household Financial and Consumption Survey (Graph 1.5). A key driver is the low rate of house ownership at the lower wealth deciles and the comparatively strong concentration of wealth from self-employed businesses at the top of the wealth distribution. The median net wealth of households who owned their own homes was EUR 300 600 in 2014. By contrast, that of tenants —about 45.0 % of the Austrian population —was only EUR 12 000. The persistent rise in house prices might increase wealth inequality, while the lack of capital acquisition (inheritance or gift) tax and low recurrent property taxation provide no policy instrument to curb its growth.

Overall, the social situation continues to improve. The proportion of the population at risk of poverty or social exclusion decreased for a third consecutive year in 2016. This was due to a further reduction in the already low level of severe material deprivation (which measures absolute poverty) to 3.0 %, well below the EU average of 7.5 %. However, in-work poverty is rising, and foreign workers are particularly affected. Foreign nationals also face an increasing risk of relative poverty, although the poverty risk for their children has fallen (see Section 3.3 on social policy).

Graph 1.5: Gini index of wealth (2014) and income inequality (2016)



Source: ECB, Eurostat

Productivity

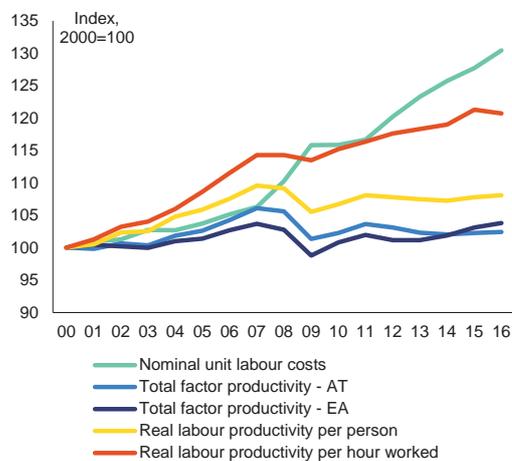
Labour productivity in Austria remains high while total factor productivity is stagnating.

Real labour productivity per person increased again in 2016 as in the year before, but it still lags behind its pre-crisis level. However, productivity per hour worked declined in 2016 for the first time since 2009. This is in line with the average annual hours worked per person, which have increased in 2016 for the first time in 5 years. Austria's total factor productivity dropped markedly during the financial crisis and has not yet recovered, stagnating at below pre-crisis level. This is in contrast with the euro area overall, where total factor productivity was also hit during the crisis but has been steadily growing since 2013 and has already surpassed its pre-crisis level.

⁽²⁾ In 2015, the difference between PISA scores in science for 15-year-olds which is explained by socio-economic and/or migrant background was one of the highest in the EU, and has not diminished from the PISA test in 2006.

⁽³⁾ The Gini coefficient takes values between 0 and 1 and is a measure of equal or unequal distribution, with higher values indicating a higher degree of inequality.

Graph 1.6: Labour productivity



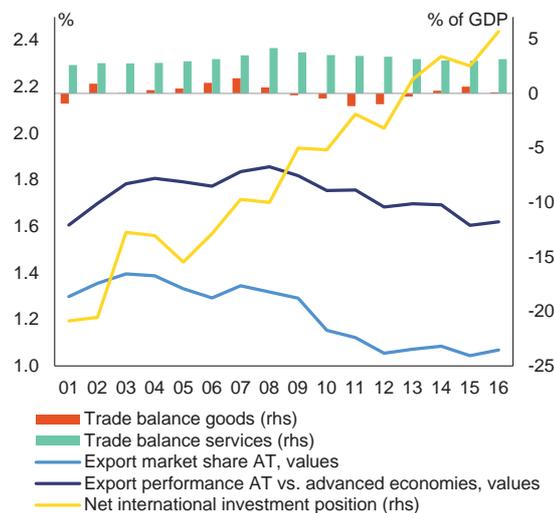
Source: Eurostat, European Commission

External position

The stable development of Austrian exports is contributing to a positive current account balance. In 2016, the current account surplus stood at 2.3 % of GDP, reaching a level similar to recent years. For many years Austria has had a positive trade balance, aided particularly by its tourism industry. 2016 goods exports, at EUR 128.9 billion, are more than twice as high as services exports, at EUR 55.7 billion. However, almost all of the trade surplus of EUR 11.9 billion derives from services (EUR 11.5 billion) and only a marginal share from goods (EUR 0.4 billion). This has been the trend for many years, and in 2009-2013 goods imports surpassed exports, thereby reducing the trade balance (Graph 1.7). Besides tourism, business services for companies are also contributing more and more to Austria's service exports. In 2017, exports overall increased markedly and Austria managed to increase its market share after a steady decline since 2007. The 5-year percentage change of Austria's export market share, that had been violating the MIP scoreboard threshold of -6 % for many years since 2009, surpassed the threshold in 2016 (with -4 %) and turned positive in 2017, thanks to base effects and world trade developments. The positive contribution of households and corporations to Austria's net international investment position has outweighed the government's negative contribution in recent years. As a result, Austria's net international investment position has been

positive since 2013 and continued to improve to 5.7 % of GDP in 2016 from 2.5 % in 2015.

Graph 1.7: Trade balance and export market share



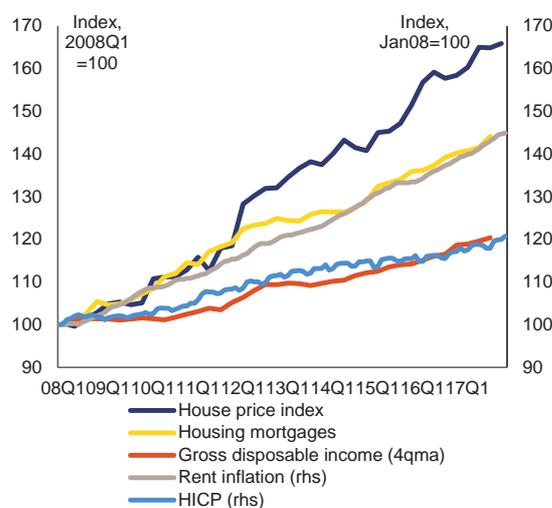
Source: European Commission

Housing market

House prices accelerated strongly in 2015-2016 but have since returned to more moderate growth. Since their peak in Q1-2016, when nominal house prices increased by 13.4 % year-on-year, increases have slowed to 4.9 % in Q3-2017. The strong increase in 2016 led to a warning by the European Systemic Risk Board in December 2016 and the indicator for deflated house prices has been above the MIP scoreboard threshold for the first time for Austria. The increase in house prices does not appear to be driven by mortgage lending. Although growth in housing loans has accelerated in recent years (they increased by 4.0 % in 2016), it is still below 2009 levels and the mortgage-to-GDP ratio (at 28.6 %) is low by European standards (EA 37.5 %). Increased housing demand due to the increased inflow of refugees in 2015-2016, on top of continuously strong migration from EU and non-EU neighbouring countries, has not been met yet by sufficient supply, although housing investment is increasing. Nevertheless, a sizeable share of the population is hardly affected by increasing house prices. This is because the overall home ownership rate of 55.0 % is low (compared to the EU average of 69.3 %) and house price increases are concentrated on the higher segments of the market. According to the Austrian National Bank, house prices are overvalued by

roughly 20 % in the capital region of Vienna which accounts for approximately 40 % of total residential value. In the rest of the country, however, house prices are in line with the values explained by fundamental indicators. As roughly 80 % of Vienna's population rent their home, overvaluation risks are somewhat mitigated (see also Sections 3.2 and 3.4).

Graph 1.8: House prices and rental costs



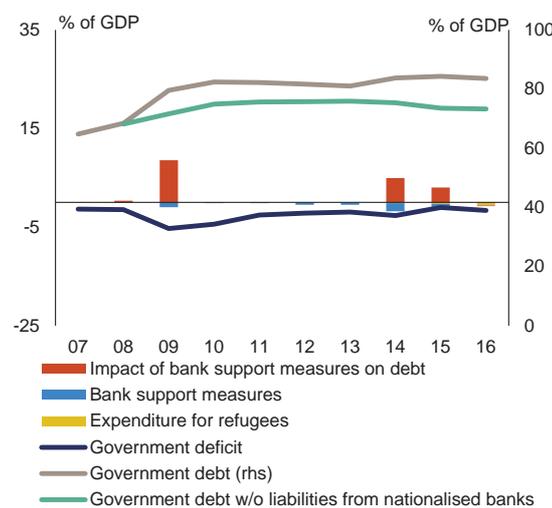
Source: ECB, Statistics Austria, Oenb, Eurostat

Public finances

Austria's public finances are expected to improve but government debt remains relatively high. The headline deficit widened to -1.6 % of GDP in 2016 due to the tax reform, but is expected to progressively improve to -0.6 % in 2019 in a no-policy-change scenario, supported by economic growth. At the same time, the structural budget balance is expected to hover around 1 % of GDP. Austria's fiscal structure has traditionally been characterised by relatively high levels of both revenues and expenditures (49.1 % of GDP and 50.7 % of GDP respectively in 2016, versus an EU average of 44.7 % and 46.3 %). The high spending rate mainly reflects the importance of the welfare state, with pensions and healthcare playing a particularly significant role in the government's budget. Government debt increased sharply in the aftermath of the crisis, due to government support for the financial sector, which also caused several peaks in the government deficit. After peaking in 2015, government debt declined to 83.6 % of GDP in 2016. It is expected

to continue declining rapidly, supported by good economic conditions and the divestment of impaired assets from nationalised 'bad' banks.

Graph 1.9: General government debt and deficit

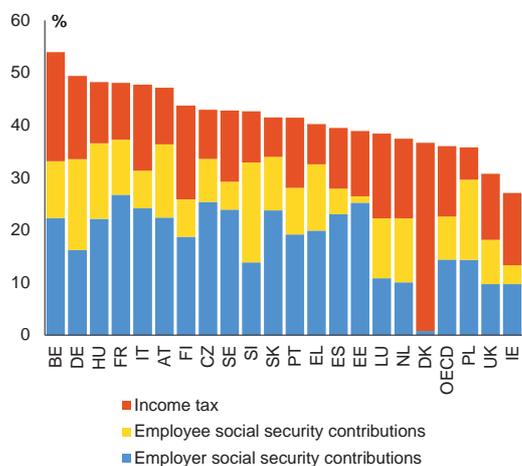


Source: European Commission

The tax wedge on labour is particularly high, especially for low-income earners, mainly due to social security contributions. Austria's historically good record on revenue collection is due to a sound economic structure, good tax compliance and an overall high level of taxation. The latter weighs mainly on labour, with comparatively high revenues from social security contributions and income taxes paid by households. As a result, the tax wedge⁽⁴⁾ on labour is particularly high despite the significant cut implemented in 2016 (Graph 1.10). A comparatively high share of the tax wedge is represented by social security contributions, reflecting the importance of social security on the spending side. As the progressivity of the tax wedge across income categories is rather limited, the burden is also heavy for low-income earners, who are considered particularly responsive to work incentives (Bargain et al., 2014).

⁽⁴⁾ The tax wedge on labour represents the difference between the total labour cost of employing a worker and the worker's net earnings. It is defined as personal income tax and employer and employee social contributions (net of family benefits) as a percentage of total labour costs (the wage and employer social contributions).

Graph 1.10: Tax wedge (% of labour costs, 2016)



(1) Tax wedge as % of labour costs for a single person at 100% of the average wage in the private sector, no children
 Source: OECD

Pensions and healthcare

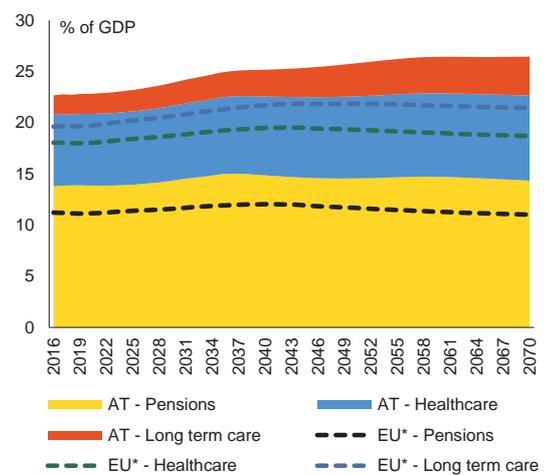
The projections of the 2018 Ageing Report for medium- and long-term pension and healthcare expenditures still point to a medium risk for fiscal sustainability. The equilibrium between high revenues and expenditures has proven successful in providing good levels of public services. However, it could be particularly vulnerable to population ageing, which will further increase social spending in a context of already high fiscal pressure. The projections of the 2018 Ageing Report point to a further increase in pension and healthcare expenditures between 2016 and 2070 (European Commission, 2018b). Compared to the projections of the 2015 Ageing Report, total expenditure is starting from a lower base in 2016 than previously forecast (European Commission, 2015a). However, the trajectory is slightly worse for pension expenditure, mainly due to the deteriorating demographic projections. Overall, the risk for long-term sustainability remains medium.

Education and skills

Implementation of Austria’s education reform agenda has so far not translated into improved education outcomes.. Austria’s poor education outcomes, with about 25 % of 14-year-olds not fully reaching the minimum required basic skills in national testing, might restrict the skills available

for future economic growth. The low number of graduates in STEM fields like ICT and engineering, in particular with PhDs, could limit the scope for innovation in Austria. Young people with a migrant background continue to do worse than their peers and education outcomes in general continue to be strongly related to the socio-economic background of parents.

Graph 1.11: 2018 Ageing report - expenditure projections



* weighted average
 Source: European Commission

Digitalisation

Austria’s progress with the digital transformation of its economy is mixed and small and medium-sized enterprises in particular are lagging behind. Austria is doing well on some aspects of digitalisation, such as e-government and digital skills. However, it ranks below or merely in line with the EU average on others, such as e-commerce, e-procurement and the deployment of high-speed broadband in rural areas. Furthermore, Austria’s economy is characterised by a particularly large SME sector and only relatively few large companies. While these larger firms are readily adopting digital technologies and business models, Austrian SMEs are lagging behind, creating a ‘digital divide’. This is especially problematic in the case of technologies that bring particular benefits to SMEs (e.g. cloud computing with its low upfront expenditure and easy scalability). Proper implementation of Austria’s national strategy for the digital future is thus paramount.

Table 1.1: Key economic and financial indicators — Austria

	2004-07	2008-12	2013-14	2015	2016	forecast		
						2017	2018	2019
Real GDP (y-o-y)	3,0	0,6	0,4	1,1	1,5	3,1	2,9	2,3
Potential growth (y-o-y)	2,1	1,0	0,9	1,1	1,7	1,8	2,1	2,0
Private consumption (y-o-y)	1,9	0,9	0,1	0,5	1,5	.	.	.
Public consumption (y-o-y)	2,1	1,2	0,8	1,5	2,1	.	.	.
Gross fixed capital formation (y-o-y)	1,7	-0,2	0,4	1,2	3,7	.	.	.
Exports of goods and services (y-o-y)	7,6	1,2	1,8	3,1	1,9	.	.	.
Imports of goods and services (y-o-y)	6,2	1,3	1,8	3,1	3,1	.	.	.
Contribution to GDP growth:								
Domestic demand (y-o-y)	1,9	0,7	0,3	0,8	2,0	.	.	.
Inventories (y-o-y)	0,4	-0,1	-0,1	0,2	0,0	.	.	.
Net exports (y-o-y)	0,9	0,0	0,0	0,1	-0,5	.	.	.
Contribution to potential GDP growth:								
Total Labour (hours) (y-o-y)	0,3	0,0	0,1	0,3	0,8	0,7	0,9	0,7
Capital accumulation (y-o-y)	0,7	0,5	0,5	0,5	0,5	0,6	0,6	0,6
Total factor productivity (y-o-y)	1,1	0,5	0,3	0,4	0,4	0,5	0,6	0,7
Output gap	0,4	-0,3	-0,8	-0,8	-1,0	-0,2	0,1	0,4
Unemployment rate	5,3	4,7	5,5	5,7	6,0	5,6	5,5	5,4
GDP deflator (y-o-y)	2,1	1,7	1,8	2,3	1,1	1,8	1,6	1,7
Harmonised index of consumer prices (HICP, y-o-y)	2,0	2,3	1,8	0,8	1,0	2,2	2,1	1,9
Nominal compensation per employee (y-o-y)	2,5	2,2	2,0	2,1	2,4	2,3	2,3	2,3
Labour productivity (real, person employed, y-o-y)	1,7	-0,4	-0,2	0,5	0,2	.	.	.
Unit labour costs (ULC, whole economy, y-o-y)	0,9	2,5	2,3	1,6	2,1	1,2	1,2	1,1
Real unit labour costs (y-o-y)	-1,2	0,8	0,5	-0,7	1,0	-0,6	-0,3	-0,6
Real effective exchange rate (ULC, y-o-y)	0,1	-0,1	2,5	-1,7	1,3	0,7	0,9	-0,7
Real effective exchange rate (HICP, y-o-y)	-0,3	-0,7	1,9	-1,9	1,7	0,6	1,4	.
Savings rate of households (net saving as percentage of net disposable income)	11,2	10,0	7,0	6,9	7,9	.	.	.
Private credit flow, consolidated (% of GDP)	5,9	2,2	0,9	2,3	3,2	.	.	.
Private sector debt, consolidated (% of GDP)	123,1	129,7	126,0	123,9	124,0	.	.	.
of which household debt, consolidated (% of GDP)	50,9	53,1	51,1	50,9	51,3	.	.	.
of which non-financial corporate debt, consolidated (% of GDP)	72,2	76,6	74,9	73,0	72,7	.	.	.
Gross non-performing debt (% of total debt instruments and total loans and advances) (2)	.	3,4	5,2	5,5	4,2	.	.	.
Corporations, net lending (+) or net borrowing (-) (% of GDP)	0,0	1,9	2,2	0,5	0,9	0,7	1,3	1,8
Corporations, gross operating surplus (% of GDP)	26,9	25,3	23,9	24,2	23,5	24,3	25,1	25,8
Households, net lending (+) or net borrowing (-) (% of GDP)	5,2	4,0	2,2	2,1	2,8	2,3	2,2	2,1
Deflated house price index (y-o-y)	0,7	2,9	2,2	3,4	7,2	.	.	.
Residential investment (% of GDP)	4,4	4,3	4,3	4,3	4,2	.	.	.
Current account balance (% of GDP), balance of payments	2,9	2,6	2,2	1,9	2,1	2,2	2,9	3,7
Trade balance (% of GDP), balance of payments	3,8	3,2	3,1	3,6	3,2	.	.	.
Terms of trade of goods and services (y-o-y)	-0,7	-0,7	0,5	1,0	0,5	0,0	0,0	0,1
Capital account balance (% of GDP)	-0,1	-0,1	-0,1	-0,5	-0,2	.	.	.
Net international investment position (% of GDP)	-12,8	-5,1	2,3	2,5	5,7	.	.	.
Net marketable external debt (% of GDP) (1)	-9,8	-11,3	-11,5	-11,2	-8,5	.	.	.
Gross marketable external debt (% of GDP) (1)	175,9	193,7	178,8	167,2	159,4	.	.	.
Export performance vs. advanced countries (% change over 5 years)	14,7	-2,8	-10,9	-7,7	-6,7	.	.	.
Export market share, goods and services (y-o-y)	-0,5	-4,7	1,5	-3,7	2,9	.	.	.
Net FDI flows (% of GDP)	1,4	2,8	0,9	1,7	0,4	.	.	.
General government balance (% of GDP)	-2,8	-3,2	-2,3	-1,0	-1,6	-1,0	-0,9	-0,6
Structural budget balance (% of GDP)	.	-2,5	-1,2	-0,3	-1,0	-0,9	-1,0	-0,9
General government gross debt (% of GDP)	66,2	78,8	82,4	84,3	83,6	78,6	76,2	73,4
Tax-to-GDP ratio (%)	42,2	42,2	43,5	43,8	42,9	42,7	42,3	42,1
Tax rate for a single person earning the average wage (%)	33,2	33,3	34,5	35,0	31,9	.	.	.
Tax rate for a single person earning 50% of the average wage (%)	21,3	21,5	22,9	23,3	20,9	.	.	.

