

# RISKS ASSOCIATED WITH THE CURRENT UPSWING IN THE DANISH ECONOMY

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## INTRODUCTION AND CONCLUSIONS

The Danish economy is in an accelerating upswing. A steady growth scenario is expected to close the output gap over the next few years. Given some fiscal tightening, this can presumably materialise without inappropriate pressures on the labour market. This scenario is contained in Danmarks Nationalbank's latest projection.

The scenario assumes, *inter alia*, that the strong expansionary effects of lower interest rates, etc. are to some extent offset by a certain degree of caution among firms and households, e.g. due to uncertainty about how long the extraordinary situation will last. It also means that house price increases are relatively moderate, not exceeding increases in wages and incomes to any considerable extent in the projection. The tightening of financial regulation since the financial crisis contributes to this assessment. Moreover, firms' currently high profits are to a high degree driven by large groups with international activities placing part of their investment abroad. In 2014, outward direct gross investment accounted for around one-fourth of firms' total investment. As a result, increases in consumption and investment ratios in the private sector are relatively moderate in the projection.

However, in several previous upswings, i.e. in the 1980s, 1990s and 2000s, demand rose significantly more strongly than projected. There are both similarities and differences between the current and previous upswings, but factors in the current situation could clearly generate a scenario similar to those previously seen. Upswings

with overheating have often been followed by prolonged periods of low, sometimes negative growth, cf. Chart 1.

In the scenario described below, demand is growing more strongly than projected in the baseline scenario described in Current Economic and Monetary Trends in this Monetary Review. More specifically, the currently low consumption and investment ratios are assumed to normalise in the near future, and house prices are assumed to accelerate more than in the baseline forecast. This will result in a strong and fast increase in demand in the economy. Two scenarios are described which differ in terms of housing market developments.

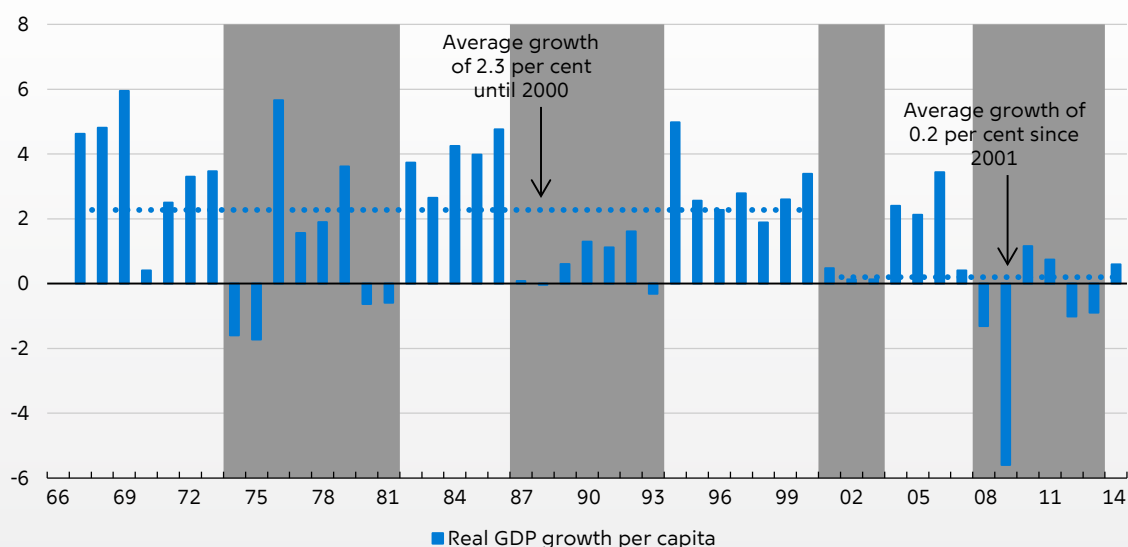
In both scenarios, an increase in the labour market participation rate and a fall in unemployment to structural levels will not be enough to prevent pressures on the economy, including on the labour market. There will be an extensive shortage of labour, entailing a risk of renewed overheating of the economy or early stagnation of the upswing. The scenario assuming house price development with self-reinforcing increases, as seen in the mid-2000s, implies a substantial risk of an abrupt downturn.

As regards economic policy, indications of such risk scenarios will require stronger fiscal tightening than recommended on the basis of the baseline scenario in Danmarks Nationalbank's projection. The risk of faster and stronger growth in demand than in Danmarks Nationalbank's baseline forecast is an argument in favour of fiscal caution.

Upswings and downturns in the Danish economy

Chart 1

Per cent, year-on-year



Note: Downturn periods are shaded.  
Source: Statistics Denmark.

