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Country Report Denmark 2019

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

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

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CONTENTS

LIST OF TABLES

LIST OF GRAPHS

LIST OF BOXES

EXECUTIVE SUMMARY

The favourable economic environment has helped reduce the current account surplus and brought down the level of household debt, but challenges remain. Labour market and pension reforms have helped bring the number of people in employment to historically high levels. However, companies are increasingly reporting shortages of skilled workers, and the government is falling behind on its 2025 targets to boost productivity growth and the supply of labour. Although high on the government's reform agenda, productivity growth has been particularly weak in domestically oriented services sectors. Savings surpluses have arisen in Denmark, and are reflected in its still sizeable current account surpluses. This has increased the value of households' housing and pension assets. The value of these assets remains higher than household debt, and policy measures have strengthened households' resilience to economic shocks. However, the high level of household debt, combined with overvalued housing prices, make households vulnerable to sudden changes in interest rates or the economy. ([1])

Economic growth has been solid, averaging 1.9 % since 2014. Robust consumer spending and a rebound in investment have been the main drivers of growth. The labour force has increased considerably, supporting the prolonged economic upswing. In 2017, the employment rate climbed to 76.9 %, surpassing the long-term average, while the unemployment rate declined to 5.7 %. Consumer price inflation has been modest, and weaker than in the euro area. This is due to taxation changes, the decline in food prices and the more muted impact of rising oil prices on Danish consumer prices.

Investment has risen strongly since reaching its trough in 2010. The main drivers of its growth have been investment in construction and equipment, which were also the two areas that contracted the most following the 2008 crisis. Investment by the public sector remains high, although its share of GDP declined from a peak of 3.9 % in 2014 to 3.4 % in 2017.

The current account surplus has continued to decline, falling to an estimated 6.1 % of GDP in 2018. The current account surplus is on a downward trend due to a pick-up in imports thanks to strong domestic demand. The net international investment position remained high, meaning that Denmark's overseas financial investment continues to be worth more than its overseas liabilities. Income from the investment abroad, combined with Danish companies' sales and production abroad, continue to provide significant support to the current account balance, amounting to around 7 % of GDP in 2018.

Economic growth is forecast to gradually slow down towards its potential growth rate of 1½ %. Consumer spending is projected to remain the main driver of economic growth, while the contribution of the remaining GDP components is projected to slowly weaken. Employment is set to increase further, but companies continue to report labour shortages, particularly for skilled workers. Wages are forecast to grow faster than productivity, putting pressure on competitiveness.

Public finances are expected to be broadly balanced in 2018 and 2019, and to show a slightly larger surplus in 2020. The general government balance is expected to have shown a slight surplus of 0.2 % of GDP in 2018. This is despite the reform of the voluntary early retirement scheme, which resulted in a reimbursement of 0.2 % of GDP to households in the beginning of the year. According to the European Commission 2018 autumn forecast, the small surplus in 2018 is projected to give way to a slight deficit of 0.1 % of GDP in 2019, primarily due to an expected one-off repayment of 0.7 % of GDP in excessively collected property taxes. The balance is therefore projected to return to positive territory in 2020 with an estimated surplus of 0.6 % of GDP.

Investment needs are emerging for skilled workers, research and development, and transport infrastructure. Investment as a share of GDP has risen above the euro area average, and Denmark has an investment-friendly business environment. Still, some factors are weighing on

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

capital holding back investment. Investment in research and innovation is concentrated in a number of larger companies. This suggests it is important to broaden the innovation base to include more companies and to ensure innovation diffusion. Despite educational spending as a share of GDP that is among the highest in the EU, increasing shortages of skilled workers are holding back investment in Denmark. Prioritising investments in areas such as vocational education and training, and adult and lifelong learning, is key to sustaining labour supply. Congestion is projected to increase around the larger cities, and there is a need to decarbonise the transport sector and reduce air pollution. Annex D identifies key priorities for support by the European Regional Development Fund and the European Social Fund Plus over 2021-2027 in Denmark, building on the analysis of investment needs and challenges outlined in this report.

Overall, Denmark has made some progress in addressing the 2018 country-specific recommendations.

There has been some progress in the following area:

- Denmark has implemented measures to enhance competition in the financial sector. It has also continued to implement the utilities strategy, where political agreements on measures in the water and sewage water sector were reached in October 2018.

Regarding progress in reaching the national targets under the Europe 2020 strategy, Denmark has made - or is making - good progress. This is the case for its targets on employment, research and development, greenhouse gas emissions, renewable energy, early school leaving, tertiary education and energy efficiency. However, Denmark is not likely to achieve its target of reducing the number of people at risk of poverty or social exclusion.

Denmark performs well on the indicators of the Social Scoreboard supporting the European Pillar of Social Rights. Despite a slight decline from 2016 to 2017, the employment rate remains relatively high and the long-term unemployment rate is among the lowest in the EU. Social security benefits have a relatively high impact on poverty reduction, reflecting the advanced social protection schemes, a well-developed welfare system and a strong social dialogue. The share of early leavers from education and training increased between 2016 and 2017, but remains below the EU average.

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

- **Although housing price inflation is gradually slowing down, property prices remain overvalued.** While housing price increases have so far been driven by the main urban areas, these increases are gradually spreading to the remaining parts of the country. Strong residential construction activity, a new property taxation system, and macroprudential measures should reduce housing price inflation.

- **While the decline in household debt lost momentum in 2018, measures to bolster households' resilience are being stepped up.** Following several years of debt reduction by households, this process may have come to a temporary halt in 2018. The debt level remains above what is warranted by economic fundamentals and represents a risk to financial stability. Danish households are among those in the EU that spend the most on servicing their debt. The share of variable-interest-rate and interest-only loans in the overall mortgage stock remain high. As a result, Danish households are vulnerable to sudden changes in interest rates and incomes. Although macroprudential measures to limit risky loan taking have been implemented, it will take time for the positive effects to be visible in the overall mortgage stock and for the measures to effectively reduce overall risks.

- **Employment growth has been solid, but challenges persist.** Employment has grown to record-high levels, supported by pension and labour market reforms. While these reforms will continue to support an expansion of the labour force in the coming years, companies continue to report increasing shortages of skilled workers. A number of recent labour market and education reforms seek to address this issue. However, it is still key to reduce the dropout rates of students and incentivise them to choose vocational education and training. Another challenge is to increase the employability of vulnerable groups, such as those with a migrant background, young people and people with disabilities who are less able to work.

- **Supporting investment is key to reversing declining productivity growth.** Productivity growth has been falling for decades. Although productivity growth is strong for companies exposed to international competition, it remains sluggish for domestically oriented services. Increasing productivity growth is essential to ensure future economic prosperity.

- **The current account surplus remains high and has led to sizeable net foreign assets.** High private savings, rather than depressed investment, have supported the current account surplus. Although it has declined since its peak of 8.7 % of GDP in 2014, the current account surplus is expected to have remained above the 6 % macroeconomic-imbalance-procedure threshold in 2018. Companies are now saving less and investing more. This is consistent with the closing of the negative output gap. Households have increased their savings, reflecting their efforts to reduce debt and policy measures to increase the resilience of households and banks.

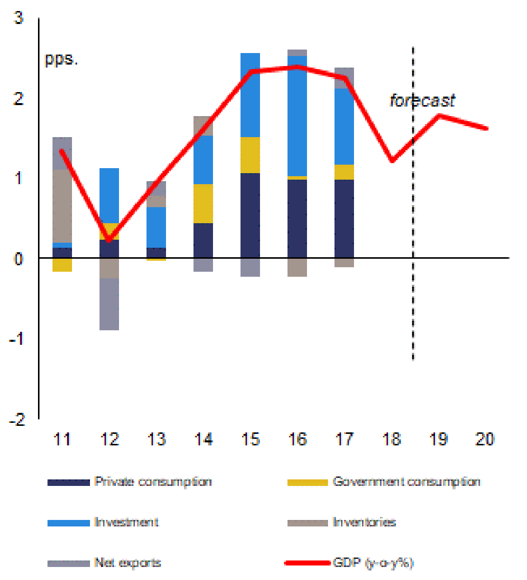
- **Denmark has strengthened its anti-money-laundering framework.** In 2018, against the background of a large money-laundering scandal involving the largest financial institution in Denmark and the largest amount allegedly being laundered to date in the EU, parliament adopted a new anti-money-laundering package, encompassing a strategy to combat money laundering and terror financing. The strategy rests on eight pillars, which include strengthening cooperation between supervisors, the financial intelligence unit and other relevant stakeholders. More staff were hired to combat money laundering in 2018, and the 2019 national budget allocated additional resources to strengthen the anti-money-laundering framework. In November 2018, the Financial Action Task Force upgraded Denmark on 10 of its 40 parameters, reflecting actions that have been taken to improve the anti-money-laundering regulatory framework that have been taken since the release of the Task Force’s mutual evaluation report in 2017.

1. ECONOMIC SITUATION AND OUTLOOK

GDP growth

Despite volatile underlying figures, Denmark's economy is on a solid upswing. Economic growth gradually accelerated from 0.2 % in 2012, and peaked at 2.4 % in 2016. Real GDP growth is estimated at 0.8 % in 2018 and forecast to increase to 1.6 % in 2019 and 1.3 % in 2020 (Graph 1.1). A relatively sharp slowdown in 2018 was mainly of a technical nature. A large payment for the use of a Danish patent (recorded as a service export) lifted real GDP growth by 0.4 percentage points (pps) in 2017, but caused a similar slowdown in 2018. Danish real GDP growth has gradually been slowing down since its peak in 2016 and converging towards its potential growth rate around 1½ %. The output gap is set to remain slightly negative in 2019 and 2020.

Graph 1.1: **GDP growth and contributions**

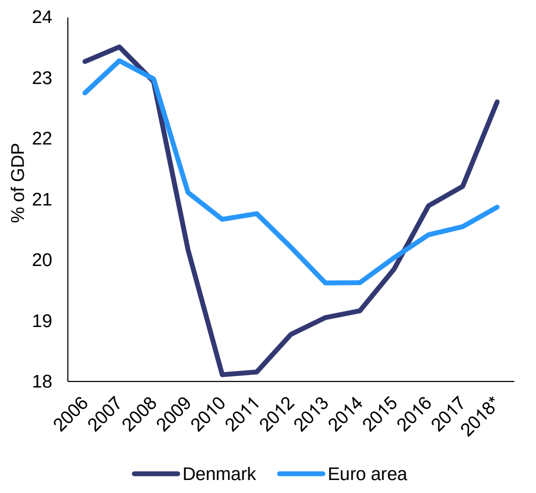


Source: European Commission 2019 winter forecast

Household consumption and investment have been the main drivers of growth. Household consumption has contributed to almost half of the economic growth since 2012, supported by the steady rise of disposable incomes. However, household consumption has still not fully recovered from the crisis 10 years ago. Household consumption, as a share of disposable income, has been decreasing since 2012, as heavily indebted households appear to focus on building up savings and reducing their debt as the legacy of the crisis (Hviid and Kuchler, 2017). Had highly indebted households displayed a consumption pattern similar to other less indebted households, private consumption would have been higher . Regarding the composition of savings, Danish households have significantly increased their pension assets. Their share in households' total financial assets rose from 41 % in 2007 to 52 % in 2018, while the proportion of cash deposits or shares have declined from 35 % to 31 % during the same period.

Investment has rebounded strongly since reaching a trough in 2010. Investment has increased from 18.1 % of GDP in 2010 to an estimated 22.6 % of GDP in 2018, which is 2 pps above its long-term average or the euro area average (Graph 2). The main drivers of growth have been investment in construction and equipment, which contracted the most following the crisis. Residential construction has been supported by strong demand in the main urban areas and its share of GDP has increased from 3.7 % in 2010 to an estimated 5.1 % in 2018. Other construction has increased from 4.1 % of GDP to an estimated 5.4 % of GDP during the same period, driven by investment by publicly owned companies. Machinery and equipment investment rebounded from 5.2 % of GDP to 6.8 % of GDP during the same period. However, a large shipping investment accounting for almost 0.8 % of GDP pushed up machinery and equipment investment growth in 2018. Without this large shipping investment, machinery and equipment investment growth would have stagnated around 6 % of GDP since 2013, well below the pre-crisis average of 7.5 % of GDP. Public investment increased markedly following the crisis, growing from around 3 % of GDP to 3.9 % of GDP in 2014. As the economic cycle matured, its share decreased to 3.4 % of GDP in 2017, which is still higher than the pre-crisis average of 2.9 % of GDP.

Graph 1.2: **Investment**



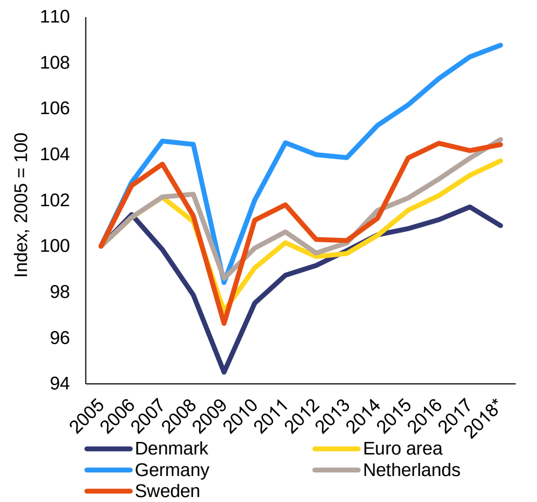
(*) Commission estimate
Source: Eurostat

Household consumption is forecast to remain the main driver of economic growth, while the contributions of other GDP components are projected to weaken. A number of fiscal measures (2) are expected to boost household incomes in the coming years, supporting robust private consumption in the future. Rising house prices are forecast to maintain some of the impetus for investment in housing, but as the number of housing permits has been declining continuously since their peak in the fourth quarter of 2016, growth in housing investment is set to slow down from the second half of 2018 (see Section 3.2). The outlook for exports and equipment investment is projected to deteriorate as growth in Denmark's main trading partners is expected to weaken. Trade-related uncertainties could negatively affect exports. Imports are set to remain robust due to the continuing strong domestic demand.

Potential growth

Productivity growth remained sluggish. Productivity growth was weak before 2009 and was badly hit by the financial crisis. Total factor productivity has been developing in line with peer economies since 2010, but was not able to reduce the accumulated gap (Graph 3). Sectoral trends have been mixed, with solid productivity growth in manufacturing, and much weaker trends in the services sector. Domestically oriented services sectors (3) have shown particularly sluggish productivity performance, while the production and sales of Danish companies operating abroad have boosted productivity growth (Section 3.4.1). A stagnating share of machinery and equipment investment in GDP could nevertheless suggest limited potential to further increase manufacturing productivity growth. Overall productivity growth slightly declined in 2018 due to the temporary slowdown of GDP growth last year.

Graph 1.3: **Total factor productivity**



(*) Commission estimate
Source: Ameco

Weak productivity growth continues to weigh on potential growth. Having bottomed out at 0.8 % in 2013, potential GDP growth is estimated to have increased to 1.6 % in 2018. The increase was driven by rising employment and investment contributions, while the contribution from total factor productivity decreased. The contribution from labour is forecast to stop growing. Weak total factor productivity growth is not expected to be able to provide an additional boost to the potential growth rate, which is thus expected to stagnate in the coming years.

(2) Payment to households from the reform of the voluntary early retirement scheme in 2018 (which transferred 0.2 % of GDP to households) and the repayment of excessively collected property taxes at the end of 2019 (estimated at 0.7 % of GDP).

(3) I.e. sectors in which exports amount to less than 25 % of total value added, or less than 25 % of total value added are produced by foreign-owned companies.

Employment and social developments

Employment trends have been robust. Employment have rising every quarter since the beginning of 2013. Solid labour force expansion paved the way for the stable employment growth. While the labour force expanded strongly, employment increased at an even faster pace. As a result, the employment rate climbed to 76.9 % in 2018, surpassing the long-term average and the EU average of 72.1 %. Compared to the 2006-2008 period, actual and structural employment ([4]) trends now appear more aligned, thereby reducing the risk of an abrupt overheating of the labour market.

Overall and long-term unemployment are falling. At the same time, the NEET rate (i.e. people not in education, employment or training) has increased. The unemployment rate continued to decline gradually to 5.0 % in 2018, the lowest level since 2008, and it remains well below the EU average of 7.0 %. Long-term unemployment stood at around 1 % in 2018. Youth unemployment also decreased, but there has been an increase in the NEET rate (ages 15-24) from 5.8 % in 2016 to 7.0 % in 2017, possibly linked to the rise in the rate of early leavers from education and training (ages 18-24) from 7.2 % in 2016 to 8.8 % in 2017.

Firms continue to report labour shortages, particularly of skilled workers, while employment rates remain low for some vulnerable groups. Shortages of skilled labour are prominent in certain sectors, such as construction, information and communication technology and services. On the other hand, lower employment rates can be observed for some vulnerable groups, such as those with a migrant background, young people and people with disabilities who are less able to work. Improving the employment rates of these vulnerable groups remains a key challenge. The strong labour market provides a unique opportunity to integrate these groups of people on the labour market.

Poverty remains low in Denmark, yet has not returned to pre-crisis levels. This is mainly due to a slight increase in the at-risk-of-poverty-or-social-exclusion (AROPE) rate, which rose 0.4 pps to 17.2 % on the back of rising financial poverty and an increase in the population experiencing severe material deprivation. The rate of AROPE for foreign-born adults is above the EU average and more than double the rate of the native born.

While income inequality remains low, the distribution of net wealth and opportunities are becoming more unequal. High market income inequality is contained by an effective tax and transfer system, which reduces headline income inequality to well below the EU average.([5]) The equalised net wealth of households above the median increased by 9.5 % from 2014 to 2016, whereas for those below the median the increase was only 7.4 %. Net wealth grew slowest for the poorest households (5.4 %). At the same time, the percentage of children at risk of poverty or social exclusion and whose parents are low skilled has nearly doubled since before the crisis, and stood at 65.7 % in 2017, surpassing the EU average (62.9 %). By contrast, at 6.7 %, the share of children of parents with tertiary education and at risk of poverty was well below the EU average (9.0 %). This suggests challenges in ensuring equality of opportunity, in particular for children of migrant families (see Section 3.3).

Inflation

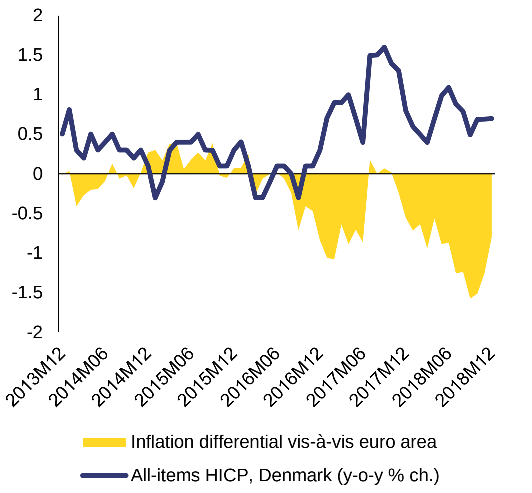
Consumer price inflation remains low. Despite rising oil prices, solid economic growth and a tightening labour market, harmonised index of consumer prices (HICP) inflation has been modest, and weaker than in the euro area (Graph 1.4). HICP inflation declined from 1.1 % in 2017 to 0.7 % in 2018, while euro area HICP inflation increased from 1.5 % to 1.7 % during this period. Denmark had the lowest inflation rate in the EU in 2018 and showed the widest divergence with the euro area since 1994. This significant gap is mainly due to taxation changes, the decline of food prices and the more muted impact of rising oil prices in Danish consumer prices. Base effects, including a lagged increase in food prices, are expected to lift consumer price inflation to 1.2 % in 2019, closing the gap with the euro area. Higher

([4]) Structural employment is the level of employment with a non-accelerating inflation rate.

([5]) In 2017, the richest 20 % of households had income, which was 4.1 times greater than the poorest 20 %, a ratio lower than the EU-28 average, and one which has remained stable over time. The ratio for market incomes (i.e. before taxes and transfers) was 12.3 in 2016, above the EU average.

wage growth is set to raise HICP inflation further to 1.7 % in 2020 (European Commission, 2019a).