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

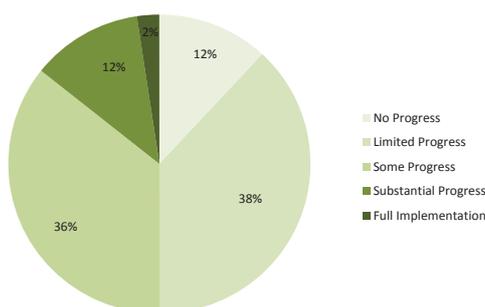
(2) Domestic banking groups and stand-alone banks, EU and non-EU foreign-controlled subsidiaries and EU and non-EU foreign-controlled branches.

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

2. PROGRESS WITH COUNTRY-SPECIFIC RECOMMENDATIONS

Progress with implementing the recommendations addressed to Austria in 2017⁽⁵⁾ 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, 50 % of all the CSRs addressed to Austria have recorded at least 'some progress'. 50 % of these CSRs recorded 'limited' or 'no progress' (see Graph 2.1). Substantial progress has been achieved in the consolidation of public finances and the stabilisation of the financial sector, while full implementation has been achieved in the transposition of the Service Directive.

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



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

** 2011-2012: Different CSR assessment categories.

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

Source: European Commission

Over the last 6 years, Austria has undertaken important reforms related to the country-specific recommendations without, however, sustainably resolving the underlying issues.

In recent years, several measures have been taken to improve the Austrian fiscal framework. Since 2012, the Austrian Stability Pact provides quantitative budget targets and ceilings for all levels of government, with the aim to encourage fiscal discipline. Between 2015 and 2019, accounting rules for subnational

governments are being progressively harmonised, which will improve the coordination and monitoring of their finances. The 2017 Financial Equalisation Law contributed to simplifying financial relations among the different layers of government, reducing the number of intergovernmental transfers and marginally increasing the amount of revenues that federal states can potentially raise through autonomous taxes. Nevertheless, the fiscal framework remains overly complex, and the misalignment between spending powers and revenue raising responsibilities is still substantial. In these areas, the agreement between the different layers of government underlying the financial equalisation law contains far more ambitious initiatives that still need to be implemented.

The 2016 tax reform substantially reduced taxes on labour, including for low income earners.

The reform redesigned tax brackets for personal income taxes and increased several targeted tax allowances. Non-wage labour costs of employers have also been reduced, in particular by reducing their contributions to the Family Burden Equalisation Fund. Nevertheless, the burden on labour still remains comparatively high, especially for low income earners.

Since 2014, action has been taken to increase the effective retirement age.

The 2014 pension reform introduced several financial incentives to retire later and significantly restricted access to early retirement. More recently, individual pension accounts showing personal pension entitlements are being developed, with the aim to increase transparency and provide incentives to longer working lives. However, a fiscal sustainability challenge remains in light of the expected evolution of the effective retirement age and the current provisions on statutory retirement age.

Austria has made positive steps towards increasing the efficiency in the healthcare sector but underlying challenges remain.

In 2013, ceilings for healthcare expenditure growth were introduced up to 2016, as well as specific targets for in-patient hospital consolidation (such as number of bed days per resident, length of stay and overall discharge rates), and for the availability of outpatient multidisciplinary primary care settings. These were positive measures, although the chosen

⁽⁵⁾ For the assessment of other reforms implemented in the past, see in particular Section 3.

targets were not overly ambitious. The 2017 Financial Equalisation Law has set tighter expenditure ceilings until 2021 and reduced incentives to treat outpatient cases as inpatient, thereby discouraging hospital excess capacity. Outpatient multidisciplinary primary care is also being strengthened, with the aim to shift services away from the hospital sector. While these measures have the potential to improve efficiency and deserve thorough implementation, the general overlap of competencies in the healthcare sector remains to be addressed.

Government intervention played an important role in stabilising the banking sector, although public finances faced significant costs.

Following the financial crisis, the government nationalised and proceeded to orderly wind-down three systemic banks. In order to cover part of the public costs, a stability fee (bank tax) for credit institutions was temporarily introduced. Although government accounts faced important costs, the negative consequences of disorderly bankruptcies for the banking sector were prevented.

Austria has partially improved labour market outcomes for women.

While female employment has increased since 2011, most of the increase has been in part-time employment. Austria addresses the low take-up of child care for children below 3 years. Only some progress was achieved so far, with the Barcelona targets of 33 % coverage not yet reached, and uneven coverage between the Länder. The harmonisation of pensionable age for men and women has been foreseen to start in 2024 but this time frame is not ambitious. Despite the recent tax reform, the personal income tax system still includes unfavourable elements to women's higher take-up of employment. The gender pay gap remains high.

Austria's policy response on education did so far not lead to improved outcomes.

International testing shows that the performance of disadvantaged students and those with migrant background has deteriorated. In the area of higher education, strategic planning has improved and the number of drop outs has been reduced.

Austria has made efforts to improve competition and investment in the services sector, but the overall level of regulation remains high. Austria's efforts have focused

notably on administrative simplification (such as the introduction of an electronic trade register). This reduces compliance costs and mitigates some of the negative effects of regulation but it does not resolve the underlying issue of restrictiveness. Since 2015, Austria has tabled various measures to facilitate business creation in the services sector and adopted a revision of the Trade Licence Act (*Gewerbeordnung*) in July 2017. Austria also participated actively in the mutual evaluation of professional regulation at EU level. The action plan it presented as part of this exercise was however unambitious and has not yet resulted in a systematic attempt to remove administrative and regulatory obstacles across professions and trades.

Overall, Austria has made some ⁽⁶⁾ progress in addressing the 2017 country-specific recommendations (CSRs).

Limited progress was made on CSR1 in addressing the sustainability of the pension and healthcare system together with streamlining the fiscal framework. CSR 1 is closely related to the euro area recommendation (EAR) 2 regarding the pursuance of effective national fiscal frameworks and growth-friendly fiscal consolidation. Overall, some progress was made on CSR2. Some progress was made in improving the labour market participation of women, while limited progress was made in improving the educational achievements of disadvantaged young people, both of which are also reflected by EAR3. Some progress was made in reducing barriers to investment in the services sector, which is related to EAR1.

⁽⁶⁾ Information on the level of progress and actions taken to address the policy advice in each respective subpart of a CSR is presented in the Overview Table in the Annex. This overall assessment does not include an assessment of compliance with the Stability and Growth Pact.

Table 2.1: Summary table on 2017 CSR assessment

Austria	Overall assessment of progress with 2017 CSRs: Some progress*
<p>CSR 1: <i>Ensure the sustainability of the healthcare system and of the pension system. Rationalise and streamline competencies across the various layers of government and align their financing and spending responsibilities.</i></p>	<p>Limited progress</p> <ul style="list-style-type: none"> • Some progress in improving the sustainability of the healthcare sector, including by improving public procurement practices. • No progress on ensuring the financial sustainability of the pension system. • Limited progress on reforming fiscal relations between the various layers of government.
<p>CSR 2: <i>Improve labour market outcomes for women through inter alia, the provision of full-time care services. Improve the educational achievements of disadvantaged young people, in particular those from a migrant background. Foster investment in the services sector by reducing administrative and regulatory barriers, easing market entry and facilitating company growth.</i></p>	<p>Some progress</p> <ul style="list-style-type: none"> • Some progress in improving labour market outcomes for women. • Limited progress in improving child care services. • Limited progress in improving the educational achievements of disadvantaged young people, in particular those from a migrant background. • Some progress in reducing administrative and regulatory barriers, easing market entry and facilitating growth in the services sector.

*This overall assessment of CSR1 does not include an assessment of compliance with the Stability and Growth Pact.

Source: European Commission

ESI Funds are important in addressing key challenges to inclusive growth and convergence in Austria, notably by boosting social inclusion, supporting the employability of women thus improving their participation in the labour market

and enhancing cooperation between SMEs and research institutions. The nation-wide Smart Specialisation Strategy improves federal-regional coordination.

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

Austria is a beneficiary of European Structural and Investment Funds (ESI Funds) support and can receive up to EUR 4.9 billion until 2020. This represents around 3% of public investment ⁽¹⁾ annually over the period 2014-2018. By 31 December 2017, an estimated EUR 2 billion (42 % of the total) was allocated to projects on the ground. This is helping 105 enterprises to cooperate with research institutions; it is contributing to the creation of more than 2000 new direct jobs in firms and is supplying jobs to nearly 600 researchers. Allocated funds are also contributing to boosting the development of rural areas by supporting investments and improving environmental standards and broadband coverage. Out of the EU financing, EUR 3 million will be invested through financial instruments.

ESI Funds help address structural policy challenges and implement country-specific recommendations. Investments in research and development in the private sector are stimulated, among others, by providing grants for the development of new products, by setting-up living labs or by facilitating and stimulating cooperation between SMEs and research institutions. The European Social Fund (ESF) also invests in coaching, training and working opportunities for people with a distance to the labour market, which in turn helps enhance the overall labour market participation. Furthermore, specific measures are supported which improve the job prospects of older workers. Austria also uses ESF investment for different social policies addressing social inclusion measures, especially for minorities and migrants, the employability of women, older workers and workers with migrant background. ESF supports also the implementation of the EU 2020 country specific recommendations by assisting measures improving the employability of women, older workers and workers with migrant background.

Various reforms were undertaken already as precondition for ESI Funds support ⁽²⁾. Austria developed a nation-wide Smart Specialisation Strategy for research and innovation, which helps focus the resources and efforts on product specialisation with a strong market potential. Furthermore, Austria improved already with the help of the ERDF the coordination between the regional and Federal levels through the national wide Smart Specialisation Strategy.

Austria 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 931 million, which is expected to trigger total private and public investment of EUR 2.8 billion. More specifically, 9 projects have been approved so far under the Infrastructure and Innovation Window (including 1 multi-country project), amounting to EUR 822 million in EIB financing under the EFSI. This is expected to trigger nearly EUR 2.3 billion in investments. Under the SME Window, 4 agreements with financial intermediaries have been approved so far. European Investment Fund financing enabled by the EFSI amounts to EUR 109 million, which is expected to mobilise more than EUR 452 million in total investment. Over 1 000 smaller companies or start-ups will benefit from this support. Transport ranks first in terms of volume approved, followed by energy, SMEs and RDI. In terms of operations however, energy ranks first.

Funding under Horizon 2020, the Connecting Europe Facility and other directly managed EU funds is additional to the ESI Funds. By the end of 2017, Austria has signed agreements for EUR 755 million for projects under the Connecting Europe Facility.

<http://cohesiondata.ec.europa.eu/countries/AT>

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

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

3. REFORM PRIORITIES

3.1. PUBLIC FINANCES AND TAXATION

Fiscal framework

Austria's fiscal framework still suffers from a strong misalignment between spending powers and revenue-raising responsibilities across the different levels of government. The fiscal framework is particularly complex and gives subnational governments weak incentives to contain costs as their spending powers are disproportionately higher than their revenues from autonomous taxes (European Commission, 2016a; European Commission, 2017b). In 2016, subnational governments (the federal states and municipalities) raised revenues from own taxes amounting to 2 % of GDP (OECD Fiscal Decentralisation Database), while their overall expenditure amounted to 17.7 % of GDP. The 2017 Financial Equalisation Law, which regulates the financial agreements between the different levels of government up to 2021, has done little to address this issue. The new government programme published in December 2017 announces a comprehensive reform of the fiscal framework aimed at pooling expenditure and revenue raising competences across levels of government (BKA, 2017).

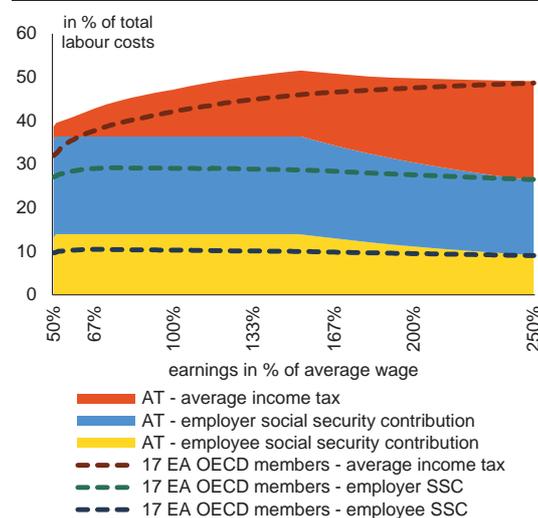
The agreement ratified between the different levels of government contains several initiatives that could improve the efficiency and quality of public spending. These include regular spending reviews, more task-oriented financing, benchmark systems at the subnational level, as well as the commitment to agree on a general reform of subnational competencies by the end of 2018. In addition, several working groups have been set up to prepare proposals for increasing tax autonomy at the subnational level, including through property taxes. While these measures are promising, their effectiveness hinges upon their thorough implementation. A pilot project increasing the task-orientation in the allocation of child-care funds should start in January 2018, but is at risk of being delayed.

Taxation

Austria's tax wedge remains one of the highest in the EU, in particular for low-income earners.

The 2016 tax reform has reduced the tax wedge on labour (European Commission, 2017b). However, with 47.1 % (2016) it remains relatively high compared to an EU average of 42.8 % for a single earner with average wage (OECD Taxing wages Database). The tax wedge for low-income earners – a group considered to be particularly responsive to work incentives – remains especially high, at 42.8 % compared to 36.8 % in the EU (OECD Taxing Wages Database). Furthermore, without the tax brackets being indexed to inflation, the tax wedge on labour will continue increasing as nominal wage increases due to inflation push tax payers into higher tax brackets ('fiscal drag'). While there were some policy discussions in Austria on indexing the two lowest income tax brackets to inflation, no such measure was adopted in 2017. The new government announced to tackle this issue within the context of a broader reform of the personal income tax system.

Graph 3.1.1: Composition of tax wedge on labour



(1) 17 euro area (EA) OECD members: simple average of euro area countries excluding Cyprus and Malta
 (2) Average income tax includes central and local income taxes as well as family benefits
 (3) Social security contributions do not include contributions to private pension funds
 Source: OECD, 2016

Social security contributions represent the largest part of the tax wedge on labour, while their impact is regressive across income categories. More than 90 % of the tax wedge for low-income earners is due to social contributions.

With 77 %, this share is also relatively high for average income earners. Discussions are under way on streamlining the social security system to make it more efficient, which could allow contributions to be reduced without affecting benefits. As individual social contributions are based on flat rates and capped at maximum amounts, their share in total labour costs is constant up to roughly 150 % of the average income and regressive thereafter (see Graph 3.1.1). In combination with the progressive schedule of personal income taxes, this generates a relatively flat profile of the tax wedge across income categories.

Austria has potential scope to shift revenues to taxes that are less distortive to growth, such as property and environmental taxes. Revenues from recurrent property taxes are particularly low in Austria, at 0.2 % of GDP compared to an EU average of 1.6 % (2015). This is mainly due to the outdated tax base (European Commission, 2017b). A EUROMOD simulation performed by the European Commission's Joint Research Centre shows that updating the tax base for property taxes and using the additional revenues for reducing labour taxes would have a limited impact on the income distribution and positive effects on labour supply and economic growth (see Box 3.1.1).⁽⁷⁾ Environmental taxes generate revenues of 2.4 % of GDP, in line with the EU. There nevertheless remains potential to shift the tax burden away from labour (European Commission, 2015b). In addition, tax advantages on company cars in Austria lead to estimated revenue losses of EUR 558 million per year (Harding, 2014).

Long-term sustainability of public finances

Based on the 2018 Ageing Report and the Commission 2017 autumn forecast, Austria's fiscal sustainability still faces a medium risk in the medium and long term. Based on debt sustainability analysis by Commission staff, Austria's public debt is projected to decrease by

⁽⁷⁾ EUROMOD simulates individuals' and households' benefit entitlements and tax liabilities (including social security contributions) according to the rules in place in each Member State. Simulations are based on representative survey data from the European Statistics on Income and Living Conditions (EU-SILC).

about 17 percentage points of GDP between 2017 and 2028 in a no-policy-change scenario, but to remain slightly above the Treaty reference value of 60% of GDP (European Commission, 2018c). To reach the 60 % debt-to-GDP ratio by 2032, a cumulative gradual improvement of 0.1 % of GDP in the structural primary balance over 5 years would be necessary (starting from 2020). By 2060, a fiscal adjustment of 3.2 % of GDP would be required to ensure the stabilisation of public debt over the long-term, mainly due to the strong projected growth in age-related spending (3.6 % of GDP between 2016 and 2070).