## POSSIBLE TRIGGERS OF FASTER AND STRONGER GROWTH IN DEMAND AS SEEN IN PREVIOUS UPSWINGS

### PREVIOUS UPSWINGS WERE STRONGER

Upswings in Denmark have typically been stronger than the forecast in Danmarks Nationalbank's latest projection. In the assessment of whether the Danish economy is facing such a scenario, it can be useful to consider previous upswings and their triggers, cf. Dam (2008).

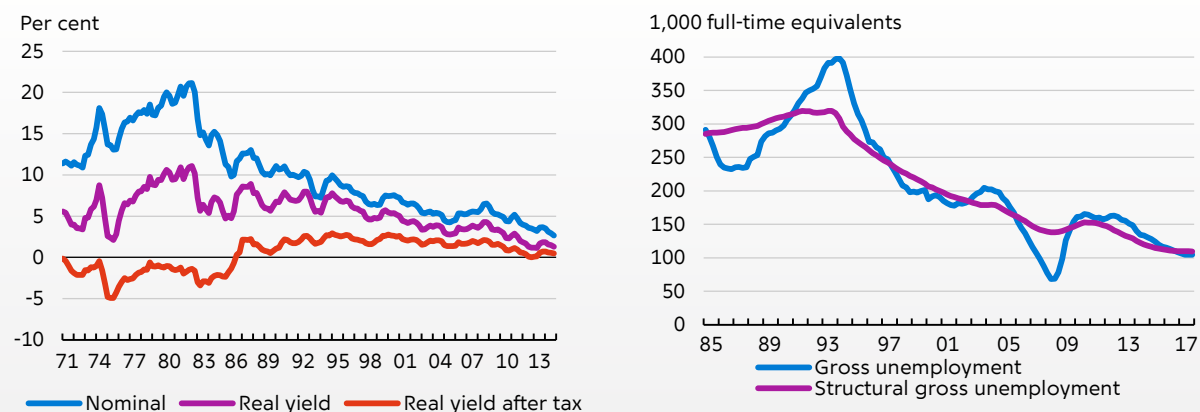
Over the last 35 years, there has been one boom period per decade in Denmark. The upswing in the first half of the 1980s was triggered by plummeting interest rates, from more than 20 per cent p.a. in 1982 to 10 per cent p.a. in 1986, cf. Chart 2 (left). Interest rates fell internationally, but their dive in Denmark was mainly due to the implementation of a consistent fixed exchange rate policy after the change of government in 1982. Other contributing factors were a considerable fiscal tightening and the suspension and subsequent abolition of the automatic price-wage indexation mechanism, which had generated a wage-price spiral throughout the 1970s. Inflation also declined, but the population had become

used to high inflation during the 1970s, cf. Christensen et al. (1997). This was reflected in rather sticky inflation expectations. Consequently, the drop in nominal interest rates was initially (mis) interpreted as a very strong drop in real interest rates. This stimulated consumption and investment and caused the current account deficit to grow, to more than 5 per cent of GDP at the peak in 1986. This led to the implementation of policy measures in the form of a tax reform reducing the tax value of interest deductibility and the austerity package known as the "Potato Cure" with measures to reduce lending by mortgage banks. These measures were followed by seven years of recession and falling house prices. However, at the same time, the tax reform also constituted the foundation for more prudent saving behaviour with fewer incentives to borrow for consumption, resulting in rebalancing of the Danish economy.

The roll-back of the most important "Potato Cure" measures, together with a further decline in interest rates and moderate fiscal easing, triggered a new upswing in the early 1990s, cf. Hansen et al. (2003). Among the financial liberalisation measures were the abolition of the "Potato Cure" requirement for the use of mixed loans in home financing, the option of mortgage loans

Yield development (left) and actual and structural unemployment (right)

Chart 2



Note: Left-hand chart: A 30-year mortgage bond yield is shown. Expected inflation rate in the real yield expression is a weighted average of inflation expectations in the preceding period and actual inflation (adaptive expectations).

Source: Statistics Denmark, Association of Danish Mortgage Banks and own calculations.

with longer maturities and the option of unlimited supplementary mortgage loans, etc.

Ten years later, prior to the upswing in the mid-2000s, the fall in interest rates was very small, but the introduction of variable rate loans in 1996 and deferred amortisation loans in 2003 led to a considerable reduction in first-year instalments when purchasing a home. This resulted in a credit-driven upswing, which entailed self-reinforcing price increases in the housing market. Together with procyclical fiscal policy and housing taxation this ultimately led to overheating of the economy with an extensive shortage of labour. The bubble came to an end with the international financial crisis in the autumn of 2008, which marked the beginning of six years of recession until 2013, when the current upswing began.

