ANALYSIS

DANMARKS NATIONALBANK

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OUTLOOK FOR THE DANISH ECONOMY – MARCH 2018

Moderate boom in the coming years

- The upswing continued in the 2nd half of 2017 and the Danish economy has entered a boom phase with mounting pressures on the labour market. The economy is well prepared for the boom, which may develop without the build-up of imbalances.
- A precondition for balanced growth is that fiscal policy does not stimulate demand further. At the same time, the government should be prepared to introduce preventive fiscal tightening with a view to dampening growth in demand if there are signs of overheating.
- Overheating will be followed by a more pronounced downturn, which may also be triggered by an international cyclical reversal sooner or later. In good times, economic policy should be prudent so that we can build up buffers against a subsequent reversal of the economy.

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A moderate boom

with mounting labour market pressures

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Real GDP growth 1.9 per cent in 2018

1.8 per cent in 2019, 1.7 per cent in 2020

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Fiscal policy

should not stimulate demand further

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Outlook for the Danish economy at a glance

- The upswing in the Danish economy continued in the 2nd half of 2017 and the Danish economy has entered a boom phase.
- Denmark's export markets are also expanding, and the euro area and the USA are in the early stages of a boom. That provides good opportunities for Danish exports.
- In Denmark, the expansion has been balanced so far, partly due to previously agreed reforms that support growth in employment.
- There are few spare resources in the labour market. But so far the shortage of labour has not led to notably higher nominal wage growth.
- Consumer prices are still showing a weak trend and underlying price pressures in the economy remain moderate.
- Strong stimuli are fuelling demand. Consumer confidence is high, and firms are optimistic. The prospects for further growth are good.
- Real GDP is forecast to grow by 1.9 per cent this year, 1.8 per cent next year and 1.7 per cent in 2020, and employment will rise by almost 75,000 towards the end of 2020.
- As the economy enters the more advanced stages of the boom, slightly lower growth rates will be natural as firms' capacity becomes more squeezed.
- The projection's upside risks are related to potentially very strong growth in private consumption and investment in particular. The consumption ratio is low and investments may rise if extensive capacity pressures emerge. The downside risks are linked mainly to external conditions, including developments in the USA.
- With the prospect of a boom, it is important that fiscal policy does not further stimulate demand in the economy.
- At the same time, the government should be prepared to step in and tighten fiscal policy preventively at short notice with a view to dampening growth in demand if there are signs of overheating.
- In good times, economic policy should be prudent so that we can build up buffers against a subsequent reversal of the economy.

Key economic variables

					2017		
	2017	2018	2019	2020	Q2	Q3	Q4
GDP (real), per cent	2.1	1.9	1.8	1.7	-1.2	-0.8	1.0
Employment, 1,000 persons	2,923	2,963	2,989	3,008	2,917	2,929	2,.942
Gross unemployment, 1,000 persons	117	109	102	97	116	119	115
Balance of payments, per cent of GDP	7.5	7.7	7.3	6.8	8.4	7.2	6.7
Government balance, per cent of GDP	0.5	-0.9	-1.0	-0.6	0.1	-1.1	2.3
House prices[1], per cent year-on-year	3.9	3.2	2.8	2.5	4.4	3.9	3.7
Consumer prices (HICP), per cent year-on-year	1.1	0.7	1.5	1.6	0.7	1.5	1.2
Hourly wages (manufacturing), per cent year-on-year	2.1	2.5	3.0	3.3	2.0	2.3	2.0

1. Nominal prices of single-family houses.
Source: Statistics Denmark and own calculations.

Outlook for the Danish economy

Moderate boom in the coming years
The current upswing in the Danish economy is solid and continued in the 2nd half of 2017. This is seen most clearly in the labour market, where employment continues to rise, while unemployment is declining. Growth in the real gross domestic product, GDP, was 2.1 per cent last year, unchanged from 2016.

Denmark's export markets are also expanding, and the upswing has gained momentum over the past year. The euro area and the USA have both entered a boom phase, with the USA a little ahead of the euro area. In both economies, the outlook is now for moderate growth, with slightly mounting pressures. The boom is more subdued than that of the mid-2000s.

The US economy is further into the business cycle than the euro area, and over the last few years the Federal Reserve has gradually been raising the Fed funds target rate. Over the last half year, the European Central Bank, ECB, has also begun to slowly wind down the stimulus by tapering its asset purchase program on two occasions. This, underpinned by the upswing in the economies and the improved growth outlook, has caused interest rates to rise a little, both in the USA and in the euro area.

As the boom gains strength, market expectations are for interest rates gradually to rise further, initially in the USA, then in the euro area. But viewed in a longer-term perspective, interest rates in the euro area will remain very low. Slightly higher interest rates will help to dampen demand growth, which must be considered appropriate in Denmark's current cyclical position, provided interest rates do not rise abruptly.

In Denmark, strong stimuli are fuelling demand. Consumer confidence is high, and firms are optimistic. At the same time, interest rates are very low and export markets are growing. So in the coming period, the Danish economy is set to enter a later stage of the boom. Growth in real GDP is forecast at 1.9 per cent this year, declining gradually to 1.7 per cent by 2020, reflecting a slight increase in capacity pressures during the boom. Employment is expected to rise by almost 75,000 by the end of 2020, bringing the total increase in employment since the beginning of 2013 to a quarter of a million.

So far, the upswing in the Danish economy has been balanced and it is likely to remain so as the economy moves into the boom, cf. Chart 1. The phasing-in of previously adopted reforms intended to increase the labour supply underpins rising employment, and the large current account surplus facilitates export growth. In other words, the Danish economy is basically well prepared for an increase in capacity pressures. Against that backdrop, a moderate boom is expected over the coming years.

As the economy reaches a more advanced stage of the boom, capacity pressures may increase to a degree that will cause output to rise at a slower pace than its potential. In itself, this will represent a natural adjustment that should not be offset by fiscal policy aimed at buoying up demand.

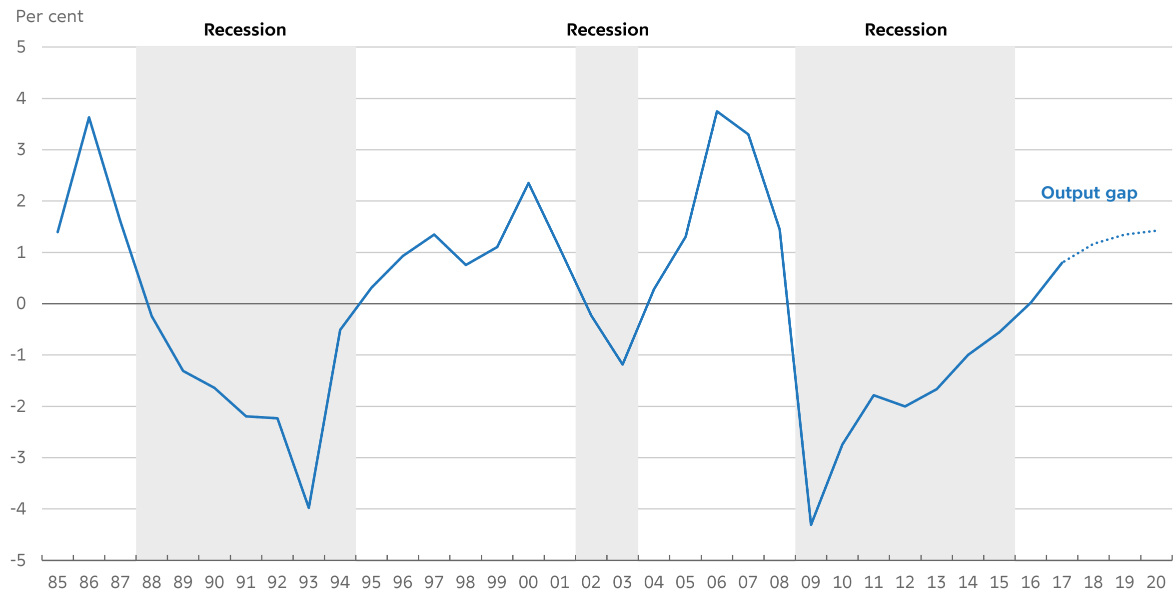
Demand growth could potentially be quite strong over the coming years. Recent years have seen a fair increase in household incomes, and savings are high. If strong growth in domestic demand coincides with similar growth abroad, this could cause pressures on the Danish economy to build. Experience has shown that the economy can overheat suddenly and violently, setting the stage for a boom-bust cycle – both in Denmark and abroad.