Pensions

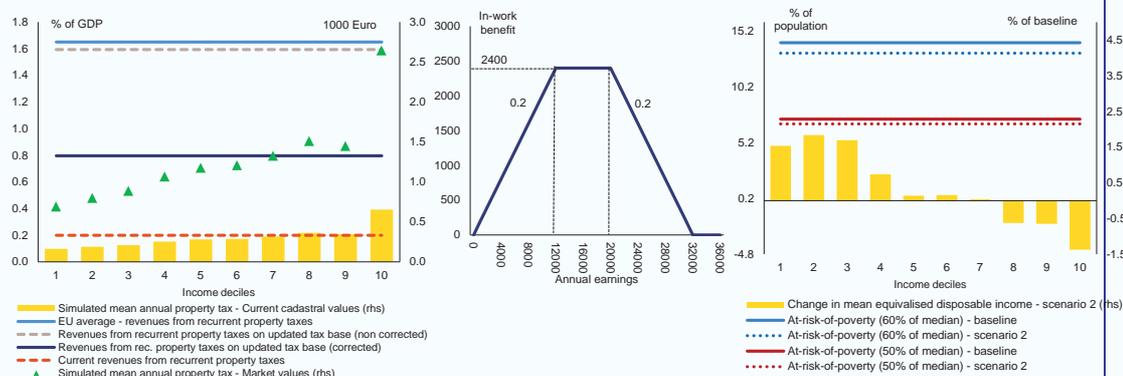
Austria's public expenditure on pensions is comparatively high and is projected to increase further in the medium and long term. At 13.8 % of GDP, public spending on pensions in Austria is among the highest in the EU (the EU average was 11.2 % of GDP in 2016; European Commission, 2018b). Based on the projections of the 2018 Ageing Report the expected increase in pension expenditure is also above the EU average. In particular, spending is projected to increase by 1.1 % of GDP between 2016 and 2040 – when most of the baby-boomer generation will be in retirement – and by 0.5 % of GDP by 2070 (the respective EU averages are 0.8 % and -0.2 % of GDP). These estimates are slightly more pessimistic than those in the 2015 Ageing Report (European Commission, 2015a) and they still point to a medium risk to fiscal sustainability. Current pension costs are reflected in relatively high social contribution rates, which represent the main part of the tax wedge on labour (see Section 3.1 on Taxation). The future increase in spending will reduce the fiscal space for other public areas, or alternatively increase government debt.

The rising number of pensioners is projected to put pressure on pension expenditure. Increasing life expectancy and low birth rates in Austria are projected to significantly increase the number of people aged over 65 for each person between 15 and 64 years old (the 'dependency ratio'). This number is expected to rise from 0.3 in 2016 to 0.5 in 2070 (European Commission, 2018b). If the statutory retirement age remains fixed at 65 years, ceteris paribus, this implies an increasing number of pensioners and rising pension expenditure.

Box 3.1.1: Shifting taxes from labour to property

The European Commission's Joint Research Centre (JRC) simulated a tax shift from labour to property by updating the tax base of recurrent property taxes to reflect properties' market values, and using the additional revenue for a reduction of labour taxes. To this end, the European Statistics on Income and Living Conditions (EU-SILC), which provides the input database for the microsimulation model EUROMOD, has been enriched with information on current property market values from the Household Finance and Consumption Survey (HFCS) ⁽¹⁾. The baseline scenario, which reflects tax-benefit rules in place in 2016 reproduces the current situation of outdated cadastral values ⁽²⁾. Current market values are then used as the taxable base, and the additional fiscal space is used to lower labour taxes in two alternative reform scenarios: (1) an across-the-board reduction in social security contributions by 16 pp and (2) the introduction of a targeted in-work benefit benefiting the middle and low income earners ⁽³⁾.

Graph 1: Budgetary effects of updating the tax base for property taxes (left), in-work benefit design (centre) and distributional effects of using the additional fiscal space for the in-work benefit (right)



Source: European Commission, Joint Research Centre, based on the EUROMOD model.

Based on the EUROMOD simulations, directly updating the tax base of recurrent property taxes to reflect market values and proportionally adjusting the tax brackets would bring Austrian revenues in line with the EU average. In 2015, revenues from recurrent property taxes in Austria amounted to 0.2% of GDP (EUR 650 million, source Statistik Austria, property tax of non-agricultural real estate and land) while the EU average was 1.6% of GDP, which would correspond to EUR 5.7 billion in the case of Austria. Based on the EUROMOD simulations, using market values as an up-to-date taxable base and adapting the property tax brackets by the same factor summarising the difference between cadastral and market values (see footnote 2) would increase revenues by 1.4% of GDP, to EUR 5.5 billion, i.e., close to the EU average.

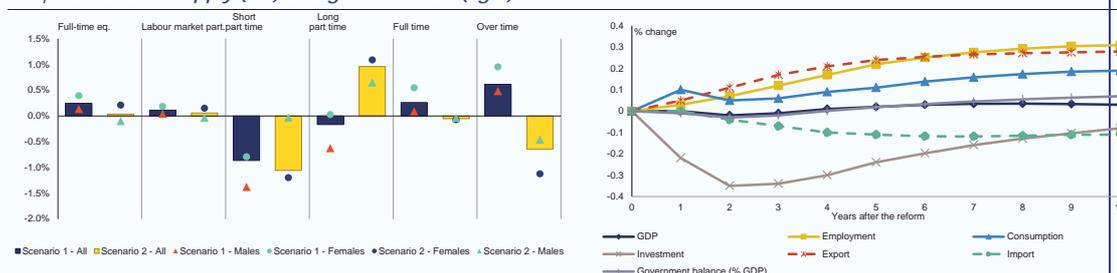
Updating the taxable base would provide additional fiscal space amounting to 0.6% of GDP (EUR 2 billion). Austrian municipalities can multiply cadastral values by a fixed factor in order to partly correct the tax base for the outdated valuation of properties. In practice, almost all municipalities apply the highest multiplier of 500 to cadastral values. When updating the tax base to market values, the municipal multiplier is halved in order to avoid a double revaluation of the tax base. Considering this correction, potential revenues from recurrent property taxes amount to 0.8% of GDP (EUR 2.7 billion) instead of the current 0.2% of GDP. This fiscal space is used in two budget-neutral scenarios that reduce labour taxes.

A targeted use of the additional revenues has slight redistributive effects and reduces the at-risk-of-poverty rate. An across-the-board reduction of social contributions (reform scenario 1) has barely any statistically significant effect on disposable income across deciles, as the higher property tax liability at the top of the distribution is broadly offset by the higher reduction in social contributions in absolute terms. The more targeted in-work benefit (reform scenario 2) tends to redistribute income from higher to lower deciles, but the impact on the Gini coefficient for disposable income is negligible. Reform scenario 2 would lower the at-risk-of-poverty from 14.2% to 13.2% with the poverty line set at 60% of median equivalised

disposable income.

Shifting taxes from labour to property positively affects work incentives in both reform scenarios. In both reform scenarios, the average participation rate and full-time equivalent are higher than in the baseline scenario when considering the entire sample, although for reform scenario 2 the difference is very small. In reform scenario 1 (reduction of social contributions) the increase in labour market participation and average full-time equivalent is higher, which is due to a shift from short and long part-time to full-time employment and over time, especially for women. Overall, in reform scenario 2 (in-work benefit) short part-time and over time decrease while long part-time is incentivised, which holds especially for women. Full-time work remains roughly stable for both men and women.

Graph 2: Labour supply (left) and growth effects (right)



(1) Average values are calculated for all households subject to behavioural changes. Short part time and long part time: weekly hours intervals [1-15] and [16-32]. Full time and Over time: weekly hours intervals [33-42] and [43-60]. Full-time equivalent is measured in terms of population working full time.

Source: European Commission, Joint Research Centre, EUROMOD (left) and QUEST model simulations (right)

Shifting taxes from social security contributions to property leads to an increase in employment, exports and consumption, while reducing housing investment. The macroeconomic effects of reform scenario 1 have been analysed using the Commission's QUEST model⁽⁴⁾. The reduction in social contributions decreases the implicit tax rate on employees, leading to an increase in employment over the ten years following the reform (0.3 %). The tax shift also increases competitiveness, leading to higher net exports. On the other hand, higher taxes on housing incentivise homeowners to substitute housing investment with consumption. Over ten years, the effects on GDP and on government balance are positive, but moderate.

(1) The statistical matching between EU-SILC and HFCS is performed by Eurostat: <http://ec.europa.eu/eurostat/web/experimental-statistics/income-consumption-and-wealth>. See Lamarche (2017) for an extensive description of the methodology to estimate the joint distribution of income, consumption, and wealth (http://ec.europa.eu/eurostat/documents/7894008/8074103/income_methodological_note.pdf). The present analysis uses 2014 EU-SILC data and the second wave of HFCS for Austria.

(2) As EU-SILC does not contain information on the current cadastral values of households' properties, these have been approximated based on the matched information on current market values. In particular, the current market value of an immovable property (household main residence or other real estate property) as matched from the HFCS are multiplied with a factor that captures the difference between cadastral and market values at an aggregate level:

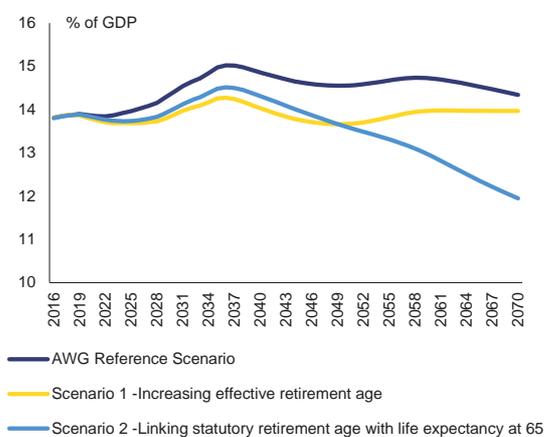
$$\text{imputed cadastral value}_k^{\text{HH}} = \text{matched market value}_k^{\text{HH}} * \frac{\text{approx. total cadastral value}_k}{\text{total current market value}_k}, \quad \text{with } k = \text{main residence, other property}$$

The total cadastral value is approximated by dividing the actual total tax base by an average tax rate that takes into account the current tax schedule for both types of property, ensuring macro-validation of the simulated revenues.

(3) The in-work benefit amounts to 0.2% of annual earnings, up to a maximum of EUR 2 400 per year and declining for annual earnings above EUR 20 000. This leads to a phase-in until annual earnings of EUR 12 000, a plateau until EUR 20 000 per year and a phase out until EUR 32 000 per year. Eligibility conditions are hours worked (25 per week or more) and age (16 years or older).

(4) See Ratto et al. (2009) for an introduction into the model and Varga and in 't Veld (2014) for a recent application. Barrios et al. (2017) present a framework of analysis for the dynamic scoring of tax reforms in the EU, which links EUROMOD and QUEST. Barrios et al. (2017) also present the labour supply model used in the analysis.

Graph 3.1.2: Pension expenditure – long term projections



Source: European Commission

Following past reforms, the effective retirement age is increasing. The government has implemented several reforms of the pension system since 2014, significantly reducing access to early retirement schemes and most notably reducing access to invalidity pensions. As a result, the effective retirement age has increased since 2014, reaching 60 years and 4 months in 2016 (BMASK, 2017). The partial retirement opportunity (*Teil-Pension*) allows employees to remain in part-time work while receiving part of their pension. Financial support by the state makes it possible to reduce working time by 50 % while receiving 75 % of their salary.

Closing the gap between the effective and the statutory retirement age can only partially improve pension sustainability. As pension entitlements are linked to the statutory retirement age, savings from increasing the effective retirement age are partly offset by higher benefits once workers decide to retire. Accordingly, after having decreased since the 2014 reforms, federal transfers to the pension system are projected to rise again in the coming years. A simulation by European Commission staff, based on the projections of the 2018 Ageing Report, shows that increasing the effective retirement age to 65.3 years for men and 64.5 years for women by 2040 (equivalent to a 5 percentage point increase in the participation rate of workers between 55-74 years old), would only marginally improve the long-term fiscal sustainability⁽⁸⁾. In fact, total pension

⁽⁸⁾ A scenario with the employment rate of older workers (55-74) being 5 percentage points higher compared with the

expenditure would amount to 14 % of GDP⁽⁹⁾, around 0.4 % of GDP lower than in the baseline scenario in 2070, still pointing to a medium sustainability risk. On the contrary, linking the statutory retirement age to changes in life expectancy would reduce expenditure by 2.3 % GDP by 2070 as compared to the baseline, which would bring the classification of Austria's long-term fiscal sustainability to low risk (see Graph 3.1.2) ⁽¹⁰⁾.

Austrian women still have one of the earliest statutory retirement ages in the EU. The government plans to start harmonising the statutory retirement ages for women and men (currently 60 and 65 years, respectively) by 2024 and to finalise the process by 2033. This contributes to lower pension adequacy for women aged over 65 (see Section 3.3).

Healthcare

Based on the 2018 Ageing Report, public healthcare expenditure is projected to increase significantly in the medium and long term, thus posing a medium risk to fiscal sustainability. Public spending on healthcare is currently among the highest in the EU, at 7 % of GDP against an EU average of 6.8 % in 2016 (European Commission, 2018b). Expenditure is projected to increase by 0.7 % of GDP by 2040, and by 1.3 % of GDP by 2070 (the respective EU averages are 0.6 % and 0.9 % of GDP). The new ceilings for healthcare expenditure laid down in the 2017 Financial Equalisation Law, as incorporated in the Ageing Report projections, play a role in containing the spending increase (see Graph 3.1.3).

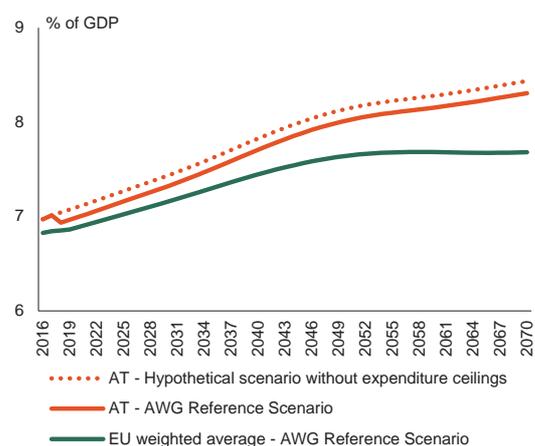
baseline projection is introduced linearly over the period 2018-2030 and remains 5 percentage points higher thereafter. The higher employment rate of this group is assumed to be achieved through a reduction of the inactive population.

⁽⁹⁾ This includes expenditure on the '*Ausgleichszulage*' (Equalising Allowance) and '*Rehabilitationsgeld*' benefits.

⁽¹⁰⁾ Retirement ages are shifted year-over-year in line with change in life expectancy at current retirement ages. Statutory retirement age is projected to rise by 5.2 years for men and 4.9 for women over 2016-70, which is assumed to correspond to higher participation rates with no effects on unemployment. Around one third of the expenditure decline stems from the denominator effect (enhanced GDP growth), whereas two thirds are due to the numerator effect (decreased pension spending) (European Commission, 2018b).

Extending implementation of these ceilings into the next years could further contribute to improve fiscal sustainability.

Graph 3.1.3: Long term projections for healthcare expenditure



Source: European Commission

A thorough implementation of the ongoing reform of outpatient healthcare could make efficiency gains possible in the medium term.

Overall, the Austrian healthcare system ensures broad access to good-quality services, as shown by the very low level of self-reported unmet healthcare needs. Nevertheless, mainly due to the incentives embedded in the fiscal framework, together with free choice of provider and no gatekeeping, the system relies heavily on the hospital sector, while less costly outpatient services are underused (OECD and EOHSP 2017). As part of the agreement on the 2017 Financial Equalisation Law, the different levels of government and the social security funds agreed to strengthen the provision of outpatient services, in order to shift services away from the hospital sector. To this end, 75 primary healthcare centres and networks will be created by 2021. While the reform is currently progressing, it is important for its success that new contractual agreements between general practitioners and social security funds will ensure the right incentives for all parties.

The high number of healthcare insurance funds points to potential efficiency gains. Austria has 18 health insurance funds, to which individuals are assigned based on their region and occupational status. While contributions are broadly

harmonised, benefits and the services provided vary across funds. Governance and administration costs for healthcare are comparatively high in Austria: 0.4 % of GDP compared to an EU average of 0.2 % in 2014. The new government programme announces a reduction to at most five social insurance funds. This could help improve the cost-efficiency, transparency and equity of the system.

Austria's health sector has room for savings and quality improvements from more effective procurement, such as more EU-wide tendering.

Austria's health sector is confronted with demographic change, increasingly complex products and higher market concentration for some inputs. In this context, EU-wide procurement could offer lower prices, higher quality and greater innovation. The modest value of health-related tenders published EU-wide by the Austrian health sector (0.23 % of GDP, compared to an EU average of 0.62 %) indicates scope for improvements in this area⁽¹⁾. Fast adoption and implementation of the pending public procurement reform law as well as increased awareness among tendering authorities would be ways to increase EU-wide tendering. Austria's public hospitals aggregate their tenders at the level of the federal states (*Länder*), and are increasingly tendering cross-regionally. Cross-border joint procurement projects are however limited. Extending cross-regional and cross-border tendering could achieve volume savings for commoditised inputs and amortise costly expertise for complex products. Finally, a further move away from price as the sole award criterion (still 51 % of EU-wide tenders in 2016) could raise quality and promote innovation.

Current efforts in preventive healthcare are relevant for the fiscal sustainability challenge.

Although expenditure on preventive healthcare in Austria is at the EU average of 0.2 % of GDP in 2014, the number of healthy life years is relatively low. Together with long-term spending projections, this underlines the importance of improving the health status of the population. In this regard, the revocation of the smoking ban as announced in the new government programme would be a missed opportunity to reduce the incidence of life-style related health risk-factors.

⁽¹⁾ The total amount is EUR 0.78 billion compared for example to Sweden's EUR 3.59 billion for a population of similar size.

3.2. FINANCIAL SECTOR

Banking sector and insurance sector

The overall health of Austria's banking sector has continued to improve. The banking sector substantially increased its capital ratios in 2016 due to retained profits and several banks' restructuring activities. Capital adequacy (including the capitalisation of subsidiaries in central, eastern and south-east Europe - CESEE)⁽¹²⁾ strengthened further and reached 18.5 % at the end of June 2017, up from 18.2 % in 2016. Due to their traditional business model, and notwithstanding the increase in 2016, Austrian banks continue to have lower leverage ratios than their European peers. The liquidity position of banks has remained adequate. Intra-group liquidity transfers to the CESEE countries have declined further as efforts to increase the funding sources of subsidiaries in their host countries have paid off. Thanks to the favourable macroeconomic conditions, the formation of new non-performing loans in Austria has slowed: the non-performing loan ratio declined to 4.1 % at the end of June 2017 from 5.1 % in 2016 (ECB, Supervisory Banking Statistics).