Graph 1.4: **HICP Inflation**

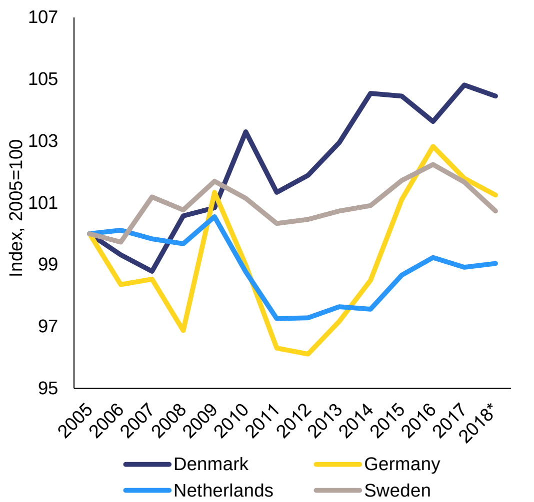


Source: Eurostat

External position and competitiveness

Denmark's share in world exports has been relatively stable since 2012. This is in line with the performance of Sweden or the Netherlands, but falls behind Germany's robust export performance. In volume terms, Denmark's export market shares have underperformed those of its peer countries, but positive trends in the terms of trade have lifted exports in value terms. The Danish pharmaceuticals industry in particular has been able to maintain a high price level in export markets, while several peer countries have seen much weaker terms of trade developments due to their industrial specialisation profile (Graph 1.5).

Graph 1.5: **Terms of trade (goods and services)**



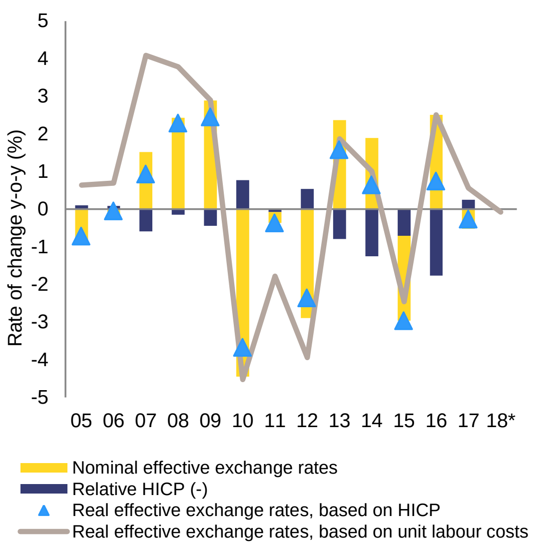
(*) Commission estimate
Source: Ameco

The current account surplus decreased from 8.7 % of GDP in 2014 to an estimated 6.1 % of GDP in 2018. This sharp decline was due to temporary factors (European Commission, 2018d) and solid domestic demand. The continued high current account surpluses have supported an increase in the net international investment position (NIIP) from close to balance in 2008 to 65 % of GDP in 2018. With a current account surplus of 1.2 % of GDP being sufficient to keep the NIIP ratio stable over the next 10 years, the NIIP ratio is likely to increase further given the projected sizeable current account surpluses. The high net stock of foreign assets generates significant investment income further boosting the current account surplus. A large share of net international investment position is in equity investment. However, components of the net international investment position that may be subject to default or partly be used as collateral remain low, amounting to less than an expected 20 % of GDP in 2018.

There are some mixed signs regarding Denmark's competitiveness. Real effective exchange rates based on unit labour costs or consumer prices (HICP) have been developing broadly in line with those of Denmark's main trading partners in the last five years (Graph 1.6). On the other hand, wage growth has started to exceed productivity growth. In 2017, compensation per employee increased by 1.7 %

while productivity growth was 0.6 %, resulting in a 1.1 % increase in nominal unit labour costs. In light of growing labour shortages in several sectors, wages are expected to increase somewhat faster than projected increases in productivity, with growth in compensation per employee expected to reach 2.5 % in 2019 and 2.8 % in 2020, above the euro area average (European Commission, 2018d). A continuation of this trend could lead to a loss of competitiveness (Section 3.4.1).

Graph 1.6: **Real effective exchange rate**



(*) Commission estimate
Source: European Commission

Monetary policy

The central bank deposit rate has been almost constantly negative since 2012, the longest period among EU countries. Denmark, the only country in the ERM-II, maintains a central rate of DKK 7.46038 to the euro with a narrow fluctuation band of ±2.25 %. Monetary policy rates were kept stable in 2018, with the lending rate at 0.05 % and the deposit rate at -0.65 %.

Financial sector

The Danish banking sector is well capitalised and bank profitability has improved. Notwithstanding the slight increase in 2018 due to weather-related difficulties in the agricultural sector, non-performing loans remain low compared to the euro area average. However, Nordic peers have lower non-performing loan ratios than Denmark, as some Danish banks are still suffering from the legacy of the economic crisis and the high share of agricultural lending. Danish authorities are introducing macroprudential measures to further increase the resilience of the financial sector, the latest of which is the increase in the countercyclical buffer to 1.0 % of risk-weighted assets.

Housing market and private indebtedness

The housing market is gradually slowing down, but housing prices remain overvalued. Buoyant residential construction and forthcoming changes to property taxation and valuation are all dampening housing price inflation. Stark regional housing price divergences have started to ease with nationwide trends being driven by property price increases in areas adjacent to urban agglomerations. Despite their slower increase, housing prices remain above their underlying fundamentals, entailing the risk of a disorderly correction with negative effects on the real economy and the financial sector. The risk has also been highlighted by the European Systematic Risk Board (ESRB, 2016).

Danish households have continued to reduce their debt, but the deleveraging process may have come to a temporary halt in 2018. Household debt has fallen from 274.5 % of disposable income in 2014 to 255 % in 2017, while the debt-to–GDP ratio fell from 131.5 % to 128 % during the same period. While lending to households hovered around a 1.5 % in 2018, weak nominal GDP growth in 2018 indicates a stagnating indebtedness ratio. Commission estimates indicate further deleveraging is needed as household debt exceeds levels consistent with economic or prudential fundamentals (Section 3.1).

Danish households remain vulnerable to sudden changes in interest rates and income shocks. The risks for the real economy are amplified by the high level of household debt. Danish households have one of the highest debt-servicing ratios in the EU, and despite positive developments, the share of interest-only, variable interest rate loans, which are the most sensitive to shocks, remained high. Half of the mortgage loans are still interest-only. Following an interest rate or income shock, most households would still be able to service their debt, but such events could markedly decrease consumption and investment. Although the latest macroprudential measures have been effective in restricting the availability of new risky mortgage loans (i.e. high loan-to-value and debt-to-income mortgage loans), it will take time until the positive effects will be visible in the overall mortgage stock and effectively reduce overall risks (Section 3.1).

Public finances

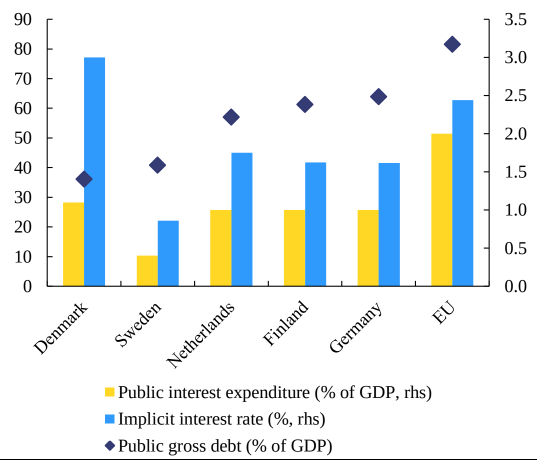
The general government account was close to balance in 2018. Strong revenue from the pension yield tax helped the budget to reach a surplus of 1.1 % of GDP in 2017, but this revenue was lower in 2018, leading to a substantially lower estimated budget surplus of 0.2 % of GDP. The continuously strong labour market has contributed to an increase in taxes on income and wealth, but weakening growth momentum is putting downward pressure on corporate tax revenue. The reform of the voluntary early retirement scheme led to a reimbursement of DKK 4 billion (0.2 % of GDP) to households in early 2018.

The headline position is projected to remain close to balance in 2019, before improving again in 2020. The change from a small surplus in 2018 to a slight deficit of 0.1 % of GDP in 2019 is primarily due to an expected one-off repayment of DKK 15.5 billion (0.7 % of GDP) of excessively collected property taxes to households and companies. ([6]) However, the underlying fiscal position is improving. Accordingly, the balance is projected to return to positive territory in 2020 to an estimated surplus of 0.6 % of GDP.

The structural balance is projected to decline slightly to a surplus of ½ % of GDP in 2018 before stabilising at a surplus of around 1 %. The expected fall in the structural balance from a surplus of around 1 % of GDP in 2017 to ½ % in 2018 is largely due to the transfers associated with the reform of the voluntary early retirement scheme. The structural balance is projected to remain positive and stabilise at around 1 % of GDP over the forecast horizon.

Despite low gross public debt, Denmark's public interest expenditure is relatively high. At 36.1 % of GDP in 2017, Denmark's gross public debt was well below the EU average of 81.6 %. Notwithstanding the low level of public debt, Denmark spends a relatively high proportion of GDP on interest (Graph 1.7). Denmark's implicit interest rate of 3.0 % is significantly higher than for neighbouring countries, as well as the EU average of 2.4 %. This is notwithstanding the fact that the proportion of low-yielding short-maturity bonds (11.5 %) in total Danish public debt is larger than that of both Germany (7.9 %) and Finland (10.4 %). The high implicit interest rate is primarily due to a high share of high-yield long-term bonds issued in 2008.

Graph 1.7: **Gross public debt and interest burden, 2017**



Source: Eurostat

([6]) The one-off repayment of the excessively-collected property taxes has been postponed to 2020 after the publication of the European Commission 2018 Autumn Forecast. The deficit numbers therefore do not reflect this information.

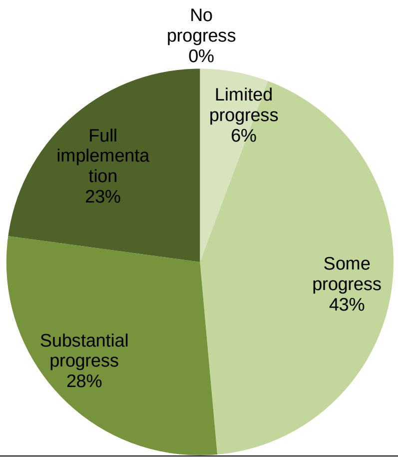
Table 1.1: **Key economic, financial and social indicators - Denmark**

						forecast		
	2004-07	2008-12	2013-15	2016	2017	2018	2019	2020
Real GDP (y-o-y)	2,5	-0,4	1,6	2,4	2,3	0,8	1,6	1,3
Potential growth (y-o-y)	1,4	0,8	0,9	1,4	1,5	1,6	1,6	1,6
Private consumption (y-o-y)	3,3	-0,3	1,2	2,1	2,1	.	.	.
Public consumption (y-o-y)	1,6	1,6	1,2	0,2	0,7	.	.	.
Gross fixed capital formation (y-o-y)	5,8	-3,6	3,8	7,6	4,6	.	.	.
Exports of goods and services (y-o-y)	6,2	1,0	2,8	3,9	3,6	.	.	.
Imports of goods and services (y-o-y)	9,5	0,5	3,3	4,2	3,6	.	.	.
Contribution to GDP growth:								
Domestic demand (y-o-y)	3,2	-0,5	1,6	2,5	2,1	.	.	.
Inventories (y-o-y)	0,3	-0,2	0,1	-0,2	-0,1	.	.	.
Net exports (y-o-y)	-1,0	0,3	-0,1	0,1	0,2	.	.	.
Contribution to potential GDP growth:								
Total Labour (hours) (y-o-y)	0,2	-0,1	0,1	0,6	0,6	0,6	0,5	0,5
Capital accumulation (y-o-y)	0,8	0,3	0,3	0,6	0,7	0,9	0,8	0,8
Total factor productivity (y-o-y)	0,5	0,7	0,5	0,3	0,2	0,2	0,3	0,4
Output gap	2,4	-2,2	-2,1	-1,0	-0,2	-0,6	-0,4	-0,5
Unemployment rate	4,5	6,4	6,6	6,2	5,7	5,2	4,9	4,7
GDP deflator (y-o-y)	2,4	2,2	0,8	0,7	1,4	1,1	1,6	2,0
Harmonised index of consumer prices (HICP, y-o-y)	1,5	2,4	0,4	0,0	1,1	0,7	1,2	1,7
Nominal compensation per employee (y-o-y)	3,4	2,6	1,6	1,5	1,7	2,2	2,5	2,8
Labour productivity (real, person employed, y-o-y)	1,1	0,6	0,9	0,9	0,6	.	.	.
Unit labour costs (ULC, whole economy, y-o-y)	2,3	2,0	0,7	0,6	1,1	2,7	1,8	2,0
Real unit labour costs (y-o-y)	0,0	-0,2	-0,1	-0,1	-0,3	1,6	0,2	0,0
Real effective exchange rate (ULC, y-o-y)	1,5	-0,8	0,0	0,5	1,4	2,8	-0,9	0,0
Real effective exchange rate (HICP, y-o-y)	-0,2	-0,7	-0,5	1,1	0,5	1,1	-1,5	-0,5
Savings rate of households (net saving as percentage of net disposable income)	-2,7	-0,1	1,1	4,5	6,2	.	.	.
Private credit flow, consolidated (% of GDP)	17,5	5,3	-0,1	1,3	-0,4	.	.	.
Private sector debt, consolidated (% of GDP)	192,3	224,0	213,9	208,0	200,7	.	.	.
of which household debt, consolidated (% of GDP)	116,5	136,5	130,8	127,9	126,6	.	.	.
of which non-financial corporate debt, consolidated (% of GDP)	74,8	86,8	82,6	79,7	73,8	.	.	.
Gross non-performing debt (% of total debt instruments and total loans and advances) (2)	.	2,9	4,3	3,4	2,6	.	.	.
Corporations, net lending (+) or net borrowing (-) (% of GDP)	3,6	7,8	8,4	6,6	5,1	4,0	4,3	3,9
Corporations, gross operating surplus (% of GDP)	22,7	22,3	23,9	24,1	24,1	22,4	22,2	22,2
Households, net lending (+) or net borrowing (-) (% of GDP)	-4,8	-1,0	0,2	1,4	1,7	2,0	2,1	1,7
Deflated house price index (y-o-y)	11,1	-6,0	4,2	4,7	3,3	.	.	.
Residential investment (% of GDP)	6,2	4,3	3,9	4,3	4,7	.	.	.
Current account balance (% of GDP), balance of payments	3,0	5,2	8,3	7,9	8,0	6,3	6,5	6,3
Trade balance (% of GDP), balance of payments	4,2	5,5	6,8	6,7	7,1	.	.	.
Terms of trade of goods and services (y-o-y)	0,4	0,6	1,0	0,7	0,5	-0,3	-0,2	0,1
Capital account balance (% of GDP)	0,1	0,1	-0,2	0,0	0,0	.	.	.
Net international investment position (% of GDP)	-0,8	14,5	38,3	54,3	55,6	.	.	.
NIIP excluding non-defaultable instruments (% of GDP) (1)	-25,6	-18,5	6,2	15,5	18,4	.	.	.
IIP liabilities excluding non-defaultable instruments (% of GDP) (1)	139,7	163,7	167,7	169,4	160,7	.	.	.
Export performance vs. advanced countries (% change over 5 years)	3,2	-0,6	-9,9	-6,9	-4,0	.	.	.
Export market share, goods and services (y-o-y)	.	.	0,2	1,6	-1,8	.	.	.
Net FDI flows (% of GDP)	1,8	2,1	1,5	3,3	1,6	.	.	.
General government balance (% of GDP)	4,3	-1,6	-0,5	-0,1	1,2	0,2	-0,1	0,6
Structural budget balance (% of GDP)	.	.	-1,2	0,5	1,3	0,5	0,8	0,8
General government gross debt (% of GDP)	35,1	41,4	42,7	37,2	35,5	32,8	31,8	30,1
Tax-to-GDP ratio (%) (3)	48,2	46,3	48,1	46,8	46,5	45,7	45,7	45,6
Tax rate for a single person earning the average wage (%)	41,0	39,1	35,8	36,0	.	.	.	.
Tax rate for a single person earning 50% of the average wage (%)	37,6	36,0	31,0	31,2	.	.	.	.

(1) Net international investment position excluding direct investment and portfolio equity shares.
(2) Domestic banking groups and stand-alone banks, EU and non-EU foreign-controlled subsidiaries and EU and non-EU foreign-controlled branches.
(3) The tax-to-GDP indicator includes imputed social contributions and hence differs from the tax-to-GDP indicator used in the section on taxation
Source: Eurostat and ECB as of 31-1-2019, where available; European Commission for forecast figures (Winter forecast 2019 for real GDP and HICP, Autumn forecast 2018 otherwise)

Since the start of the European Semester in 2011, 94 % of all country-specific recommendations addressed to Denmark have recorded at least 'some progress'. 6 % of these country specific recommendations recorded 'limited' or 'no progress' (see Graph 2.1).In a multi-annual assessment of the implementation of the country specific recommendations (CSRs) since these were first adopted, 94 % of all CSRs addressed to Denmark since 2011 have recorded at least 'some' progress. . Substantial progress and full implementation have been achieved, in particular in areas related to public finances, but also in areas related to labour market policies and the financial sector.

Graph 2.1: **Level of implementation today of 2011-2018 CSRs**



(1) The overall assessment of the country-specific recommendations related to fiscal policy excludes compliance with the Stability and Growth Pact.
(2) The multiannual CSR assessment looks at the implementation since 2011 up until the 2019 Country Report.
Source: European Commission

Denmark delivered a timely and durable correction of its excessive deficit by 2013, and has since made the fiscal framework more robust. Denmark introduced legally binding multi-annual expenditure ceilings on all three levels of the public sector, applicable from 2014 onwards. The comply-or-explain principle was also added to the fiscal framework in 2016, making national law compliant with the Fiscal Compact. Since 2016, Denmark has consistently had a more positive structural balance than its medium-term objective of -0.5 % of GDP. It has also not had a country-specific recommendation on fiscal policy since 2016.

Long-term labour supply and the employability of people at the margins of the labour market were topics for the CSRs to Denmark in 2011-2014. Denmark implemented a number of labour market, pension and social reforms in this period. Measures were also taken to improve the quality of the education system and to reduce dropout rates within vocational education. Denmark made enough progress for the recommendations in these areas to be dropped in 2015. Since then, the labour market performance has continued to significantly improve, and the number of people on social assistance benefits has declined. Labour shortages are, however, increasing - particularly for skilled workers - and there is a continued need to incentivise students to choose vocational education and training (VET), and to increase the skills of people on the margins of the labour market.

The 2011-2012 recommendation to strengthen the stability of the housing market and the financial sector in the medium-term was dropped following several initiatives from Danish authorities. Macroprudential measures to safeguard financial stability have been adopted. These include the 'supervisory diamond' aiming at reducing risky lending by commercial banks and mortgage institutions (to be fully implemented by 2019 and 2020, respectively). The introduction of a loan-to-value cap for mortgage loans, and a 5 % compulsory down-payment for new loan applications, also aims to reduce risky mortgage lending. More recent measures include the activation of the countercyclical buffer in 2018, which will reach 1.0 % of risk-weighted assets in 2019. Further macroprudential measures took effect from 1 January 2018 requiring amortisation for mortgage loans with high loan-to-income values subject to variable interest rates. A reform from May 2017 will re-align property taxes with actual property values by 2021, putting an end to the pro-cyclical property tax, which also fuelled regional house price divergences. However, progress with the new valuation system behind the property tax reform has been delayed.

Since 2011, Denmark has made some progress in addressing the recommendations to foster competition and productivity. The government has adopted reforms in specific sectors, such as retail and transport services; there has therefore been some progress in this area. Following the mapping of standards in 2015, the modernisation

Table 2.1: **Assessment of 2018 CSR implementation**

Denmark	**Overall assessment of progress with 2018 CSR: Some progress**
CSR 1: *Increase competition in domestically oriented services sectors, for instance in the distribution of utilities and in the financial sector.*	Denmark has made **some progress** in addressing CSR 1: In 2018, Denmark has implemented measures to enhance competition in the financial sector. Moreover, Denmark has continued its work with implementing the utilities strategy. Political agreements on measures in the water and sewage water sector were reached in October 2018.