In order to facilitate balanced growth, fiscal policy should not stimulate demand further, and this year the fiscal policy impact on economic activity is largely neutral. At the same time, the government should be prepared to step in with preventive fiscal tightening with a view to dampening growth in demand if the economy shows signs of overheating. So in good times it is important to avoid overheating and to build up buffers for the time after the boom.

The next two years will see major disbursements of accumulated contributions to the early retirement scheme and excess property taxes paid. This represents an additional source of uncertainty.
The disbursements to households have been estimated at kr. 14 billion, equivalent to a 1.3 per cent increase in household disposable incomes. These disbursements, although one-off in nature, could further stimulate demand in a situation of growing pressures on the economy. Thus, the timing of the disbursements is unfortunate. Moreover, the taxation

Moderate boom expected over the coming years

Chart 1



Note: The output gap reflects the cyclical position and is calculated as the difference between actual and potential output.
Source: Own calculations.

agreement adopted in early February provides for gradual income tax reductions while the economy is in a boom.

Healthy growth in the labour market, but pressures are set to build

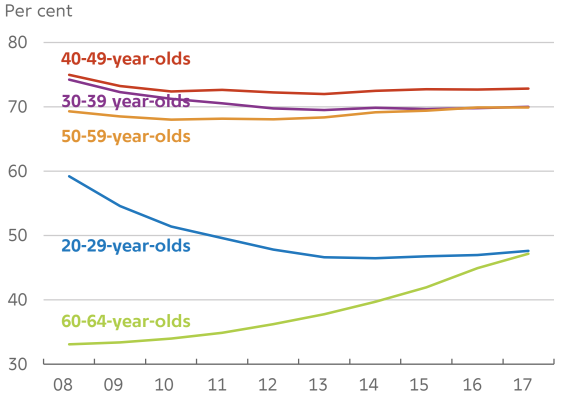
In the labour market, employment continues to rise. Since early 2013, employment has increased by 180,000 jobs, almost exclusively in the private sector. The services sector has been the main driver of employment growth, but employment in manufacturing and construction has also picked up.

So far, the recovery in the labour market during the upswing has been healthy. Employment has risen (and unemployment has fallen) at a slower pace than during the overheating of the economy in the mid-2000s. The labour force has expanded considerably, primarily due to the increase of the early retirement age, which has prompted many employees to postpone their retirement. Others have chosen to work longer hours, see Chart 2. As a result, a large proportion of the core labour force has remained in the labour market, thereby underpinning the rise in employment.

If the effects of technical movements associated with integration benefits and the restructuring of the unemployment benefit system are disregarded[1], unemployment decreased throughout 2017, cf. Chart 3. With just over 110,000 unemployed workers, the unemployment rate is currently slightly below its estimated structural level, although not at rock bottom as in 2008. Long-term unemployment has also been reduced in step with the reduction in gross unemployment, now accounting for just 20,000 people. So

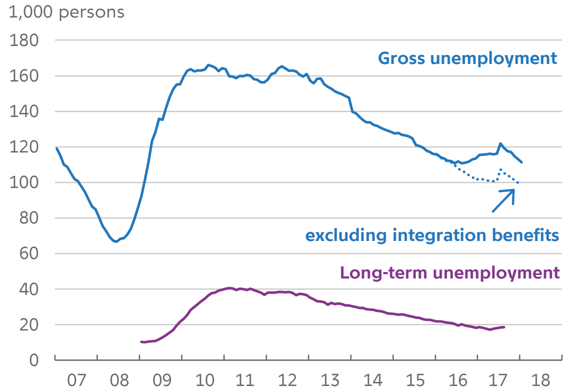
1 In July 2016, integration benefits were expanded and at the same time more recipients of these benefits were found to be ready to enter the labour market. As a result gross unemployment increased for technical reasons. The unemployment benefit reform entails a change in data sources for unemployment statistics in July 2017, increasing the uncertainty of the compilation.

Substantial increase in the employment rate among older age groups in the labour force Chart 2



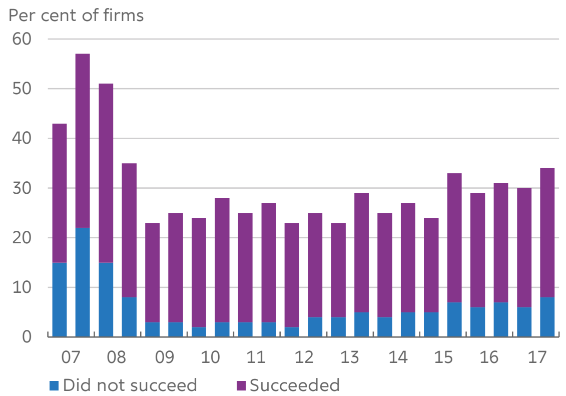
Note: Employment (full-time equivalents) broken down by age, relative to the population of the relevant age group.
Source: Jobindsats and Statistics Denmark.

Decline in unemployment and long-term unemployment Chart 3



Note: Long-term unemployment according to Statistics Denmark's compilation.
Source: Statistics Denmark, jobindsats and own calculations.

More jobs are posted, and they are becoming harder to fill Chart 4



Note: The proportion of firms succeeding and not succeeding, respectively, in recruiting new staff over the past two months. The remaining proportion of firms did not need to recruit new staff over the past two months.
Source: The Danish Agency for Labour Market and Recruitment.

for the great majority of workers, spells of unemployment are relatively short.[2]

Labour market pressures have increased with the rise in employment. Firms are reporting worsening labour shortages – at levels similar to those experienced immediately before the onset of the crisis 10 years ago. More job openings are posted, and although firms are finding it increasingly difficult to recruit staff, most of the positions are filled, cf. Chart 4. Relative to the number of unemployed, the number of jobs posted is still somewhat lower than a decade ago.

Pressures on the labour market (and on the Danish economy) are yet some distance from the overheating in the mid-2000s. Compared with previously, capacity utilisation in manufacturing is not assessed to be high at the moment, and construction activity is still dampened to some extent by a shortage of demand, cf. Chart 5. At the national level, both employment in construction and the level of residential and construction investment are somewhat lower than during the overheating of the economy.

2 As a case in point, a total of 350,000 people were unemployed at some point in 2016, but measured in full-time equivalents the Charte was only just over 112,000.

As the Danish economy is entering a later stage of the boom, with continuing employment growth, labour market pressures will, nevertheless, start to build. A precondition for sustained, healthy development of the labour market is the continued addition of persons currently outside the labour force, including foreign labour. If we see continued, sustainable employment growth over the coming years, the spare unemployed resources will presumably be insufficient to meet the need for labour. This challenge is increased because competition for foreign labour is intensifying as Denmark's neighbouring countries are also entering later stages of the boom.

Wage growth remains moderate

So far, increased labour market pressures have not led to higher nominal wage growth. In the 4th quarter, private sector wages were 1.8 per cent higher than one year earlier. This matches the rate of wage growth seen in recent years.

In the manufacturing sector, where a large share of output is exported, the annual rate of wage growth was 2.0 per cent, slightly lower than in the preceding quarters and a little lower than the rate of wage growth of foreign competitors. This follows a period with improvement of Denmark's terms of trade, which has boosted the relative wage share, while relative unit labour costs have remained flat, cf. Chart 6. This means that Denmark is in a good competitive position, but the strong effective exchange rate of the krone may curb export growth.