Notwithstanding measures taken so far, achieving further efficiency gains to support profitability remains a priority. The profitability of Austrian banks on the local market remained robust in 2016 and increased in the first half of 2017 against the same period of the previous year. It was supported by a significant reduction in the cost of risk. However, this positive trend hides a weakening of underlying operating profits as low interest rates and increasing operating expenses continue to take their toll. Banks have stepped up their adjustment efforts but some of these have yet to bear fruit. Improving bank profitability still requires a sustainable increase in operating efficiency. The cost-to-income ratio for operations on the local market deteriorated in 2016: it

increased to 74.5 % from 62.8 % in 2015 and remained above the EU average of roughly 60 %. Meanwhile, the Austrian banking sector still has scope to further reduce the total number of branches in order to move closer to the EU average.

Foreign-currency loans granted by banks on the local market have further declined. The decrease in foreign-currency loans, in particular Swiss franc-denominated loans, is the outcome of supervisory measures to curb foreign exchange lending adopted by the banking supervisors since 2008. In June 2017, a revised version of the Financial Market Authority's minimum standards for risk management and granting of foreign currency and repayment vehicle loans entered into force. The revised standards expand the obligations of credit institutions to provide sufficient information to borrowers. They also include new requirements aimed at improving market transparency and a new chapter on risk provisions to be made by banks. At the end of September 2017, the outstanding stock of foreign currency loans granted by Austrian banks declined by 67 % as compared to October 2008 (when the Financial Market Authority first recommended banks refrain from granting foreign currency loans to unhedged borrowers). The share of foreign currency loans to households in total loans has continued to decrease and stood at 15 % at the end of September 2017. Roughly 80 % of the outstanding foreign-currency loans to Austrian households will mature from 2021 onwards.

The asset quality and profitability of subsidiaries in CESEE has continued to improve. At the end of June 2017, the total exposure of Austrian banks to CESEE countries stood at EUR 209.9 billion, up from EUR 193 billion in 2016⁽¹³⁾. The most important host markets for Austrian banks with international operations are the Czech Republic, Slovakia, Romania, Croatia and Poland. The restructuring of the UniCredit Group in 2016 led to a significant change in the geographical risk profile of the Austrian banking sector as its exposure to several

⁽¹²⁾ The CESEE (central, eastern and south-east Europe) region includes Turkey and the following sub-regions: i) central and eastern Europe, consisting of the Czech Republic, Hungary, Poland, Slovakia and Slovenia; ii) south-east Europe, consisting of Albania, Bosnia & Herzegovina, Bulgaria, Croatia, Kosovo, FYI Macedonia, Montenegro, Romania and Serbia; iii) the Baltic region, consisting of Estonia, Latvia and Lithuania, and Russia, Ukraine and other countries in the Commonwealth of Independent States group.

⁽¹³⁾ The comparability of end-June 2017 data with earlier figures is limited due to recent methodological changes to data collection.

markets (for instance, Turkey, Russia and Croatia) declined. As of October 2016, the total assets of the subsidiaries of Austrian banks in CESEE countries decreased by roughly 40 % compared to the situation before the restructuring of UniCredit. Asset quality has continued to improve in most of the markets in the CESEE region, partly due to efforts made by banks to clean up their balance sheets. Furthermore, profitability has also increased thanks to lower impairment charges for credit risk. Overall, despite the improved outlook even in more challenging markets (for instance, Ukraine), remaining risks warrant further close oversight.

The insurance sector has faced several headwinds in recent years. Low interest rates, increases in life expectancy, climate change and digitalisation are some of the main challenges faced by insurance companies in recent years. Total gross written premiums in Austria fell 1.9 % in 2016 from the previous year, mainly due to the decline in such premiums for life insurance. The life insurance business has contracted on the back of the low interest rates, the low expected rate of return and the change in the tax treatment of new life insurance contracts following the 2016 tax reform. Insurance companies have taken measures to adjust to the low interest rates by changing their product portfolios and improving operational efficiency, including through mergers. Overall, Austrian insurance companies have been better placed to cope with the challenges posed by low interest rates than those in several peer countries as the share of guaranteed products in their portfolios has been lower. Austrian insurance companies with international operations have been significantly exposed to CESEE countries, which make a high contribution to their gross written premiums. Developments in these host markets therefore also warrant close oversight.

Nationalised banks

The liabilities of ‘financial defeasance vehicles’ set up in the aftermath of the crisis still account for a significant share of government debt. Between 2009 and 2015, the non-viable (winding-down) segments of three banks — Kommunalkredit, Hypo Alpe Adria and Volksbanken — were included in government accounts as corresponding financial defeasance vehicles (KA Finanz, HETA and Immigon). This

had a significant impact on public finances (European Commission, 2016a). Over time the assets of these three vehicles are being divested, which will partly reduce public costs. At the end of 2016, liabilities from the three financial defeasance vehicles classified as part of government debt amounted to 6.1 % of GDP, while the overall impact on debt from the support to the financial sector was 9.4 % of GDP.

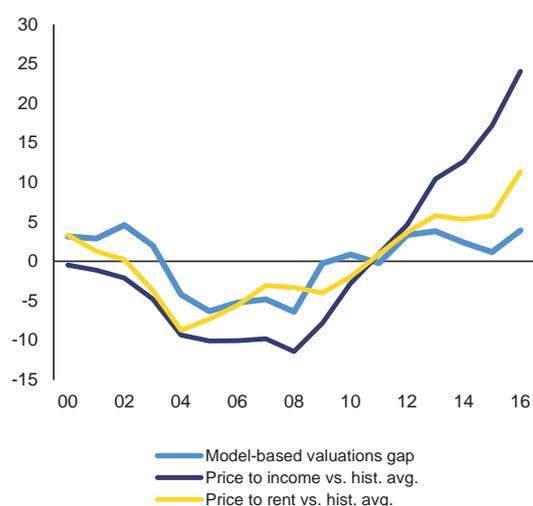
The winding-down of the three public financial defeasance vehicles is proceeding, with limited overall risks. As the recoveries from the winding-down of the HETA assets have been higher than expected, in May 2017 the Financial Market Authority reduced the haircut on HETA’s debt from 54 % to 35.6 %, resulting in a recovery rate of 64.4 %. In July 2017, interim payments amounting to EUR 5.4 billion took place due to high cash reserves, despite the initial plan to wait for the complete resolution. The winding-down is also proceeding faster than planned and is expected to be concluded by 2020 instead of 2024, with most assets expected to be divested by 2018. While divestments are on track to meet these targets, some delay cannot be excluded as the remaining assets are less attractive than the ones already sold. KA Finanz returned its banking licence in September 2017, becoming a winding-down vehicle owned by the Republic of Austria. The decision was taken in order to reduce funding costs — as short- and medium-term market funding has been replaced by public long-term funding — and regulatory requirements, in particular on capitalisation. The conversion into an asset management company will also considerably shorten the time needed for winding down KA Finanz’s assets. This is now expected to be completed by 2026 instead of 2040 as previously planned. No consequences for public finances are expected, as all KA Finanz’s assets and liabilities were already included in government debt. The winding-down of Immigon is proceeding according to plan and is expected to be completed by mid-2018.

Housing market

House prices in Austria have grown robustly over the last decade including during the crisis years. Between 2005 and 2016 nominal house prices grew on average 5.0 % annually. Rental prices followed a similar path, increasing by 3.3 %

per year. Having increased by 7.2 % in 2016, deflated house prices were above the 6.0 % threshold of the MIP scoreboard for the first time. In 2016, the European Systemic Risk Board also indicated that house price developments in Austria required closer monitoring. The price-to-rent and price-to-income ratios have increased noticeably over the last decade, by 1.7 % and 2.7 % annually. Especially the price-to-income ratio departs increasingly from its long-term average since 2012 (Graph 3.2.1). This illustrates the decreasing affordability of housing and particularly of house ownership. However, quarterly house price data in 2017 point to a slowdown in house price inflation, back to levels below the scoreboard threshold.

Graph 3.2.1: Relative price developments and valuation gap



(1) Overvaluation gap estimated as an average of the price/income, price/rent and fundamental model valuation gaps. Long-term values are computed over 1995-2016.
Source: European Commission

The increase of house prices differs across regions. House price increases have been much more pronounced in the capital region of Vienna (6.8 % on average between 2005 and 2016) than elsewhere (4.4 %). However, the impact on the population is mitigated by the fact that about 80 % of households in Vienna live in rented housing compared with 50 % in the rest of the country. In addition, social housing, which is home to about 40 % of all households that rent, and strict rental regulations play an important role in providing affordable housing in Austria. In line with these national characteristics, the recent house price increases mainly affect households with enough

income to afford buying a home as well as tenants in the private urban rental market (see also Section 3.4).

There seem to be no indications of excessive credit growth and risks to financial stability.

Between 2005 and 2016, housing mortgages rose on average 4.6 % annually. Rising credit flows reflect the increased transaction values due to house price increases. Lending to households for housing purposes has been supported by the favourable financing conditions, with lending standards remaining broadly unchanged in recent years. Changes in investment strategies towards real estate as a reaction to the low interest rates might have created additional housing demand and contributed to price increases. Overvaluation, measured as the overall price gap exceeding the long-term average and not being explained by fundamental data, has increased since 2010 and stood at 3.9 % in 2016 (see Graph 3.2.1). A similar indicator by the Austrian National Bank specifies that overvaluation is about 20 % in Vienna but negligible in the rest of the country. The risks of a credit-driven house price bubble thus appear contained.

The macro-prudential toolkit has been strengthened to contain potential risks from real estate financing.

The Austrian authorities have stepped up their efforts to finalise the legal framework for introducing macro-prudential tools to contain potential risks from financing of both commercial and residential real estate following the warning issued by the European Systemic Risk Board in 2016. The macro-prudential toolbox includes the possibility of imposing limits on loan-to-value ratios, debt service-to-income ratios and debt-to-income ratios, as well as maturities limits and minimum amortisation requirements. These tools can be applied individually or jointly, but only to the flow of new loans. The tools are not yet activated as the Financial Market Stability Board has assessed that current developments do not warrant this. However, credit institutions will be subject to enhanced reporting requirements on real estate financing from mid-2018 onwards.

Private sector debt

In 2016 private sector debt remained roughly flat for a second year in a row, at 124 % of GDP. On the back of the increase in nominal

GDP, the share of private sector debt as % of GDP declined steadily from 2010 to 2015 and remained broadly stable in 2016 below the macroeconomic scoreboard threshold. The indebtedness of non-financial corporations declined slightly in 2016 from the previous year to 72.7 % of GDP. Meanwhile, household debt increased to 51.3 % in 2016, up from 50.9 % in 2015.

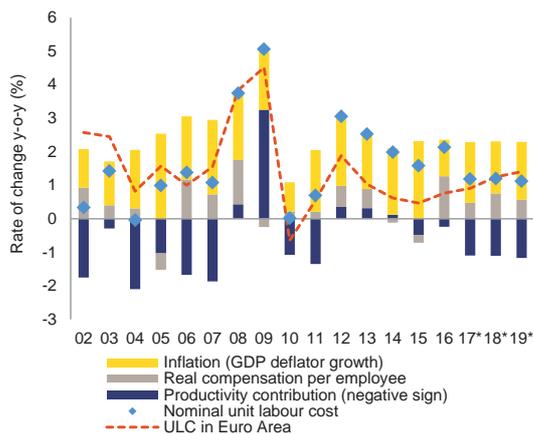
Despite increasing further, private sector credit flow remained below the macroeconomic scoreboard threshold of 12 %. Spurred by favourable financing conditions, private sector credit flow (as % of GDP) edged up to 3.2 % at the end of 2016 from 2.3 % in 2015. The breakdown of private credit flow shows that the credit flow to households (as % of GDP) continued the upward trend seen since 2012, as it rose to 1.2 % at the end of 2016. Meanwhile, the credit flow to non-

financial corporations, which has gained further momentum since 2014, increased to 2.1 % of GDP at the end of 2016, up from 1.6 % in the previous year. The credit rise was more marked for households than for corporates, for which internal resources have been the main source of financing. Low interest rates have supported the debt-servicing capacity of non-financial corporates, which remain exposed to interest rate risk due to their high proportion of loans with variable interest rates. Household lending gained further momentum in 2017, driven mainly by mortgage credit. Meanwhile, the share of loans with variable interest rates (traditionally high in Austria and above international standards) and of foreign currency loans in total loans has continued to decline. This has reduced the exposure of households to interest rate and currency risks.

3.3. LABOUR MARKET, EDUCATION AND SOCIAL POLICIES

Austria's labour market performance is improving but some structural challenges persist. Thanks to strong economic growth, employment is growing faster than the labour force supply. After 6 years of continued increases, unemployment therefore started to decline in 2017 and is expected to remain low. It still shows strong regional differences, however. The employment rate has risen to a record high of 75.3 % (Q3-2017). Despite population ageing the labour supply increased, mainly driven by rising numbers of women, older people and people with a migrant background either in work or seeking a job.

Graph 3.3.1: Trends in labour costs and its components



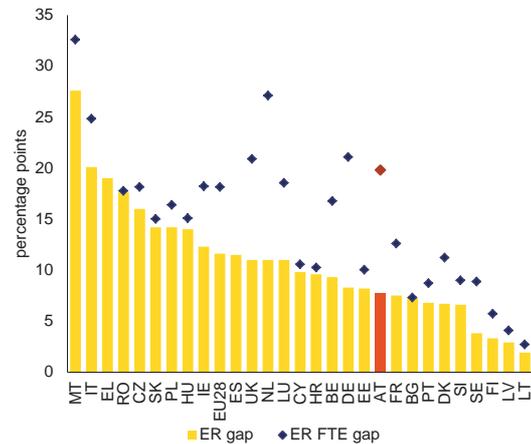
Source: European Commission

Wages are growing in line with the performance of the labour market. Nominal compensation per employee increased by 2.4 % in 2016 and is expected grow by 2.3 % annually between 2017 and 2019. Coupled with solid productivity gains, this has resulted in a fall in the nominal unit labour cost, thus improving Austria's competitive position. As inflation picked up, real wage growth slowed, from 1.3 % in 2016 to 0.5 % in 2017.

Immigration and the increased numbers of women and older people working or seeking a job led to a faster expansion of Austria's labour

force than in peer countries. Over the past decade Austria has experienced increased inflows of people mainly from new EU Member States. Recently, however, these have been surpassed by non-EU migrants due to an increased number of people seeking protection (OECD, 2017a). The proportion of women working has also increased over the past 10 years to 70.9 %, above the EU average of 65.3 %. Similarly, the employment rate of older workers increased from 33 % in 2006 to 49.2 % in 2016, but it is still below the EU-28 average of 55.3 %. Once out of the labour market, it is more difficult for older workers to return. The additional labour supply is positive as it is partially mitigating the drop in the workforce caused by the ageing of the population. Nonetheless, absorbing the additional labour supply in the labour market remains one of the challenges. The 'employment bonus', a subsidy aimed at creating new jobs, was introduced in July 2017 but has seen limited take-up and was phased out end of January 2018.

Graph 3.3.2: Gaps in employment rate (20-64) and between male and female full-time equivalent employment rate, 2016



Source: Eurostat

Box 3.3.1: Monitoring performance in the 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.

Austria performs relatively well on the indicators of the Social Scoreboard⁽¹⁾ supporting the European Pillar of Social Rights. They reflect Austria's focus on active labour market policies and a strong positive impact of social transfers on reducing poverty risks. The strong involvement of social partners in high-level decision-making, characterised by minimum government intervention, contributes to fair working conditions and a good functioning of social dialogue.

AUSTRIA		
Equal opportunities and access to the labour market	Early leavers from education and training (% of population aged 18-24)	Better than average
	Gender employment gap	Better than average
	Income quintile ratio (S80/S20)	Better than average
	At risk of poverty or social exclusion (in %)	Better than average
	Youth NEET (% of total population aged 15-24)	Good but to monitor
Dynamic labour markets and fair working conditions	Employment rate (% population aged 20-64)	Better than average
	Unemployment rate (% population aged 15-74)	Good but to monitor
	GDHI per capita growth	To watch
Social protection and inclusion	Impact of social transfers (other than pensions) on poverty reduction	Best performers
	Children aged less than 3 years in formal childcare	Better than average
	Self-reported unmet need for medical care	Better than average
	Individuals' level of digital skills	Better than average

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. NEET: neither in employment nor in education or training; GDHI: gross disposable household income.

A high share of part-time employment of women coincides with a fairly large pay gap.

The gender employment gap is relatively low but it widens significantly if full time equivalents are taken into account. The high share of part time employment of women hampers the full use of their labour market potential which would be crucial in the context of an ageing population to sustain the welfare system. There is a strong gender segmentation of the labour market and the gender related part-time employment is among the highest in the EU.

Social transfers (other than pensions) have a strong impact on poverty reduction. Cash family benefits have a very strong impact on reducing the at-risk-of poverty rate. This type of benefits reduces the at-risk-of poverty rate of families with children by approximately 8 to 23 pps depending on the given family constellation. Benefits dedicated to families and children especially reduce the at-risk-of-poverty rates of households with young children (at the age up to 6 years). Family allowances and parental leave benefits compensate to a considerable degree for the lower income deriving from lower employment rates of parents.

⁽¹⁾ 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. Abbreviation: GDHI – gross disposable household income.

The high share of part-time employment of women indicates a still significant untapped labour potential. The gender differences in Austria's employment rates are relatively low at 7.8 %, compared with an EU-28 average of 11.6 % in 2016. However, this is not the case when considering the full-time equivalent employment rates (see Graph 3.3.2). Women's part-time

employment is among the highest in the EU at 47.9 %, compared with the EU-28 average of 31.4 % in 2016. This reflects the division between women who do paid and unpaid work. There is a gender gap of 17 percentage points in the time spent in unpaid care work per week, putting Austria in the 25th place in 2015 (Bergmann and Sorger, 2017). This does not only hurt women's

income and career prospects but also reduces the adequacy of their pensions.