Source: European Commission.

of the law on electrical installations in 2015, and the 2018 update of the building regulation to simplify procedures there has also been some progress in increasing competition in the construction sector. Furthermore, there has been some progress on incentivising cooperation between businesses and universities, by setting up specific programmes and establishing the Innovation Fund.

Denmark has made some progress in addressing the 2018 country-specific recommendation. The 2017 country-specific recommendation emphasised the need to improve competition in domestically oriented sectors as a whole. While still including this general emphasis on domestically oriented sectors, in 2018 the recommendation was more targeted, focusing on the distribution of utilities and the financial sector. On the distribution of utilities, Denmark has implemented measures detailed in its utilities strategy on the distribution of electricity, gas and district heating. Political agreements on some measures in the water and sewage water sector were reached in October 2018. Despite continued efforts in implementing the utilities strategy, progress remains limited in 2018. However, substantial progress has been achieved in fostering competition in the financial sector, where measures have been implemented to increase competition in the mortgage credit market.

Box 2.1: **EU funds help overcome structural challenges and foster development in Denmark**

Denmark is a beneficiary of European Structural and Investment Funds (ESI Funds), and the financial allocation is up to EUR 1.5 billion in the current Multiannual Financial Framework, equivalent to around 2 % of all public investment per year on average. As of the end of 2018, some EUR 968 million (around 63 % of the total) was already allocated to specific projects. In addition, EUR 788 million was allocated to specific projects on strategic transport networks through a dedicated EU funding instrument, the Connecting Europe Facility. Furthermore, many Danish research institutions, innovative firms and individual researchers benefited from other EU funding instruments, notably Horizon 2020 which provided EUR 889 million.

In general, EU funding helps to address policy challenges identified in the country-specific recommendations. ESI Fund investments in Denmark mostly aim to promote small and medium-sized enterprise development. EU funds have supported closer collaboration between businesses and research institutions. They have also supported R&D investments in the private sector. By the end of 2018, ESI Funds had supported more than 1 100 enterprises in building cooperation with research institutions, and almost 600 enterprises in introducing new products in their markets. Horizon 2020 supported 1 547 research projects covering a very broad thematic spectrum from vaccine development to fish farming.

In Denmark, total financing under the European Fund for Strategic Investments (EFSI) amounts to EUR 762 million, which is set to trigger EUR 4.7 billion euros in additional investments. Denmark ranks relatively low in the EU for the overall volume of approved operations as a percentage of GDP. Under the ‘infrastructure and innovation’ window, 17 projects were approved for financing by the European Investment Bank (EIB) with EFSI backing([1]), for a total financing of approximately EUR 567 million set to trigger EUR 3.9 billion in total investment. Under the small and medium-sized enterprise component, there were six agreements approved with intermediary banks financed by the European Investment Fund (EIF) with EFSI backing, with EUR 195 million in total financing set to trigger approximately EUR 717 million in investments, benefiting some 1 228 small and medium-sized enterprises and mid-cap companies in Denmark improving their access to finance. One example of and company benefiting from an EFSI-backed project in Denmark is financing for Bavarian Nordic, a biotech company. The project, which is receiving a financing of EUR 30 million, funds the construction of a fill-and-finish-facility on its existing production site, allowing the accelerated deployment of advanced biotechnological manufacturing processes and technologies for the production of vaccines.

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

([1]) 9 of which are multi-country projects

3. REFORM PRIORITIES

3.1. PUBLIC FINANCES AND TAXATION

Taxation

Total tax revenue, as a share of GDP, is among the highest in the EU. Total tax revenue in Denmark represented 45.7 % of GDP in 2017 compared to an EU average of 39.1 %. This is despite the Danish share falling by 0.8 percentage points (pps) since 2006, while the EU average increased by 1.2 pps over the same period. More specifically, taxes on labour represented 23.1 % of GDP in 2017 compared to 19.4 % of GDP in the EU.

While high effective income tax rates can affect incentives to work, some progress in lowering them has been achieved. Second earners moving from inactivity to 67 % of the average wage face a substantial inactivity trap of 48.4 % of the additional wage, largely due to the tax system. This represents one of the largest inactivity traps in the EU, for which the corresponding average value is 31.3 %. ([7]) However, reforms between 2005 and 2018 to lower taxes on labour income and to reduce social transfers have contributed to halving the amount of people with low economic incentives to work (Ministry for Economic Affairs and the Interior, 2018b). The authorities expect this group to shrink further over the coming years.

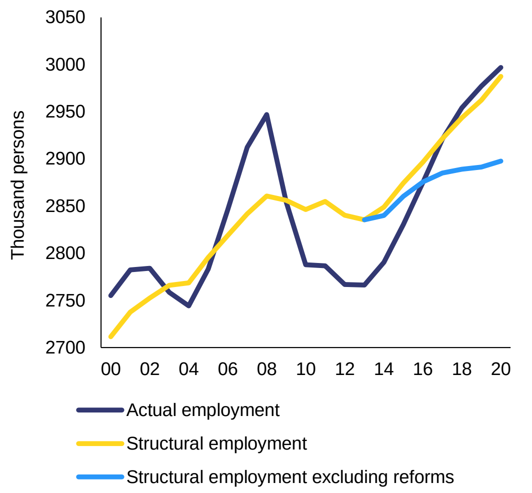
Denmark continues to have one of the highest mortgage debt tax biases in the EU. Denmark is among the nine countries in the EU with mortgage tax relief. This implies a preferential treatment by the tax system of debt-financed housing. Gruber et al. (2017) highlight how deductions for mortgage interest expenditure induces households to increase indebtedness. Some steps have been taken to reduce mortgage interest deductibility for high mortgage interest payers between 2012 and 2019.

Recent reforms aim at promoting pension savings. Political agreements on tax and pension issues were made in June 2017, February 2018 and in the 2019 budget. These agreements aimed to address the issue of high effective tax rates on the pension savings of certain groups; particularly those close to retirement age and with low pension savings (see European Commission, 2018b). While some of these disincentives to pension savings persist, recent analyses by the Ministry of Finance suggest that improvements have been made in some areas. According to their study (Ministry of Finance, 2018), the recent reforms have notably made pension savings a more attractive option later on in working life. Before these reforms were made, pension savings late in working life had been less advantageous than alternatives outside the pension system.

Additional measures are being introduced to incentivise older workers to remain on the labour market. The 2006 and 2011 welfare and pension reforms included measures to shorten the voluntary early retirement pension scheme (VERP) and to link retirement age to life expectancy. These measures have been phased in since 2013. Together with other labour market reforms, these measures have provided a significant boost to the labour supply of an estimated 20 000 persons annually (Graph 3.1.1, and the Ministry for Economic Affairs and the Interior, 2018a). The retirement age will also be raised for the first time in 2019. The retirement age will be adjusted every five years and can be raised by one year at most every five years. Life expectancy is, however, increasing faster than anticipated in the 2006 and 2011 reforms, leading to higher pension costs than projected. The 2019 budget includes a tax-free premium of EUR 4 000 for pensioners that reach the statutory retirement age from 2019 onwards, and that choose to remain in work for an additional year.

([7]) European Commission Tax and Benefits Indicators Database, based on OECD data. Values are for 2016.

Graph 3.1.1: **Employment developments**



Source: National Reform Programme 2018

Debt sustainability analysis and fiscal risks

Public finances appear stable with few risks. The Commission evaluates fiscal sustainability risks through a range of indicators and analyses. **([8])** The short-term analysis is based on the fiscal stress indicator S0, which focuses on sustainability risks in the upcoming year. The medium-term fiscal sustainability gap indicator, S1, provides information about required adjustments to reach the 60 % debt criterion over a period of 15 years, also taking into account the costs of ageing. The long-term fiscal sustainability gap indicator, S2, shows the fiscal adjustment required to stabilise the debt-to-GDP ratio in the long term. Debt sustainability analysis (DSA) deploys a rich analytical toolkit to identify fiscal risks over a period of ten years. DSA outcomes influence the medium and long-term fiscal sustainability results. Both the medium and long-term analyses grant insights into the costs of ageing in the fields of pensions, health care and long-term care. According to these methodologies, risks to fiscal sustainability in Denmark appear low across all estimated time horizons.

Different technical assumptions lead Danish authorities and the European Commission to project different debt trajectories in the future. Public debt is expected to have fallen to 33.3 % of GDP in 2018. Under the European Commission baseline scenario, government debt is expected to fall to 10.8 % of GDP in 2029 (see Annex B). The Danish authorities, however, expect public debt to fall less by 2029. This is primarily due to reforms in the financing of housing and of housing taxation, which will result in a build-up of government assets and liabilities (Ministry of Transport, Building, and Housing, 2017). These reforms are expected to reduce the financing costs of housing and to allow homeowners to postpone property tax increases.

([8]) For an overview of the European Commission's assessment of fiscal sustainability risks in the short, medium and long term, see European Commission (2019c).

Fiscal framework

The Economic Council is being relocated. Since 2017, the Economic Council (DØRS) has held the role of national productivity board. The national productivity boards are objective, neutral and independent institutions that investigate productivity challenges, contributing to evidence-based policy making and boosting domestic ownership of structural reforms. The Council also acts as the fiscal watchdog. It is being relocated from Copenhagen to Horsens as part of the government's strategy to diversify public employment across the country. A satellite office of six employees will remain in Copenhagen. The move has resulted in a loss of employees. It has also resulted in the postponement of DØRS' biannual reports and the annual report of the productivity board. The new Horsens office opened on 2 January 2019.

The Economic Council's latest fiscal projections expect the government to comply with national fiscal rules in 2018. Using the Ministry of Finance's own methodology for the structural deficit, The Economic Council (DØRS) projects a larger structural deficit than the Ministry of Finance's projection in 2018. This is primarily due to DØRS using a lower estimate of structural revenues from North Sea oil- and gas exploration than the ministry, as well as a different treatment of tax arrears. At -½ % of GDP, however, the structural deficit remains within the boundaries of the deficit limit as mandated by national law. DØRS also expects that the government will comply with the expenditure ceiling set for 2019 to 2022.

Tax administration

The tax administration has been extensively reformed. After years of efforts to streamline the tax administration and improve tax collection, on 1 July 2018 the Danish tax and customs administration (SKAT) was replaced by seven agencies: a tax agency, a customs agency, a debt agency, a valuation agency, a vehicle agency, a development and simplification agency, and an administration and service agency. As part of the reform, Denmark has once more increased the budget of the tax administration. In its 2019 budget, parliament increased the resources of the tax administrations by DKK 2.1 billion, of which DKK 600 million will be invested in upgrading IT systems. This increase follows two consecutive increases in the budget of the tax and customs administration in 2017 and 2018, by DKK 5 billion and DKK 5.5 billion respectively. In total, the budget of the tax administration has been increased by about DKK 13 billion in three years. The main goals of the reform are to modernise the tax administration and make it more efficient. Modernisation is particularly needed in the area of information technology. Out of the almost 200 IT systems still used by the tax administration, some were developed in the 1960s and 1970s. Splitting one tax administration into several specialised agencies may lead to improvements in performance. Nevertheless, it remains too early to evaluate the effect of the re-organisation.

Implementation of the reform to the property valuation system has continued, albeit with some delays. New value assessments for around 1.7 million owner-occupied houses were expected for the second quarter of 2019. Yet on 31 October 2018, it was announced that the process would be delayed until 2020. Valuations are public, and owners can access the assessment criteria. If need be, owners can ask for a rectification. The reforms on property valuation and tax administration are connected. As part of the tax administration reform, a new specialised agency has been set up for private and commercial property valuation. This agency has been tasked with delivering the new property valuation system. Its key goal is to ensure that all homeowners get a new, fair and transparent property assessment. To achieve this goal, the recently established agency has been focusing in the recent past months on enhancing its resources, including by recruiting additional staff (+400, bringing the total staff number up to about 680), training current personnel, and improving the IT systems and data it relies on.

Environmental taxation

The use of alternative fuels in new passenger cars sold in Denmark remains low. The share of new passenger cars using alternative fuels peaked in 2015 at 2.4 % of sales, and fell sharply after the introduction of registration tax in 2016. In 2017, the share fell to 0.7 %, considerably lower than the EU average of 1.5 %. Since the end of 2017, sales of cars using alternative fuels, particularly plug-in hybrids (PHEV), have increased, due to changes to car registration taxes that entered into force in October 2017. This reform also aimed to promote the sale of cars with a better fuel economy and a higher level of traffic safety, and led to a shift in car sales towards heavier cars with larger motors. Consequently, average CO_2 emissions from new cars based on fossil fuels were 3.4 % higher after the tax reform than in 2016-2017 (Statistics Denmark, 2018). In October 2018, the government presented its goal to phase out the sale of new petrol and diesel cars in 2030 together with new initiatives to promote the sales of zero- and low-emission vehicles.

The tax system can be used for environmental purposes. In 2018, excise taxes on diesel were 32 % lower than the ones for petrol, despite diesel’s higher carbon and energy content. This is one of the largest gaps in the EU. The gap incentivises the use of diesel over petrol, and thus promotes nitrogen dioxide pollution. Although this ‘diesel differential’ on average is offset by a fee on certain diesel vehicles, the disincentive to drive an extra kilometre is less for diesel than for petrol.

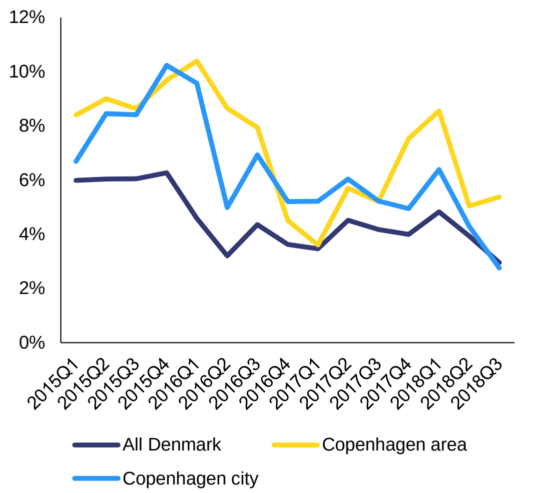
3.2. FINANCIAL SECTOR

3.2.1. HOUSING MARKET AND PRIVATE INDEBTEDNESS

Housing market

The housing market appears to be switching into a lower gear. With the exception of a peak in the first quarter of 2018, the annual growth rate of nominal housing price has moderated from 6.3 % in 2015 to 3.0 % in the third quarter of 2018. Nationwide housing price trends have been recently fuelled by property price increases in areas adjacent to urban agglomerations. However, increases in these areas have also moderated since the second quarter of 2018 (Graph 3.2.1).

Graph 3.2.1: **Nominal house price developments**

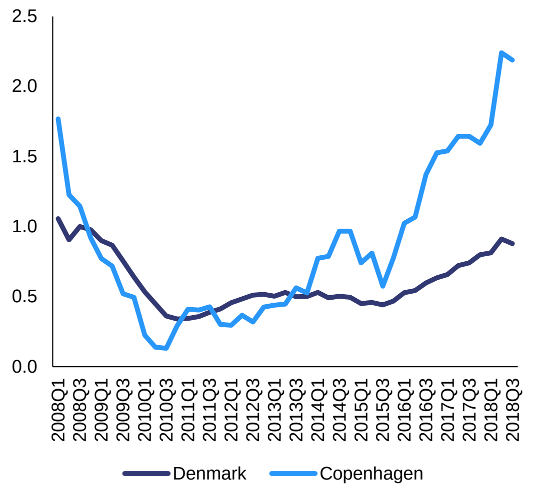


Source: Statistics Denmark

It also appears that housing price pressure has started to moderate in the Copenhagen area. Denmark has so far been the EU country with the most significant divergence between property prices in the capital city and the rest of the country (European Commission, 2017b; and Gaál, 2017). Notwithstanding a surge at the beginning of 2018, quarterly real housing price growth for both family houses and apartments has been moderating in the capital city. The number of dwellings for sale jumped in 2018, and an increase can be observed in the amount of time that dwellings are advertised on the market in Copenhagen. Besides high price levels, several additional factors appear to support a broader geographical spread of housing price growth and lower demand in the capital area.

Rapidly increasing residential construction kept pace with increase in housing prices. Having bottomed out in 2013, residential construction has been growing at an average annual rate of 7.7 % since 2014, increasing its share of GDP from 3.7 % in 2013 to an estimated 5 % in 2018, above its long-term average of 4.7 %. Copenhagen has experienced the largest rise in construction activity. The number of new dwellings per head of population is still below the level reached in the first quarter of 2008 in the country as a whole, but they are well above this 2008 level in Copenhagen (Graph 3.2.2). As a result, following several years of shortages, the housing stock increase now appears to match population growth in the capital area, with a dampening effect on housing prices. ([9])

Graph 3.2.2: **New construction per thousand inhabitants (four quarter moving average)**



Source: Statistics Denmark

The decline in building permits indicates slower construction growth in the near future. The number of building permits has decreased 21 % since the fourth quarter of 2016. This indicates weaker housing constructions going forward. New dwelling construction has not been targeted only at owner-occupiers: almost half of the newly constructed dwellings in the last five years in Copenhagen have been for private rentals. Since these new rental dwellings are not subject to rent

([9]) The average square metres per person is 40 in Copenhagen, and the number of inhabitants is growing by approximately 10 000 people per year. This means that construction of 420 000 square metres per year is in par with the population increase (Nykredit, 2018).

control (as compared to the rental dwellings built before 1991 that still comprise still around 80 % of the existing stock), these new constructions will increase the flexibility of the rental market, supporting labour mobility.

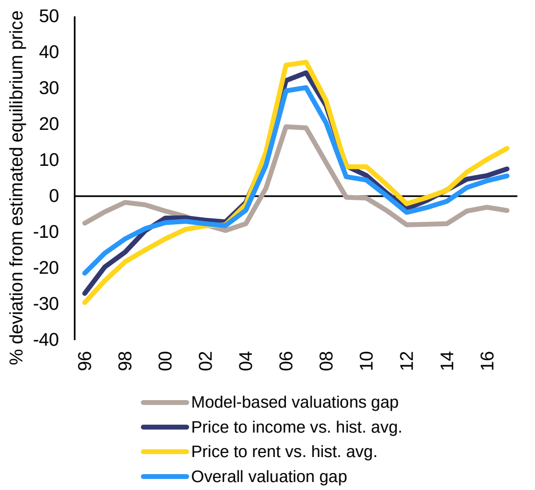
The new property tax system could already be having an impact on the housing market. The new system taking effect from 2021 will restore the link between property market valuations and taxation. The updated valuation system will mean that dwellings (particularly apartments) situated in urban areas will be subject to higher taxation. The anticipated new system may therefore already be dampening price increases in the Copenhagen area while supporting prices for dwellings outside cities (Danmarks Nationalbank, 2017).

Housing prices in Copenhagen have been increasingly driven by foreign investors. In 2011, almost no foreign investors were active in Denmark's residential property market. By contrast, foreign capital was responsible for half of the property purchases in 2017, mainly by investors from Norway, Sweden, Germany and the United States. The market appears to have peaked in the first quarter of 2018, after which the share of foreign investors in property purchases started to decline. These trends are in line with those of other main capital cities, as current global financial conditions support similar changes in housing prices in advanced economies (Alter et al 2018).

Despite the slower increases, housing prices remain higher than predicted by underlying fundamentals. The overall valuation gap ([10]) shows a potential overvaluation of around 10 % in 2017. While the price-to-income and price-to-rent indicators have continued to increase above their long-term average, prices have been relatively stable compared to the model based estimations. The European Systemic Risk Board has also issued a warning in 2016 to Denmark pointing at medium-term vulnerabilities in the residential real estate sector due to increasing housing prices and high household debt (ESRB, 2016).

([10]) The estimated valuation gap is an average of the affordability gap (price-to-income deviation from its long-term average), the yield gap (price-to-rent deviation from long-term average), and the estimated deviation from equilibrium values from an error-correction model.