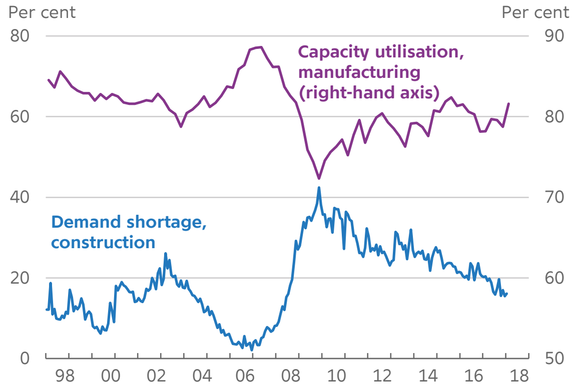
In the construction sectors, the rate of wage growth was 2.3 per cent. Domestic upswings are traditionally first reflected in higher wage growth in these sectors. Construction has, to some extent, succeeded in attracting labour, including labour from abroad, but this does not change the fact that labour shortages are currently most pronounced in these sectors.

Moderate nominal wage growth in the private sector should be seen in the context of low consumer price inflation. This means that the purchasing power of wages, i.e. real wages, has increased more in recent years than the average of recent decades.

Growing capacity pressures are forecast to gradually boost wage growth over the coming years, to just over 3 per cent per year. Wage growth still remains moderate, however. Public sector wage growth is also subdued.

Capacity utilisation in manufacturing and demand shortage in construction are around average

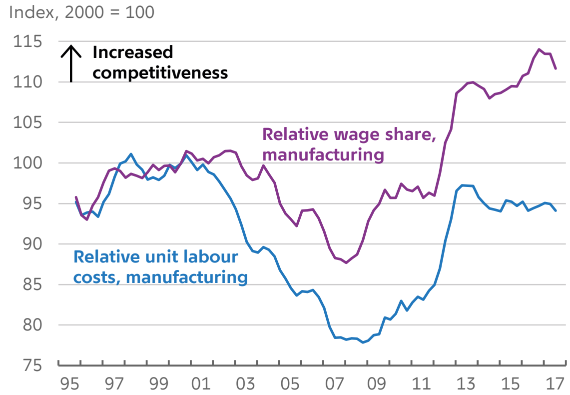
Chart 5



Source: Statistics Denmark.

Danish firms are competitive

Chart 6



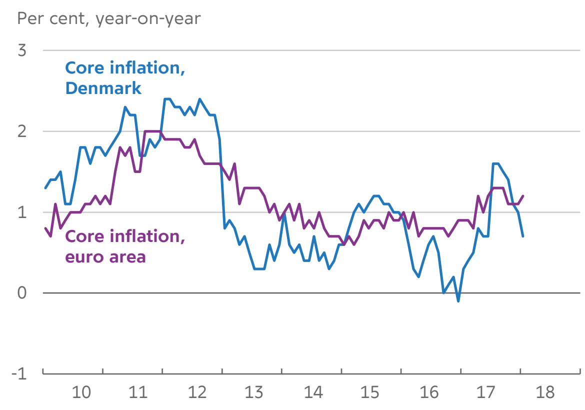
Note: Wage share and unit labour costs abroad (weighted together) relative to the Danish share and unit labour costs. The different developments in the two measures of competitiveness are mainly attributable to improvement in Denmark's terms of trade.

Source: Eurostat, OECD, Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve Economic Data and Danmarks Nationalbank.

Consumer prices are still showing a weak trend
Consumer price inflation has weakened in recent months, following a brief period in the autumn with slightly stronger price inflation. In the past three months, annual consumer price inflation has been below 1.0 per cent. Viewed over a longer period of time, price inflation has been subdued and a little weaker than in the euro area. In the medium term, Danish consumer prices mirror those of the euro area, but in the short term differences may be found.

Underlying price pressures in the economy remain moderate, although not quite as low as previously. Core inflation, i.e. consumer price inflation excluding energy and unprocessed food, is lower in Denmark than in the euro area, cf. Chart 7.

Underlying price pressures are moderate Chart 7



Note: Core inflation is measured as HICP excluding energy and unprocessed food.
Source: Eurostat, Statistics Denmark and own calculations.

Domestic market-determined inflation, IMI, has also picked up over the past year. Energy prices increase the overall price index in the wholesale link, but less so than a year ago. Import prices, on the other hand, do not contribute to increased price pressures. They are being kept down by a strengthened effective exchange rate of the krone, which reduces the price of foreign goods in Danish kroner. Over the past year, the effective exchange rate of the krone has appreciated by approximately 3 percentage points, driven primarily by a weaker dollar rate.

Over the coming years, consumer price inflation is expected to rise to about 1.6 per cent p.a. in response to wage growth and capacity shortages in the economy. In 2018, an increase of 0.7 per cent is expected. Viewed in isolation, price developments will be dampened slightly this year by the lowering of various indirect taxes and abolition of the PSO duty.

Favourable outlook for Danish exports
Growing global trade and export market recovery have had a spillover effect on Danish exports. In 2017, exports of goods and services increased by 4.6 per cent relative to 2016. Exports of industrial goods showed the highest increase[3].

The recovery in export markets is expected to continue over the coming years, and Danish firms are well-positioned competitively to meet growing demand from abroad.

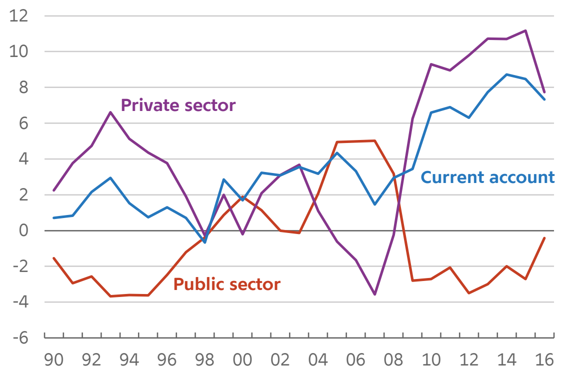
Higher earnings from trade in goods and services boosted the current account surplus to kr. 162 billion in 2017, corresponding to about 7.5 per cent of GDP. The current account surplus has been extraordinarily high since 2010, also relative to economic developments, driven by households and private sector firms, cf. Chart 8. From 2010 to 2015, it was mainly firms that were cautious, while recent years' surplus is attributable primarily to households boosting their savings to reduce their debt[4]. The current account surplus is expected to decline a little in the coming years as domestic activity picks up, but to remain large.

Prospects for growth in consumption and investment
Consumer purchasing power has been increasing steadily in recent years as employment has grown,

3 Danish firms are increasingly selling goods abroad that are not produced or processed in Denmark. See Casper Winther Nguyen Jørgensen, Paul Lassenius Kramp and Anne Ulstrup Mortensen, Globalisation complicates current account interpretation, *Danmarks Nationalbank Analysis*, No. 2, February 2018.

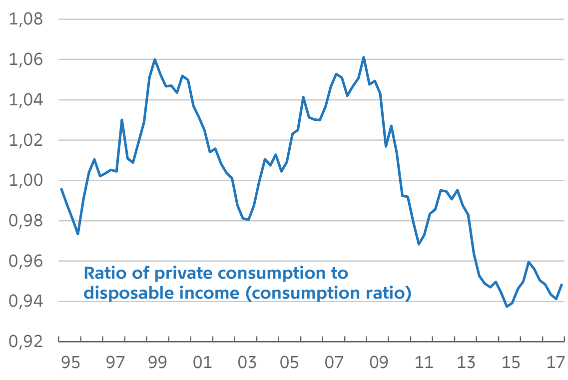
4 See Casper Winther Nguyen Jørgensen, Paul Lassenius Kramp and Anne Ulstrup Mortensen, Extraordinarily high current account surplus is temporary, *Danmarks Nationalbank Analysis*, No. 20, November 2017.

Large private sector savings surplus is reflected in current account surplus Chart 8



Note: Net lending (adjusted for tax payments in connection with restructuring of pension schemes in 2013-15) by the public and the private sector.
Source: Statistics Denmark and own calculations.