Austria's gender pay gap of 21.7 % in 2015 is wider than the EU average of 16.3 %, mainly due to the high proportion of women in part-time work and on low pay. The gap remains persistently high despite a slight reduction in recent years. It is driven by gender segmentation in the labour market, with women working in economic sectors that offer comparatively low pay for the same level of qualification. In 2013, women were proportionally more often in low-wage employment in all branches, and even among female full-time earners the percentage of low-wage earners is high (Geisberger, 2012). The strong influence of traditional gender roles and the undervaluation of women's work and skills also play a key role (Bergmann and Sorger, 2017). Part-time work is often associated with lower earnings per hour and this combination contributes to Austria's wide gender gap in pensions (see Section 3.1. on pensions). Despite a reduction of 5 pp compared to 2015, the low wage trap for second earners⁽¹⁴⁾ is still 6 pp above the EU average. Moreover, the tax reform of 2015 and 2016 benefitted men more than women (Rechnungshof, 2017).

Although significantly increasing over the past ten years, the rate of formal childcare remains below the targets. The proportion of children aged below 3 attending formal childcare has substantially increased, from 10.8 % in 2006 to 25.4 % in 2016. However, it remains below the EU Barcelona target of 33 % participation in early childhood education and care (ECEC). Progress is hampered by the institutional set-up and by the lack of a framework to improve quality⁽¹⁵⁾. On opening hours and availability during public and school holidays, there are substantial differences between Vienna and the federal provinces (Baier and Kaindl, 2011; Fink 2013). In Vienna, 44.3 % of 0-2 year-olds were in childcare in 2016 while the figure for Styria was 14.2 %. Parental leave for fathers was introduced in 1990 but take-up has

⁽¹⁴⁾ The low wage trap is defined as the rate at which taxes are increased and benefits withdrawn as earnings rise due to increased work productivity. Example: principle earner (100 % wage), second earner: increase from 33 to 67 %.

⁽¹⁵⁾ This could involve raising the level of staff qualifications and introducing compulsory quality criteria for all stakeholders.

been low (estimations range from 0.6 % to 2 %). Austria supports expanding ECEC for children below the ages of 3-4 by giving the federal provinces incentives to improve their institutional childcare e.g., through co-financing the start-up costs of new childcare places⁽¹⁶⁾.

People with a migrant background find it harder to get work. Around 21 % of Austria's workforce in 2016 had a migrant background. In 2016, the employment rate of non-EU born persons was 17.1 pp lower than that of EU-born nationals. The lower number of people with a migrant background who are in work or seeking a job is mainly due to their qualification levels and correlates with their country of origin. Their labour market performance is influenced by their reasons for migrating, their education level and their socioeconomic background. The increase of the unemployment rate of foreign born (from non-EU 28) from 2010 to 2016 was much higher (10.3 % to 14.3 %) than the increase of unemployment of Austrian nationals (4.1 % to 4.7 %) for the same period. The employment situation of native-born with foreign born parents (i.e. second-generation) is also unfavourable⁽¹⁷⁾.

Getting refugees into work will remain a challenge, particularly for women. Austria has made considerable efforts to accommodate and integrate refugees⁽¹⁸⁾. More asylum seekers and refugees want to work but a number of factors including their low qualification levels and insufficient German language skills as well as institutional barriers hinder this. Of the 9 523 refugees recognised between 2015 and mid-2016, 15.2 % were in employment by the end of 2016. 66.8 % were registered at Public Employment Service Austria (AMS) and 18 % were outside the labour force (AMS, 2017). The Integration Act "Integrationsjahrgesetz" adopted in June 2017 obliges refugees and beneficiaries of subsidiary protection to a one year labour market integration

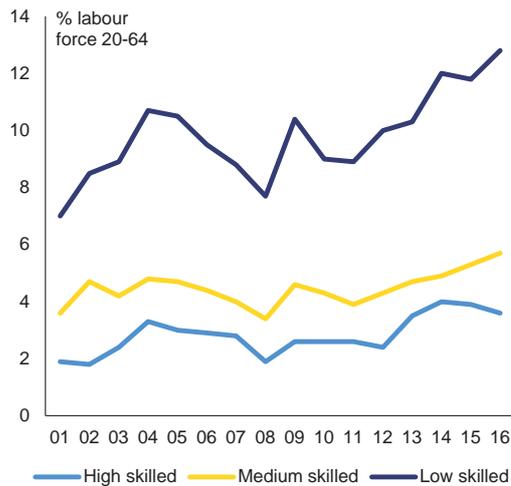
⁽¹⁶⁾ Its goal is to improve ECEC-coverage rate for children in the age below 3 years. It also aims to expand the opening hours of existing institutions and to close regional gaps in access to childcare for children aged over 3

⁽¹⁷⁾ In 2014, native born with foreign born parents had lower employment rate (59.2%) by around 14.4 % points than native-born without a migrant background (73.6%).

⁽¹⁸⁾ In June 2017, the government adopted the Integration Act (*Integrationsjahrgesetz*), a package of measures to find work for refugees and asylum seekers who are likely to be granted asylum.

programme implemented by the public employment service. Asylum seekers with a high likelihood of being granted asylum also have access to these measures.

Graph 3.3.3: Unemployment rate by educational attainment



Source: Eurostat

Low-skilled workers have been hit particularly hard by unemployment. People with only compulsory education are particularly affected by unemployment. At 13.1 % (Q2-2017), the unemployment rate for low-qualified workers is more than twice Austria's overall unemployment rate of 6.1 %⁽¹⁹⁾. In 2016 almost half (46.8 %) of those registered as unemployed had completed only the compulsory school level (*Pflichtschulabschluss*); 51.2 % of this group were long-term unemployed (AMS, 2016). Active labour market policies remain crucial to upskill these workers and help them find new jobs.

The digital transformation of the Austrian economy will lead to widespread changes in job profiles and qualification requirements. Forecasts for Austria predict a significant increase in automation of routine tasks in the production sector and in business administration functions. In Austria, these changes will not necessarily lead to job losses. They will however significantly alter

⁽¹⁹⁾ According to Public Employment Service Austria, the unemployment rate in 2016 of people with only compulsory education (*Pflichtschulabschluss*) is three to five times higher than that of groups with higher levels of education (AMS, 2016).

qualification profiles, putting pressure on low-skilled and elderly workers. AMS regularly identifies professions that will be particularly impacted by digitalisation and tailors its advice services accordingly. Basic digital skills will become an essential requirement of all jobs. In 2017 around 33 % of Austrians aged 16-74 did not have basic digital skills, putting them at a disadvantage in the jobs market. Adapting to technological change may require people in all segments of the labour market to upskill through continued adult education. The relevance of Austria's 'dual' vocational education system will thus increase in the future (Hausegger et al., 2016). Moreover, the share of companies reporting difficulties in finding ICT specialists is significantly higher in Austria (60 %) than the EU average (40 %) according to the European Digital Scoreboard.

Austria is well placed to adapt its labour market institutions to digitalisation.

Digitalisation will have profound effects on careers and working patterns. While crowd-working is still a minor phenomenon in absolute terms, numbers are rising (Huws and Joyce, 2016). Specific digitalisation challenges arise, such as protection of employees' data and striking the right balance between work and private life. Austria has acknowledged the need to prepare labour market institutions for the digital economy and is working on modernising employee protection, including for non-traditional forms of employment (teleworking, freelancing, crowd-working). Austria can build on the existing coverage of independents in the social security system to cover freelancers and crowd-workers as well. Implementation of the corresponding measures under Austria's national digitalization strategy is still pending.

Social policy and inclusion

The overall social situation reflects the good economic conditions. In 2016 the number of people at risk of poverty or social exclusion fell for the third consecutive year. The improvement was driven by a decline in severe material deprivation, which measures absolute poverty, and by a fall in the number of households with low work intensity. Austria's real gross disposable household income per capita stagnated following the crisis but 2016 data suggest household income has increased, in

line with the improved overall economic conditions.

By contrast, in-work poverty is rising, particularly among foreign workers. While improved labour market conditions and falling unemployment have been broadly beneficial, the increase in in-work poverty raises questions over the quality of job creation. In 2016 Austria's rate of in-work poverty increased slightly from 7.9 % to 8.3 %. This overall increase was driven solely by a rise in in-work poverty among (both EU and non-EU) foreign nationals, from 21.7 % to 24.8 % whilst for Austrians the rate of in-work poverty remained stable at a relatively low 5.4 %. The social partners agreed in 2017 on a monthly gross minimum wage of EUR 1 500 for all sectors, to be implemented nationally by 2020.

Austria's welfare system, though robust, might not sufficiently protect certain groups against poverty. The poverty gap remains significantly below the EU average. The means-tested minimum income (*Bedarfsorientierte Mindestsicherung*) provides support for poor citizens in need and for persons who are granted asylum as well as for those under subsidiary protection. The benchmarking exercise ⁽²⁰⁾ shows that in Austria the minimum income benefits are somewhat below the national poverty threshold, still more generous than in most EU member states. However, the legislation is currently set at state ("Länder") level, which creates variations within the country. The new Government envisages establishing a federal framework with upper ceilings regardless of family composition, thus potentially increasing poverty risks for larger families. The Land of Upper-Austria introduced such a cap of 1.500 Euro per month for a family with 2 or more children already.

Income inequality remains low, but both wealth and opportunity are unequally spread. The S80/S20, which measures the distribution of income, remained low at 4.1 in 2016, compared to an EU average of 5.2. This is largely due to the redistributive effects of taxes and benefits. In contrast, the continued rise in house prices might increase wealth inequality due to the unequal

ownership of property assets. The opportunities for young people from a disadvantaged background are also relatively poor, as evidenced by the strong link between the 2015 PISA results and socioeconomic background.

The system of long-term care faces challenges in funding and staffing which may complicate access for patients. In 2018, the provisions for personal and family contributions to long-term care from an individual's wealth (*Pflegeregress*) will be abolished. There are no clear estimates of the projected impact of this measure on demand, or of its overall financial cost. In the face of demographic trends and staff shortages, the current system is already under pressure and increased demand may cause capacity constraints (Grossmann and Schuster, 2017). Based on the projections of the 2018 Ageing Report and without considering any additional impact on demand from the new measures, total expenditure for long-term care is already expected to increase from 1.9 % of GDP in 2016 to 2.6 % in 2040 and 3.8 % in 2070 (European Commission, 2018b). Furthermore, it is unclear how these changes to the existing funding model, which will mean the system is no longer progressive, will affect the already high level of inequality in the distribution of wealth (Firgo, 2017)

Austria faces a particular challenge to provide adequate pensions for women over 65. The pension system features relatively high aggregate replacement ratios. This ensures adequate pensions, reducing old age poverty risks. A means-tested equalisation supplement (*Ausgleichszulage*) for contributions above 30 years also reduces this risk. Nevertheless, the risk of poverty for women over 65 remains higher than that for men. Shorter working lives, career interruptions due to care responsibilities, part-time work, and the high gender pay gap lead to lower contributions and thus to lower pension benefits for. Austria's gender gap in pensions for 65-74 year-olds was 40.5 % in 2016, above the EU average.

Austria's social protection for employees and the self-employed performs well. Austria has one of the highest coverage rates of unemployment benefits for the short term unemployed but

(20) According to the results of the benchmarking exercise in the area of minimum income carried out by the Social Protection Committee, see Draft Joint Employment Report.

maximum duration of benefits is rather low⁽²¹⁾. However, employees or self-employed with gross monthly earnings below EUR 425.70 (*Geringfügig Beschäftigte*), a majority of whom women, are not covered by unemployment insurance⁽²²⁾. They can opt into other strands of social insurance, i.e. sickness, maternity, pensions and invalidity schemes. National data show that the number of people employed under such conditions has increased steadily (from 148 278 in 1996 to 273 093 in 2008 and 341 735 in 2015) while the number of marginal freelance contracts has declined (European Commission, 2017c).

Education and skills

Austria made progress on its education reform but performance in basic skills remains below EU average. The second package⁽²³⁾, adopted in mid-2017, gives schools more autonomy and clearer responsibilities and will allow administrative clustering of several schools. Schools are to determine also class and group size and school heads will be allowed to select their teachers. The law foresees that within model regions, parents and teachers may vote with simple majority to convert a school into a comprehensive school for pupils aged 10-14⁽²⁴⁾. Federal authorities will nominate the directors of the newly created (still hybrid) regional ‘education directorates’ (*Bildungsdirektionen*) in agreement with the regional governor. The proportion of pupils in all-day schooling improved from 23.13 % in 2016/2017 to 24.36 % in 2017/2018. However, the more comprehensive type, called *verschränkte Form*, still accounts for only 18 % of pupils in all-day schooling at general compulsory schools.

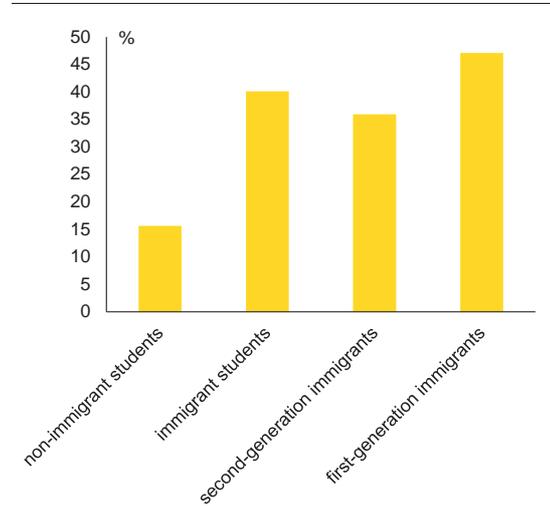
⁽²¹⁾ According to the results of the benchmarking exercise in the area of Unemployment benefits of the EMCO, see Draft Joint Employment report.

⁽²²⁾ Approximately half of the marginally employed (*Geringfügig Beschäftigte*) are subject to compulsory social insurance as they are at the same time either in a regular job or recipients of unemployment benefits or of a pension.

⁽²³⁾ The first implementation package, adopted in 2016, introduced a better transition between the last compulsory year of early childhood education and the first 2 years of primary school.

⁽²⁴⁾ Vorarlberg, is in the process of doing so and can provide important evidence for further nationwide reform.

Graph 3.3.4: Science — Percentage of low performers in Austria by immigrant background



Source: OECD

Overall, performance in basic skills remains below EU average. A wide performance gap remains between students with and without migrant background. National testing in 2016 confirmed that many pupils lack basic skills in German. 38 % of 10 year-olds in 2015 and 45 % of 14 year-olds in 2016 did not reach the basic level or did so only partially as measured by the Federal Institute for Education studies (BIFIE, 2016 and 2017). Comparing the 2012 and 2015 PISA results, the proportion of low achievers increased in all three core areas surveyed, i.e. mathematics, reading and science (European Commission, 2017b). Native born pupils outperform first generation migrants by 82 PISA score points (translating into almost 3 years of school). PISA indicates weaker science performance among students who do not speak the language of instruction at home. Recent international testing (PIRLS) confirmed a widening gap in reading for those with weak socio-economic or migrant background (Wallner-Paschon et al., 2017). National testing confirms this trend and shows a major difference between listening and reading⁽²⁵⁾. Many students with a migrant background attend non-academic lower secondary schools (NMS) where up to 59 % do not reach or only partially

⁽²⁵⁾ According to Wallner-Paschon et al. (2017), for reading, young people with a migrant background trail with 75 score points, compared to 477 points for young people without a migrant background; for listening the scores are 96 and 423, respectively. Accounting for social background reduces the disadvantage to 48 and 68 points, respectively.

reach the minimum level in reading, whilst this is essential in preparing for work. The new Government announced to strengthen policies on early tracking and separation, including for special education, and wants to introduce an education result obligation until 18 years for all.

Various policy and legal initiatives seek to help young people with a migrant background, including recognised refugees and people under ‘subsidiary protection’ to integrate into Austrian society. These include measures to reduce early school leaving like the recently adopted Education and Training Act (*Ausbildungspflichtgesetz*). This expands the framework for upgrading the skills of disadvantaged young people. Since July 2017 all young people aged up to 18 are obliged to be in education, training or employment. The Integration Act of June 2017 makes it compulsory for migrants to attend courses in language, culture and values. Austria has pledged to pay special attention to the transition from nursery school to primary school. The new Government aims at reinforcing German support in schools, and introducing in case of lacking language skills a second year of compulsory early childhood and care (ECEC). The quality of the latter should be improved through a common framework on quality indicators, including smaller groups, higher standards for initial and continued training as well as of management.

In line with the 2016 Council Recommendation on Upskilling Pathways, Austria is implementing its Adult Education Initiative. This enables adults who lack basic skills or never graduated from lower secondary education to continue and finish their education free of charge. Since many of those with a migrant background and most recognised refugees opt for professional training, vocational education and training (VET) ⁽²⁶⁾ is crucial to their integration. Initiatives and programmes integrate refugees into formal VET by assessing and validating their skills and qualifications gained abroad. An essential aspect is to support young refugees in gaining an apprenticeship diploma and help them choose the appropriate occupation.

⁽²⁶⁾ A current challenge is the regional mismatch in apprenticeship-based vocational education and training

Austria’s tertiary educational attainment rate is 40.1%, reaching both the national and Europe 2020 targets. The number of students and graduates has continually increased over the last decade. However, resources and teaching staff have not kept pace (European Commission 2016a and 2017b). The intended move to capacity-based financing has not been finalised. Such a ‘fully managed’ system of access to higher education is planned to be linked to a relative increase of available resources to improve quality and effectiveness by, among other things, boosting the student-teacher ratio to levels comparable to the international average. This measure has not been adopted but figures among the priorities of the new government. Having adopted a national strategy ‘on the social dimension in higher education’ ⁽²⁷⁾ allows mitigating rising inequality, also through such a reform. Study grants have already been increased and the range of recipients enlarged ⁽²⁸⁾.

Austria is expected to increase the use of digital technology in higher education. This is important for both teaching and publishing ⁽²⁹⁾. Higher education structural funds (*Hochschulraumstrukturmittel*) will be invested in a new ‘e-infrastructure’ and in developing a national infrastructure for creating, discovering and sharing open educational resources. Austria has a lower number of graduates in some fields of science, technology, engineering, and mathematics (STEM), particularly at PhD level, limiting the scope for innovation. The project “*Zukunft Hochschule*” addressed this with a particular focus on ICT graduates. Austria has the second biggest gender gap in STEM graduates. For ICT, the share of women among recent graduates is only 17 %, among the lowest in Europe.