Graph 3.2.3: **Housing price valuation indicators**

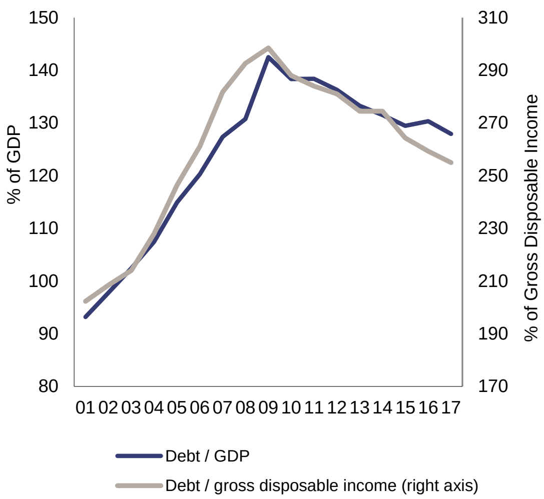


Source: European Commission

Household indebtedness

While households have been reducing their debt since the peak in 2009, the deleveraging process may have come to a temporary halt in 2018. The deleveraging process has been more pronounced when household debt is compared to disposable income. This ratio fell from 274.5 % in 2014 to 255 % in 2017, while debt-to-GDP fell only modestly from 131.5 % to 128 % during the same period (Graph 3.2.4). The household-debt-to-financial-assets ratio has decreased even faster, from 61.7 % in 2008 to 41.7 % in 2017, which is the lowest value since 2000. While lending to households remained modest, hovering at a growth rate around 1.5 % in 2018, weak nominal GDP growth in 2018 indicates a stagnating indebtedness ratio. Nevertheless, strongly rising household disposable incomes, higher nominal GDP growth rates and stable flows of credit suggest continuation of the slow deleveraging trends from 2019.

Graph 3.2.4: **Household debt**

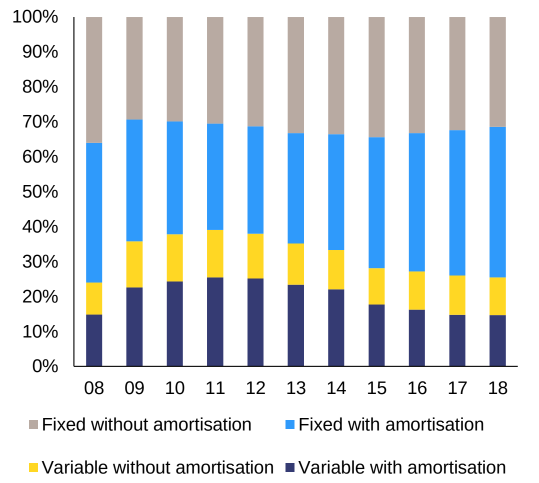


Source: European Commission

Commission analyses suggest a need for further reductions in household debt. Despite its gradual decrease, Danish households' gross indebtedness remains the highest in the EU and well above what fundamental drivers would suggest. Danish households' gross indebtedness is also well above the level generally associated with higher risks of a banking crisis. ([11]) These benchmarks suggest a need for further deleveraging of a magnitude of 30 % to 60 % of GDP in order to limit potential macro-financial stability risks. In the aftermath of the real estate crisis in 2008, the financial sector remained resilient. However, the impact on the real economy has been significant, causing suppressed domestic demand even ten years after the crisis and a potentially altered household consumption pattern (Section 1).

Although there have been positive changes to the composition of the mortgage stock since 2014, the developments are less favourable when compared to pre-crisis levels. The share of variable-interest-rate mortgages (with interest rates fixed for less than a year) has reduced from its peak of 39 % in 2011 to 25 % in 2018, similar to the levels in 2008. Interest-only loans with variable interest rates, which are the most sensitive to the rise of interest rates, have been stagnating at around 11 % of the total mortgage stock since 2013, higher than their 2008 level. The share of interest-only loans remained high and rather stable hovering at around 45 % of the total mortgage stock since 2008 (Graph 3.2.5).

Graph 3.2.5: **Household mortgage stock**

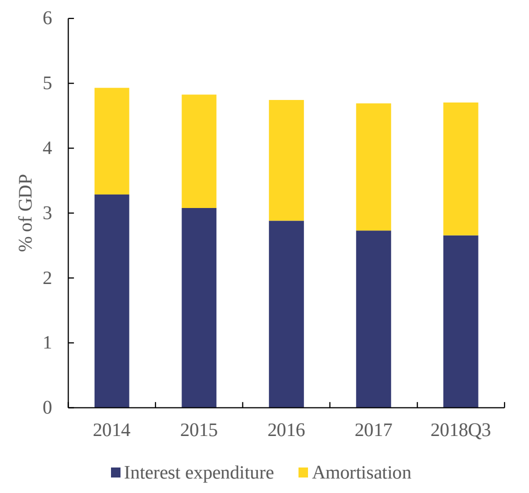


Source: FinanceDenmark

Danish households remain vulnerable to sudden changes to interest rates and income shocks. Although amortisation, as a share of GDP, has risen, debt servicing costs as whole have fallen due to decreasing interest rate expenditure. That being said, debt servicing costs of Danish households are still one of the highest in the EU. The interest rate sensitivity of the mortgage stock on average is relatively moderate, it is sizeable for highly indebted households. A 1 percentage point increase in interest rates would have reduced households' total disposable income on average by 0.7 % in 2016. But for the most indebted households an interest rate increase of 1 percentage point, would have reduced disposable income by 2.7 % despite the impact of generous mortgage interest deductibility (Danmarks Nationalbank, 2018a). With an income shock of this magnitude, most households would still be able to service their debt. However, considering the high debt servicing ratio, such a shock could markedly decrease consumption and investments.

([11]) Fundamental-based benchmarks are derived from regressions capturing the main determinants of credit growth and taking into account a given initial stock of debt. Prudential thresholds represent the debt threshold beyond which the probability of a banking crisis is high, minimising the probability of missed crisis and that of false alerts. See also European Commission (2017a).

Graph 3.2.6: **Debt servicing expenditure, households**



Source: Danmarks Nationalbank

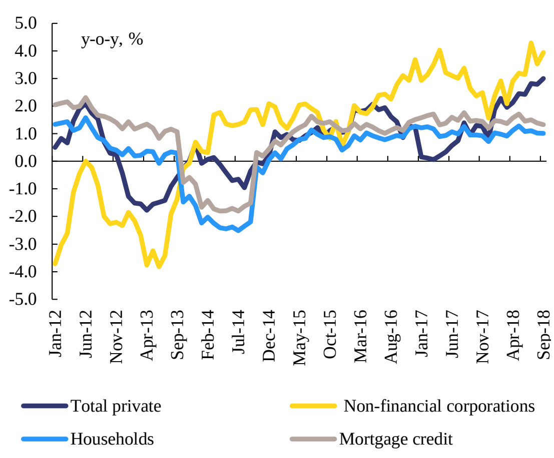
The Danish authorities have adopted several macroprudential measures to increase the resilience of households. In 2016, the Financial Supervisory Authority adopted 'seven best practices' for mortgage lending in high growth areas. However, these guidelines had only limited impact on reducing new loans with high debt-to-income levels (Danmarks Nationalbank 2018b). New and stricter macroprudential measures were put in place at the beginning of 2018. As a result, the share of risky loans ([12]) decreased markedly from 12 % in the fourth quarter of 2017 to 6 % in the second quarter of 2018 at national level. The share of risky loans has fallen the most in Copenhagen, declining from 19 % to 8 % during the same period (Ministry of Industry, Business and Financial Affairs, 2018a). Although the latest macroprudential measures appear to be effective for new loans, it will take time until the positive effects will be visible in the overall mortgage stock. Therefore high household debt and the high share of risky loans within the overall mortgage stock continues to represent a macroeconomic risk.

3.2.2. FINANCIAL SECTOR STABILITY

Denmark's banking sector is stable and well capitalised. In the first quarter of 2018, the average tier-1 capital adequacy ratio was 17.4 % and the total capital adequacy ratio was 21.3 % (Table 3.2.1). ([13]) Banks have ample liquidity and comply with the fully phased-in liquid coverage ratio (LCR) requirement. Impairments have been decreasing, except for the peak in the first quarter of 2018, and banks were able to release some loan loss provisions. This helped them bring back profitability to levels similar to those of the most profitable ones in the EU. The average ratio of non-performing loans has fallen in recent years, from 5.1 % in 2014 to 2.5 % in the second quarter of 2018. The non-performing loans ratio for corporate exposures picked up temporarily and increased to 4.9 % in the first quarter of 2018. This was because some loans to the agricultural sector became non-performing because of adverse weather conditions, but the non-performing loans ratio has since fallen to 4.2 %.

Credit to the private sector is growing moderately. Lending to businesses reached 3.9 % annual growth in September 2018. Credit to households has been increasing steadily in recent years. In September 2018, mortgage credit was growing by 1.3 % (Graph 3.2.7).

Graph 3.2.7: **Credit growth**



Source: Danmarks Nationalbank

([12]) Loans with a loan-to-income (LTI) ratio above four together with a loan-to-value (LTV) ratio above 60 %.

([13]) In December 2017, the Basel Committee on Banking Supervision endorsed a package of amendments to the Basel III framework of prudential standards for banks. The Basel agreement will have implications for Danish banks, notably as capital requirements for the major banks will be influenced by the composition of assets and determined more by standardised approaches.

Table 3.2.1: **Financial soundness indicators**

(%)	2011	2012	2013	2014	2015	2016	2017	2018Q2
Non-performing debt	3.0	3.9	3.9	5.1	4.0	3.4	2.6	2.5
Non-performing loans	-	-	-	5.1	3.9	3.3	2.5	2.5
Non-performing loans NFC	-	-	-	10.2	7.0	5.4	4.2	4.4
Non-performing loans HH	-	-	-	2.9	2.7	2.6	2.2	2.0
Coverage ratio	18.1	43.6	44.0	31.1	35.2	27.3	25.4	32.3
Loan to deposit ratio*	306.2	295.4	292.4	280.5	277.3	265.1	253.9	252.4
Tier 1 ratio	14.9	16.7	17.3	16.2	17.6	18.4	19.7	19.2
Capital adequacy ratio	16.9	18.7	19.2	18.2	19.8	20.7	22.1	21.7
Return on equity**	0.6	2.0	4.4	4.7	6.8	9.7	10.8	-
Return on assets**	0.0	0.1	0.2	0.3	0.4	0.6	0.7	-

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

Macroprudential measures to strengthen the financial system are being phased in. The final provisions to reduce excessive risk-taking in the financial sector, as envisaged in the 'supervisory diamond', were introduced in January 2019 for commercial banks. For mortgage credit institutions they will be phased in in 2020 and set limits for loans with deferred amortisation and variable interest rates. The countercyclical capital buffer (CCyB) has been activated and will increase to 0.5 % in March 2019, and to 1.0 % in September 2019.

The Financial Supervisory Authority has introduced a general resolution principle for systemically important banks (SIFIs). SIFIs must fulfil minimum requirements for own funds and eligible liabilities (MREL) from 1 July 2019. The general principle is that it should be possible to restructure SIFIs and return them to the market with adequate capitalisation to ensure market confidence. MREL has been determined based on this principle and therefore MREL would require twice the solvency requirements plus twice the capital buffer requirements. Instead of MREL, mortgage credit institutions must fulfil a so-called debt buffer requirement of 2 per cent of their unweighted loans.

Conditions for access to finance remain favourable, although challenges persist for smaller companies. The mortgage system provides cheap access to finance for companies with collateral. Access to finance is more difficult and costly for companies without collateral, which tend to be smaller and younger. The cost of borrowing small amounts (up to EUR 1 million) increased between 2016 and 2017, making Denmark among the worst performer for the relative cost of small loans in the EU (European Commission, 2018d).

Anti-money laundering

Preventing money laundering and terrorism financing has become a priority for Denmark. On 19 September 2018, Danske Bank, the largest financial institution in Denmark, published the results of an internal investigation admitting that money laundering could have taken place through its Estonian branch between 2007 and 2015. In 2015, Danske Bank closed its non-resident portfolio in Estonia following information from a whistle-blower. As a result of the scandal, the European Commission called on the European Banking Authority to investigate any possible breach or non-application of European Union law by the Estonian or Danish supervisors on 21 September 2018. Moreover, criminal investigations against Danske Bank are ongoing in Denmark, Estonia and the US.

The Danish authorities have implemented several measures to fight money laundering and combat terrorism financing. The Financial Action Task Force (FATF) ([14]) identified several issues in the Danish system combatting money launder and terrorism financing in their report of

([14]) The Financial Action Task Force was created in 1989 by the G7 and entrusted to set global standards and recommendations. These standards and recommendations cover AML rules for financial and other entities to be enforced by public authorities. They also cover the proper criminalisation and prosecution of money laundering.

2017 (FATF, 2017). ([15]) On 19 September 2018, Denmark adopted a new anti-money-laundering package encompassing a national strategy, and additional measures to fight money laundering and combat terrorism financing. The new measures introduce significantly higher fines and aim at establishing better coordination between the different national institutions. The measures also aim to improve cross-border cooperation and provide significant additional staff for the national competent authorities. The 2019 national budget allocated additional resources to strengthen the anti-money laundering framework. On 21 November 2018, Financial Action Task Force upgraded Denmark on ten of the 40 recommendations because of its progress in strengthening the framework to tackle money laundering and terrorist financing. The Danish authorities are planning further efforts to enhance compliance by transposing in full the 4th Anti-Money Laundering Directive and the early transposition of the 5th Anti-Money Laundering Directive.

([15]) These included a missing anti-money laundering strategy, non-coordination of related objectives and activities of competent authorities, the need to improve the national risk assessment methodology in input and scope, the lack of comprehensive statistics relevant for the effectiveness of the anti-money laundering system, the lack of sufficient human resources, and concerns that suspicious transaction reports electronically submitted through the goAML system are not integrated with other anti-money laundering databases.

3.3. EMPLOYMENT, EDUCATION AND SOCIAL POLICIES

3.3.1. EMPLOYMENT DEVELOPMENTS

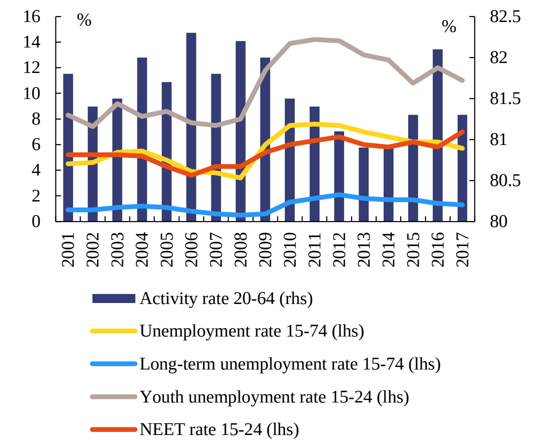
Despite a temporary slowdown in economic growth in 2018, the Danish labour market continues to perform well. The employment rate remained relatively high at 76.9 % in 2017, above the EU average of 72.1 %. Despite a slight decline from 2016 to 2017 by 0.5 percentage points (pps), Denmark's Europe 2020 employment rate target of 80 % remains within reach. ([16]) Nevertheless, firms are facing challenges in recruiting certain types of workers, while a section of the population (such as young people, migrants, homeless people and people with disabilities, mental issues or drug-problems) remains on the margin of the labour market.

Unemployment continues to decrease, including among the young people, while the not in Education, Employment, or Training (NEET) rate for those aged 15-24 increased in 2017. The unemployment rate has gradually declined to 5.7 % in 2017, the lowest level since 2008 and well below the EU average of 7.6 %. Long-term unemployment dropped to 1.3 %, among the lowest in the EU, and youth unemployment fell from 12.0 % to 11.0 %. At the same time, the NEET rate (among those aged 15-24) increased from 5.8 % in 2016 to 7.0 % in 2017. The overall activity rate declined from 80 % in 2016 to 78.8 % in 2017, but remains 5.4 pps above the EU average and below the pre-crisis level. The activity rate for men (81.5 %) remains above that of women (76.1 %).

Firms continue to report labour shortages, particularly for skilled workers. The share of businesses reporting labour shortages has gradually increased in recent years, rising to 13.5 % in 2017, but has not yet reached its pre-crisis level. Shortages are stronger in the construction sector (24.4 % in 2017) but are also reported in services (13.3 %) and the industrial sector (7.6 %). In addition, approximately 60 % of the small and medium-sized enterprises reported recruitment challenges concerning information and communication technology specialist skills. Although this share has fallen slightly compared to 2018, the EU average is significantly lower (52 % in 2018).

Despite the lack of skilled workers, the labour force has increased due to significant inflows of foreign workers and older workers staying longer in the labour market. Between 2009 and 2017, the employment rate of people aged 55-64 increased by 10.7 pps, reaching 68.9 % thanks to reforms that have delayed the age of retirement and reduced early retirement. The number of foreign workers has increased in recent years. Foreign workers accounted for 9.2 % of the total employed in July 2018. From June 2015 to July 2018, out of the total increase in employment nearly half came from foreign workers.

Graph 3.3.1: **Labour market developments**



Source: Eurostat

Increasing the number of graduates from vocational education and training (VET) programmes is crucial for ensuring a sufficient supply of skilled workers, but participation rates remain low. In 2018, around 19.4 % of young people started a vocational education and training programme directly after compulsory schooling, which is significantly below the national 2025 target of 30 %. The 2014 vocational education and training reform strengthened entry requirements, but did not increase participation rates as intended. On the positive side, the dropout rate decreased from 24.4 % in 2014 to 18.5 % in 2017. To respond to the lack of apprenticeship places, firms committed to establish an additional 8 000-10 000 places by 2025, as part of a tripartite agreement reached in 2016. Since 2016, around. 2 100 additional apprenticeship places have been established (Confederation of Danish Employers,

[16] Employment statistics for Denmark present a break in series in 2017 and 2016 (Statistics Denmark, 2017)

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

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

SOCIAL SCOREBOARD FOR DENMARK		
Equal opportunities and access to the labour market	Early leavers from education and training (% of population aged 18-24)	To watch
	Gender employment gap	Better than average
	Income quintile ratio (S80/S20)	Better than average
	At risk of poverty or social exclusion (in %)	Good but to monitor
	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)	Good but to monitor
	Unemployment rate (% population aged 15-74)	On average
	Long-term unemployment (% population aged 15-74)	Better than average
	GDHI per capita growth	Better than average
	Net earnings of a full-time single worker earning AW	Better than average
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	Best performers
	Self-reported unmet need for medical care	Better than average
	Individuals' level of digital skills	Good but to monitor

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

Denmark performs well on the indicators of the Social Scoreboard supporting the European Pillar of Social. This is reflected in Denmark's advanced welfare model, social protection system, well-established social dialogue, and focus on active labour-market policies. Employment rates are relatively high and long-term unemployment is among the lowest in the EU. The risk of poverty or social exclusion is low, especially for elderly people, and the impact of social transfers on poverty reduction is high, which reflects an efficient redistribution of resources.

In spite of the overall strong labour market performance, young people appear to face challenges. The share of early leavers from education and training (ages 18-24) has increased from 7.2 % in 2016 to 8.8 % in 2017, but it remains below the EU average (10.6 % in 2017). Male students leave school early nearly twice as often as female students (11.3 % vs 6.2 %). At the same time, the NEET rate (for those aged 15-24) rose from 5.8 % to 7 % in the same period.

Despite a relatively weak labour market integration of non-EU born, the employment rate of those who have arrived recently (within the last five years), is above the EU average (58.7 % vs. 46.4 % in 2017). Denmark has introduced a series of policy measures since September 2015, aimed at reducing the number of asylum seekers and improving the labour market integration of recently arrived refugees. The labour market measures, which focus on early intervention and assessing individuals' skills, and appear to be working as intended. In particular, the two-year 'basic integration education' (IGU) programme for those who have resided less than five years in Denmark, has shown positive results. The programme combines work and education (Danish language lessons and professional/vocational courses). By October 2018 around 1 600 IGU contracts had been signed, but the dropout rates are relatively high (approximately 36 %), which appears to be partly linked to refugees entering into ordinary work.

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

2018). Furthermore, in November 2018 the government decided to increase investments in the vocational education and training system by DKK 2.3 billion over the period 2019-2023. Some of this money will be spent on introducing compulsory vocational education and training related subjects and exams in lower secondary school and on improving student counselling (Ministry of Education, 2018a).