Like the 1970s, the 1980s were characterised by high cyclical and structural unemployment. Cyclical unemployment fell during the boom, while little was done to reduce structural unemployment. This changed in the 1990s with the implementation of labour market reforms that resulted in a more flexible labour market. The upswing in the 1990s lasted a very long time due to, inter alia, reforms reducing structural unemployment, thus ensuring the necessary labour supply during the upswing, cf. Chart 2 (right). Another contributing factor was the fiscal tightening measures well into the upswing, including, inter alia, the "Whitsun Package" of measures in 1998 and the further

reduction of the tax value of interest deductibility. The reforms continued after the turn of the millennium, most recently with the unemployment benefit reform, and today's structural unemployment is less than half the level in the early 1990s. This implies a considerably smaller potential for further decreases than previously. The current challenge is to prevent that the current upswing becomes powerful and short-lived, only to be followed by a low-growth period as seen several times before.

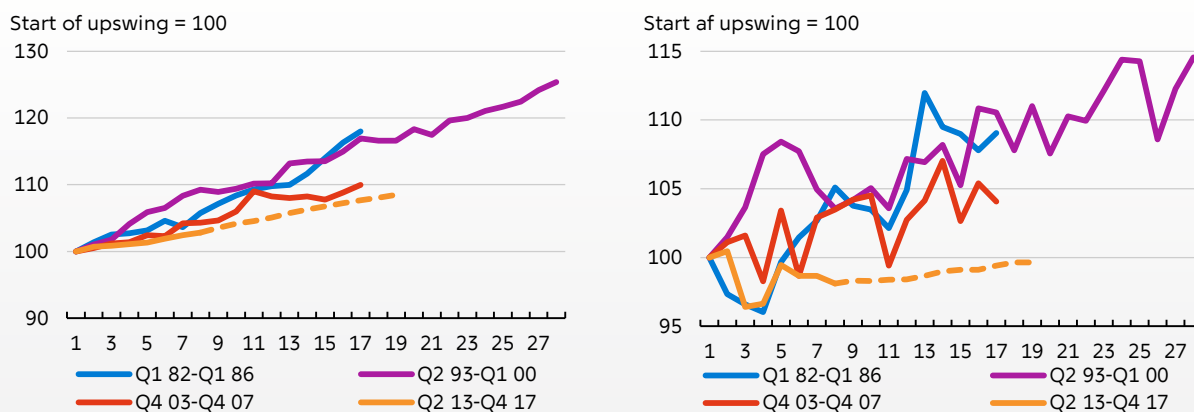
### STRONG DRIVING FORCES OF THE CURRENT UPSWING

According to Denmark's Nationalbank's baseline forecast, the current upswing is expected to entail a moderate growth scenario over the coming years, cf. Chart 3 (left). However, several factors contribute to increasing the risk of the upswing suddenly accelerating – ending in renewed overheating of the economy – or stagnating quickly due to labour shortage.

The consumption and investment ratios are both currently substantially lower than their long-term averages, cf. Chart 3 (right) and Charts 4 and 7 (left). In addition, private savings are very high, house prices are – despite increases – still lower than their equilibrium level at the current low level of interest rates, and export market growth is gaining momentum. Oil prices have plummeted by around 40 per cent since last summer, and the

**Real GDP in four upswings (left) and consumption ratio in four upswings (right)**

Chart 3



Note: The X axis denotes the number of quarters into the upswing. Left-hand chart: Upswing periods have been defined as periods with a predominantly increasing output gap, i.e. becoming either less negative or more positive. The broken line is Danmarks Nationalbank's baseline forecast. Right-hand chart: Household disposable income has been adjusted for extraordinary tax payments related to the restructuring of capital pensions in 2013, 2014 and 2015. The broken line is Danmarks Nationalbank's baseline forecast.

Source: Statistics Denmark.

effective exchange rate of the krone has declined by approximately 4 per cent since the autumn. Viewed in isolation, these factors, together with the very low level of interest rates, boost GDP growth by around 1 percentage point this year and next year. Danmarks Nationalbank's projection assumes that the strongly expansionary effects of low interest rates, etc. are to some extent offset by a certain degree of caution among firms and households, e.g. due to uncertainty about how long the extraordinary situation will last. All in all, the conditions for a stronger and faster upswing exist, compared with the baseline forecast in Danmarks Nationalbank's projection.