Austria has also launched its digital education strategy ‘School 4.0 — let’s get digital’. Digital skills will be introduced into the curriculum of

⁽²⁷⁾ <https://wissenschaft.bmwf.gv.at/bmwf/studium/nationale-strategie-zur-sozialen-dimension/>

⁽²⁸⁾ The strategy is the first comprehensive document aimed at improving access to higher education for less-represented groups. It sets quantitative goals up until 2025. The paper identifies three broad goals: more integrative access; preventing dropout and improving results; and optimal framework conditions for policy steering.

⁽²⁹⁾ Performance-based financing agreements with higher education institutions will provide incentives for increasing digital learning and teaching programmes. Licensing educational content for open use should help it spread to other users.

primary and lower secondary schools in 2018/2019. Digital training for teachers is also compulsory for new teachers with 6 points from the European Credit Transfer and Accumulation System. They have to complete a modular training within 3 years of beginning their career, but it remains optional for other teachers. A virtual pedagogical institute will support this. The strategy also has a hardware component that is not yet financed. By 2021, all schools will have broadband and WLAN access, compared to 96 % of federal and 78 % of compulsory schools today.

3.4. INVESTMENT

General investment situation

Investment grew strongly in 2017 but did not improve the stagnating total factor productivity. Austria's total factor productivity has been stagnating in recent years, against the overall trend in the EU of slightly rising TFP (see Graph 1.6). Overcoming this stagnation requires productivity enhancing investments, notably in innovation and digitalization. Total investment in Austria increased by 3.7 % in 2016. This strong investment growth was the main contributor to the economic upswing, ahead of private consumption and exports also in 2017. However, investment growth is expected to slow down from 2018 onwards (to 2.7 % in 2018 and 2.4 % in 2019) which will also dampen GDP growth. Strong investment in equipment drove investment growth in 2016 and 2017 as firms worked through a backlog of necessary replacements. For 2018, investment in business expansion is expected to be on par with replacements (WKÖ, 2017a). This type of investment contributes strongly to growth, productivity and employment.

Strong housing demand is keeping up pressure on building supply. The population grew on average by 0.6 % yearly from 2010 to 2016, faster than the EU average of 0.2 % per year. The number of households increased by 40 170 on average per year between 2010 and 2016 due to migration and a trend towards more single-person households. Thus, together with depreciation, housing demand can be estimated at approximately 56 780 dwellings per year. This is broadly in line with the average number of completed dwellings. However, stronger housing demand due to the refugee crisis since 2015 has outpaced supply in the last 3 years, contributing to the overall upward pressure on house prices. Housing construction has grown at a subdued level in the last decade and only picked up in 2017. Nevertheless, the number of completed dwellings per 1 000 people at 5.6 units demonstrates that Austria comes from one of the highest rates in the EU (the average of 16 comparable EU countries is 3.0). Along with institutional changes in the region's housing market schemes since 2005, this may also explain the weak growth rate of housing investment as the overall number of units completed is already high. The population increase has been particularly strong in Vienna, averaging 1.4 % a year between 2010 and 2017, and peaking at 2.0 % in 2016

during the refugee crisis. This was also reflected in stronger price pressures than in the rest of the country (see Section 3.2) despite the fact that the number of completed dwellings has almost doubled from 4 173 units in 2010 to 8 061 units in 2016 in Vienna compared to an increase of 32 % in the rest of the country.

Services sector

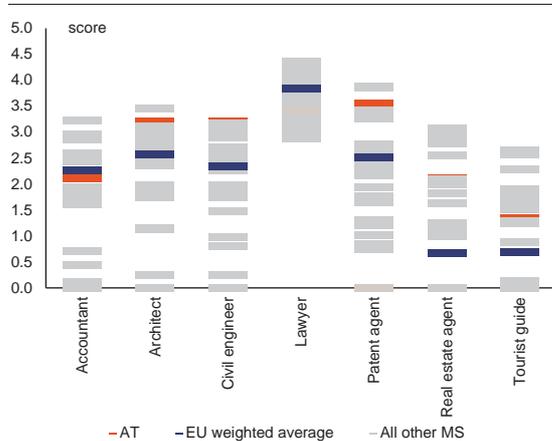
Reform of Austria's services sector regulation would strongly benefit productivity and competitiveness throughout the Austrian economy. High levels of regulation in Austria's services sector result in less competition and innovation and therefore less productivity in the services sector itself (European Commission, 2017b). This directly affects 50 % of GDP produced by the services sector and 45 % of employment in the overall services sector. The high level of regulation has gone hand in hand with declining wage-adjusted labour productivity and negative levels of allocative efficiency in this area. Restrictive regulation also limits employment and contributes to wage inequalities, impacting the 22 % of the Austrian labour force who work in regulated professions. Low competitive pressure in business services are furthermore evidenced by below average churn rates and above average gross operating rates in sectors such as legal, accounting, architectural and engineering activities. Around 35 % of the value created by Austrian manufacturing is created by service inputs so that services sector regulation also harms Austrian manufacturing industries.

Austria has revised only some aspects of its service sector regulation. In July 2017, Austria adopted a revision of the trade licence act (*Gewerbeordnung*) which removed access requirements for 19 trades (*Teilgewerbe*) and expanded the scope of activities which can be exercised under each trade licence (*Nebenrechte*)⁽³⁰⁾. Administrative fees for all trade law procedures, including the notification of a new trade business were dropped. A planned one-stop

⁽³⁰⁾ Activities related to (regulated or free) trades can be provided to up to 30 % of annual turnover; in the case of regulated trades, they must however not exceed 15 % of the provision of services per contract and be "economically complementary" to the actual activity from within the original trade (*wirtschaftlich sinnvolle Ergänzung der eigenen Tätigkeit*).

shop, including permits for which the regions (*Länder*) are competent, was not implemented however. This reform also reduced only marginally the high number of trades for which professional qualification is required⁽³¹⁾. The new government has therefore announced a further revision of the trade licence act to be implemented by July 2020 (BKA, 2017). As regards liberal professions serving the business sector, Austria merely revised the law on economic trustees (*Wirtschaftstreuhandberufsgesetz*) notably by simplifying educational requirements.

Graph 3.4.1: Regulatory restrictiveness in key professions in Austria and the EU (2016)



Source: European Commission

Regulatory barriers in Austria's business service sector are still among the highest in the EU. In key business services, such as legal, patent agent, architectural and engineering services, Austrian regulation is restrictive. Except in the case of lawyers and accountants, it is significantly more restrictive than the EU average and at or near the highest level of restrictiveness for civil engineers and architects (Graph 3.4.1). Restrictions on interdisciplinary firms between regulated professions affect architects, engineers and patent/trademark agents. Shareholding, company form or exclusivity requirements exist in Austria notably for architects, engineers and patent/trademark agents. Particularly wide-ranging reserved activities exist for architects, engineers, accountants, tax advisers, patent/trademark agents and tourist guides. Austria has so far not used the

⁽³¹⁾ Two regulated professions were liberalised, job brokerage (*Arbeitsvermittlung*) and production of cosmetic articles (*Erzeugung von kosmetischen Artikeln*).

mutual evaluation of regulated professions and the reform analysis of January 2017 to lower regulatory barriers (European Commission, 2016a). Previously announced intentions of allowing interdisciplinary companies among traders and liberal professions have also not been implemented.

Low market dynamics and high prices point to a relatively weak performance of the Austrian retail sector. According to Eurostat, the retail sector is characterized by low churn rates and wage-adjusted productivity below the EU average. Food prices are the third highest in the EU. The overall restrictiveness of the regulatory framework positions Austria around the average of EU Member States. Nevertheless, some issues can be identified that contribute to the sector's suboptimal performance. They particularly concern regulations affecting the daily operations of retailers such as restrictions on sales promotions and shop opening hours, as well as complex retail establishment procedures.

Austria's tourism sector is doing well but is impacted by regulatory and fiscal burdens. Austria has a large tourism industry which is doing well in general terms. However, tight profit margins are a challenge. Furthermore, skill and labour supply shortages exist for some tourism professions. More broadly, tourism in Austria is heavily impacted by new online business models. Austria is reacting with a policy initiative as regards digitalization (*Tourismus-Digitalisierungsstrategie*). The new government programme 2017-2022 furthermore foresees an overall tourism strategy with annual monitoring. The programme focuses on addressing labour shortages and on reducing regulatory and financial burden. A first specific measure announced is a reduction of VAT on accommodation from 13 % to 10 % (BKA, 2017).

Business environment and access to finance

Austria has managed to improve its business environment, notably for start-ups, and plans further reductions of the regulatory and tax burden. Austria's business environment has traditionally been difficult for those starting a business. In recent years, start-up numbers have however increased strongly with a peak in 2016 (WKÖ, 2017b). This is partly due to the cyclical

upswing but also reflects the success of the structural reforms undertaken in the implementation of the start-up strategy. In particular the combination of direct and indirect financial support with administrative and regulatory simplification has resulted in a genuinely improved start-up environment. Among the regulatory improvements adopted in 2017, Austria has notably facilitated setting up limited liability companies by abolishing the requirement of a notary act for one-person limited liability companies⁽³²⁾. The government programme for 2017-2022 puts particular emphasis on further reducing the regulatory and tax burden on companies as key instruments to further improve the business environment (BKA, 2017). This includes a reduction in the corporate tax (second highest in the EU) as well as a host of measures to reduce the regulatory and administrative burden imposed in particular on SME.

While start-up numbers are continuously increasing and survival rates are high, scaling up remains a problem for Austrian firms.

Rising start-up numbers combined with a high survival rate point to a strong environment for business creation. The same positive assessment cannot yet be made for the later phases in firms' life-cycle. The share of high-growth firms among active companies with at least 10 employees is 6.5 % in 2015 and thus considerably below the EU average of 9.9 %. This lack of high-growth firms partly explains Austria's stagnating total factor productivity, as company productivity is highly correlated with firm size. Furthermore, start-ups making the transition to become bigger firms create a disproportionately higher number of new jobs. A lack of later-stage financing options (see below) is a key obstacle, while firms also cite the high regulatory and tax burden as well as a lack of skilled labour in certain areas (not least as regards digital skills, see section 3.3) as important barriers to company growth. Several programmes try to target the skills issue, such as "R&D Competences for Industry" through which the Austrian Research Promotion Agency (FFG) funds training for employees of SMEs. The lack of national rules and

⁽³²⁾ Austria's complex and costly procedures for starting limited liability companies are a reason for its relatively low ranking in international scoreboards, such as the World Bank's "Cost of doing business" ranking.

procedures governing transfers of registered company offices can also create regulatory burden.

Despite the high levels of investment in R&D, Austria's share of knowledge-intensive sectors in the economy is still relatively low.

Austria is lagging behind the EU's innovation leaders⁽³³⁾ on the share of knowledge intensive sectors in its economy. This might also explain its comparatively weaker performance in innovation output. In 2016, value added in high-tech knowledge intensive services was 3.5 % of total value added, well below the EU average of 5 % (2014). In high-tech (HT) manufacturing sectors too, at 1.69 % in 2016 Austria only ranks just above the EU average of 1.67 % (2014). Austria's strength still lies in the medium-high-tech (MHT) manufacturing sector (accounting for 6.5 % of total value added in 2016 vs an EU average of 5.7 % in 2014)⁽³⁴⁾. Business enterprise research and development intensity in these sectors is high - the third highest for both, HT and MHT. While the efforts undertaken take time to be reflected in the corresponding structural indicators, maintaining high investment levels is important to increase Austria's share in these sectors and help it catch-up with the innovation leaders.

Austria has not yet managed to create the vibrant "ecosystem" of innovative companies found in comparable Member States.

With only 2.9 % of its employment in fast-growing firms in innovative sectors⁽³⁵⁾ in 2014 (compared with the 4.8 % EU average), Austria's economy lags behind most other EU Member States. This can be partly explained by the structure of its economy and the resilience of existing companies. However, Austria has not yet been able to create an ecosystem for

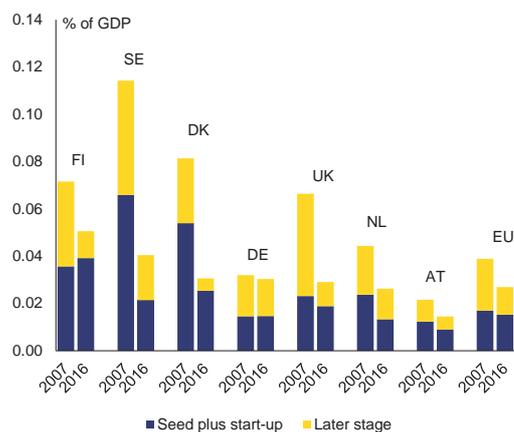
⁽³³⁾ "Innovation leaders" are countries with a performance at least 20 % above the EU average in the European Innovation Scoreboard (EIS). In the 2017 EIS, these are Sweden, Denmark, Finland, the Netherlands, the United Kingdom, and Germany. Austria is closely behind this group with a summary innovation index of 119 % of the EU average.

⁽³⁴⁾ Austria ranks highly in the automotive sector, but also in the transport and tourism sectors. The latter two are not captured here as they are not considered as knowledge-intensive sectors.

⁽³⁵⁾ Number of employees in high-growth enterprises in 50 % most innovative sectors, as a share of total employment for enterprises with 10 or more employees. High growth enterprises are defined as firms with an average annual growth in employees greater than 10 % a year, over a three-year period, and with 10 or more employees at the beginning of the observation period.

highly innovative start-ups that is as vibrant as those of the innovation leaders ⁽³⁶⁾. Finding the right policy mix to both support the innovativeness of its strong MHT manufacturing sector and to create the right incentives for HT manufacturing and HT knowledge-intensive services sectors to flourish is therefore crucial. Recent initiatives to take advantage of Austria's relative strength in specific sectors, include its "Strategy for the future for life sciences and pharmaceuticals in Austria" (2016), "Innovative Vienna 2020" (2015) and the "Global Incubator Network". Several international start-up accelerators and incubators have established themselves in Vienna.

Graph 3.4.2: Venture capital as % of GDP



Source: European Commission

Austria's equity financing culture remains underdeveloped which limits company growth and poses a resilience risk. Austria's firms traditionally rely on bank credit for most of their financing needs. This puts them at risk in the event of a future crisis. Venture capital financing in Austria amounted to 0.014 % of GDP which is lower than the EU average of 0.027 % and also lower than in the five Member States which are innovation leaders (see Graph 3.4.2). Venture capital for later stage funding constituted only 38 % of all venture capital in 2016. The public sector accounts for a high share of venture capital investment. The start-up package of policy measures adopted in 2016 provides financial support and regulatory improvements for start-ups,

⁽³⁶⁾ London, Berlin, Stockholm and Amsterdam are among the world's top 20 start-up ecosystems in 2017 according to the Global Startup Ecosystem Report 2017 (Startup Genome, 2017).

with an overall investment volume of EUR 185 million over three years. This includes a risk capital bonus to seed and pre-seed investments.

Public capital markets and FinTech innovation offer yet unexploited funding opportunities for Austrian firms. Public capital markets can play a pivotal role in helping start-ups and high-growth companies to scale up and expand. High administrative burden caused by regulation, low and even decreasing research on listed SMEs and thus insufficient visibility of listed companies for potential investors form bottlenecks in Austria. This hampers access to capital markets for SMEs and mid-caps. The creation of an ecosystem that fosters equity as well as better financial education would tap sources of investments that so far are underused. The 2015 law on alternative financing created a tailor-made regulatory environment for crowd-funding (see Box 3.5.1). Recent developments in FinTech, such as cryptocurrencies/initial coin offerings and artificial intelligence based applications, could further extend the scope of alternative forms of funding.

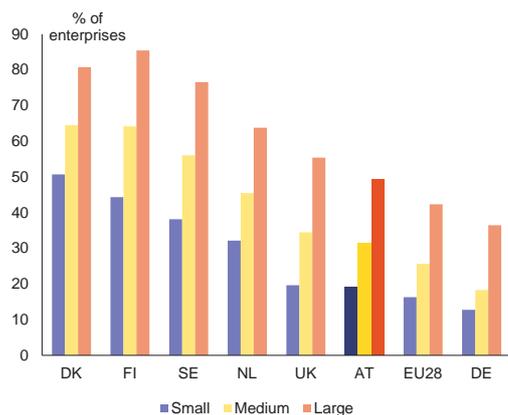
Digital transformation

While larger Austrian companies are well advanced in adopting digital technologies and business models, most small and very small firms are struggling. Overall, Austria is performing well. On average it ranks slightly above other Member States in terms of businesses using digital technology (European Commission 2017d). Austrian businesses are ahead of their European peers in the use of e-invoicing but they have been relatively slow to move to electronic selling, especially SMEs. Both the relatively low number of SMEs selling online (15 %) and the similarly low share of turnover (6 %) show that this sales channel remains underdeveloped⁽³⁷⁾. However, when they sell online, Austrian companies are quick to do business across borders – more than 10 % do so. Cloud computing is another area where Austrian businesses are behind the EU average, despite the advantages that cloud computing offers (such as low upfront investment costs and easy scalability) in particular to (very) small businesses (OECD, 2017). Austria has created the initiative "KMU Digital" to support SME in their digitalization efforts. Austria adopted

⁽³⁷⁾ The Austrian tourism sector is an exception to this rule.

a comprehensive digitalization strategy in January 2017 and has implemented some of the announced actions. Monitoring and benchmarks are missing however.

Graph 3.4.3: Enterprises with high levels of digital intensity by size (2016)



Source: European Commission

Concerns over security and privacy hinder some aspects of digital transformation. Austrian firms and the Austrian public have an overall positive view on digitalization. Furthermore, they do not necessarily face digital security incidents more often than those in other Member States. Cyber crime has however been on the rise recently (31 % from 2015 to 2016). Austria is also among those Member States where businesses and the public have the greatest concerns over security and privacy. Around 52 % of the Austrian public are, for example, bothered that their online activities are being recorded to provide tailored advertising. Slightly more than 20 % of individuals said they would not use cloud computing due to concerns over security and privacy (compared to an EU average of around 13 %). For businesses, the risk of security breaches discouraged more than 40 % of Austrian firms from using cloud computing (far more than in most other OECD countries). Policy initiatives such as "*KMU digital*" therefore also offer advice services to SME regarding privacy and security. The Austrian government plans to adopt an overall digital security strategy, to review its legal rules and to strengthen the digital security institutional framework (BKA, 2017).