While employment rates for recently arrived ([17]) non-EU born residents is relatively high, the situation of those who have resided in Denmark for longer remains a challenge. In 2017, the employment rate for all non-EU born residents (both those recently arrived and those who have resided in Denmark longer) fell to 61 %, which is 18 pps below the employment rate of natives. This is one of the widest gaps in the EU and it has worsened since 2008. Non-EU born women experience an even stronger disadvantage, with an employment rate of 55.1 % in 2017, 21.1 pps below the rate for native women. At the same time, people born outside EU represented 18.4 % of the unemployed and 17.3 % of the inactive population in 2017. One reason for the unfavourable labour market situation of this group is the relatively high share of low-educated people within it (OECD, 2018a) ([18]). However, even when accounting for differences in education levels, age and gender ([19]), the labour market performance of migrants remains worse than that of natives (with an adjusted employment probability that is 6 pps lower). ([20]) Beyond employment, non-EU born migrants also face higher risks of in-work poverty and over-qualification.

Native-born persons with a migrant background also experience greater difficulties in labour market integration. Among native-born people with two foreign-born parents, the employment rate stood at 58 % in 2016, 18 pps lower than that of native-born people with a native background (76 %). This gap, which may be related to lower education outcomes, is among the largest in the EU and has not improved much over the last ten years. Other factors causing this gap include early tracking in education fields with limited possibilities for good transitions to the labour market; the lack of networks and role models; and limited access to jobs in the public sector (OECD, 2018a and OECD, 2015b). A number of measures aim to promote employment of young people with a migrant background in the public sector. These measures include equity benchmarking at municipal level (e.g. target setting, regular monitoring of employment statistics, and small financial incentives, see OECD, 2015b). However, there is no evidence that such policies have a substantial impact.

In 2016, the share of self-employed people in Denmark was 8 %, the lowest in the EU (where an average of 14 % are self-employed). While workers in non-standard forms of employment generally face higher risks of being excluded from social protection schemes, Denmark is among those EU Member States paying particular attention to the greater diversity in the forms of work (European Commission 2018d). The access of 'non-standard' and atypical workers to unemployment insurance depends on whether they are covered by collective agreements (approximately 80 % of all employees are). In 2017, Denmark established a voluntary unemployment insurance scheme for the self-employed, aiming at improving coverage for new and combined forms of employment. In October 2018 the approach was further harmonised such that self-employed, 'non-standard' and other atypical workers will – to a large extent – be given equal status to those in traditional employment (STAR, 2018). Among other changes, the calculation of an individual's unemployment benefit no longer distinguishes between income sources. To adjust to the new types of work arrangements, the allowance now takes into account all sources of income, including income earned from self-employment or atypical work.

The proportion of the workforce specialising in information and communication technology (ICT) (4.4 %) has been stable over recent years. Around 71 % of the population have at least basic digital skills, which is well above the EU average

([17]) Less than five years.
([18]) Latest data available. See OECD-EU Settling in 2018, forthcoming, based on 1/1/2017 Danish register data. According to Eurostat, the share of non-EU born residents (aged 25-54) with a low level of education was 26.7 % in 2017 compared to 19.0 % for natives. However, it was down from 30.2 % in 2012 (however, there was a break in the data series so it is difficult to interpret).
([19]) OECD (2014) IMO. Note: literacy level as measured by PIAAC (2012).
([20]) This OECD estimate was based on PIAAC and for all foreign born (not only non-EU born).

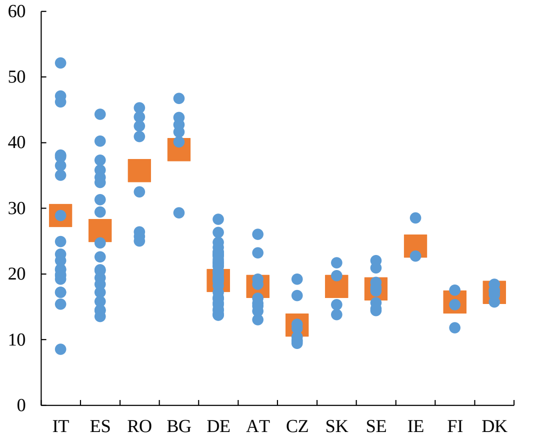
of 57 %. This proportion has, however, decreased from 78 % in 2017, which is also highlighted in the Social Scoreboard accompanying the European Pillar of Social Rights. The 'Disruption Council', established in 2017 to adapt the labour market to the collaborative economy and the spread of digitisation, is expected to develop a set of recommendations by February 2019. These recommendations will promote ways for digitisation and artificial intelligence to improve welfare and prepare the labour market for the potential losses of some traditional jobs.

3.3.2. SOCIAL POLICY AND INCLUSION

Poverty and income inequality remain low. The share of the population at risk of poverty or social inclusion (AROPE) is relatively low, but it has not yet returned to pre-crisis levels. In 2017, the AROPE rate stood at 17.2 %, a slight increase of 0.4 pps, due to rising monetary poverty and an increase in the population experiencing severe material deprivation. Men have a slightly higher risk of poverty or social exclusion (17.8 %) than women (16.6 %). Graph 3.3.2 shows that regional disparities in the AROPE rate are among the lowest in the EU. For people above the age of 65, the AROPE rate has decreased in recent years and is almost half that of the EU average (9.5 % vs 18.1 % in 2017). In addition, the number of persons living in households with very low work intensity fell by almost 30 000. However, the gap between this number and the national Europe 2020 target is far from being closed. ([21])

The population at risk of poverty or social inclusion rate for foreign-born adults is 38.1 %, which is more than double the rate for those born in Denmark (16.3 %). It is also above the EU average of 35 %. The situation remains particularly unfavourable for those born outside the EU, 42.1 % of whom were at risk of poverty or social exclusion in 2017, an increase of 10.7 pps compared to 2014. And while median household incomes for those born in Denmark have been increasing steadily since the end of the crisis years, median household incomes have remained flat for foreign-born residents since 2012.

Graph 3.3.2: **People at risk of poverty or social exclusion by country and regions, sorted by range**



(1) Data not available for every NUTS2 region for every country. The table only includes countries where more 2 or more regions (NUTS 2) have data on people at risk of poverty and social exclusion.
Source: Eurostat

Denmark is progressing on some of the ten social mobility goals drawn up in May 2016, which aim at strengthening the focus and emphasis of social policy. Some positive results can be seen in the decline in the crime rates among marginalised young people, and in the increase in the share of adults who successfully complete an alcohol rehabilitation programme. On the other hand, the proportion of young people completing an upper secondary education programme decreased from 2014 to 2016 (Ministry of Children and Social Affairs, 2018a). Overall, the improved economic and labour market situation has not resulted in significant changes to the social situation.

A proposal from October 2018 aims to increase employment among people with disabilities. The 2025 target is for13 000 people with a significant disability to find employment, either in ordinary work or in 'flexjobs' (Ministry of Employment, 2018a). Funding of DKK 120 million will be distributed over four key priorities: reducing bureaucracy and smoothing the transition to employment; targeted efforts to encourage more people with a disability into employment; improved possibilities for training; and improving knowledge of disabilities and reducing prejudice.

([21]) The national Europe 2020 target is to reduce the number of persons in very low work intensity households by 22 000 by 2020, based on a reference point of the 2008 value of 347 000.

In 2017, approximately one third of people with a disability were in employment.

The adequacy of minimum income benefits is high, and recently introduced changes to require beneficiaries of welfare benefits to find employment appear to be working as intended. Benefits for a single person represented 87.1 % of the poverty threshold, and 76 % of the income of a low wage earner in 2016, one of the highest adequacy levels in the EU. ([22]) This is also supported by universal access to social services. ([23]) Recent initiatives aimed at increasing work incentives appear to have worked as intended. The number of social assistance recipients decreased by 20 % between April 2016 and September 2018, corresponding to 31 100 full-time persons (seasonally adjusted) (Ministry of Employment 2018b). It is, however, unclear to what extent this positive trend is related to incentives to 'make-work-pay' ([24]), or rather is reflective of increasing economic activity and job creation. For unemployment benefits, Denmark ranks above the EU average for indicators related to coverage, adequacy and net replacement rate. The maximum duration of benefits for persons with a one-year work record, two years, is among the longest in the EU. ([25])

([22]) Calculated using OECD and Eurostat data as part of the Benchmarking Framework on Minimum Incomes conducted within the SPC Committee. The at-risk-of-poverty threshold used here is the one agreed upon at EU level. It is calculated separately for each country and is set at 60 % of the median of the total national household equivalised income. For details, see draft Joint Employment Report 2019, COM(2019) 761 final.

([23]) In 2017, Denmark had the smallest gap in unmet needs for medication examination between working age adults at risk of poverty and in very low work intensity households and those not at risk of poverty nor in very low work intensity (VLWI) households was the smallest in the EU. Additionally, Denmark has one of the lowest gaps between these two groups in non-participation in training related to professional activity. While the gap in the housing cost overburden rate is highest in the EU, this may relate to the large number of student households and may not accurately reflect the position of minimum income beneficiaries.

([24]) This includes the ceiling on social assistance benefits (2016), the 225-work requirement (2016) and the introduction of lower benefits (2015) for recently arrived refugees.

([25]) According to the benchmarking exercise in the area of unemployment benefits and active labour market policies conducted within the EMCO Committee. See the draft Joint Employment Report 2019 for details.

3.3.3. INTEGRATION POLICY

In recent years, a number of policy initiatives aimed at discouraging new migrants from entering Denmark while improving the integration outcomes for those that did. These changes include tightening the access to social benefits and the requirements for obtaining a permanent residence permit. Other initiatives aimed at improving the integration outcomes, such as financial incentives for language students through a compulsory deposit (supported by a bonus, which is however limited to six months since 2018). There has been a marked decline in the number of asylum claims as well as family migration to Denmark over the last few years. The Danish government proposed a "No-Ghetto" plan based on 22 initiatives including compulsory childcare for children in vulnerable neighbourhoods, Danish language test in preschool class (grade 0) and better allocation of children with a migrant background in secondary schools (Regeringen, 2018). However as the bill has not yet been adopted, its impact cannot yet be measured.

The two-year fast-track Basic Integration Education (IGU) programme for recently arrived migrants and refugees ([26]) is set to be prolonged. It was introduced in 2016 as part of a tripartite agreement and combines language classes, apprenticeships and vocational education for recently arrived migrants and refugees between 18-39 years. Participants receive a wage according to the sector-specific collective agreements and companies that recruit participants upon the completion of an IGU apprenticeship receive a cash bonus. Despite relatively high dropout rates, which are partly due to participants entering into ordinary work or continued education, the IGU programme shows positive first-hand results. The number of participants is increasing and companies report a high degree of satisfaction with the scheme. This has resulted in a positive attitude among the social partners in regards to prolonging the IGU programme.

([26]) Maximum five years of residence in Denmark.

3.3.4. EDUCATION

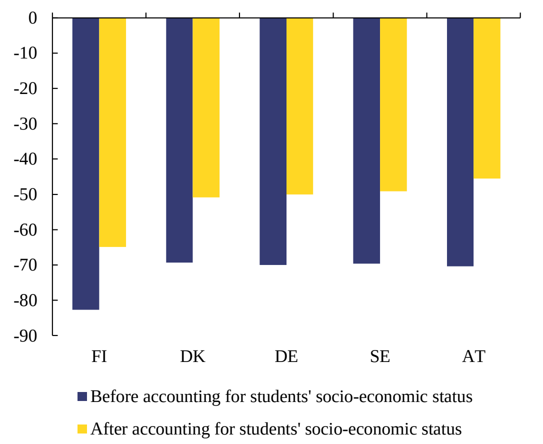
Despite recent budget cuts, Denmark continues to be among the EU countries with the highest education spending as a percentage of GDP. Education spending amounted to 6.6 % of GDP in 2017, a significant part of which is related to the student grant system at tertiary level. General government expenditure on education remained broadly unchanged at DKK 142 billion (EUR 19 billion)... Denmark spends 1.3 % of GDP in early childhood education and care compared to 2 % in Sweden.

The Danish education system is performing well, with educational outcomes above the EU average, but the early school-leaving rate increased to 8.8 % in 2017. Boys tend to leave school early nearly twice as often compared to girls (11.3 % vs 6.2 %), which is one of the highest gender gaps for early school leaving in the EU. However, the early-school leaving rate of students from a migrant and socially disadvantaged background is a concern, in particular for second-generation migrants (Greve and Krassel, 2017) ([27]) who do not seem to catch up (European Commission, 2018c). The gap in the dropout rate between foreign-born and native-born children amounts only to 0.5 pps (8.8 % compared to 9.3 %), one of the narrowest gaps in the EU.

Participation in early childhood education and care is nearly universal. The system covers almost all children above the age of four (98.1 %), but conditions vary between the municipalities. Further improving participation and quality may contribute to reducing the gender gap in school dropout rates, as well as to narrowing the educational outcome gap between young people from a migrant background and young people not from a migrant background. In a new initiative for 2019 called '*The first 1 000 days of a child*' the government proposes to invest DKK 1 billion in measures to improve the quality of early childhood education and care. This will be spent on support of municipalities to employ more trained pedagogical assistants, continuous training of staff and direct support to the most vulnerable families (Ministry of Children and Social Affairs, 2018b).

The educational outcomes of pupils with a migrant background remain a key challenge. At the same time, foreign-born children show relatively high participation in early childhood education and care compared to other EU countries. Pupils at the age of 15 with a migrant background are 3.4 times more likely to under-achieve in science, compared to those without a migrant background (European Commission 2018c). This underachievement remains even after accounting for the social economic background. This suggests that the performance gap between foreign-born children and native born children is less significant for younger children, while it increases during primary and lower secondary school.

Graph 3.3.3: **PISA score gap in science between, immigrant and non-immigrant students**



Source: OECD PISA 2015

In January 2019, the government reached agreement on a reform package, fine-tuning the 2014 reform of the primary and lower secondary school system (Folkeskolen). It increases the number of lessons in subjects such as art, history and foreign languages and provides for the introduction of more practical subjects, such as craftsmanship. The reform package will also reduce the length of the school day and the share

([27]) In PISA 2015 the proportion of low achievers in science was 0.9 pps. lower than in 2012. However, this was still much higher in 2015 for foreign-born (28.2 %) than for native students (14.8 %). 23.5 % of foreign-born students in mathematics and 25.6 % in reading were low achievers, in both cases a gap of around 11 pps relative to native-born students. This shows a substantial narrowing of the gap in mathematics between 2012 and 2015, but little progress in reading. The mean performance in science of migrant students in 2015 trailed 69 points behind non-migrant students.

of insufficiently qualified teachers while giving more autonomy to individual schools.

The share of tertiary graduates has increased, but the share of science, technology, engineering and mathematics (STEM) graduates remains low. The tertiary attainment rate increased to 48.8 % in 2017, but the share of graduates in engineering and manufacturing remains below the EU average, although it is slightly higher than the EU average in information and communication technology. Female tertiary attainment is 11.8 pps, above the EU average, and similar to other Nordic countries.

The employment rate of tertiary graduates remains high (83.8 %), 3.6 pps above the EU average. In 2018, the government proposed a new strategy for higher education, the main purpose of which was to help students to work during their studies or between a bachelor's and master's degree. The number of bachelor's degree programmes has been reduced and their content broadened to better prepare students for the demands of the future labour market. Computer science has been included in some study programmes, and the promotion of science, technology, engineering and mathematics related subjects has been intensified in secondary education.

To meet future labour market demands, new digital specialisations are provided by technical upper secondary and vocational education and training institutions. These include topics such as 'technology and programming', 'renewable energy sources', 'natural gas transmission and distribution' and 'floriculture and landscape architecture'. The government has established the Centre for the Application of IT in Teaching in Vocational Education. This centre will collect and disseminate experience and knowledge on the use of IT and technology in teaching to benefit both students and teachers. The centre will work in close collaboration with researchers from Danish universities to ensure the creation of a new knowledge base in the area of IT in teaching.

Participation in lifelong learning (26.8 % in 2017) is well above the EU average (10.9 %). Participation rates are significantly higher for women (31.4 %) than for men (22.3 %). Furthermore, the share of low-qualified (17.3 %) and unemployed (27.9 %) people participating in adult learning is significantly higher than the EU average (4.3 % and 10.1 %, respectively).

3.3.5. HEALTH POLICY

Denmark has a well-performing health system, and remains among the Member States with the highest spending on health (10.2 % of GDP) and long-term care (2.5 % of GDP). Life expectancy is around the EU average (80.9 years), but there is a significant gender gap of four years. Furthermore, the number of healthy years remains below the EU average, which appears to be linked to lifestyle factors ([28]), affecting the low-educated in particular. ([29]) The vast majority of medical cases are handled by general practitioners without referral to further examination and treatment. Spending on hospital healthcare is relatively high (44 % of healthcare spending).

The self-reported unmet need for medical care is relatively low, as highlighted in the Social Scoreboard accompanying the European Pillar of Social Rights, but there are some challenges related to the healthcare workforce. Around 70 % of all general practitioners are no longer able to accept new patients, and this leads to rates of avoidable hospital admissions for certain conditions (which can be treated at the level of general practitioners) that are higher than the EU average. A government proposal from January 2019 aims to increase the number of general practitioners and improve patients' access to primary healthcare. The relatively low share of specialist practitioners and relatively high share of doctors are also challenges. Moreover, as the population ages, nurses will need to take on more chronic disease management and health promotion activities. It also appears to be a challenge to coordinate between hospitals (which are managed at the regional level) and primary healthcare (which is organised by the municipalities). This may result in waiting times and uncertainty for patients.

([28]) Over 30 % of the overall disease burden could be attributed to behavioural risk factors, IHME, 2016.
([29]) Smoking rates are more than double and obesity twice as prevalent among people with the lowest level of education.

In January 2019, the government proposed a major structural health reform based on the principle of proximity, implying that patients must be treated closer to their place of residence, by, among other things, reducing the number of hospital consultations by 500 000 and the number of hospital admissions by 40 000 by 2025. The reform also aims to re-structure the financial management of the health system by closing down the regional councils.

Denmark ranks as one of the front-runners in the deployment of e-health. IT systems in hospitals and general practices are well developed. There is also good digital communication between healthcare sectors. A new national strategy for digital health from 2018, the digital health strategy 2018-2022, focuses on digitisation and the use of health data for prevention and care. The strategy will complement the 2013-2020 assisted living strategy.

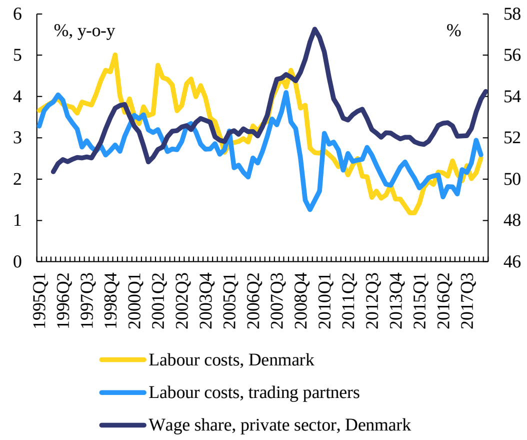
Continuous investments in skills, education and training are important for sustaining Denmark's long-term inclusive growth. Labour shortages, in particular of skilled workers, are a key obstacle to business investment. This underlines the need to prioritise continuous investment in education and training, in particular in vocational education and training (VET), adult- and lifelong learning. This upskilling concerns both those in employment and people who are currently outside the labour market.

3.4. COMPETITIVENESS REFORMS AND INVESTMENT

3.4.1. EXTERNAL POSITION AND COMPETITIVENESS

The external position of the Danish economy indicates strong competitiveness. Pressure on competitiveness indicators is building. Nominal wage growth has been moderate despite the gradual closing of the negative output gap. Inflation and effective exchange rates point to stable external price competitiveness (see Section 1), but increasing globalisation and the low inflation environment makes conventional competitiveness more difficult to interpret. Over the long-term, however, nominal wage growth should develop in line with inflation and productivity. In Denmark, wages have grown more than inflation and productivity in the recent past. This has brought the wage share of the private sector back to levels observed in the years before the crisis when imbalances were building up (Graph 3.4.1).