As mentioned earlier, falling interest rates have triggered upswings several times before. The long-term nominal mortgage bond yield has been almost halved from 2011 until today, when it is around 3 per cent after the latest increase, and short-term retail interest rates are close to zero. The fall in interest rates has a direct impact on consumption and investment by increasing disposable income and reducing financing costs, and an effect via the housing market in the form of upward pressure on prices, increasing household wealth and consumption. Strong growth in equity prices has the same effect. Even though consumer price inflation is also moderate, a low level of interest rates like the current one is, in many ways, new territory. This still applies, also after the

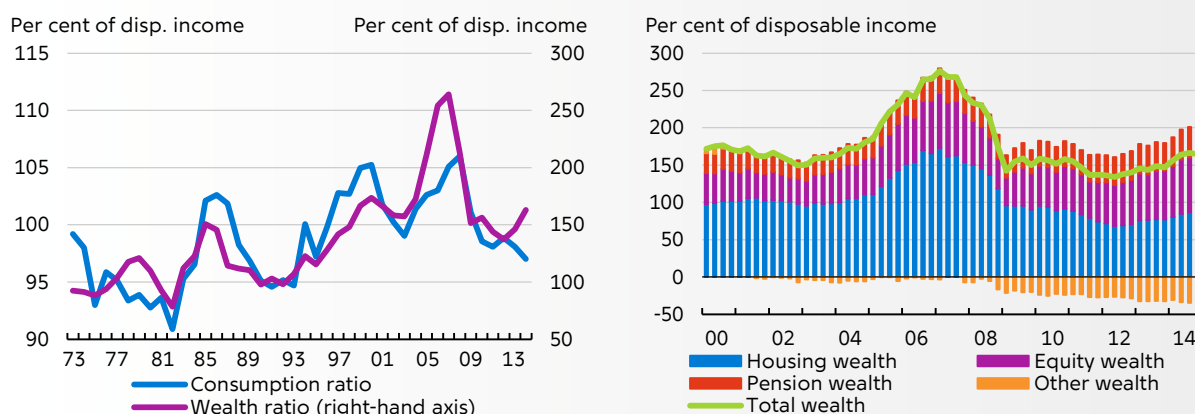
increase over the last month in long-term interest rates in particular. However, post-tax real interest rates were lower in a period in the mid-1980s.

The correlation between household wealth and private consumption is traditionally strong, i.e. increasing wealth leads to higher private consumption. Since 2012, however, the development in private consumption has been weaker than warranted by the increase in wealth, cf. Chart 4 (left). This implies potential for stronger growth in consumption than forecast in the projection, given the current positive sentiment among households as reflected in the consumer confidence indicator. Recent years' increase in wealth is primarily attributable to higher home equity for those who own their own home, and higher equity wealth, cf. Chart 4 (right).

In most cases, translation of higher home equity into consumption requires more borrowing, but initially free funds are also a possibility in light of the substantial savings. Total lending by banks and mortgage banks has decreased a little in recent years, but the level is high. The decline in lending is not attributable to a shortage of credit, but rather to the large, accumulated savings surplus in the private sector, which entails lower demand for loans in the first part of the upswing. Typically, as is also seen for investment, corporate lending growth does not accelerate until well into an upswing.

**Household consumption and wealth ratios (left) and consumption-determining wealth (right)**

Chart 4



Note: Disposable income has been adjusted for extraordinary tax revenue from the restructuring of capital pensions in 2013 and 2014. The wealth ratio is based on consumption-determining wealth including lower weights for the wealth elements estimated to have a more limited effect on consumption. Hence, pension wealth after tax and equity wealth are included with a weight of 0.2 and 0.55, respectively. Net housing wealth is included with a weight of 0.8. Right-hand chart: Net housing wealth is home equity, while other wealth is financial assets, excluding pension and equity wealth less other debt than housing debt.

Source: Statistics Denmark and Danmarks Nationalbank.

The gross debt-to-income ratio of Danish households is very high by international standards, cf. Andersen et al. (2012a). However, the high gross debt alone is not likely to curb the upswing or prevent overheating. Besides high gross debt, Danish households also hold very substantial assets, including great pension wealth by international standards. The high gross debt may be a challenge in the context of macroeconomic stability, cf. Andersen et al. (2012b), but analyses show that most of the families holding the debt also have the financial resources to service it.

## ACCELERATING GROWTH IN THE HOUSING MARKET

In previous boom periods, the housing market was a key driving force and sometimes the cause of an upswing derailing. Today's housing market is growing and has been growing for some time, with rising prices and turnover and falling supply and time on market. House prices have gained momentum in the first part of 2015. There is, however, wide regional variation. Especially the market for owner-occupied flats in Copenhagen has experienced strong growth in recent years, i.e. just under 10 per cent p.a. But other factors should also be considered in this context, i.e. the rather strong population growth in Copenhagen over a number of years and the higher increases

in income compared with the rest of the country, paving the way for high and rising price levels.