Public administration

Austria has one of the lowest publication rates for public procurement contracts advertised at EU level and also ranks low on joint procurement between public authorities. In 2015, the share of public contracts for works, goods and services (including utilities and defence) published by the Austrian tendering authorities under EU procurement legislation was only 2.2 % of GDP. This is a slight reduction of 0.1 pp. from 2014 and is only around half the EU average of 4.16 %. Contract notices from Austrian tendering authorities are not always complete. This was for example the case for the 11 % of notices in 2017 (down from 32 % in 2016) where the contract volume was not indicated. Furthermore, in 2017 Austria used central purchasing bodies on joint procurement among public authorities for only 5 % of tenders. This represented no improvement over the 2011 value and was markedly below the EU average of 8 % (European Commission, 2017e).

Austria scores highly in providing e-government services to businesses and citizens but there is some delay in rolling out e-procurement. Austria continues to improve its offer of digital (online) public services and in particular their mobile accessibility. More than (98 %) of the most-used public services are available online. Austria's aim is to have a one-stop shop platform available and to reduce the need for people and business to actively interact with public authorities or use public services. For instance certain tax claims will be automatically handled for the user. Austria also intends to introduce one nation-wide usable "digital identity" managed by a central system which would give users an overview of which data is available and how and by whom it can be used (BKA, 2017). In contrast to this leadership in general e-government, Austria has not yet adopted the pending legislative proposal that would modernize the e-procurement rules. Individual tendering authorities have begun to introduce e-procurement systems, choosing among a small number of technical solutions with some differences between them. Austrian authorities are aware of the risk that these differences could lead to additional burden for tenderers and are monitoring the situation.

Box 3.4.1: Investment challenges and reforms in Austria

Section 1. Macroeconomic perspective

Investment in Austria (see also Section 1) held up fairly well throughout the financial crisis. Compared to the EU average the decline was less severe and the recovery quicker. Since the end of 2015 investment activity by the corporate sector has picked up. This is partly due to replacement needs, but also it is supported by increased consumption triggered by the 2016 tax reform and a general upswing in the economy. Since 2017, construction investment, including that in housing, grew noticeably. With accelerating economic growth the investment climate has also improved. The availability of bank credit does not act as a macroeconomic constraint on investment but equity funding remains underdeveloped. Strong housing demand in Austria due to continuing migration and a growing population calls for higher public and private investment in dwellings. Available building space, especially in the capital region, as well as the availability of fiscal space might act as limiting factors for increased investment in social housing.

Section 2. Assessment of barriers to investment and ongoing reforms

Public administration/ Business environment	Regulatory/ administrative burden	CSR	Financial Sector / Taxation	Taxation	
	Public administration			Access to finance	
	Public procurement /PPPs		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	CSR
	Competition and regulatory framework			Retail	
Labour market/ Education	EPL & framework for labour contracts			Construction	
	Wages & wage setting			Digital Economy / Telecom	
	Education			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		

Barriers to investment in Austria exist but are relatively modest overall, as the European Commission's assessment confirms (European Commission, 2015c). Some reforms have been adopted in the area of regulated professions and administrative simplification (see Section 3.4). Continued efforts and further reform measures to reduce the tax wedge, improve the business environment and better meet consumption and housing demand will help strengthen overall investment in Austria.

Main barriers to investment and priority actions underway:

1. The overall tax wedge remains high despite the recent tax reform, as a large part consists of social security contributions that remained broadly unchanged. Additionally, without the tax brackets being indexed to inflation, the tax wedge on labour will continue increasing (see Sections 3.1). Reducing the tax wedge on labour and shifting taxation to more growth-friendly sources like property or environmental taxes, can incentivise investment activities.
2. The high degree of regulation of the services sector constitutes a barrier to investment and competition in services but also for manufacturing firms which depend on services inputs. While the 2017 reform of the trade licence act and the reforms to reduce administrative burden bring some improvements, the regulatory level remains high and continues to hinder market entry and business development (see Section 3.4).
3. The start-up environment has improved while scaling-up remains an issue and Austria has not yet established the vibrant ecosystem for innovative enterprises seen in other Member States. Business creation and company growth, notably of innovative firms, are key triggers of investment, job creation and productivity increases (see Section 3.4).

3.5. SECTORAL POLICIES

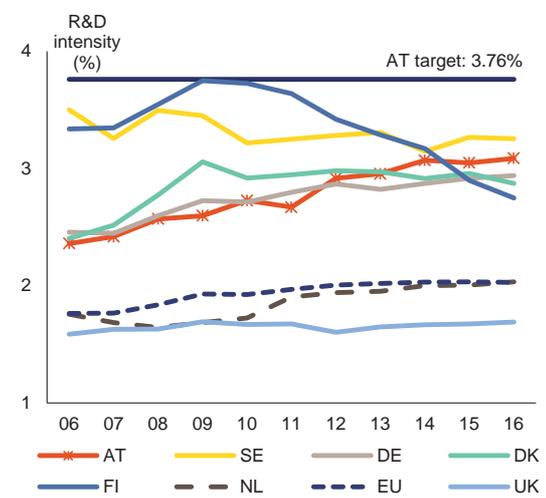
Research and innovation

Austria is a strong innovator, with a solid public commitment to support research and innovation. In 2011, Austria set itself the ambitious goal of becoming an innovation leader in the EU by 2020. It has undertaken considerable efforts in the past decade to improve the performance of its research and innovation system, with a performance increase relative to the EU of 9 % since 2010. (European Commission, 2017f) This makes it the 7th strongest innovator in the EU, right behind the EU's innovation leaders. With an R&D intensity of 3.09 % of GDP in 2016, it ranks second in the EU ⁽³⁸⁾ just behind Sweden (3.25 %). Austria has the goal of raising the private sector contribution to overall R&D spending to two thirds, preferably to 70 %. To achieve this goal, Austria recently increased its indirect support for private R&D by raising the research tax premium from 12 % to 14 % from 1 January 2018. An evaluation of the tax premium conducted in 2017 confirmed its benefits in attracting national and international private investments (BMWFW and BMVIT, 2017). Austria ranks top in the EU with regard to direct and indirect public support for business enterprise R&D (BERD) expenditures, with total public support for BERD at 0.4 % of GDP in 2015. Despite these efforts and the significant performance improvements, Austria will only reach its self-set 2020 R&D intensity target of 3.76 % if R&D intensity grows at a rate of 5.1 % per annum over the period 2016-2020.

Austria has a solid research and science base, but there is room to increase its scientific excellence. Austria's universities rank well below the innovation leaders and other strong innovators in international university rankings ⁽³⁹⁾. The country performs strongly in scientific output, with 11.5 % of the top 10 % most cited scientific publications worldwide and ranking sixth in the EU (EU average of 11.1 % for 2014 values). However, Austria performs less well on the top 1 % most cited publications, an indicator of scientific excellence. In late 2016, the "Research

Billion" initiative was adopted, with the aim of providing EUR 700 million in public funding and EUR 500 million in private funding for research and innovation in 2017-2021. Its implementation will depend on the new government. The "Future of Universities" project was launched in spring 2016 to ensure the strategic development of the Austrian university system. It identifies several areas of action to boost the university system and to prepare the first steps towards capacity-based university funding.

Graph 3.5.1: Austria's R&D intensity in comparison to innovation leaders



(1) Denmark: Break in series between 2007 and the previous years; Netherlands: Breaks in series between 2011 and the previous years and between 2012 and the previous years; United Kingdom: Break in series between 2011 and the previous years.

Source: European Commission

Stronger science-business links would ensure a better translation of Austria's R&D investments into innovation output. Supporting knowledge transfers and science-business cooperation remains important for Austria, as well as promoting an entrepreneurial spirit within and outside the higher education system. Various public initiatives have been launched in the past decades. They include the "Academia plus Business (AplusB) centers", the "Competence Centres for Excellent Technologies (COMET)", the "Christian Doppler Laboratories" as well as the "FFG Bridge programme". More recent initiatives include Spin-off Fellowships (September 2017) to support university spin-offs and the 2017 intellectual property strategy, which aims at supporting the translation of scientific output into innovation.

⁽³⁸⁾ When the data is adjusted for the structural composition of countries, Austria ranks highest in the EU according to the OECD Science, Technology and Industry Scoreboard 2017.

⁽³⁹⁾ No Austrian university is listed within the top 150 in the Academic Ranking of World Universities 2017 (Shanghai ranking) or within the World University Ranking (Times Higher Education).

However, it remains a challenge to convert the current strengths of Austria's public science base into solutions that tackle the current needs of Austrian businesses. Austria is aiming at addressing these issues in the future post-2020 RTI strategy (BKA, 2017).

Since 2011, Austria has tabled a multitude of initiatives and programmes and has started to evaluate their overall effectiveness. Austria adopted its national strategy for research, technological development and innovation in 2011 ('*Der Weg zum Innovation Leader*'). Since then, 90 % of the measures formulated have been or are in the process of being realised. Recent measures are the "Open Innovation Strategy" (2016), the "Intellectual Property-Strategy" (2017), and the "Creative Industries Strategy for Austria" (2016) and the "Life Science Strategy" (2016). In recent years, a clear evaluation culture has been established. Evaluations were performed, for example, on the AplusB centers, the research tax premium, the *Austria Wirtschaftsservice* and the *Forschungsförderungsgesellschaft*. Nonetheless, ex-post evaluation in Austria can be difficult because data availability from different sources is restricted or data cannot be linked due to privacy issues (BMWF and BMVIT, 2017). Finally, Austria has commissioned the OECD to perform a review of its innovation system which will be used to develop the post-2020 Research, Technology and Innovation (RTI) strategy. The results of the review are expected in end-2018 (ibid.).

Network industries and infrastructure

Austria continues to have problems in ensuring next-generation broadband coverage in rural areas, in particular for public institutions such as schools. In 2017, 90 % of all Austrian households were covered by a high-speed broadband (next-generation access) network, which is above the EU average. While Austria increased the coverage of high-speed broadband in rural areas to 45 % in 2017, a 'digital divide' between urban and rural areas remains, in particular as regards connections for public institutions such as schools. To this end, Austria in 2017 continued to implement the *Breitband Austria 2020*, a funding scheme financed by

spectrum revenues (*Breitbandmilliarde*). There are also regional-level initiatives to roll out high-speed infrastructure, for instance in Lower Austria. By 2025, Austria's ambitious aim is to have nationwide coverage of gigabit connections and a nation-rolling-out of mobile 5G infrastructure. This may be financed by revenues from further spectrum auctions (starting in 2018 for 5G).

Energy, climate change and environment

Austria is on track to meet only one of the three Europe 2020 targets on energy and climate change. Austria is well on track towards its 2020 target on renewable energy. It is also implementing measures under the Energy Efficiency Law to achieve the 2020 energy efficiency target but has recently shown growing final and primary energy consumption. Furthermore, according to its own projections, Austria will fall 2 percentage points short of meeting its 2020 emission reduction target for greenhouse gases in the sectors not covered by the EU Emission Trading System. Transport is the sector with the highest emissions in Austria and transport emissions are not decreasing.

Swift implementation of planned projects and active regional cooperation remain crucial as regards Austria's electricity and gas networks. Progress on the high-tension 380-kV ring in Austria, a crucial project with significant benefits on neighbouring countries, depends on the legal review of its environmental impact assessment. The implementation of increased cross-border capacities in particular with Germany, Italy and Switzerland is on track. The current national arrangements for managing congestion and defining bidding-zones in central Europe do not necessarily reflect actual congestion accurately. This is leading to increasing limitations on cross-border flows of electricity. While the bilateral agreement between Germany and Austria on an interim solution for this problem is a positive step, further discussions with neighbouring countries are needed for the agreement to be implemented. Concerning gas infrastructure, Austria's role as an important transit country requires it to maintain a regional approach to network planning and increased efforts to establish market-based solutions to infrastructure usage.

Box 3.5.1: Policy highlights - Framework for crowd-funding and collaborative economy

Crowdfunding and the provision of collaborative economy services are two activities that are small but rapidly growing in Austria. The volume of funds raised through crowdfunding tools is growing exponentially. Austrian citizens are also both offering and consuming an increasing amount of services intermediated by online platforms, in particular in some sectors such as short-term accommodation. Austria's authorities on the federal, regional and local level have reacted by adapting the applicable policy framework. Two initiatives have in particular established a good balance between supporting new business models and ensuring compliance with existing legal obligations or protecting users such as small investors.

The **2015 Law on Alternative Funding** has created a tailor made regulatory environment for crowd-funding projects. It covers both direct calls of an issuer as well as those offered by internet platforms. It foresees a number of obligations of the issuer in terms of information (such as thresholds, scope, periodicity and route of information obligation), the auditing duty, and regulations for internet platforms (information obligation, validation of issuer information, privacy) and several regulations to prevent abuse. With these rules to protect small scale investors, it has created trust in crowd-funding with citizens who are otherwise not active participants in capital markets. In terms of project volumes, the rules apply to projects of up to EUR 1.5 million. For projects above this threshold (but below EUR 5 million) the law foresees the obligation to issue a simplified prospectus. The tailored regulatory environment has been well received by the market, resulting in a 160 % volume increase in crowd-funding even in the first full year of its application.

A new **law on the promotion of tourism in Vienna** is applicable since August 2017. It is based on an evaluation of developments in collaborative short-term accommodation services in the city. Based on statistical evidence, Viennese authorities did not identify a need to impose additional regulatory restrictions on citizens renting out their homes short-term. Instead, the city chose an enabling approach and introduced new legislation to improve the compliance of accommodation providers with already existing tourist tax (*Ortsaxe*) obligations. The responsibility of enforcing tax rules remains with the public authorities, but the new law requires collaborative platforms intermediating short-term accommodation services to inform tax authorities of the identity of providers of such services and the addresses of rented properties. Vienna's new law limits itself to data that platforms already have at their disposal. Thus, such regime can be considered to establish a balanced framework where it does not impose additional monitoring obligations and remains within EU data protection rules. Alternatively, the law allows collaborative platforms to conclude voluntary agreements with the City of Vienna, allowing the collaborative platform to calculate, withhold and remit the applicable tourist tax to authorities, thereby reducing administrative burden and facilitating tax compliance.

The evaluation of collaborative short-term accommodation services and their development allowed the Viennese authorities to adopt a targeted regulatory measure addressing a specific policy objective (ensuring tax compliance) while seeking to minimise regulatory and administrative burden.

Austria's eco-innovation performance is good and stable but constrained by limited resources and the lack of an overall strategy.

Environmental technology sectors are a particularly dynamic part of the Austrian economy and contribute to export-oriented growth. They have also performed significantly more strongly than the overall economy since the financial crisis. The main drivers of eco-innovation in Austria are high environmental standards, well-functioning environmental protection laws and various environment-related financial incentives offered by the state. Austria also improved its ranking within the Eco-Innovation Scoreboard and is now the eighth best performing Member State. This puts it

slightly above the EU average, within the group of the so called average eco-innovation performers. The main barriers to further improvements of its eco-innovation are the limited financial and human resources into research and development (R&D) activities and the low integration of various activities and policy measures across governmental institutions into a coordinated eco-innovation policy. In fact, Austria has not yet established an overarching policy programme for eco-innovation or the circular economy.

ANNEX A: OVERVIEW TABLE

Commitments	Summary assessment ⁽⁴⁰⁾
2017 country-specific recommendations (CSRs)	
<p>CSR 1: Pursue its fiscal policy in line with the requirements of the preventive arm of the Stability and Growth Pact, which entails achieving its medium-term budgetary objective in 2018, taking into account the allowance linked to unusual events. Ensure the sustainability of the healthcare system and of the pension system. Rationalise and streamline competencies across the various layers of government and align their financing and spending responsibilities.</p> <ul style="list-style-type: none"> • Pursue its fiscal policy in line with the requirements of the preventive arm of the Stability and Growth Pact, which entails achieving its medium-term budgetary objective in 2018, taking into account the allowance linked to unusual events. 	<p>Austria has made limited progress in addressing CSR 1.</p> <p>This overall assessment of CSR 1 does not include an assessment of compliance with the Stability and Growth Pact.:</p> <ul style="list-style-type: none"> • The compliance assessment with the Stability and Growth Pact will be included in spring when final data for 2017 will be available.

⁽⁴⁰⁾ 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.