Graph 3.4.1: **Labour costs and wage share**

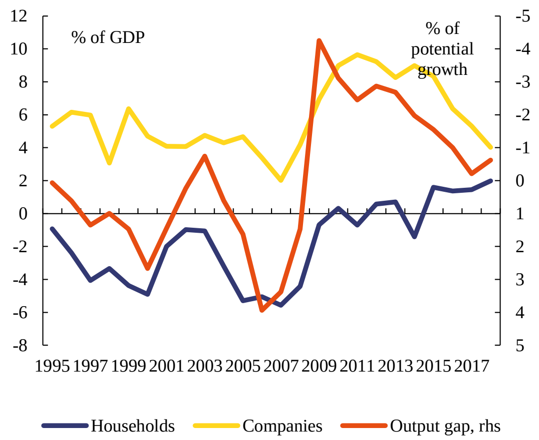


Source: European Commission and Danmarks Nationalbank

While the current account surplus has decreased, it remains well above the level warranted by economic fundamentals supported by high household savings. The current account norm is the value of the current account that should be observed on the basis of a country's fundamental characteristics. ([30]) Since 2008, the current account norm and the actual current account have diverged. Households have driven this change. Seen over a longer time period, households' net lending balance has been countercyclical. However, recent years have seen a gradual increase in the net lending balance of households, despite a gradual closing of the negative output gap (Graph 3.4.2). Increased household savings reflect households' efforts to reduce debt, and have more than offset increasing household investment, which is largely residential investment.

The external position of the economy is supported by large Danish multinational companies producing and selling goods abroad. Danish companies retain ownership of the intellectual property and control of sales to customers. Since the companies own the produced goods, the sales of these goods are recorded as exports and the purchase of factor input is recorded as imports. Net exports stemming from production and sales abroad have gradually gained importance and amounted to 2.5 % of GDP in 2018.

Graph 3.4.2: **Private sector net lending balance and output gap**



Source: European Commission

Productivity and investment developments

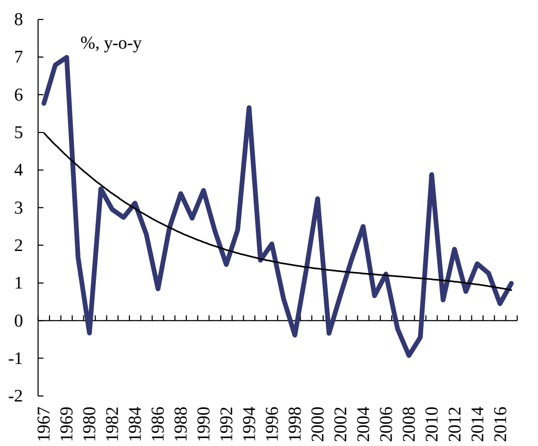
Investment in the education system, R&D and transport infrastructure is key to boost productivity growth. Maintaining the high level of investment in education will allow Denmark to face the challenges of a changing labour market. Labour shortages are increasing and companies report that the lack of skilled workers is the main

([30]) The current account 'norm' benchmark is derived from reduced-form regressions capturing the main fundamental determinants of the saving-investment balance (e.g. demographics, resources), as well as policy factors and global financial conditions. See also European Commission (2017c).

investment barrier. This underlines the need to prioritise investment in vocational education and training, adult- and lifelong learning (see Section 3.3). Despite the high overall R&D level, the concentration of R&D activities in a small number of large firms calls for R&D capacity building within small and medium-sized enterprises. Finally, road congestion around larger cities, combined with the need to decarbonise the transport sector, point to investment opportunities in transport infrastructure.

Denmark's productivity growth has slowed down in recent decades (Graph 3.4.3). This is broadly in line with the EU as a whole (European Commission, 2018d). Sectoral productivity developments have been mixed. Manufacturing productivity growth has been relatively strong, while productivity growth has been much weaker in the services sector. Domestically oriented services sectors in particular have shown weak productivity growth.

Graph 3.4.3: **Productivity growth**



Source: Statistics Denmark

The production and sale of goods abroad has boosted productivity growth at the economy wide level, masking weak productivity gains in the non-tradable sectors. Value added from producing and selling goods abroad makes up net exports, and this is normally associated with little employment. Knudsen (2018) shows that productivity in the manufacturing sector rose by an average of 3 % annually from 2005 to 2017. However, when companies producing and selling goods abroad are excluded, productivity in manufacturing only grew on average by 2 % annually over the same period. At the economy wide level, increasing production and sales abroad in the manufacturing sector have boosted annual productivity growth on average by 0.2 percentage points (pps) per year. This highlights not only the relatively strong productivity growth in the tradable sector, but also the weaker productivity growth of companies oriented towards domestic sectors.

Investment has continued its upward trend. Since its ten-year low at 18.1 % of GDP in 2010, investment has increased faster than in the EU as a whole. Greater investments in construction, transport equipment and information and communication technology products were the main drivers of this increase. Investment in intellectual property products, which accounts for a quarter of total investment, is still at a high level in Denmark.

The availability of skilled staff is the main investment barrier for firms in Denmark, according to the EIB investment survey (European Investment Bank, 2018). In 2018, all sectors reported the lack of skilled staff as the most significant investment barrier. It was the most significant barrier for 71 % of firms in the services sector and for 92 % of companies in the construction sector (total economy: 76 %). For most sectors, uncertainty about the future was the second largest investment barrier. Only firms in the construction sector mentioned labour regulations as being the second biggest barrier (59 % of firms). Other factors, e.g. business regulations or demand, are less significant for most companies.

Research, innovation and digitisation

Denmark acknowledges the significant role of research & innovation (R&I) investments as growth enablers. Denmark had one of highest research and development (R&D) intensities in the EU in 2017. At 3.1 % of GDP, it has already reached the 2020 target of 3 % of GDP. However, R&D intensity has stagnated since 2009, mostly due to a decrease in business expenditure on R&D as a percent of GDP (BERD) (although R&D intensity is still high compared to other EU Member States. The pharmaceutical and biotechnology sectors remain the clear leaders in R&D spending in Denmark due to the presence of leading global pharmaceutical companies. As part of the government's political agreement on business and entrepreneurial activities from 2017, corporate income tax deductions for BERD investments will gradually increase from 100 % to 110 % as of 2026.

Innovation is concentrated in a relatively small number of large enterprises. Although Denmark is an innovation leader overall according to the *European Innovation Scoreboard (EIS) 2018*, this is due to investment in R&D by a few very large businesses. Business expenditure in R&D (BERD) in small and medium-sized enterprises as a percentage of GDP slightly declined between 2007 and 2015 but remains among the highest in the EU despite Denmark's below-EU-average public support for BERD i.e. direct government support and R&D tax incentives (OECD, 2018b). However, about 70 % of business R&D is performed by the top 50 R&D performers in the country which is a high percentage in the OECD context (OECD, 2017). This may indicate that there is a need to foster spillovers from large companies to small and medium-sized enterprises. In addition, the share of small and medium-sized enterprises introducing product or process innovation is declining. Sales of new-to-market and new-to-firm innovations is now below the European average. There is therefore a need to further build up capacities in small and medium-sized enterprises to internalise external knowledge and new technologies.

Over the last decade, a process of structural change towards high-technology sectors has taken place in Denmark. The joint contribution of high-tech manufacturing, medium-high-tech manufacturing and knowledge-intensive services to gross value added (GVA) increased between 2007 and 2016 and corresponds to more than half of Denmark's GVA. In particular, the value added from high-tech manufacturing increased by almost 10 % in the last ten years.

The public science base is characterised by its high quality and increasing openness. In 2016, Denmark outperformed other EU member states in international scientific collaboration when measured by co-publications per capita of population. On scientific excellence, the country ranks third in the EU in highly scientific publications in the top 10 % of citations (2014-2017) as well as in the number of universities in the 2017 Shanghai ranking per million of population. Through its 2017 strategy for R&I, *Denmark: Ready to seize future opportunities*, the government wants to further boost the quality of Danish research to meet the highest international standards while aligning research with pressing societal challenges. One example is the 'pioneer centre' initiative aiming at ground breaking basic research.

Increasing the efficiency of the R&I system to boost overall productivity is a priority. Despite being a top R&D investor in the EU, Denmark's scientific excellence has rarely materialised into ground-breaking innovation. Denmark ranks only 13th in employment in fast-growing enterprises in innovative sectors and the share of high-growth firms is below the EU average. Reinforcing the entrepreneurial ecosystem by helping small and medium-sized enterprises to access advanced business support could boost employment in fast-growing enterprises. At the same time, co-operation on internationalisation and interregional clusters could also be encouraged. Moreover, since disruptive innovators depend greatly on risk financing, the fact that venture capital as a percentage of GDP decreased between 2007 and 2016 constrains the scaling-up of innovative companies. The Danish government has requested a peer review under the Horizon 2020 policy support facility to look into ways to support ' world-class knowledge-based innovation' focusing on knowledge-based technological services for businesses, collaboration, and networks and knowledge-based entrepreneurship.

Denmark has taken steps towards smart specialisation. Although Denmark has no formal smart specialisation strategy, a number of strategies, including the government's growth plans and the regional growth strategies, are oriented towards smart specialisation. In particular, the regional growth fora coordinate and ensure synergies between the Danish government's growth strategy and specific regional strengths. Moreover, Denmark takes part in the activities of the smart specialisation platform.

Denmark is positioned high in the EU in the use of digital technologies by enterprises (61 % in 2017). Nevertheless, the authorities aim to further strengthen the digitisation and e-commerce through its digital growth strategy. One of the initiatives is the small and medium-sized enterprises*: Digital* that provides grants to help clarify how the company can be digitised and to identify the economic and business potential. The initiative also aims at improving the use of e-commerce by small and medium-sized enterprises. Only 31 % of Danish small and medium-sized enterprises sell online, while the percentage for large enterprises is almost double that (57 %).

Transition to a low-carbon economy

The Danish economy is among the most energy efficient in the EU. In 2017, the greenhouse gas intensity of the economy, defined as the ratio between greenhouse gas emissions and GDP, was considerably lower than the EU average. Only Sweden had a lower greenhouse gas intensity. Environmental goods and services contributed to the Danish economy with a gross value added of EUR 8.4 billion (0.5 % of GVA) in 2015, and employment in these sectors grew from 66 000 in 2012 (2.4 % of total employment) to almost 76 000 in 2015 (2.7 % of total employment).

While Denmark is on track to achieve its 2020 emissions reduction target for sectors not covered by the EU emissions trading system, stronger efforts will be needed to achieve the 2030 target of reducing emissions by 39 %. According to the latest projections based on the existing policies as of April 2018, emissions are expected to decrease by 24 % by 2030, i.e. 15 pps below target. However, in October 2018 the government presented its climate and air proposal, which includes new initiatives that can close parts of this gap. According to the Climate Council (Klimarådet, 2018), reducing emissions in Denmark sufficiently to reach the target could be accomplished at the same time as creating a net socio-economic benefit. For example, energy renovations of buildings or the conversion to heat pumps and solar heating are identified as investments that may contribute to significant emissions reductions at relatively low cost.

A cost-efficient transition towards a low-carbon society by 2050 requires a significant part of the transition to take place before 2030. Denmark aims to achieve net-zero emission by 2050. This will require a gradual transition throughout the period, as an accelerated transition over a shorter period of time would cause costs to rise. When planning for 2030, it will therefore be cost efficient to prioritise those aspects of transition, that also form part of the long-term vision. This includes in particular large changes that require new technology and long-term investments (Klimarådet, 2018).

Investing in reducing emissions and in limiting the risk of damage from climate change will reduce the costs of climate change mitigation and adaptation. Electricity consumption may increase as a result of electrification within heating and transport, and as a result of new activities. A study of the future for large data centres in Denmark showed, in a main scenario, that data centres could need 7 TWh of electricity in 2030, which corresponds to 20 % of current electricity consumption (COWI, 2018). Investments in new electricity generation are price sensitive and Danish projections showed that without continued support to renewables, new electricity generation could be based on coal rather than renewables (Energistyrelsen, 2018). In the Energy Agreement 2018, it was agreed that the government will open a tender for one off-shore wind park in 2019/2020 and will aim to establish another two off-shore wind parks by 2030. The Energy Agreement also plans to gradually reduce the number of on-shore wind turbines (Ministry of Energy, Utilities and Climate, 2018).

Climate-related events already have significant costs for Danish society. The direct cost of extreme weather has been estimated at EUR 10 billion over the period 1980-2016 (European Environment Agency, 2017). This is the highest per capita cost among the EU Member States. The national strategy for adaptation to climate change outlined 11 sectors in which climate impacts may be significant ([31]). The relevant ministries have developed sectoral adaptation strategies for transport, roads and coasts.

([31]) These sectors are coastal management, dikes, ports etc; buildings and infrastructure; water supply; energy supply; agriculture and forestry; fisheries; nature management; land use planning; health; rescue preparedness; insurance.

3.4.2. SINGLE MARKET INTEGRATION AND SERVICES SECTOR

Competition in services markets

Retail sector

Despite the recent reform of the Planning Law, retail establishment remains difficult in Denmark. According to the Commission's retail restrictiveness indicator (RRI) ([32]), Denmark is among the most restrictive Member States for retail establishment. Rules on shop location and size, the level of detail required in the local plans, and the requirement to provide economic data in the establishment process contribute to this score. At the same time, however, Denmark displays a very low level of restrictions on the daily operations of retailers. Denmark's average of consumer price levels in all product categories in 2017 was still the highest in the EU.

A new planning directive for retail establishment in the Capital region entered into force on 1 January 2019. The directive implements the rules set out in the revised Planning Act adopted in 2017, which has provided municipalities with more flexibility in taking local conditions into account in the planning process. Based on the Directive, some municipalities will be able to provide new areas for shops that cannot easily be established in city centres, such as large surface retail and shops selling bulky goods.. The areas will be reserved for non-food stores. Emphasis has been placed on achieving an appropriate balance between the need to create an efficient store structure and to maintain the existing store supply in the city centres. It will be important to ensure that the new planning regulations do not create undue market entry barriers.

Competition in the mortgage credit market

There is scope for improving competition in the Danish mortgage market. Increasing operational and capital costs cannot explain the sharp rise in the price of mortgage loans since 2009. It is unlikely that the observed increases in mark-ups could have taken place in a more competitive mortgage market. The preconditions for effective competition are not in place as the market is dominated by four mortgage providers. There are barriers to entry and expansion (regulatory and non-regulatory) and there are difficulties in establishing a competitive system of mortgage distribution (Danish Competition and Consumer Authority, 2017).

Measures have been implemented to increase competition in the mortgage credit market. In May 2018, a political agreement was reached to require home sales to involve the use of an online price comparison tool provided by the Danish Financial Supervisory Authority. As of January 2019, mortgage banks are also obliged to inform borrowers about the possibilities and risks of trading the covered bonds behind their loans themselves.

Logistics sector

The logistics sector is an important pillar of the Danish economy. Wholesale trade, which is closely linked to the logistics sector, has been identified as a particularly important sector in Denmark (Dachs et al., 2016). With a share of almost 12 % of total employment in the non-financial business sector, Denmark (after Greece with 13 %, EU: 8 %) stands out in the EU. Wholesale trade in Denmark is above the EU average in terms of turnover and value added.

The 'growth team' set up to examine the trade and logistics sector has handed over its final report. To address challenges related to increasing digitisation and changing consumption and production patterns, the government had asked a team of business representatives to come up with proposals on how to support and future-proof the sector in a growing digital world. In November 2018, this 'growth team' presented 24 proposals in three areas (i) how to foster growth and the digital transformation, (ii) how to create a national and international level playing field, and (iii) how to simplify everyday business (Ministry of Industry, Business and Financial Affairs, 2018b).

([32]) See the Commission's Communication "A European retail sector fit for the 21st century" COM(2018) 219 final, and in particular its Annex with the Retail Restrictiveness Indicator, as well as the accompanying Staff Working Document.

Collaborative economy

Denmark is implementing its recently launched strategy for the collaborative economy. A recent Eurobarometer survey (European Commission, 2018b) indicates that 26 % of respondents from Denmark (EU: 23 %) have used a service offered via collaborative platforms, most frequently in the transport and accommodation sectors. In May 2018, the government and several opposition parties reached an agreement on more attractive conditions for the collaborative economy. As part of the agreement, a one-stop-shop for companies has been established serving as a single point of contact providing information and guidance on rules. Moreover, the government wants to increase and simplify tax deductions for incomes generated from short-term accommodation rentals up to 70-100 nights per year (depending on the municipality) and the private hire of cars and boats, as long as these activities are intermediated by platforms that report the income generated to the tax authorities. The government thereby seeks to promote entrepreneurship and transparency and to facilitate tax compliance in the sector. This approach, recently implemented by follow-up legislation adopted in December 2018, seems therefore to incentive the development of the collaborative economy. Draft legislation on short-term rental of accommodation is also being discussed. These developments also benefitted from the work done by the Disruption Council.

Energy system

Denmark plays an active part in the cross-border trade of gas and electricity. However, domestic markets would benefit from increased competition. This issue of increased competition was addressed by the June 2018 political agreement to promote markets for ocean wind energy. Denmark's own gas production will be largely on hiatus during the Tyra field refurbishment scheduled for 2019-2022. While it has typically been a gas exporter, during this period Denmark will be fully relying on the market (and in particular on imports from Germany) to meet the demand from both Danish consumption and through-flow to the dependent Swedish market. At 50.6 %, Denmark has a level of electricity interconnection above the 10 % target for 2020. Following further progress, cross border flows between Denmark and Germany (DK1-DE) have increased in 2018.

Danish households continue to pay the highest electricity prices in the EU due to a high share of taxes and levies in the final energy bill. The reduction of the electricity tax provided for in the June 2018 political agreement will contribute to alleviate this concern. Furthermore, the Public Service Obligation (PSO) tax on electricity use is gradually being phased out towards 2022 leading to further decreases in the final consumer prices. The substantial decrease in wholesale electricity prices of 39.7 % between 2013 and 2015 has not translated into reductions in final consumer prices, which increased by 3.6 % in the same period for Danish households. High energy prices for households in Denmark are mostly due to the share of taxes in households' prices. This share of taxes is among the highest in the EU for both electricity and gas, and more than twice the share of the EU average (69.1 % in Denmark vs 32.6 % in the EU for electricity and 57.3 % in Denmark vs 27.2 % in the EU for gas in 2015).

In its National Energy and Climate Plan (NECP), to be adopted by 31 December 2019 in line with the Regulation on the Governance of the Energy Union and Climate Action([33]), Denmark will provide an overview of its investment needs until 2030 for the different dimensions of the Energy Union. Denmark submitted its draft NECP on 21 December 2018, which is to be assessed by the European Commission. The draft presents the prioritised budgets for the period 2018-2025, which amount to DKK 0.5 billion in 2019 and increases to DKK 2.8 billion in 2025. Priorities over the 2018-2025 period are identified as the reduction of taxes on electricity (DKK 5.5 billion), targeted energy saving effort (DKK 2.3 billion), renewable energy on market conditions (DKK 1.5 billion) and world class offshore wind (DKK 0.9 billion).

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

3.4.3. INFRASTRUCTURE

Transport sector

Denmark has high-quality roads, but congestion is increasingly a problem. In terms of road quality, Denmark ranks among the top five EU Member States (World Economic Forum, 2018) with its well-developed road network. Since 2008, the investment rate in road infrastructure has gradually increased to a level comparable with the EU average. Road congestion is, however, increasing, particularly around the large cities. Projections from the Ministry of Transport, Building and Housing (2018) suggest that in ten years' time car commuters will spend 150 % more time each year in congestion than they did in 2018.

Denmark has put forward plans to electrify the national railway network. While the total rail density in per capita terms is comparable with the EU average, the share of electrified rail currently ranks among the lowest in Europe, at 25 %. The ratio of electrified rail length to rail passenger kilometres in Denmark is among the lowest in the EU. Denmark ranks at the lower end of the euro area countries in the quality of railroad infrastructure in the Global Competitiveness Report (World Economic Forum, 2018). In June 2018, the Danish railway operator announced plans to electrify the national railway network, with broad support from parliament. According to the plan, the new electrified trains on the national network will be up and running in 2022.