Households are cautious Chart 9



Note: The consumption ratio is determined as an average of the quarter in question and three previous quarters. The consumption ratio is consumption relative to disposable income, with disposable income adjusted for the restructuring of capital pensions and LD savings in 2013-15.
Source: Statistics Denmark and own calculations.

interest rates have decreased and consumer price inflation has been low. Rather than merely consuming their growing incomes, households have increased their savings rates considerably. Private consumption accounts for a smaller share of household disposable income than previously, cf. Chart 9.

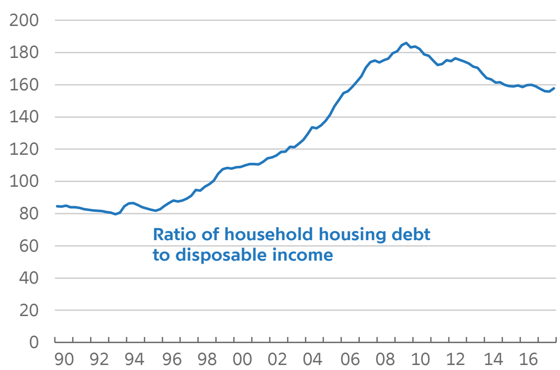
Cautious household spending behaviour curbs demand growth, and, so far, this has helped to moderate the upswing.

Consumer caution may be the result of a wish to reduce the debt accumulated by households in the 2000s. The aggregate housing debt to income ratio remains high, cf. Chart 10, illustrating that changes in household balance sheets may have a long-term impact.

Continued savings and rising house prices are reflected in increased household wealth. Coupled with sustained economic growth and high consumer confidence, this presents a large potential for increased private consumption.

Recently, interest rates have risen slightly. This applies to longer-term interest rates, in particular, including yields on 30-year mortgage loans, cf. Chart 11. Although market expectations are for interest rates to continue their gradual increase, the level of interest rates is expected to remain very low in the coming years. Slightly higher interest rates may

Household debt remains high despite several years of consolidation Chart 10



Note: Disposable income (4-quarter moving average) has been adjusted for the restructuring of capital pensions and LD savings in 2013-15.
Source: Statistics Denmark and own calculations.

reduce private consumption and investment, but low interest rates still provide considerable stimulus to demand.

Residential investment has increased as house prices have risen. This trend applies to both new construction and major repairs and is especially evident in the Copenhagen area, which has also seen the highest increase in house prices. As a result of the taxation agreement adopted last May, making it advantageous for property developers to sell newly constructed housing projects before 2021, construction may accelerate in the years until 2021. That could lead to increased activity in the construction sectors, which are already showing increasing signs of labour shortages.

Overall, business investment is aligned with the cyclical position. Private investment is expected to continue rising as capacity utilisation pressures increase. This applies especially to investment in plant and equipment, while the need for non-residential construction is limited by vacant premises. At the same time, residential investment that is brought forward with a view to completing the construction projects before 2021 may postpone other construction investments if there is insufficient labour.

The primary drivers of output and employment are private consumption and exports

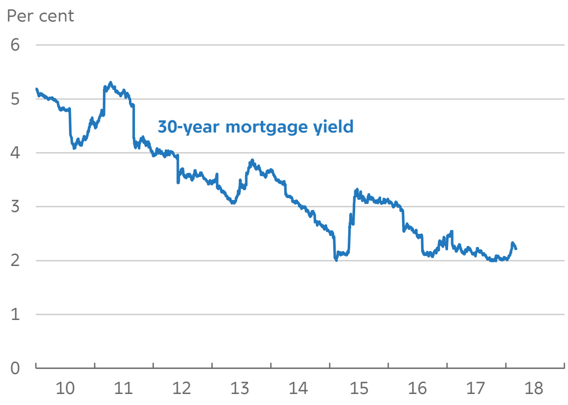
GDP is expected to grow by 1.9 per cent this year, largely the same as in the previous two years. Exports, coupled with private consumption, will be the primary drivers of GDP in the coming years, and GDP growth is forecast at 1.8 per cent next year and 1.7 per cent in 2020, cf. Chart 12. This is slightly higher than the increase in the output potential, and the output gap is forecast to widen gradually to 1.4 per cent in 2020.

Employment is expected to increase by 75,000 by the end of 2020, at which time it is expected to exceed its structural level by about 35,000 jobs. This means that hourly productivity growth in the private non-primary sector is assumed to be slightly higher than in the previous years, but still low compared with previous upswings, cf. Chart 13.

The housing market is picking up across most of Denmark

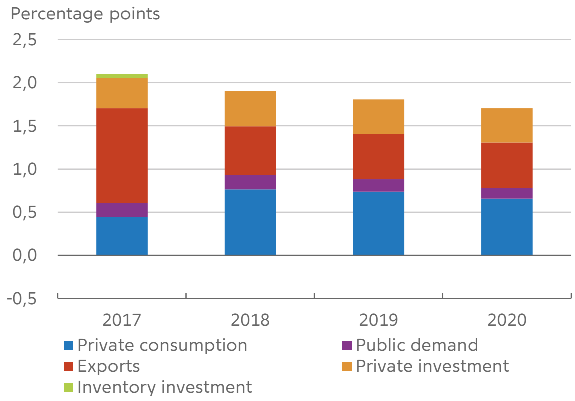
The Danish housing market has been growing since 2012, with rising prices and turnover. Initially, growth was concentrated in large towns and cities, but now

Low yields Chart 11



Note: The series shows the yield to maturity for various benchmark bonds.
Source: Nasdaq OMX and own calculations.

Growth is driven by private consumption and exports Chart 12



Note: Growth contributions adjusted for imports.
Source: Statistics Denmark and own calculations.

it is broadly distributed geographically, thereby underpinning economic growth.

Price increases for owner-occupied flats in Copenhagen, in particular, remain high. This gives cause for concern as the price level is assessed to be higher than warranted by developments in disposable incomes and interest rates. At the same time, Copenhagen has a higher prevalence of more risky mortgage types, which increases homeowner sensitivity to interest rates.

Housing market growth is also reflected in turnover, which is at a 10-year high. At the same time, the supply of homes for sale continues to decrease at the national level, as does the time on market. There are, however, considerable geographical differences. In some regions of Denmark, the supply of homes for sale remains high, and the time on market is lengthy.

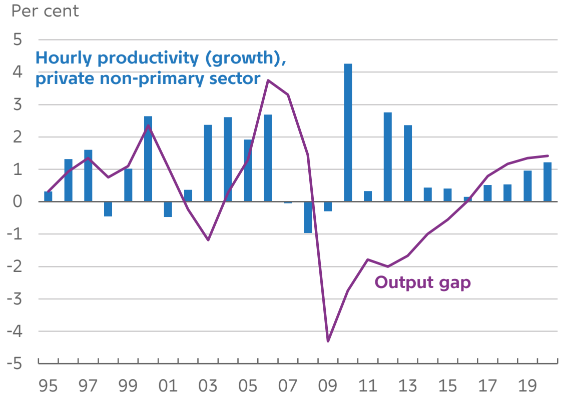
With the revised good practice rules, restrictions were imposed on the choice of mortgage type for home buyers with high debt-to-income and loan-to-value ratios, so-called macroprudential measures, with effect from the turn of the year. The purpose is to strengthen financial stability, and these measures, in combination with the new housing taxation system adopted in the spring of 2017, may help to curb price growth, especially for owner-occupied flats in large towns and cities. The introduction of macroprudential measures before large imbalances occur in the housing market is crucial to ensuring a steady trend in house prices.

This is illustrated by developments in Sweden and Norway. For a number of years, house price growth in both Stockholm and Oslo substantially exceeded that of Copenhagen, and price levels were higher. The situation reversed six months ago, and since then both cities have seen prices fall, reflecting e.g. the implementation of various macroprudential measures and a larger supply of new housing. Both factors may have contributed to the turnaround.

Against the backdrop of a positive outlook for the Danish economy and a sustained low level of interest rates, house prices are expected to continue to rise in the coming years, but across a wider geographical area than so far during the upswing[5]. Both the revised good practice rules and the new housing taxation system will contribute to this process. At the national level, prices of single-family homes are forecast to rise by approximately 3 per cent p.a. in the period until 2019, and by slightly less in 2020.