<ul style="list-style-type: none"> • Ensure the sustainability of the healthcare system and of the pension system. • Rationalise and streamline competencies across the various layers of government and align their financing and spending responsibilities. 	<ul style="list-style-type: none"> • Some progress in improving the sustainability of the healthcare sector, including by improving public procurement practices. The reform of primary healthcare services is progressing. The reform is expected to help shifting services away from the hospital sector, thus containing expenditure in the medium term. • No progress on ensuring the financial sustainability of the pension system. No new measures taken so far. However, due to the proper implementation of previous measures aimed at encouraging later retirement, the effective retirement age is increasing. • Limited progress on reforming fiscal relations between the various layers of government. The Parliament ratified the increased autonomy for federal states to set the contribution rate for the housing subsidy. Although this is a step towards increased tax autonomy at the subnational level, the amount of additional revenues potentially raised by this subsidy is small compared to the spending powers of federal states. The pact for the 2017 Financial Equalisation Law contained several more ambitious initiatives that still need to be implemented.
<p>CSR 2: Improve labour market outcomes for women through, inter alia, the provision of full-time care services. Improve the educational achievements of disadvantaged young people, in particular those from a migrant background. Foster investment in the services sector by reducing administrative and regulatory barriers, easing market entry and facilitating company growth.</p>	<p>Austria has made some progress in addressing CSR 2:</p>

<ul style="list-style-type: none"> • Improve labour market outcomes for women • through, inter alia, the provision of full-time care services. 	<ul style="list-style-type: none"> • Some progress in improving labour market outcomes for women but there is still a high proportion of women in part-time work, and a high gender pay gap. • Limited progress in improving child care services. Despite increasing child care provision Austria is still below the Barcelona criteria for the age under 3 years old. In addition there are considerable regional differences in child care provision and the quality of the child care provision does not allow parents to work longer due to opening hours of child care facilities.
<ul style="list-style-type: none"> • Improve the educational achievements of disadvantaged young people, in particular those from a migrant background. • Foster investment in the services sector by reducing administrative and regulatory barriers, easing market entry and facilitating company growth. 	<p>Limited progress in improving the educational achievements of disadvantaged young people, in particular those from a migrant background</p> <ul style="list-style-type: none"> • Some progress. Austria adopted a revision of the Trade Licence Act (<i>Gewerbeordnung</i>) in July 2017. The revision removes access barriers for 19 trades (<i>Teilgewerbe</i>), abolishes the initial registration fee and increases the scope for performing side activities without an additional licence (15-30 % instead of around 10 % currently). However, the high number of regulated trades (<i>reglementierte Gewerbe</i>) remains largely unchanged (two trades were liberalised). The law still requires separate licence entries for each additional trade exercised beyond the <i>Nebenrechte</i> described in Section 3.4 above. Austria has also simplified the procedure for authorising installations on business premises (<i>Betriebsanlagen</i>). Low-risk installations will benefit from a simplified procedure, deadlines for granting authorisations will be shortened and publication requirements will be reduced. A one-stop shop has been introduced for federal-level permits but the plan to also integrate federal state-level permits was not adopted. For other restrictions on access to and exercise of regulated professions only relatively minor changes have been implemented. This included a reform of the law on economic

	trustees (<i>Wirtschaftstreuhandberufsgesetz</i>), where education requirements were simplified.
Europe 2020 (national targets and progress)	
Employment rate target: 77-78 %	The labour market performance is improving and Austria's employment rate has reached 75.3 % in Q3 of 2017, thus reaching the Europe 2020 target. Given the current trend in the Austrian employment rate, the country is on track to meet the national target of 77-78 % by 2020.
R&D target: 3.76 % of GDP	R&D intensity reached 3.09% of GDP in 2016. It is expected to reach 3.14% of GDP in 2017, according to estimates from Statistics Austria (April 2017). Austria is also among the EU countries with the strongest increase in R&D intensity since 2000. This resulted from increases in both business and public R&D expenditure (though progress has slowed in recent years especially for public expenditure). However, without additional efforts and faster progress, the ambitious 3.76 % target for 2020 will not be reached.
National greenhouse gas (GHG) emissions target: -16 % in 2020 compared with 2005 (in sectors not included in the EU emissions trading system)	According to the latest national projections submitted to the Commission, and taking into account existing measures, Austria is expected to reduce its emissions by 14% compared to 2005. Consequently, Austria will fall short of its target by 2 pps. Non-ETS emissions in 2016: a reduction of 12 % compared to 2005. Austria achieved its interim target of 10 % reduction for 2016.
2020 renewable energy target: 34 %	Austria is well on track, and close (2016 Eurostat-SHARES official data: 33.5 %) to attaining its renewable energy target for 2020.
Energy efficiency target:	Effective and continuous implementation of the Energy Efficiency Law (adopted in July

Austria's 2020 energy efficiency target is 31.5 Mtoe expressed in primary energy consumption (25.1 Mtoe expressed in final energy consumption)	<p>2014 to transpose the Energy Efficiency Directive) remains key for decreasing primary and final energy consumption in view of reaching the 2020 targets.</p> <p>Primary energy consumption in 2016: 31.84 Mtoe.</p> <p>Final energy consumption in 2016: 28.13 Mtoe.</p>
Early school/training leaving target: 9.5 %	ESL is at 6.9% both below the national target of 9.5% and the EU target. While the rate fell also for foreign-born students they are still twice as likely to leave school early.
Tertiary education target: 38 % of population aged 30-34	Tertiary education attainment has at 40.1% surpassed the EU average and the national target.
Risk of poverty or social exclusion target: -235 000	In the baseline year 2008, the number of people at risk of poverty and social exclusion was 1 699 000. The respective number for 2015 was 1 542 000, i.e. 157 000 less, requiring additional efforts to meet the target.

ANNEX B: MACROECONOMIC IMBALANCE PROCEDURE SCOREBOARD

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

			Thresholds	2011	2012	2013	2014	2015	2016
External imbalances and competitiveness	Current account balance, % of GDP	3 year average	-4%/6%	2.4	2.0	1.7	2.0	2.1	2.2
	Net international investment position	% of GDP	-35%	-1.9	-3.2	1.3	3.4	2.5	5.6
	Real effective exchange rate - 42 trading partners, HICP deflator	3 year % change	±5% (EA) ±11% (Non-EA)	-1.8	-4.7	0.7	1.9	1.5	1.0
	Export market share - % of world exports	5 year % change	-6%	-12.3	-21.4	-18.1	-15.4	-9.0	-4.0
	Nominal unit labour cost index (2010=100)	3 year % change	9% (EA) 12% (Non-EA)	5.8	3.8	6.4	7.8	6.2	5.8
Internal imbalances	House price index (2015=100), deflated	1 year % change	6%	2.9	4.9	3.0	1.4	3.4	7.2
	Private sector credit flow, consolidated	% of GDP	14%	3.0	1.2	1.0	0.9	2.3	3.2
	Private sector debt, consolidated	% of GDP	133%	129.4	128.2	127.1	124.9	123.9	124.0
	General government gross debt	% of GDP	60%	82.2	81.7	81.0	83.8	84.3	83.6
	Unemployment rate	3 year average	10%	4.9	4.8	5.0	5.3	5.6	5.8
	Total financial sector liabilities, non-consolidated	1 year % change	16.5%	1.5	0.4	-3.2	-0.8	-0.1	-2.4
Employment indicators	Activity rate - % of total population aged 15-64	3 year change in pp	-0.2 pp	0.7	0.8	1.1	0.8	0.4	0.7
	Long-term unemployment rate - % of active population aged 15-74	3 year change in pp	0.5 pp	0.2	0.0	0.1	0.3	0.5	0.6
	Youth unemployment rate - % of active population aged 15-24	3 year change in pp	2 pp	0.4	-1.3	0.2	1.4	1.2	1.5

1) This table provides data as published under the Alert Mechanism Report 2018, which reports data as of 24 Oct 2017. Please note that figures reported in this table may therefore differ from more recent data elsewhere in this document. .

2) Figures highlighted are those falling outside the threshold established in the European Commission's Alert Mechanism Report.

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

ANNEX C: STANDARD TABLES

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

	2012	2013	2014	2015	2016	2017
Total assets of the banking sector (% of GDP) ⁽¹⁾	305.9	282.1	263.0	248.0	238.8	224.8
Share of assets of the five largest banks (% of total assets)	36.5	36.7	36.8	35.8	34.5	-
Foreign ownership of banking system (% of total assets) ⁽²⁾	27.2	27.6	30.4	31.9	23.9	23.2
Financial soundness indicators: ⁽²⁾						
- non-performing loans (% of total loans) ⁽³⁾	4.3	4.2	6.2	5.5	4.2	3.5
- capital adequacy ratio (%)	14.2	15.4	15.6	16.2	18.2	18.5
- return on equity (%) ⁽⁴⁾	4.1	-0.7	1.1	7.6	7.1	4.6
Bank loans to the private sector (year-on-year % change) ⁽¹⁾	0.8	-1.0	0.5	0.6	2.2	3.4
Lending for house purchase (year-on-year % change) ⁽¹⁾	2.6	2.2	3.0	4.3	4.4	4.2
Loan to deposit ratio ⁽¹⁾	107.4	103.4	100.5	99.6	95.9	96.6
Central Bank liquidity as % of liabilities	-	-	1.8	2.1	1.8	3.1
Private debt (% of GDP)	128.2	127.1	124.9	123.9	124.0	-
Gross external debt (% of GDP) ⁽²⁾ - public	60.9	66.4	74.1	69.1	66.5	60.4
- private	39.8	33.0	34.8	36.4	38.0	36.3
Long-term interest rate spread versus Bund (basis points)*	87.8	44.0	32.4	25.0	28.7	27.1
Credit default swap spreads for sovereign securities (5-year)*	78.9	19.8	20.1	16.4	18.0	11.6

(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

* 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)	7.8	7.5	7.0	7.3	6.9	:
Gender employment gap (pps)	9.7	9.1	8.2	8.2	7.8	7.8
Income inequality, measured as quintile share ratio (S80/S20)	4.2	4.1	4.1	4.0	4.1	:
At-risk-of-poverty or social exclusion rate ¹ (AROPE)	18.5	18.8	19.2	18.3	18.0	:
Young people neither in employment nor in education and training (% of population aged 15-24)	6.8	7.3	7.7	7.5	7.7	:
Dynamic labour markets and fair working conditions[†]						
Employment rate (20-64 years)	74.4	74.6	74.2	74.3	74.8	75.3
Unemployment rate ² (15-74 years)	4.9	5.4	5.6	5.7	6.0	5.5
Gross disposable income of households in real terms per capita ³ (Index 2008=100)	:	:	95.9	95.4	96.6	:
Public support / Social protection and inclusion						
Impact of social transfers (excluding pensions) on poverty reduction ⁴	44.2	44.4	44.5	45.7	46.4	:
Children aged less than 3 years in formal childcare	14.0	17.0	16.0	22.3	20.6	:
Self-reported unmet need for medical care	0.3	0.4	0.1	0.1	0.2	:
Individuals who have basic or above basic overall digital skills (% of population aged 16-74)	:	:	:	64.0	65.0	67.0

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

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

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

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

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

(5) Average of first three quarters of 2017 for the employment rate and gender employment gap..

Source: Eurostat.

Table C.3: Labour market and education indicators

Labour market indicators	2012	2013	2014	2015	2016	2017 ⁵
Activity rate (15-64)	75.1	75.5	75.4	75.5	76.2	:
Employment in current job by duration						
<i>From 0 to 11 months</i>	14.0	13.9	13.4	14.0	14.3	:
<i>From 12 to 23 months</i>	9.5	9.4	9.3	9.0	9.5	:
<i>From 24 to 59 months</i>	16.2	16.3	16.6	16.9	16.6	:
<i>60 months or over</i>	60.3	60.4	60.7	60.1	59.6	:
Employment growth*						
(% change from previous year)	1.0	0.3	1.0	0.6	1.2	1.7
Employment rate of women						
(% of female population aged 20-64)	69.6	70.0	70.1	70.2	70.9	71.4
Employment rate of men						
(% of male population aged 20-64)	79.3	79.1	78.3	78.4	78.7	79.2
Employment rate of older workers*						
(% of population aged 55-64)	41.6	43.8	45.1	46.3	49.2	50.8
Part-time employment*						
(% of total employment, aged 15-64)	25.2	26.0	26.9	27.3	27.8	27.9
Fixed-term employment*						
(% of employees with a fixed term contract, aged 15-64)	9.3	9.2	9.2	9.1	9.0	9.3
Transition rate from temporary to permanent employment (3-year average)	44.5	45.8	47.9	45.9	:	:
Long-term unemployment rate ¹ (% of labour force)	1.2	1.3	1.5	1.7	1.9	1.9
Youth unemployment rate						
(% active population aged 15-24)	9.4	9.7	10.3	10.6	11.2	9.7
Gender gap in part-time employment	36.6	36.1	36.7	37.0	36.6	36.6
Gender pay gap ² (in undadjusted form)	22.9	22.3	22.2	21.7	:	:
Education and training indicators	2012	2013	2014	2015	2016	2017
Adult participation in learning (% of people aged 25-64 participating in education and training)	14.2	14.1	14.3	14.4	14.9	:
Underachievement in education ³	18.7	:	:	21.8	:	:
Tertiary educational attainment (% of population aged 30-34 having successfully completed tertiary education)	26.1	27.1	40.0	38.7	40.1	:
Variation in performance explained by students' socio-economic status ⁴	15.8	:	:	15.9	:	:

* 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, unless for the youth unemployment rate (annual figure).

Source: Eurostat, OECD.

Table C.4: Social inclusion and health indicators

	2012	2013	2014	2015	2016	2017
Expenditure on social protection benefits* (% of GDP)						
<i>Sickness/healthcare</i>	7.3	7.3	7.3	7.4	:	:
<i>Disability</i>	2.1	2.1	2.0	1.9	:	:
<i>Old age and survivors</i>	14.2	14.5	14.7	14.6	:	:
<i>Family/children</i>	2.8	2.8	2.7	2.8	:	:
<i>Unemployment</i>	1.5	1.6	1.6	1.6	:	:
<i>Housing</i>	0.1	0.1	0.1	0.1	:	:
<i>Social exclusion n.e.c.</i>	0.4	0.4	0.5	0.5	:	:
Total	28.4	28.8	29.0	29.0	:	:
<i>of which: means-tested benefits</i>	2.3	2.4	2.5	2.6	:	:
General government expenditure by function (% of GDP, COFOG)						
<i>Social protection</i>	20.9	21.3	21.5	21.4	21.6	:
<i>Health</i>	7.7	7.8	7.8	7.9	8.0	:
<i>Education</i>	5.0	5.0	4.9	4.9	4.9	:
Out-of-pocket expenditure on healthcare (% of total health expenditure)	17.8	18.2	18.1	17.9	:	:
Children at risk of poverty or social exclusion (% of people aged 0-17)*	20.9	22.9	23.3	22.3	20.0	:
At-risk-of-poverty rate ¹ (% of total population)	14.4	14.4	14.1	13.9	14.1	:
In-work at-risk-of-poverty rate (% of persons employed)	8.1	7.9	7.2	7.9	8.3	:
Severe material deprivation rate ² (% of total population)	4.0	4.2	4.0	3.6	3.0	:
Severe housing deprivation rate ³ , by tenure status						
<i>Owner, with mortgage or loan</i>	1.0	1.4	1.2	0.7	0.6	:
<i>Tenant, rent at market price</i>	9.4	9.5	10.0	10.0	9.3	:
Proportion of people living in low work intensity households ⁴ (% of people aged 0-59)	7.7	7.8	9.1	8.2	8.1	:
Poverty thresholds, expressed in national currency at constant prices*	11730	11576	11920	11774	11898	:
Healthy life years (at the age of 65)						
<i>Females</i>	9.5	8.8	7.7	7.7	:	:
<i>Males</i>	8.9	8.9	8.4	7.9	:	:
Aggregate replacement ratio for pensions ⁵ (at the age of 65)	0.6	0.6	0.6	0.6	0.6	:
Connectivity dimension of the Digital Economy and Society Index (DESI) ⁶	:	:	50.8	57.9	61.4	63.5
GINI coefficient before taxes and transfers*	49.7	49.5	49.9	49.8	49.9	:
GINI coefficient after taxes and transfers*	27.6	27.0	27.6	27.2	27.2	:

* 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	5.38	3.90	1.37	1.68	1.56	0.41	0.91
Labour productivity in construction	-4.59	-1.96	-1.34	0.70	-2.03	-1.09	-1.12
Labour productivity in market services	0.74	1.45	-0.45	-0.26	0.97	3.25	-1.28
Unit labour costs (ULC) (whole economy, year-on-year % change)							
ULC in industry	-5.12	-0.24	3.43	1.30	1.06	1.54	2.28
ULC in construction	4.84	4.15	4.50	3.39	6.12	3.99	2.90
ULC in market services	0.80	1.11	4.06	4.07	1.79	0.95	2.70
Business environment	2010	2011	2012	2013	2014	2015	2016
Time needed to enforce contracts ⁽¹⁾ (days)	397.0	397.0	397.0	397.0	397.0	397.0	397.0
Time needed to start a business ⁽¹⁾ (days)	25.0	25.0	25.0	25.0	22.0	22.0	21.0
Outcome of applications by SMEs for bank loans ⁽²⁾	0.23	0.24	0.23	0.35	0.41	0.49	0.31
Research and innovation	2010	2011	2012	2013	2014	2015	2016
R&D intensity	2.73	2.67	2.91	2.95	3.07	3.05	3.09
General government expenditure on education as % of GDP	5.10	5.00	5.00	5.00	4.90	4.90	4.90
Persons with tertiary education and/or employed in science and technology as % of total employment	37	38	39	41	46	47	48
Population having completed tertiary education ⁽³⁾	16	16	17	18	27	28	29
Young people with upper secondary level education ⁽⁴⁾	86	85	86	87	90	89	90
Trade balance of high technology products as % of GDP	-0.10	-0.03	0.13	0.19	0.50	0.09	na
Product and service markets and competition					2003	2008	2013
OECD product market regulation (PMR) ⁽⁵⁾ , overall					1.61	1.37	1.19
OECD PMR ⁽⁵⁾ , retail					3.50	3.30	2.40
OECD PMR ⁽⁵⁾ , professional services					3.21	3.08	2.71
OECD PMR ⁽⁵⁾ , network industries ⁽⁶⁾					2.47	1.84	1.55

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

<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 scored 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 if the outcome is not known.

(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 at: <http://www.oecd.org/competition/reform/indicatorsofproductmarketregulationhomepage.htm>

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

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 / €	0.11	0.11	0.11	0.11	0.11	0.11
Carbon intensity	kg / €	0.27	0.26	0.26	0.25	0.25	-
Resource intensity (reciprocal of resource productivity)	kg / €	0.63	0.62	0.60	0.60	0.58	0.59
Waste intensity	kg / €	-	0.16	-	0.18	-	-
Energy balance of trade	% GDP	-3.7	-3.9	-3.5	-3.0	-2.3	-
Weighting of energy in HICP	%	8.89	9.09	9.41	9.75	8.86	8.42
Difference between energy price change and inflation	%	2.2	1.1	-0.1	-1.8	-3.0	-2.8
Real unit of energy cost	% of value added	13.7	14.1	13.7	12.6	-	-
Ratio of environmental taxes to labour taxes	ratio	0.10	0.10	0.10	0.10	0.10	-
Environmental taxes	% GDP	2.4	2.4	2.4	2.4	2.4	2.4
Sectoral							
Industry energy intensity	kgoe / €	0.15	0.15	0.15	0.14	0.14	0.14
Real unit energy cost for manufacturing industry excl. refining	% of value added	14.1	13.7	13.1	12.7	-	-
Share of energy-intensive industries in the economy	% GDP	10.94	10.84	11.10	11.17	11.16	11.07
Electricity prices for medium-sized industrial users	€/ kWh	0.11	0.11	0.11	0.11	0.10	0.10
Gas prices for medium-sized industrial users	€/ kWh	0.04	0.04	0.04	0.04	0.04	0.03
Public R&D for energy	% GDP	0.01	0.01	0.02	0.02	0.03	0.02
Public R&D for environmental protection	% GDP	0.02	0.02	0.02	0.01	0.01	0.01
Municipal waste recycling rate	%	56.7	57.7	57.7	56.3	56.9	57.6
Share of GHG emissions covered by ETS*	%	39.3	37.8	37.3	36.8	37.4	36.6
Transport energy intensity	kgoe / €	0.57	0.57	0.59	0.58	0.59	0.60
Transport carbon intensity	kg / €	1.46	1.45	1.53	1.47	1.49	-
Security of energy supply							
Energy import dependency	%	70.3	64.4	61.3	65.8	60.5	62.4
Aggregated supplier concentration index	HHI	34.6	40.5	25.2	36.3	23.2	-
Diversification of energy mix	HHI	0.26	0.27	0.27	0.27	0.27	0.27

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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