In general, the housing burden, meaning the costs of buying an owner-occupied home relative to household disposable income, is considerably lower than its long-term average, cf. Chart 5 (left). This indicates that the low interest rates have not yet been fully priced into the housing market. An assessment based on Danmarks Nationalbank's house price model points to the same conclusion. This still applies also after the latest increase in the level of interest rates.

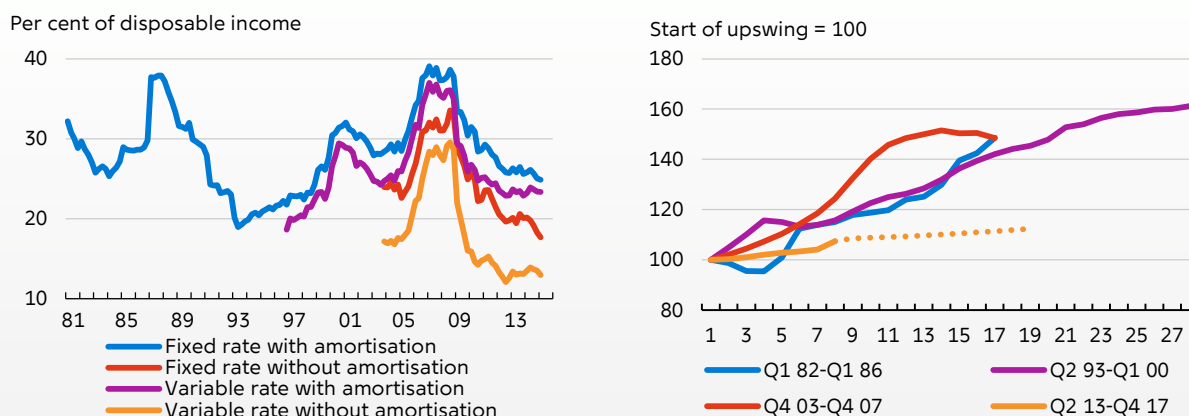
Developments so far are still a long way from the developments during the overheating of the housing market in 2005-07, cf. Chart 5 (right). Danmarks Nationalbank's baseline forecast projects continued growth in average house prices of around 6 per cent this year and a slightly lower rate in the coming years, but the risk of a considerably accelerated development exists, as seen in previous upswings, if the sentiment turns markedly more optimistic and becomes self-reinforcing. This risk is amplified by the absence of sufficient automatic stabilisers in the housing market.

## FIRMS POISED TO INCREASE DEMAND QUICKLY

Corporate savings have been high in recent years, cf. Chart 6 (left). If firms' accumulated savings

**Housing burden (left) and real house prices in four upswings (right)**

Chart 5



Note: Left-hand chart: The housing burden indicates the stylised financing costs, including administration margins, brokerage fees and housing taxes when buying a 140 sq.m single family house as a ratio of average disposable income. Right-hand chart: Upswing periods have been defined as periods with a predominantly increasing output gap quarter-on-quarter, i.e. becoming either less negative or more positive. The X axis denotes the number of quarters into the upswing. The broken line is Denmark's Nationalbank's baseline forecast. Source: Own calculations.

are used for increased investment, this will also imply a substantial potential for demand. Especially non-financial corporations have seen steady growth in profits over the last five years. However, this has not led to higher investment, but to rising net lending, cf. Chart 6 (right) and higher dividend payments, cf. Kramp et al. (2015). The counterpart is a very low investment ratio in the private sector, cf. Chart 7 (left). The baseline forecast of

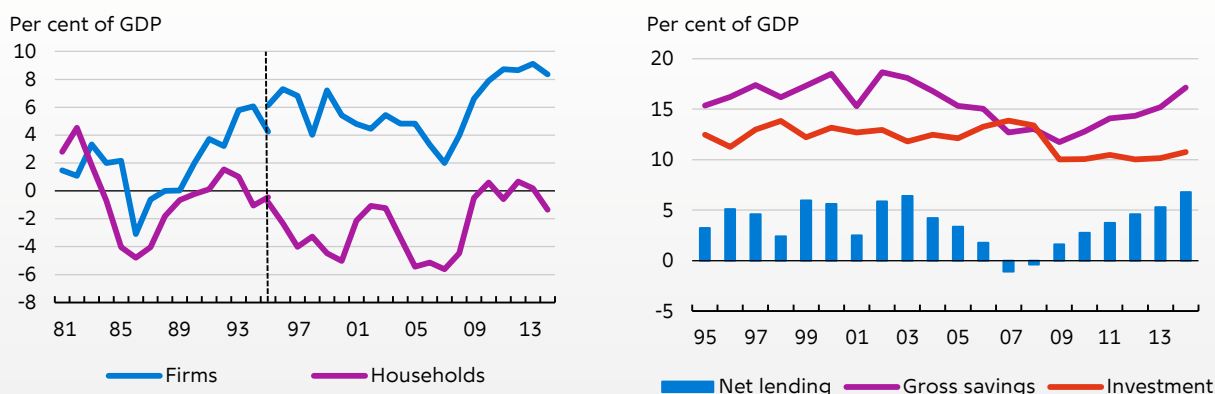
the projection expects only a small increase in the investment ratio, cf. Chart 7 (right).