Slightly higher growth in hourly productivity over the coming years

Chart 13



Note: Hourly productivity is measured as GVA per hour worked.
Source: Statistics Denmark and own calculations.

The government deficit is set to increase

The government budget surplus was 0.5 per cent of GDP in 2017. Viewed in isolation, the continued cyclical improvement will help to improve the structural balance in the period until 2020. However, disbursement of contributions previously made to the early retirement scheme to those opting out and the extraordinary refund of property taxes in connection with the introduction of the new property valuation system will have a negative impact on the government budget this year and next year. Lower expected revenue from pension yield tax is another detracting factor. Consequently, the government surplus is expected to be reversed to a deficit of 0.9 per cent and 1.0 per cent of GDP, respectively, this year and next year and 0.6 per cent of GDP in 2020.

The structural balance is expected to show a small deficit in all years until 2020. In other words, a

5 See Simon Juul Hviid, A regional model of the Danish housing market, *Danmarks Nationalbank Working Paper*, No. 121, November 2017.

government budget deficit is expected well into the boom, both on the actual and the structural balances. This provides for a weaker fiscal point of departure in a future economic slowdown.

Upside domestic risks and balanced external risks

Viewed in a long-term perspective, households are consuming only a low share of income, and wealth is high. This provides potential for stronger-than-projected growth in private consumption. In addition, over the coming years, households will receive various one-off disbursements in the form of reversal of housing taxes previously paid and disbursement of contributions previously made to the early retirement scheme to those opting out. Both factors may stimulate demand further. Housing market developments may amplify this risk, especially if the strong price rises in Copenhagen spread to large parts of Denmark.

Stronger-than-expected consumption growth in a boom phase could lead to widespread labour shortages, potentially resulting in inexpediently strong wage growth and weaker competitiveness. The remaining labour reserve is small, and in a scenario of somewhat higher-than-projected growth, it may not be possible to increase the labour force sufficiently. If foreign demand is also higher than expected, this situation may be aggravated.

Key economic variables Table 1

Real growth on preceding period, per cent	2017	2018	2019	2020	2017 Q2	2017 Q3	2017 Q4
GDP	2.1	1.9	1.8	1.7	-1.2	-0.8	1.0
Private consumption[1]	1.5	2.2	2.3	2.2	0.4	-1.1	1.3
Public consumption	1.1	1.0	0.8	0.8	0.3	0.1	1.0
Residential investment	4.8	4.2	3.8	4.0	0.9	1.4	5.2
Public investment	-4.5	-1.1	0.2	0.5	4.6	-3.5	6.4
Business investment	3.9	3.6	4.7	4.9	3.7	2.8	-1.9
Inventory investment, etc.[2]	0.1	0.0	0.0	0.0	-0.4	-0.3	0.4
Exports	4.6	2.1	2.7	2.9	-2.3	-0.7	1.3
Industrial exports	6.9	2.8	3.6	3.7	2.4	-1.7	0.3
Imports	4.1	2.5	3.8	3.9	0.7	-0.3	2.5
Employment, 1,000 persons	2,923	2,963	2,989	3,008	2,917	2,929	2,.942
Gross unemployment, 1,000 persons	117	109	102	97	116	119	115
Balance of payments, per cent of GDP	7.5	7.7	7.3	6.8	8.4	7.2	6.7
Government balance, per cent of GDP	0.5	-0.9	-1.0	-0.6	0.1	-1.1	2.3
House prices[3], per cent year-on-year	3.9	3.2	2.8	2.5	4.4	3.9	3.7
Consumer prices (HICP), per cent year-on-year	1.1	0.7	1.5	1.6	0.7	1.5	1.2
Hourly wages (manufacturing), per cent year-on-year	2.1	2.5	3.0	3.3	2.0	2.3	2.0

1. Includes both households and non-profit institutions serving households, NPISH.
2. Contribution to GDP growth (this item comprises inventory investment, valuables and statistical discrepancy).
3. Nominal prices of single-family houses.
Source: Statistics Denmark and own calculations.

Conversely, the downside risks of the projection are linked mainly to external developments. The USA has adopted a number of fiscal measures that expand the already large budget deficit, entailing a risk that the US economy may overheat. Overheating of the US economy and/or imbalances in the federal finances could lead to interest rate increases in the short term and a notable recession a few years later – in a situation with limited opportunities to mitigate the recession via fiscal policy. This will affect the Danish housing market and exports.

In recent years, protectionist ideas have featured prominently in international economic policy debate. Recently, the US president has proposed imposing tariffs on steel and aluminium. Any large-scale protectionist measures that inhibit global trade have the potential to hit the Danish economy severely in the longer term. Denmark is dependent on foreign trade. The current upswing and the prospect of further improvements are, to a large extent, linked to foreign demand for Danish goods and services and Danish firms' and consumers' access to foreign-produced goods. Access to markets abroad is the foundation for Denmark's prosperity.

International background

The upswing in the global economy has accelerated over the past year. Global GDP growth is forecast to reach an eight-year high in 2018 and will be well above its historical average. Spare capacity in the US and euro area labour markets has decreased, but so far wage and price pressures have been moderate. Since the confidence indicators are strong, a more positive growth spiral than expected may emerge, while further corrections in the financial markets, the consequences of monetary policy normalisation, geopolitical tensions, protectionism and a higher level of indebtedness pose downside risks. In the USA there is a particular risk that the very accommodative fiscal policy may result in a boom-bust cycle.

The international economic upswing is accelerating

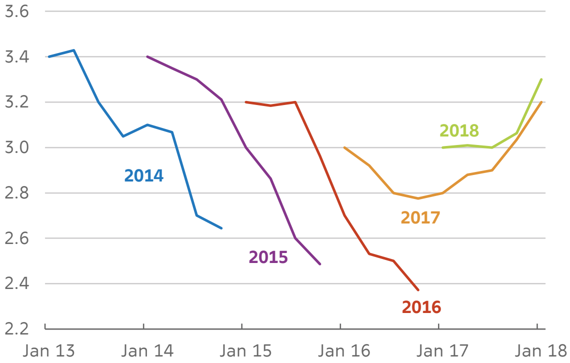
The global upswing has gained momentum over the past year. It is broad-based across countries, and growth in global trade is increasing. Private consumption makes a substantial contribution to global GDP growth and is being supported by high asset prices, strong confidence indicators and low interest rates.

Growth in the USA and the euro area has accelerated since the summer of 2016. In the USA, the annual rate of increase in GDP has gradually risen from 1.2 per cent in the 2nd quarter of 2016 to 2.5 per cent in the 4th quarter of 2017. By comparison, euro area growth rose from 1.8 to 2.7 per cent over the same period. The stronger US growth is primarily attributable to investment, one reason being that the US oil industry has increased its investments in step with the rise in oil prices. In the euro area, the stronger growth reflects a rise in exports fuelled by the global upswing. In the UK, on the other hand, growth has moderated since the Brexit referendum in June 2016 due to more subdued private consumption, among other factors. A weaker pound and rising inflation have contributed to a fall in real wages, which has eroded consumers' purchasing power. Among the emerging market economies, economic activity is rising strongly in India and China, while growth rates are modest in Brazil and Russia.

Lately the upswing has been stronger than expected and economic projections have been adjusted upwards, cf. Chart 14. This means that several years' tendency to adjust the growth outlook downwards has been broken. The global economy is expected to grow by 3.3 per cent in 2018, which is the highest growth rate since 2010 and well above the average of 2.8 per cent seen over the last 30 years.

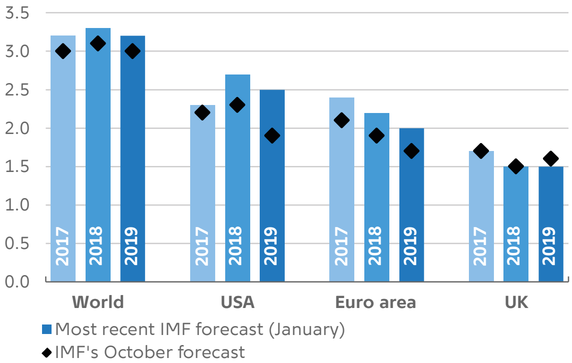
Especially the US growth forecasts have been adjusted upwards, cf. Chart 15. This is mainly due to the tax reform adopted in December, which will, inter alia, reduce corporate and personal income taxes.