Broadband

Denmark has maintained its high coverage of fixed broadband and next-generation access networks, which are available to 99 % and 95 % of homes, respectively (European Commission, 2018b). The have been improvements in upload capacity, in line with the aim of the Danish government action plan to ensure 100 % coverage of 30 Mbps upload speeds. However, next-generation access (NGA) networks in rural areas are only available to 66 % of households (Agency for Digitisation, 2016). This is clearly below the national figure of 95 %, but well above the EU average of 47 %. In mobile broadband, high take-up of 130 broadband subscriptions per 100 people (the EU average is 90 subscriptions per 100 people) and full 4G coverage (100 %) were reported. Denmark does not have a dedicated national broadband plan like some other EU Member States. Instead, it has a telecommunications agreement, which is a wide political agreement covering different areas such as broadband, 5G, access to frequencies, deployment funds, etc. In addition, the Innovation Fund Denmark has allocated funds to several major 5G projects involving universities, industry and operators.

To promote access outside urban areas, the government has committed to further enhance network quality in rural areas. For this reason, Denmark allocated DKK 290 million of public funds between 2016 and 2019. Municipalities mainly play a facilitating role in network deployment without providing direct financial contributions. The government is leading negotiations on a cross-party political agreement on rural broadband. Coverage in terms of NGA wireline networks, notably in underserved areas, is needed to realise the government's ambitions of fast broadband everywhere.

3.4.4. INSTITUTIONAL QUALITY AND GOVERNANCE

Business environment

Denmark offers a favourable business environment to companies. Remarkably, Denmark shows above-average results in seven out of ten areas measured under the European Union's small and medium-sized enterprise policy (European Commission, 2018e). The country's small and open economy is the EU's top performer in internationalisation of small companies, and it offers favourable conditions for doing business in the single market. Denmark has been successful in keeping administrative burden in check, ensuring that public administration is responsive to the needs of SMEs, and providing easy to use e-government facilities.

The reform of the business support system is an opportunity to build on current strengths. Since 1 January 2019, the structure of public business support has been re-organised in Denmark. The regional growth fora have been abolished, and their responsibilities have been divided between local authorities and a new state actor, the

Business Support Board. With the new board responsible for setting an overall strategy, it is important that this strategy builds on the work done in the regional smart specialisation strategies. A new national business support strategy is planned to facilitate better coordination and synergy between different initiatives and funding sources.

Denmark's policymaking process is inclusive and stakeholders feel that their concerns are being heard. The Danish government has pursued regulatory reform for years, and has a strong track record in collaboratively working with business stakeholders (OECD, 2018c). Much of this progress made in recent years is thanks to the Business Forum, which highlights areas where SMEs experience unnecessary and burdensome legislation.

Digital public services

The initiatives in the digital strategy for 2016-2020 have delivered the first results, strengthening Denmark's worldwide leading position in public service digitisation. 90 % of people submit official forms to administrative authorities electronically, well above the EU average (56 %), and Denmark is a frontrunner in making domestic and cross-border online public services for businesses. Denmark has also focused on developing a so-called eID gateway that will enable EU citizens to use their national eID to log into another EU country's digital self-service solutions.

Box 3.4.1: **Investment challenges and reforms in Denmark**

Macroeconomic perspective

At an estimated 21.7 % of GDP in 2018, aggregate investment in Denmark has risen above EU average levels. Public investment continues to remain high. Corporate investment is gaining momentum, reaching levels above its average for the past three decades. However, it remains broadly in line with the economic cycle. Moreover, household investment has picked up from low levels, supported by rising housing prices.

Assessment of barriers to investment and ongoing reforms

Overall, barriers to private investment in Denmark are moderate. In recent years, parliament has adopted reforms to liberalise retail planning and increase competition in the taxi sector. Building regulations have also been amended, making it easier to build. Recent initiatives also help to further foster cooperation between academia, business and the research community. However, private R&D expenditure remains concentrated in larger companies. In 2018, parliament adopted reforms to strengthen competition in the mortgage market, addressing concerns raised by the Competition Council. Denmark also implemented reforms to lower consumer prices for utilities.

Public administration/ Business environment	Regulatory/ administrative burden	
	Public administration	
	Public procurement /PPPs	
	Judicial system	
	Insolvency framework	
	Competition and regulatory framework	
Labour market/ Education	EPL & framework for labour contracts	
	Wages & wage setting	
	Education	

Financial Sector / Taxation	Taxation	
	Access to finance	
R&D&I	Cooperation between academia, research and business	
	Financing of R&D&I	
Sector specific regulation	Business services / Regulated professions	
	Retail	
	Construction	
	Digital Economy / Telecoms	
	Energy	
	Transport	

Legend:

	No barrier to investment identified
CSR	Investment barriers that are also subject to a CSR
	No progress
	Limited progress
	Some progress
	Substantial progress
	Fully addressed

Main barriers to investment and priority actions underway

1. The main barrier to investment is weak competition. In recent years, the government has also adopted measures to enhance competition in the retail, construction, taxi and mortgage credit sectors. Further reforms are needed to raise competition, particularly in domestically oriented services sectors.

2. The lack of skilled staff hampers investment for firms in Denmark, according to the EIB investment survey (EIB, 2018). While a number of recent labour market and education reforms seek to address this issue, it is also key to reduce the dropout rates of students and to incentivise them to choose vocational education and training (VET). Moreover, investment in research and innovation is concentrated in a number of larger companies. This suggests that it is important to broaden the innovation base to include more firms and to ensure innovation diffusion.

3. Denmark needs to invest in its transport infrastructure. The investment need is particularly high in the road infrastructure around Copenhagen, where congestion is already high and projected to increase. At the same time, there is a need to decarbonise the transport sector and reduce air pollution. Significant growth is projected in fast freight and passenger transport, and this is likely to put further pressure on transport systems. In 2018, Denmark adopted plans to electrify the national railway network. According to these plans, these new electrified trains will be running on the national network in 2022 (see Section 3.4).

The Danish Growth Fund and the Innovation Fund are the Danish state's investment funds. The Growth Fund supports and promotes growth for start-ups as well as for small and medium-sized enterprises. The Innovation Fund supports research and innovation projects. The funds contribute by providing capital and expertise. In 2017, the Danish Growth Fund supported more than 800 companies by providing capital amounting to DKK 2.5 billion (1.2 % of GDP) while the Innovation Fund provided funding amounting to DKK 1.2 billion (0.6 % of GDP).

ANNEX A: OVERVIEW TABLE

Commitments	Summary assessment (1)
2018 country-specific recommendations (CSRs)	
CSR 1: Increase competition in domestically oriented services sectors, for instance in the distribution of utilities and in the financial sector.	Denmark has made some progress in addressing CSR 1: In 2018, Denmark has implemented measures to enhance competition in the financial sector. Moreover, Denmark has continued its work with implementing the utilities strategy. Political agreements on measures in the water and sewage water sector were reached in October 2018.
Europe 2020 (national targets and progress)	
Employment rate target set in the NRP: 80 %.	76.9 % (2016) The employment rate has increased moderately, from 75.6 % in 2013 to 76.9 % in 2017. It remains, however, below pre-crisis levels (79.7 % in 2008). Denmark has adopted a series of active labour market reforms in recent years, aiming at increasing the incentives to work ('make work pay'). These measures are also expected to contribute closing the 3.1 percentage point gap from Denmark's national Europe 2020 employment target (80 %).
Research and development target set in the NRP: 3 % of GDP	3.1 % (2017) Research and development (R&D) intensity in Denmark has been above 3 % of GDP since 2015. In 2017, R&D intensity reached 3.1 % of GDP. Business R&D investments in the country account for around 2/3 of total R&D expenditure, while there is a political commitment to keep R&D intensity at least at 1 % of GDP.
Greenhouse gas emissions, national target: -20 % in 2020 compared to 2005 (in non-ETS sectors)	2020-target: -20 % Emissions in the sectors not covered by the Emissions Trading System (ETS) are expected to be 22 % lower in 2020 than in 2005, according to the latest national projections and taking into account existing measures. Denmark is therefore expected to achieve its 2020-target with a small

	margin. 2017 interim target: -13 % Emissions in 2017 were 19 % lower than in 2005, according to approximated data. The interim target was thereby achieved.
2020 renewable energy target: 30 %	35.8 % (2017) With a 35.8 % share of renewable energy in final energy consumption in 2017, Denmark is on track to meet its 2020 target of 30 %. Progress is most noticeable in electricity generation (biomass and wind energy) and in heating (largely biomass).
Energy efficiency, 2020 energy consumption targets: 17.38 Mtoe (primary energy consumption); 14.39 Mtoe (final energy consumption).	17.7 Mtoe of primary energy consumption (2017) Denmark increased its primary energy consumption by 2.41 % from 17.04 Mtoe in 2016 to 17.7 Mtoe in 2017. Final energy consumption increased by 1.2 % from 14. Mtoe in 2016 to 14.46Mtoe in 2017. After two consecutive years of increase in energy consumption, Denmark is above its indicative national 2020 target in terms of primary energy consumption (16.89 Mtoe). Final energy consumption has also increased but remains below its target, but only because Denmark also in 2018 changed the target to align it with a higher expected consumption. Denmark’s practice of updating its indicative targets so that they correspond to the level in the latest available baseline forecasts will by definition tend to narrow or eliminate any gaps between targets and actual energy consumption as 2020 gets closer. These gaps are therefore not the best indicators for Denmark’s contribution to the EU 2020 headline target. In this respect, recent increases in the Danish energy consumption have contributed to widening the gap towards the EU 2020 target.
Early school leaving (ESL) target: <10 %	8.8 % (2017)

(Less than 10 % school drop-out rates of the population aged 18-24)	The <10 % target has been reached and even surpassed. The school drop-out rate of the population aged 18-24 has been improving in recent years, from12.5 % in 2008 to 7.2 % in 2016, but increased again to 8.8 % in 2017.
Tertiary education target: >40 %.	48.8 % (2017) The >40 % target has been reached and even surpassed. The share of the population aged 30-34 which has successfully completed tertiary studies has increased from 39.2 % in 2008 to 48.8 % in 2017.
Target for reducing the number of people at risk of poverty or social exclusion, expressed as an absolute number of people: reduce the number of people in households with low work intensity by 22 000 towards 2020.	Between 2008 and 2016 the number of people living in low-work intensity households increased with 88 000 (+25 %), i.e. the gap to the national Europe 2020 target in the area of poverty and social exclusion (reducing the number of persons living in low work intensity households with 22 000 by 2020) is far from being closed. A better inclusion of people on the margins of the labour market is crucial. To address this, the government has introduced a strategy to progress towards its ten goals on social mobility, designed to give direction and greater emphasis to social policy. Denmark is making progress on some but lagging behind on others, such as increasing the proportion of young marginalised people starting an upper secondary education and reducing the number of homeless people (this rose from 5 000 in 2009 to 6 600 in 2017).

(1) 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.

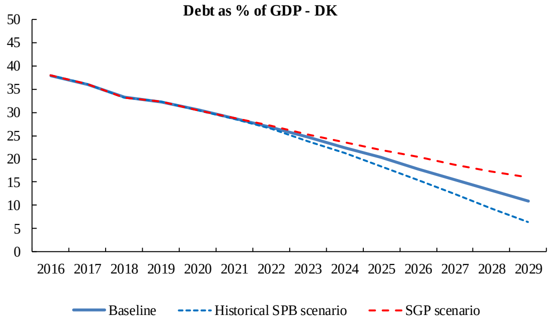
Substantial progress: The Member State has adopted measures that go a long way towards addressing the CSR and most of them have been implemented.

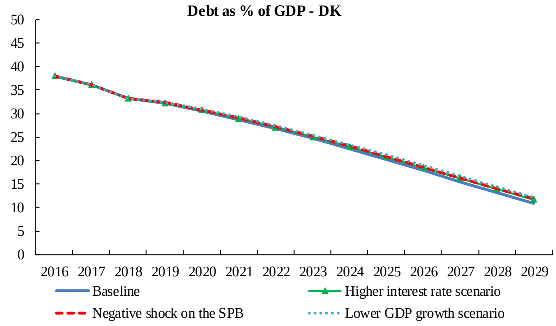
Full implementation: The Member State has implemented all measures needed to address the CSR appropriately.

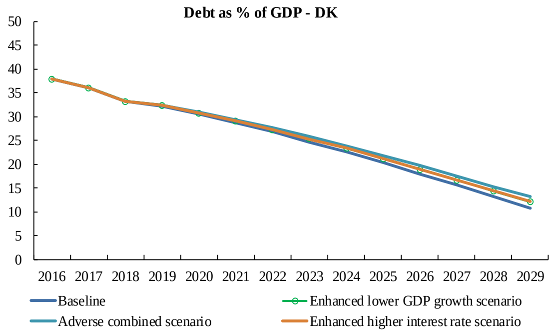
ANNEX B: COMMISSION DEBT SUSTAINABILITY ANALYSIS AND FISCAL RISKS

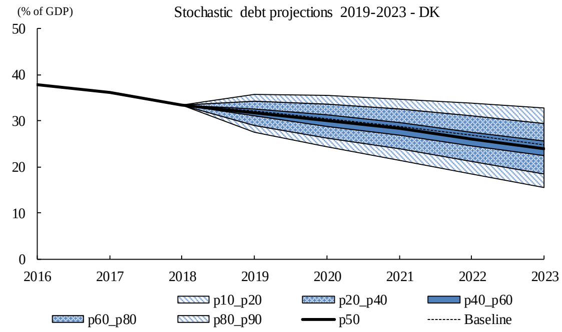
General Government debt projections under baseline, alternative scenarios and sensitivity tests

DK - Debt projections baseline scenario	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Gross debt ratio	**36.1**	**33.3**	**32.2**	**30.5**	**28.7**	**26.8**	**24.7**	**22.5**	**20.3**	**17.9**	**15.5**	**13.1**	**10.8**
Changes in the ratio (-1+2+3)	*-1.8*	*-2.8*	*-1.0*	*-1.7*	*-1.8*	*-2.0*	*-2.1*	*-2.1*	*-2.3*	*-2.3*	*-2.4*	*-2.4*	*-2.3*
of which													
(1) Primary balance (1.1+1.2+1.3)	**2.2**	**1.2**	**0.8**	**1.5**	**1.6**	**1.8**	**2.0**	**2.1**	**2.2**	**2.3**	**2.3**	**2.4**	**2.3**
(1.1) Structural primary balance *(1.1.1-1.1.2+1.1.3)*	***2.3***	***1.6***	***1.8***	***1.7***	***1.8***	***1.9***	***2.0***	***2.1***	***2.2***	***2.3***	***2.3***	***2.4***	***2.3***
(1.1.1) Structural primary balance (bef. CoA)	*2.3*	*1.6*	*1.8*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
(1.1.2) Cost of ageing					*0.0*	*-0.2*	*-0.3*	*-0.3*	*-0.3*	*-0.4*	*-0.4*	*-0.3*	*-0.2*
(1.1.3) Others (taxes and property incomes)					*0.0*	*0.0*	*-0.1*	*0.0*	*0.1*	*0.2*	*0.2*	*0.3*	*0.3*
(1.2) Cyclical component	***-0.1***	***-0.4***	***-0.3***	***-0.3***	***-0.2***	***-0.1***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***
(1.3) One-off and other temporary measures	***0.0***	***0.0***	***-0.7***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***
(2) Snowball effect (2.1+2.2+2.3)	**-0.4**	**0.2**	**-0.2**	**-0.2**	**-0.2**	**-0.2**	**-0.1**	**-0.1**	**-0.1**	**0.0**	**0.0**	**0.0**	**0.0**
(2.1) Interest expenditure	*1.1*	*1.0*	*0.9*	*0.9*	*0.8*	*0.8*	*0.8*	*0.7*	*0.7*	*0.6*	*0.5*	*0.5*	*0.4*
(2.2) Growth effect	*-0.8*	*-0.4*	*-0.6*	*-0.5*	*-0.5*	*-0.4*	*-0.4*	*-0.3*	*-0.3*	*-0.3*	*-0.2*	*-0.2*	*-0.2*
(2.3) Inflation effect	*-0.6*	*-0.4*	*-0.5*	*-0.6*	*-0.6*	*-0.6*	*-0.5*	*-0.5*	*-0.4*	*-0.4*	*-0.4*	*-0.3*	*-0.3*
(3) Stock-flow adjustments	**0.7**	**-1.8**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**









Short term	Medium term	S1	Debt sustainability analysis (detail)	Baseline	Historical SPB	Lower GDP growth	Higher interest rate	Negative shock on SPB	Stochastic projections	DSA	S2	Long term
LOW (S0 = 0.1)	LOW	LOW (S1 = -5.1)	Risk category	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW (S2 = -0.5)	LOW
			Debt level (2029)	10.8	6.5	12.2	11.7	11.9				
			Debt peak year	2018	2018	2018	2018	2018				
			Percentile rank	28.0%	23.0%							
			Probability debt higher						8.1%			
			Dif. between percentiles						17.1			

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

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

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

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

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

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

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

ANNEX C: STANDARD TABLES

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

	2013	2014	2015	2016	2017	2018
Total assets of the banking sector (% of GDP)[1)]	404.6	407.3	377.1	383.6	370.4	360.7
Share of assets of the five largest banks (% of total assets)	68.4	68.1	67.8	68.3	65.7	-
Foreign ownership of banking system (% of total assets)[2)]	12.9	12.2	12.5	12.3	7.0	6.9
Financial soundness indicators:[2)]						
- non-performing loans (% of total loans)	-	5.1	3.9	3.3	2.5	2.5
- capital adequacy ratio (%)	19.2	18.2	19.8	20.7	22.1	21.7
- return on equity (%)[3)]	4.4	4.7	6.8	9.7	10.8	9.5
Bank loans to the private sector (year-on-year % change)[1)]	0.6	0.2	1.0	1.2	0.8	3.0
Lending for house purchase (year-on-year % change)[1)]	-0.8	0.4	1.1	1.5	1.2	1.3
Loan to deposit ratio[2)]	-	192.9	213.8	211.0	228.7	229.2
Central Bank liquidity as % of liabilities[1)]	0.9	1.0	0.1	0.1	0.1	0.1
Private debt (% of GDP)	216.1	214.0	211.4	208.0	200.7	-
Gross external debt (% of GDP)[2)] - public	17.2	17.8	15.1	13.0	12.5	11.0
- private	36.6	39.2	42.1	41.7	38.9	38.6
Long-term interest rate spread versus Bund (basis points)*	17.6	16.3	19.4	23.1	15.9	6.0
Credit default swap spreads for sovereign securities (5-year)*	17.6	16.0	12.7	15.5	10.9	6.8

(1) Latest data Q3 2018. Includes not only banks but all monetary financial institutions excluding central banks.
(2) Latest data Q2 2018.
(3) Quarterly values are annualised.
* Measured in basis points.
Source: European Commission (long-term interest rates); World Bank (gross external debt); Eurostat (private debt); ECB (all other indicators)

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

	2013	2014	2015	2016	2017	2018
Total assets of the banking sector (% of GDP)[1)]	404.6	407.3	377.1	383.6	370.4	360.7
Share of assets of the five largest banks (% of total assets)	68.4	68.1	67.8	68.3	65.7	-
Foreign ownership of banking system (% of total assets)[2)]	12.9	12.2	12.5	12.3	7.0	6.9
Financial soundness indicators:[2)]						
- non-performing loans (% of total loans)	-	5.1	3.9	3.3	2.5	2.5
- capital adequacy ratio (%)	19.2	18.2	19.8	20.7	22.1	21.7
- return on equity (%)[3)]	4.4	4.7	6.8	9.7	10.8	9.5
Bank loans to the private sector (year-on-year % change)[1)]	0.6	0.2	1.0	1.2	0.8	3.0
Lending for house purchase (year-on-year % change)[1)]	-0.8	0.4	1.1	1.5	1.2	1.3
Loan to deposit ratio[2)]	-	192.9	213.8	211.0	228.7	229.2
Central Bank liquidity as % of liabilities[1)]	0.9	1.0	0.1	0.1	0.1	0.1
Private debt (% of GDP)	216.1	214.0	211.4	208.0	200.7	-
Gross external debt (% of GDP)[2)] - public	17.2	17.8	15.1	13.0	12.5	11.0
- private	36.6	39.2	42.1	41.7	38.9	38.6
Long-term interest rate spread versus Bund (basis points)*	17.6	16.3	19.4	23.1	15.9	6.0
Credit default swap spreads for sovereign securities (5-year)*	17.6	16.0	12.7	15.5	10.9	6.8