#### EXTERNAL DEMAND IS ALSO SET TO GAIN MOMENTUM

Demand also comes from abroad, and Danish exporters have seen increasing growth in their export markets. Higher exports will claim domestic resources in a situation where domestic demand

**Financial savings of households and firms (left) and savings and investment of non-financial corporations (right)**

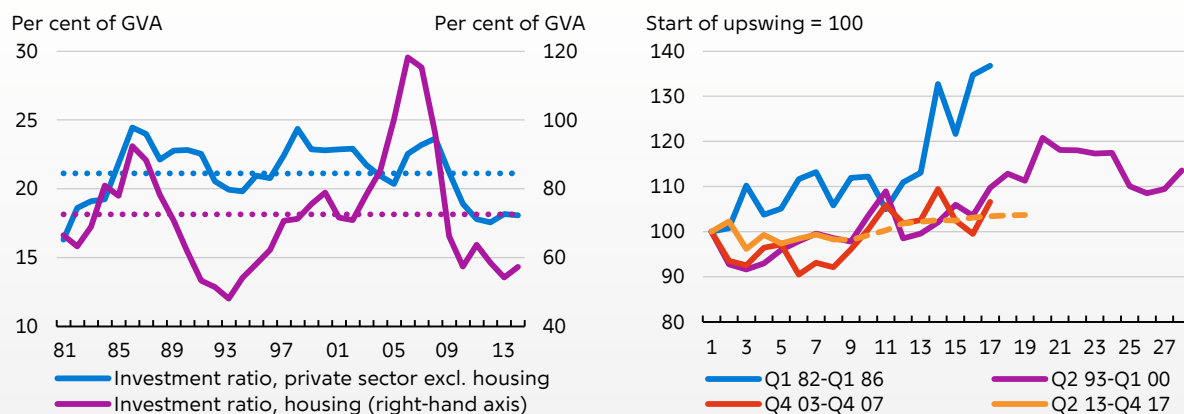
Chart 6



Note: Left-hand chart: Data up to and including 1995 is based on the previous ESA95 definition. After that period, ESA2010 has been applied. Household net lending has been adjusted for extraordinary tax revenue from the restructuring of capital pensions in 2013 and 2014. Source: Statistics Denmark.

Investment ratios (left) and investment ratios in four upswings (right)

Chart 7



Note: Left-hand chart: Investment ratios have been calculated relative to gross value added, GVA, in the two sectors. The broken lines are averages since 1981. Right-hand chart: The investment ratio shows business investments as a ratio of GVA in the private sector excluding housing. Upswing periods have been defined as periods with a predominantly increasing output gap quarter-on-quarter, i.e. becoming either less negative or more positive. The broken line is Danmarks Nationalbank's projection. The X axis denotes the number of quarters into the upswing.

Source: Statistics Denmark and own calculations.

will probably also be growing strongly, thereby reinforcing the risk of the economy overheating. The wage competitiveness of Danish firms has improved markedly in recent years, so the deterioration during the boom in 2005-07 has been more than offset. This is due to a period of lower wage increases and higher productivity growth in the competitive industries compared with the competitors. At the same time, the effective exchange rate of the krone has weakened. This means that Danish exporters are set to benefit from the indicated growth in external markets, which could also be a driver of stronger demand.

### WHAT IS THE SCENARIO FOR A STRONGER UPSWING?

Box 1 describes two scenarios with strong, fast growth in demand due to normalisation of consumption and investment ratios and accelerating growth in house prices and residential investment. The scenarios vary in terms of the housing market assumption.