Several years' tendency to adjust economic forecasts downwards has been broken Chart 14



Note: Each line shows the development in the IMF's official forecast of global GDP growth in a given year.
Source: IMF.

Expectations for global growth have risen Chart 15



Source: IMF.

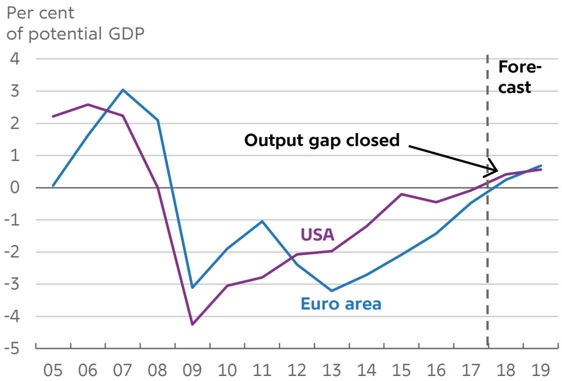
In the assessment of the International Monetary Fund, IMF, the lower corporate taxes and a temporary allowance for full expensing of investment will provide the strongest boost to US demand in the short term. The IMF estimates that, viewed in isolation, the tax reform will increase US GDP by 1.2 per cent over the next three years. The tax reform will also stimulate economic activity in the rest of the world via higher exports to the USA. According to the IMF, half of the global upward adjustment for the next two years is attributable to the US tax reform. In the slightly longer term, part of the increase in US GDP will be reversed since the tax reform will increase the budget deficit so that fiscal tightening will be required.

Both the USA and the euro area are expected to experience a moderate boom in the coming years, with actual output only a little above its potential level, cf. Chart 16. This is a slightly more subdued development than that seen in the mid-2000s. In the USA, Congress on 9 February agreed on a 2-year framework agreement to increase the spending ceiling in the fiscal years 2018 and 2019 by an amount corresponding to around 0.7 per cent of GDP in both years, entailing a debt increase of 1.4 per cent of GDP. It is expected that this agreement will result in an actual appropriation agreement in late March and hence increased public consumption. In the short term, this will boost GDP growth, while the budget deficit will increase. There is a risk that fiscal easing measures already agreed and a potential agreement to invest in infrastructure may amplify the boom to such an extent that it will trigger more abrupt interest rate rises.

Imbalances in the federal finances may also push up interest rates. US federal debt has grown from 35 per cent of GDP in 2007 to almost 80 per cent of GDP in 2017, which is the highest level since the years after World War II. The federal budget deficit is expected to exceed 4 per cent of GDP this year and to be even larger in the coming years. Hence there is a risk that the next downturn in the US economy will occur at a time when the budget deficit and government debt are already sizeable. That will limit the opportunities to mitigate the impact of the recession via fiscal policy.

The USA and the euro area are heading towards a boom

Chart 16



Note: The output gap is calculated as the difference between actual and potential output as a percentage of potential output. The chart shows the average of the estimates from the European Commission, the IMF and the OECD.
Source: Macrobond.

A key prerequisite for sound growth is that the growth curve flattens as it becomes more difficult to bring additional resources into the economy. The USA is further into the business cycle than the euro area, but despite slightly lower growth the euro area output gap has narrowed faster than that of the USA since 2013. This reflects stronger demographic headwinds in the euro area, among other factors.[6]

The IMF views the risks to the global forecast as balanced in the short term, but in the medium term the negative risks dominate, including the effect of sudden interest rate hikes, further corrections to the pricing of financial assets, geopolitical tensions and protectionism. The US administration's decision to introduce import tariffs on steel and aluminium has increased the risk of escalation, with more countries introducing new trade barriers.

Mounting pressures in the US and euro area labour markets

The US labour market has been recovering visibly since the crisis and unemployment is now at 4.1 per

6 Cf. Christian Ellermann-Aarslev, Tina Saaby Hvolbøl and Erik Haller Pedersen, Prosperity growth facing demographic headwinds, *Danmarks Nationalbank Analysis*, No. 1, January 2018.

cent, down from 10.0 per cent in the autumn of 2009, cf. Chart 17. This is below the structural level, indicating that upward pressure may at some point be seen on wages. However, the employment rate remains below the pre-crisis level so that it may still be possible to bring people outside the labour force into employment. This could be one of the reasons why increases in nominal wages have been moderate so far.

The euro area labour markets have also improved, but the recovery has come later because the financial crisis was followed by a severe debt crisis in some euro area member states. Unemployment peaked at 12.1 per cent in early 2013 and has now fallen to 8.6 per cent, cf. Chart 18. Despite the relatively high rate of unemployment, still more firms are reporting labour shortages. This is because unemployment is now close to its structural level, which is higher in the euro area than in the USA. The employment rate is above the pre-crisis level, one reason being that several euro area member states have implemented labour market reforms. As in the USA, nominal wage pressures have so far been subdued in the euro area.

Energy prices are driving euro area inflation
Underlying price pressures have been low in both the USA and the euro area for quite a while. In both economies, core inflation, i.e. consumer price inflation excluding energy and food, has been below 2 per cent for more than five years, cf. Chart 19.

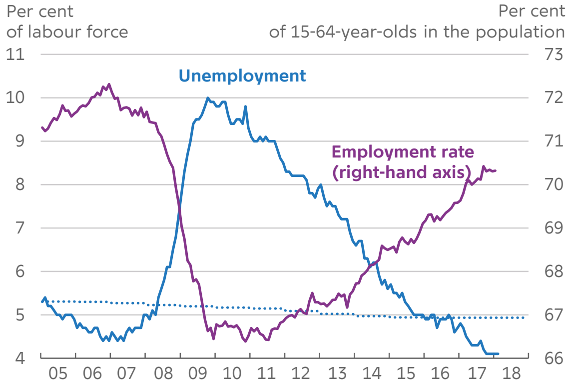
In the euro area, the annual rate of increase in the Harmonised Index of Consumer Prices, HICP, was around 1.5 per cent in 2017, having hovered around 0 in the preceding years, cf. Chart 20. Developments were driven by rising energy prices. Background factors include growing demand in the global economy, the agreement between OPEC and Russia to reduce oil production and shrinking US oil stocks, which have contributed to reversing the trend in oil prices after large falls in the previous years. Conversely, a strengthening of the euro in 2017 had a downward impact on inflation.

Whereas nominal wage growth has been low since 2013, real wage growth increased until 2015, cf. Chart 21. The lengthy period of low inflation has presumably been reflected in inflation expectations and contributed to dampening wage demands.

Looking ahead, declining real wage growth in the euro area since 2015 may lead to higher nominal

The USA and the euro area are heading towards a boom

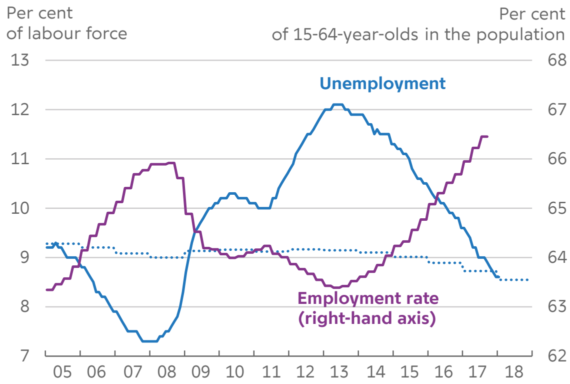
Chart 17



Note: The dotted line shows the OECD's forecast of structural unemployment.
Source: Macrobond.