(1) People at risk of poverty or social exclusion (AROPE): individuals who are at risk of poverty (AROP) and/or suffering from severe material deprivation (SMD) and/or living in households with zero or very low work intensity (LWI).
(2) Unemployed persons are all those who were not employed but had actively sought work and were ready to begin working immediately or within two weeks.
(3) Long-term unemployed are people who have been unemployed for at least 12 months.
(4) Gross disposable household income is defined in unadjusted terms, according to the draft Joint Employment Report 2019.
(5) Reduction in percentage of the risk of poverty rate, due to social transfers (calculated comparing at-risk-of poverty rates before social transfers with those after transfers; pensions are not considered as social transfers in the calculation).
(6) Average of first three quarters of 2018 for the employment rate, unemployment rate and gender employment gap. Data for unemployment rate is seasonally adjusted.
Source: Eurostat

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

Labour market indicators	2013	2014	2015	2016	2017	2018 [4]
Activity rate (15-64)	78.1	78.1	78.5	80.0	78.8	:
Employment in current job by duration						
From 0 to 11 months	19.1	19.8	19.4	21.6	20.9	:
From 12 to 23 months	10.8	11.6	13.0	12.8	13.5	:
From 24 to 59 months	17.1	16.7	17.5	18.0	18.8	:
60 months or over	52.5	51.4	49.9	47.5	46.8	:
Employment growth* (% change from previous year)	0.0	0.9	1.4	1.5	1.7	1.9
Employment rate of women (% of female population aged 20-64)	72.4	72.2	72.6	74.0	73.7	74.8
Employment rate of men (% of male population aged 20-64)	78.7	79.5	80.2	80.7	80.2	81.3
Employment rate of older workers* (% of population aged 55-64)	61.7	63.2	64.7	67.8	68.9	70.4
Part-time employment* (% of total employment, aged 15-64)	24.7	24.6	24.7	26.4	25.3	24.6
Fixed-term employment* (% of employees with a fixed term contract, aged 15-64)	8.8	8.6	8.7	13.5	12.9	11.3
Participation in activation labour market policies (per 100 persons wanting to work)	45.8	45.4	54.5	43.9	:	:
Transition rate from temporary to permanent employment (3-year average)	26.0	32.2	39.2	44.8	41.8	:
Youth unemployment rate (% active population aged 15-24)	13.0	12.6	10.8	12.0	11.0	9.3
Gender gap in part-time employment	20.5	19.8	19.1	20.1	19.1	19.1
Gender pay gap[1] (in undadjusted form)	16.5	16.0	15.1	15.0	14.7	:
Education and training indicators	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Adult participation in learning (% of people aged 25-64 participating in education and training)	31.4	31.9	31.3	27.7	26.8	:
Underachievement in education[2]	:	:	13.6	:	:	:
Tertiary educational attainment (% of population aged 30-34 having successfully completed tertiary education)	43.4	44.9	47.6	47.7	48.8	:
Variation in performance explained by students' socio-economic status[3]	:	:	10.4	:	:	:

* Non-scoreboard indicator
(1) Difference between the average gross hourly earnings of male paid employees and of female paid employees as a percentage of average gross hourly earnings of male paid employees. It is defined as "unadjusted", as it does not correct for the distribution of individual characteristics (and thus gives an overall picture of gender inequalities in terms of pay). All employees working in firms with ten or more employees, without restrictions for age and hours worked, are included.
(2) PISA (OECD) results for low achievement in mathematics for 15 year-olds.
(3) Impact of socio-economic and cultural status on PISA (OECD) scores. Values for 2012 and 2015 refer respectively to mathematics and science.
(4) Average of first three quarters of 2018. Data for youth unemployment rate is seasonally adjusted.
Source: Eurostat, OECD

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

	2012	2013	2014	2015	2016	2017
Expenditure on social protection benefits* (% of GDP)						
Sickness/healthcare	6.5	6.4	6.3	6.3	6.3	:
Disability	4.1	4.1	4.1	4.1	4.0	:
Old age and survivors	12.7	13.3	14.0	13.6	13.0	:
Family/children	3.7	3.6	3.5	3.5	3.5	:
Unemployment	1.9	1.8	1.6	1.5	1.4	:
Housing	0.7	0.7	0.7	0.7	0.7	:
Social exclusion n.e.c.	1.2	1.3	1.3	1.5	1.5	:
Total	30.9	31.3	31.6	31.1	30.3	:
of which: means-tested benefits	11.0	11.2	11.3	11.3	11.3	:
General government expenditure by function (% of GDP, COFOG)						
Social protection	24.6	24.5	24.0	23.6	23.4	22.7
Health	8.7	8.5	8.6	8.6	8.6	8.5
Education	7.0	6.9	7.1	7.0	6.9	6.6
Out-of-pocket expenditure on healthcare (% of total health expenditure)	14.2	13.8	13.8	13.7	13.7	:
Children at risk of poverty or social exclusion (% of people aged 0-17)*	14.9	15.4	14.5	15.7	13.9	14.5
At-risk-of-poverty rate[1] (% of total population)	12.0	11.9	12.1	12.2	11.9	12.4
In-work at-risk-of-poverty rate (% of persons employed)	5.2	5.5	4.9	5.5	5.3	5.3
Severe material deprivation rate[2] (% of total population)	2.7	3.6	3.2	3.7	2.6	3.1
Severe housing deprivation rate[3], by tenure status						
Owner, with mortgage or loan	1.2	0.9	1.1	1.5	0.5	0.9
Tenant, rent at market price	5.0	4.8	4.7	5.1	3.6	6.0
Proportion of people living in low work intensity households[4] (% of people aged 0-59)	10.2	11.9	12.2	11.6	10.7	10.0
Poverty thresholds, expressed in national currency at constant prices*	108815	107205	108491	109962	110964	113538
Healthy life years (at the age of 65)						
Females	12.9	12.7	12.8	11.9	11.9	:
Males	10.6	11.6	11.0	11.0	11.5	:
Aggregate replacement ratio for pensions[5] (at the age of 65)	0.4	0.4	0.5	0.4	0.5	0.5
Connectivity dimension of the Digital Economy and Society Inedex (DESI)[6]	:	:	66.4	71.1	72.4	76.4
GINI coefficient before taxes and transfers*	50.6	49.9	51.4	50.7	51.2	50.4
GINI coefficient after taxes and transfers*	28.1	26.8	27.7	27.4	27.7	27.6

* Non-scoreboard indicator
(1) At-risk-of-poverty rate (AROP): proportion of people with an equivalised disposable income below 60 % of the national equivalised median income.
(2) Proportion of people who experience at least four of the following forms of deprivation: not being able to afford to i) pay their rent or utility bills, ii) keep their home adequately warm, iii) face unexpected expenses, iv) eat meat, fish or a protein equivalent every second day, v) enjoy a week of holiday away from home once a year, vi) have a car, vii) have a washing machine, viii) have a colour TV, or ix) have a telephone.
(3) Percentage of total population living in overcrowded dwellings and exhibiting housing deprivation.
(4) People living in households with very low work intensity: proportion of people aged 0-59 living in households where the adults (excluding dependent children) worked less than 20 % of their total work-time potential in the previous 12 months.
(5) Ratio of the median individual gross pensions of people aged 65-74 relative to the median individual gross earnings of people aged 50-59.
(6) Fixed broadband take up (33%), mobile broadband take up (22%), speed (33%) and affordability (11%), from the Digital Scoreboard.
Source: Eurostat, OECD

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

Performance indicators	2012	2013	2014	2015	2016	2017
Labour productivity per person[1] growth (t/t-1) in %						
Labour productivity growth in industry	2,95	0,41	-0,96	-1,75	4,08	0,15
Labour productivity growth in construction	3,63	3,62	0,81	7,55	-0,30	2,69
Labour productivity growth in market services	-0,58	1,90	0,34	1,43	-0,02	-0,10
Unit Labour Cost (ULC) index[2] growth (t/t-1) in %						
ULC growth in industry	-0,88	1,15	3,16	3,97	-1,40	1,37
ULC growth in construction	-1,47	-2,98	1,22	-4,07	3,94	-0,41
ULC growth in market services	1,93	-0,82	1,01	0,42	1,52	2,06
Business environment	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Time needed to enforce contracts[3] (days)	410	515	485	485	485	485
Time needed to start a business[3] (days)	6,0	6,0	6,0	3,5	3,5	3,5
Outcome of applications by SMEs for bank loans[4]	:	0,70	0,44	0,98	0,79	0,48
Research and innovation	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
R&D intensity	2,98	2,97	2,91	3,06	3,12	3,06
General government expenditure on education as % of GDP	7,00	6,90	7,10	7,00	6,90	6,60
Employed people with tertiary education and/or people employed in science and technology as % of total employment	47	48	48	48	49	50
Population having completed tertiary education[5]	29	29	30	31	31	32
Young people with upper secondary education[6]	72	72	73	74	75	75
Trade balance of high technology products as % of GDP	-0,28	-0,10	-0,04	0,19	0,10	-0,24
Product and service markets and competition				**2003**	**2008**	**2013**
OECD product market regulation (PMR)[7], overall				1,48	1,35	1,22
OECD PMR[7], retail				3,00	1,83	1,69
OECD PMR[7], professional services				0,87	0,78	0,82
OECD PMR[7], network industries[8]				2,05	1,70	1,61

(1) Value added in constant prices divided by the number of persons employed.
(2) Compensation of employees in current prices divided by value added in constant prices.
(3) The methodologies, including the assumptions, for this indicator are shown in detail here: http://www.doingbusiness.org/methodology.
(4) Average of the answer to question Q7B_a. "[Bank loan]: If you applied and tried to negotiate for this type of financing over the past six months, what was the outcome?". Answers were codified as follows: zero if received everything, one if received 75% and above, two if received below 75%, three if refused or rejected and treated as missing values if the application is still pending or don't know.
(5) Percentage population aged 15-64 having completed tertiary education.
(6) Percentage population aged 20-24 having attained at least upper secondary education.
(7) Index: 0 = not regulated; 6 = most regulated. The methodologies of the OECD product market regulation indicators are shown in detail here: http://www.oecd.org/competition/reform/indicatorsofproductmarketregulationhomepage.htm
(8) Aggregate OECD indicators of regulation in energy, transport and communications (ETCR).
Source: European Commission; World Bank — Doing Business (for enforcing contracts and time to start a business); OECD (for the product market regulation indicators); SAFE (for outcome of SMEs' applications for bank loans).

Table C.6: **Green growth**

Green growth performance		2012	2013	2014	2015	2016	2017
Macroeconomic							
Energy intensity	kgoe / €	0.07	0.07	0.07	0.07	0.07	-
Carbon intensity	kg / €	0.21	0.22	0.20	0.19	0.19	-
Resource intensity (reciprocal of resource productivity)	kg / €	0.53	0.49	0.49	0.49	0.49	0.50
Waste intensity	kg / €	0.07	-	0.08	-	0.08	-
Energy balance of trade	% GDP	0.8	0.3	0.0	0.0	0.0	-0.1
Weighting of energy in HICP	%	11.4	10.3	10.6	11.3	10.1	11.1
Difference between energy price change and inflation	%	-0.7	0.8	0.7	-5.9	-2.2	-1.5
Real unit of energy cost	% of value added	11.1	10.9	9.5	9.8	10.1	-
Ratio of environmental taxes to labour taxes	ratio	0.17	0.17	0.16	0.17	0.17	-
Environmental taxes	% GDP	4.0	4.1	4.0	4.0	4.0	-
Sectoral							
Industry energy intensity	kgoe / €	0.06	0.05	0.05	0.05	0.05	-
Real unit energy cost for manufacturing industry excl. refining	% of value added	5.4	5.5	4.9	4.9	4.9	-
Share of energy-intensive industries in the economy	% GDP	8.0	7.3	7.2	7.1	6.9	7.0
Electricity prices for medium-sized industrial users	€ / kWh	0.10	0.10	0.10	0.09	0.09	0.08
Gas prices for medium-sized industrial users	€ / kWh	0.04	0.04	0.04	0.04	0.03	0.03
Public R&D for energy	% GDP	0.05	0.05	0.04	0.03	0.02	0.02
Public R&D for environmental protection	% GDP	0.02	0.02	0.02	0.02	0.02	0.01
Municipal waste recycling rate	%	42.1	43.2	45.1	46.3	46.9	46.3
Share of GHG emissions covered by ETS*	%	34.1	39.1	36.0	32.7	34.2	-
Transport energy intensity	kgoe / €	0.37	0.33	0.36	0.37	0.38	-
Transport carbon intensity	kg / €	0.95	0.85	0.91	0.94	0.97	-
Security of energy supply							
Energy import dependency	%	-2.2	12.3	12.4	13.4	13.9	-
Aggregated supplier concentration index	HHI	5.3	5.7	7.4	4.8	5.8	-
Diversification of energy mix	HHI	0.26	0.26	0.27	0.27	0.27	-

All macro intensity indicators are expressed as a ratio of a physical quantity to GDP (in 2010 prices)
Energy intensity: gross inland energy consumption (in kgoe) divided by GDP (in EUR)
Carbon intensity: greenhouse gas emissions (in kg CO2 equivalents) divided by GDP (in EUR)
Resource intensity: domestic material consumption (in kg) divided by GDP (in EUR)
Waste intensity: waste (in kg) divided by GDP (in EUR)
Energy balance of trade: the balance of energy exports and imports, expressed as % of GDP
Weighting of energy in HICP: the proportion of 'energy' items in the consumption basket used for the construction of the HICP
Difference between energy price change and inflation: energy component of HICP, and total HICP inflation (annual % change)
Real unit energy cost: real energy costs as % of total value added for the economy
Industry energy intensity: final energy consumption of industry (in kgoe) divided by gross value added of industry (in 2010 EUR)
Real unit energy costs for manufacturing industry excluding refining : real costs as % of value added for manufacturing sectors
Share of energy-intensive industries in the economy: share of gross value added of the energy-intensive industries in GDP
Electricity and gas prices for medium-sized industrial users: consumption band 500–20 00MWh and 10 000–100 000 GJ; figures excl. VAT.
Recycling rate of municipal waste: ratio of recycled and composted municipal waste to total municipal waste
Public R&D for energy or for the environment: government spending on R&D for these categories as % of GDP
Proportion of GHG emissions covered by EU emissions trading system (ETS) (excluding aviation): based on GHG emissions (excl land use, land use change and forestry) as reported by Member States to the European Environment Agency.
Transport energy intensity: final energy consumption of transport activity (kgoe) divided by transport industry gross value added (in 2010 EUR)
Transport carbon intensity: GHG emissions in transport activity divided by gross value added of the transport industry
Energy import dependency: net energy imports divided by gross inland energy consumption incl. consumption of international bunker fuels
Aggregated supplier concentration index: covers oil, gas and coal. Smaller values indicate larger diversification and hence lower risk.
Diversification of the energy mix: Herfindahl index covering natural gas, total petrol products, nuclear heat, renewable energies and solid fuels
* European Commission and European Environment Agency
Source: European Commission and European Environment Agency (Share of GHG emissions covered by ETS); European Commission (Environmental taxes over labour taxes and GDP); Eurostat (all other indicators)

ANNEX D: INVESTMENT GUIDANCE ON COHESION POLICY FUNDING 2021-2027 FOR DENMARK (33)

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

Policy Objective 1: A Smarter Europe – Innovative and smart industrial transformation
Overall, Denmark is an Innovation Leader, but private research and development investment is increasingly concentrated on a small number of large businesses. This means that the majority of Danish small and medium-sized enterprises are not sufficiently preparing for the future through innovations in products and processes. Investment needs (35)have been therefore identified **to enhance research and innovation capacities and the uptake of advanced technologies in small and medium-sized enterprises**, and in particular to: • promote cooperation between small and medium-sized enterprises and academia and encourage universities/research centres to be actively involved in projects, whilst developing entrepreneurial ecosystems; cooperation could involve stakeholders in other regions, and also across borders notably in the framework of the EU Strategy for Baltic Sea Region; • invest in firms' capacity to internalise external knowledge and new technologies, strengthen market-oriented research and development, including through the establishment of Living Labs, and facilitate innovation uptake in small and medium-sized enterprises, in order to allow them to participate in global value chains; • strengthen effective connectivity between actors in the innovation ecosystem in order to facilitate a quicker commercialisation of research in the high growth smart specialisation areas; • increase the diffusion of the latest digital developments and other key enabling technologies through the network of digital innovation hubs via science/business collaboration to allow Danish small and medium-sized enterprises to exploit new technologies to generate growth.
Among Danish small and medium-sized enterprises, there are relatively few with a high growth rate, and employment in fast growing firms is below the European average. Investment needs have therefore been identified **to enhance growth and competitiveness of small and medium-sized enterprises**, which could boost productivity growth, and in particular to: • promote the creation of, and broaden the scope, of innovative firms among small and medium-sized enterprises (foster growth of start-ups/scale-ups/accelerators) and enable them to sufficiently prepare for the future through innovations in products and processes in the smart specialisation areas with the highest growth potential; • facilitate growth and internationalisation of small and medium-sized enterprises through the use of networks and clusters on a regional, interregional and international level. The partnerships and knowledge sharing can be the basis for further innovations and co-operation, in line with the EU Strategy for the Baltic Sea Region. This could open up potential for new exports, high tech sales, and boost employment creation.
The improving economic situation following the financial and economic crisis has led to shortages of skilled labour, and firms are facing challenges in recruiting certain types of workers. There is room to improve the matching of supply and demand of relevant digital skills. Investment needs have therefore been identified for the **development of skills for smart specialisation, industrial transition and entrepreneurship**, in synergy with lifelong learning actions under Policy Objective 4; and in particular

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

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

to:
• specific training and reskilling for smart specialisation areas at all levels within firms and building the necessary administrative capacity, with a particular attention to digital skills and the need to address industrial transition;
• trainings on managing innovations to small and medium-sized enterprises, research institutions and to entities that provide support and advisory services;
• strengthening the integration of education and training providers including universities and vocational education and training centres within national and regional innovation, technology diffusion and skills development ecosystems;
• support cooperation on promoting mobility of researchers across borders to better utilise the available human capital.

Policy Objective 4: A more social Europe – Implementing the European Pillar of Social Rights

Companies report labour shortages while some vulnerable groups remain on the margin of the labour market. In a context of a well-functioning education system, vocational education and training needs strengthening. Investments needs have therefore been identified **to improve the quality, effectiveness and labour market relevance of education and training, to support acquisition of key competences including digital skills; to promote lifelong learning, notably flexible upskilling and reskilling, taking into account digital skills, better anticipating change and new skills requirements, facilitating career transitions and promoting professional mobility**, and in particular to:
• promote vocational education and training as a quality career pathway and ensure its attractiveness to students;
• build vocational education and training providers' capacity to respond to the needs of employers by promoting innovation and entrepreneurship;
• develop and implement life-long learning strategies, in cooperation with social partners, civil society and other stakeholders;
• upgrade basic skills of the adult population, including migrants, and create new opportunities for low-skilled adults.

An important share of youth with migrant background trail significantly behind native born in educational outcomes. Investment needs have therefore been identified **to promote equal access to, and completion of, quality and inclusive education and training, from early childhood education and care through general and vocational education and training, and to tertiary level, as well as adult education and learning,** in particular to:
• improve basic skill attainment of all students, in particular those from disadvantaged groups;
• support targeted outreach, in particular to prevent early school leaving.

Factors for effective delivery of Cohesion policy

• strengthen innovation performance and foster productivity growth by identifying smart specialisation areas on the basis of national and regional needs and potential. In Denmark, this applies also to the new national business support strategy;
• broader use of financial instruments and/or contributions to a Danish compartment under InvestEU for revenue-generating and cost-saving activities;
• adequate participation of social partners, civil society and other relevant stakeholders in the delivery of the policy objectives.

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