One scenario assumes a slightly stronger impact of the low interest rates on house prices – with annual rates of increase of 8 per cent – but that this does not trigger an actual housing bubble in large parts of the housing market with self-reinforcing price increases and marked credit-financed growth in consumption and residen-

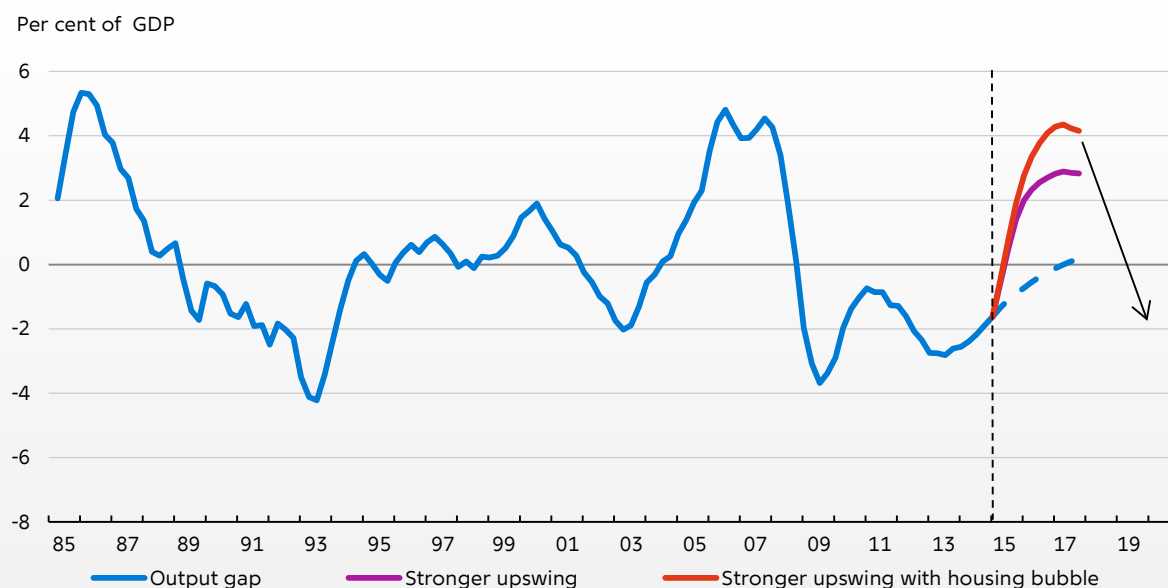
tial investment. In this scenario, the demand for labour will grow by around 60,000 in addition to the expected increase in employment by approximately 100,000 until the end of 2017 in Danmarks Nationalbank's projection. That entails considerable pressure on the labour market. However, in the absence of large imbalances in the housing market, a relatively soft landing of the economy over a long period is possible, with fiscal tightening measures and deterioration of wage competitiveness gradually easing the pressure on the demand for goods and services made in Denmark. In such a scenario, structural reforms may also lead to a timely increase in the output potential of the economy, and imports may to some extent accommodate demand, thereby acting as an automatic stabiliser.

In the second scenario, low interest rates and high consumer confidence have a strong impact, and a housing bubble builds up, with price increases of almost 20 per cent over the next few years. This leads to stronger, credit-financed growth in consumption and investment. This course of events has been seen several times before in recent Danish economic history. In this scenario, the demand for labour increases by 85,000 in addition to the around 100,000 in the baseline scenario, and keeping the economy on track will be a challenge. Imbalances of this magnitude in



Output gap

Chart 8



Anm.: The output gap is the difference between actual and potential output. The risk scenario assumptions are explained in Box 1. The output gap is assumed to be demand driven during the stronger upswing and does not include possible supply effects on potential output. Data is shown as a 3-month moving average.

Kilde: Danmarks Nationalbank.

the housing and labour markets entail a large risk of abrupt adjustment of house prices in the event of a sudden reversal of sentiment among households and firms. This risk is reinforced by the procyclical nature of housing taxation and by the fact that it would require very substantial fiscal tightening measures to counter these effects. For example, Pedersen and Ravn (2014) estimate that the stabilisation of the scenario observed in the mid-2000s would have required fiscal tightening measures of around 1½ per cent of GDP p.a. in 2006-08.

Chart 8 illustrates both scenarios, with a strong upswing with rising capacity pressures followed by a reversal. These are illustrations and not concrete alternative projections. The scale of the subsequent downturn is very uncertain, depending not only on domestic factors, but also on international business cycles. In the mid-2000s, a relatively modest adjustment in the housing market set in from 2006, but as a consequence of the preceding build-up of imbalances in the form of weakened wage competitiveness and high indebtedness the economy was very vulnerable when the international financial crisis escalated in the autumn of

2008-09. This amplified the real-economic downturn and the downturn in the housing market.