Mounting labour market pressures in the euro area

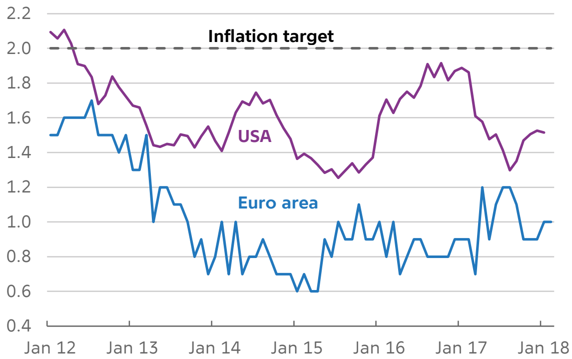
Chart 18



Note: The dotted line shows the OECD's forecast of structural unemployment.
Source: Macrobond.

Low core inflation in the USA and the euro area

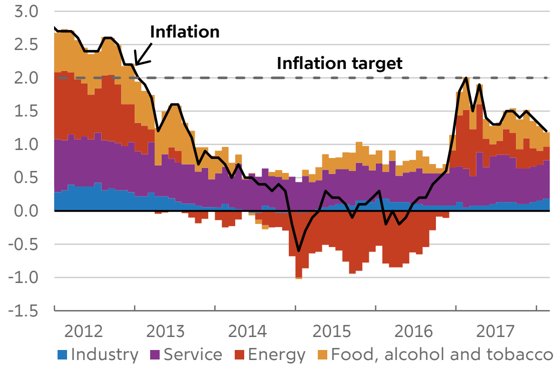
Chart 19



Note: HICP excluding energy, food, alcohol and tobacco for the euro area and the Personal Consumption Expenditures Index, PCE, excluding energy and food for the USA.
Source: Macrobond.

Higher energy prices pushed up euro area inflation in 2017

Chart 20



Note: Contributions of product groups to inflation in the euro area. The contributions have been calculated on the basis of the weights in the overall HICP.
Source: Macrobond and own calculations.

wage demands and hence higher underlying inflation. Limited spare capacity in the labour market also points to increased wage pressures. At 3.6 per cent, Germany's unemployment rate is among the lowest in the euro area. Wage growth in Germany has exceeded the euro area average since 2014. Recently a new wage agreement was negotiated for the metal industry, which is typically the benchmark for wage developments in Germany. Analysts predict that wage growth in the metal industry in 2018-19 will be around 3.5 per cent, i.e. somewhat above the 2.1 per cent seen in 2016 and the 2.7 per cent seen in 2017.

Normalisation of US monetary policy continues – the ECB is scaling down its asset purchase programme

The Fed funds target rate has been increased by 0.25 percentage point on five occasions since December 2015, most recently in December 2017. At the most recent meeting of the Federal Open Market Committee, FOMC, in late January, the Federal Reserve kept the target range unchanged at 1.25-1.50 per cent. In its interest rate forecast, the FOMC indicates three increases this year and two in 2019. This is a little more than expected by the market, cf. Chart 22, although the latter has moved closer to the FOMC forecast since December, reflecting factors such as higher growth and inflation prospects.

Furthermore, in October the Fed gradually began to reduce its balance sheet, which had grown considerably in connection with the financial crisis as a result

Real wages in the euro area have fallen since 2015

Chart 21

Note: Real wage growth has been calculated by deflating nominal wage growth by the HICP.
Source: Macrobond and own calculations.

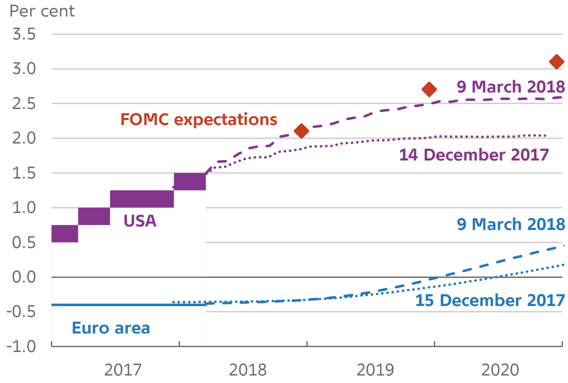
of asset purchase programmes. Limits have been set for the speed at which the balance sheet can be reduced; initially this was 6 billion dollars a month for Treasury papers and 4 billion dollars for mortgage bonds. The limits will be increased every three months until they reach 30 and 20 billion dollars, respectively.

No specific long-term level for the size of the balance sheet has been announced. However, William Dudley, vice-chairman of the FOMC, has indicated that a normalised balance sheet would be in the range of 2,400-3,500 billion dollars. The current level is around 4,400 billion dollars, compared with less than 1,000 billion before the crisis. Before the reduction, the Fed estimated that its total purchase programmes are keeping 10-year US Treasury yields down by 100 basis points. This effect is expected gradually to fade away over the coming years as the Fed reduces its balance sheet.

In the euro area, the ECB has kept its monetary policy interest rates unchanged, but from the turn of the year monthly net purchases under the asset purchase programme have been halved to 30 billion euro. The programme has been extended by nine months until September 2018, with the option that it may be further extended if the ECB does not see more convincing signs of a sustained upward tendency in core inflation. In addition, the ECB has announced that it does not expect to raise interest rates until well past the horizon of the net asset purchases. As in the USA, market expectations of rising interest rates have been brought forward in the euro area. The monetary policy interest rate is now expected to move into positive territory after December 2019, while the expected date was June 2020 just after the monetary policy meeting in December 2017.

Interest rates are expected to rise further in the USA

Chart 22



Note: Fed funds target range for the USA, ECB's deposit rate for the euro area. The dotted lines indicate market expectations based on futures prices on the days after the respective monetary policy meetings in December.
Source: Bloomberg and Federal Reserve.

Financial conditions are very expansionary

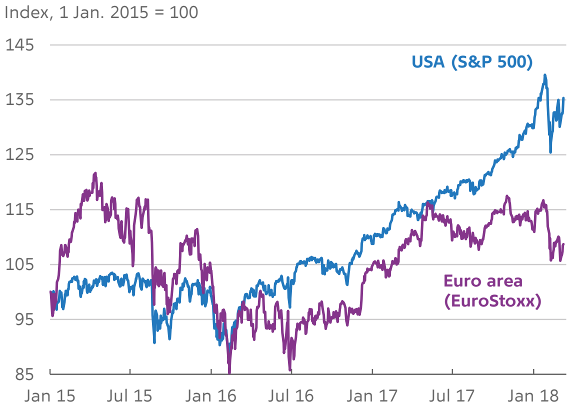
Financial conditions in the USA and the euro area are very expansionary. Valuations across asset classes have risen sharply in recent years because the economic outlook has improved and because the search for yield has pushed down risk premia. In the USA, the risk premium is close to its lowest level since August 2007 and considerably below the average for the last decade. Except during a couple of weeks in June 2015, this also applies to the risk premium in the euro area.

Following a long period with substantial price rises, a correction was seen in the stock market in early February. The US S&P index dropped by 8.6 per cent in the first week of February, while the benchmark European stock index, EuroStoxx, fell by 6.4 per cent. All the same, equity prices were well above the pre-crisis level in nominal terms and measured by the price/earnings ratio, P/E. In the USA, the decline corresponded to the rise during the preceding three months, while the decline in the euro area corresponded to the rise during the preceding year. The correction in the stock markets should be viewed in the light of market expectations of larger future interest rate increases. Subsequently US equity prices have regained some of the lost ground, cf. Chart 23.

In connection with the adjustments in the stock markets, volatility increased. This is an expression of uncertainty in the financial markets. Volatility was very low from mid-2016 until the end of January, when it reached a 50-year low. In early February, the implied market volatility, measured by the VIX index, rose to its highest level since August 2015 (when turmoil in the Chinese equity market spread to the rest of the world), cf. Chart 24. But the level remained somewhat lower than during the financial crisis in the autumn of 2008, and the index is now slightly below the average since 1990.

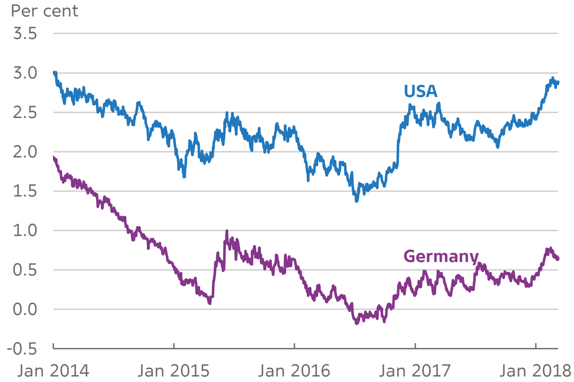
The accommodative financial conditions have caused some concern among international institutions such as the IMF and the OECD. The reason is that the current conditions may increase systemic risks via excessive risk-taking. Market participants seem to

Correction in the stock markets following a long period of increase Chart 23



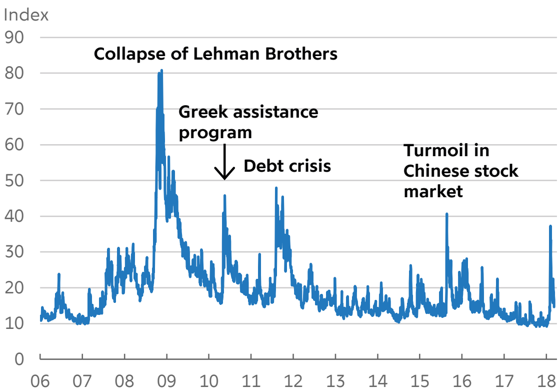
Source: Macrobond.

10-year government yields have risen Chart 25



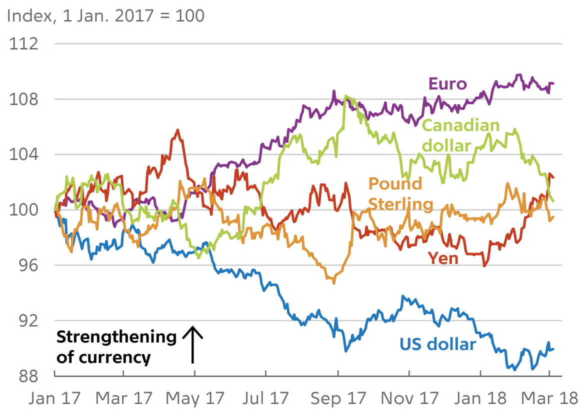
Source: Macrobond.

Period of low implied volatility since mid-2016 Chart 24



Note: The VIX index is the implied volatility of options based on the S&P 500 index.
Source: Macrobond.

The euro strengthened in 2017 Chart 26



Note: Nominal effective exchange rates.
Source: Macrobond.

be aware of this risk, judging from e.g. the increase in the SKEW index, a measure of investors' wish to hedge against negative market shocks.

Long-term government bond yields have risen considerably from a low level at the turn of the year, cf. Chart 25. This is partly because the markets expect more rapid increases in monetary policy interest rates due to higher growth and inflation figures. US Treasury bond yields are now almost back at the level from early 2014, while German government yields are at the level seen in the autumn of 2015.

Among the G7 currencies, the euro strengthened the most in 2017, cf. Chart 26. Supported by diminishing political risks and strong macroeconomic indicators, the euro strengthened by 8.1 per cent in 2017, measured by the nominal effective exchange rate. The dollar has weakened steadily since early 2017, reflecting, inter alia, the appreciation of other currencies in response to stronger-than-expected economic growth. The dollar may also have been affected by the US administration's statements that the dollar is overvalued.

Appendix: Assumptions in and revision of the projection for the Danish economy

The projection has been prepared using the macroeconomic model MONA and is based on the available economic statistics, including Statistics Denmark's quarterly national accounts for the 4th quarter of 2017. The projection involves a number of assumptions concerning the international economy, financial conditions and fiscal policy.

The international economy
The forecasts of the international organisations have been adjusted upwards since the September projection. Especially the US growth forecasts have been adjusted upwards due to the tax reform passed in December.

Against that background, export market growth in the coming years has been adjusted slightly upwards. Growth in the markets for Danish industrial exports is expected to be 4.2 per cent this year, 4.1 per cent in 2019 and 4.0 per cent in 2020, cf. Table A1.

Foreign wage growth is expected to be moderate. Export prices in the countries from which Denmark imports are expected to rise at a subdued pace.

Interest rates, exchange rates and oil prices
Developments in short- and long-term interest rates in the projection are based on the expectations

Overview of projection assumptions Table A1

	2017	2018	2019	2020
International economy:				
Export market growth, per cent year-on-year	4.3	4.2	4.1	4.0
Foreign price[1], per cent year-on-year	3.3	1.9	1.5	1.6
Foreign hourly wages, per cent year-on-year	2.1	2.3	2.4	2.6
Financial conditions, etc.:				
3-month money market interest rate, per cent p.a.	-0.5	-0.5	-0.3	0.2
Average bond yield, per cent p.a.	0.7	0.9	1.3	1.7
Effective krone rate, 1980 = 100	102.1	103.9	103.9	103.9
Dollar exchange rate, DKK per USD	6.6	6.1	6.1	6.1
Oil price, Brent, USD per barrel	54.3	66.5	62.8	59.9
Fiscal policy:				
Public consumption, per cent year-on-year	1.1	1.0	0.8	0.8
Public investment, per cent year-on-year	-4.5	-1.1	0.2	0.5
Public sector employment, 1,000 persons	818	820	821	821

1. Weighted export price for all countries from which Denmark imports. The projection assumes the same growth rates for the weighted import price in the countries to which Denmark exports.

of future developments that can be derived from term structures in the financial markets. The money market interest rate, measured by the T/N rate, is projected by a 3-month CITA swap rate. It is expected to become positive in early 2020.

The average bond yield (average of yields to maturity for government and mortgage bonds) is expected to rise over the projection period, from 0.8 per cent initially to 1.8 per cent by the end of 2020.

In the projection, the effective krone rate and the dollar rate are assumed to remain constant at the current levels.

In late February 2018, the price of oil was around 67 dollars per barrel. The oil price is assumed to develop in line with futures prices, which entails a slight downward trend towards the end of 2020.

Fiscal assumptions

The projection is based on preliminary national accounts data on public sector consumption and investment and the planned fiscal policy in the Finance Act for 2018. In addition, the recent political agreements, including the defence agreement from January and the tax agreement from February 2018, have been incorporated.

Real public consumption is assumed to rise by 1.0 per cent this year and by 0.8 per cent in both 2019 and 2020. Public investment is assumed to fall by 1.1 per cent this year and to rise by 0.2 and 0.5 per cent in 2019 and 2020, respectively, cf. Table A1.

Revisions in relation to the previous projection

The slightly stronger krone than assumed in the previous projection points to weaker growth in 2018, while the stronger export market growth has an upward effect. Changes in assumptions affect the projection for 2019 only slightly, cf. Table A2.

The forecast for HICP inflation has been adjusted downwards for 2018 and 2019. This is primarily because prices of unprocessed food and domestic market-determined prices have recently shown a weaker-than-expected trend, which affects the annual rate of increase for 2018 substantially (carry-under effects). The estimated rent increases in 2018 have also been adjusted downwards.

Revisions in relation to the previous projection Table A2

	GDP			Consumer prices, HICP		
Per cent, year-on-year	2017	2018	2019	2017	2018	2019
Projection, September 2017	2.3	1.8	1.7	1.0	1.4	1.7
Contribution to revised forecast from:						
Export market growth	0.1	0.1	0.1	0.0	0.0	0.1
Interest rates	0.0	0.0	-0.1	0.0	0.0	0.0
Exchange rates	0.0	-0.3	0.0	0.0	-0.1	-0.1
Oil prices	0.0	0.0	-0.1	0.1	0.5	-0.1
Other factors	-0.3	0.3	0.0	-0.1	-1.1	-0.1
This projection	2.1	1.9	1.8	1.1	0.7	1.5

Note: The transition from the previous to this forecast may not add up due to rounding. "Other factors" includes data revisions.

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