## THE OUTPUT POTENTIAL IN THE DANISH ECONOMY CAN ONLY COVER A LIMITED INCREASE IN DEMAND

### THE DANISH ECONOMY IS RUNNING CLOSE TO ITS CAPACITY LIMIT

Meeting rising demand in the economy will require higher output and thus increased demand for labour. Danmarks Nationalbank expects employment to rise by around 100,000 by the end of 2017, cf. Chart 9 (left). Over the same period, structural employment will rise by just under 50,000, mainly as a result of the structural reforms implemented in the last decade. This will bring actual employment to a slightly higher level than structural employment, i.e. the level of employment consistent with balanced wage development, meaning that wage growth does



## A fast and strong increase in demand will result in a shortage of labour

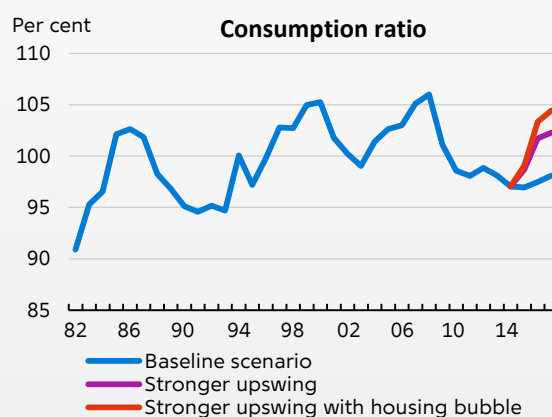
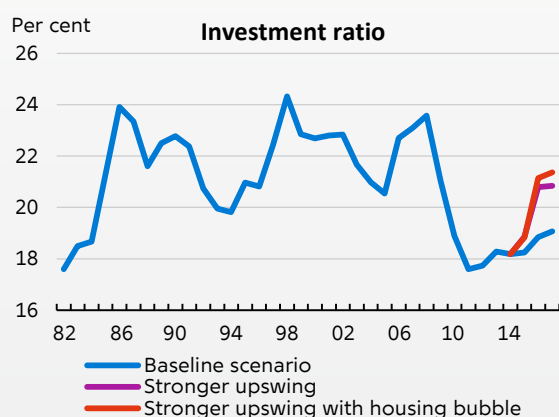
Box 1

Two scenarios are behind the calculations. The first scenario envisages normalisation of consumption and investment ratios over a short period as well as an increase in house prices of 8 per cent p.a., which is slightly stronger than in the baseline scenario, i.e. Danmarks Nationalbank's projection. In the second scenario an actual housing bubble builds up, with house price increases of just under 20 per cent p.a. in 2016. This results in growth in residential investment, contributing to increasing demand. A rise in activity implies a tightening of the labour market. In the first scenario, the demand for labour will grow by almost 60,000 persons in

addition to the approximately 100,000 in Danmarks Nationalbank's projection, and the increase in the second scenario is 85,000 persons. This means that there is a risk of a fast and strong increase in demand exerting substantial pressure on the labour market. This applies in both scenarios.

The labour market participation rate has risen in recent years, but is still lower than its structural level. An increase in the labour market participation rate and a drop in unemployment to the structural level will be far from enough to meet the demand for labour in the constructed risk scenarios.

### Shocks to investment and consumption ratios

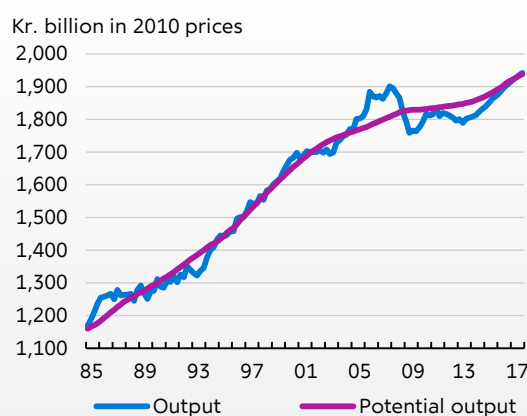
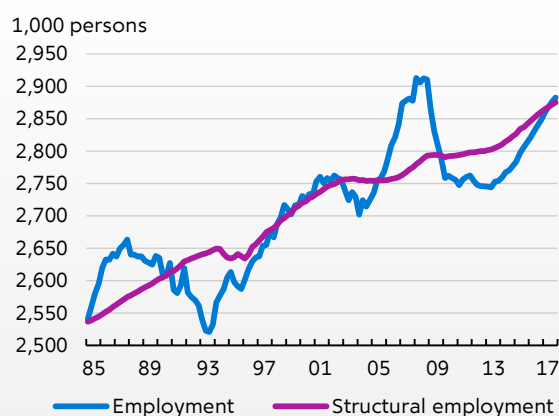


Note: The baseline scenario is Danmarks Nationalbank's central forecast. In both scenarios, the stronger upswing begins in the 2nd quarter of 2015. If it begins later, the effect in 2015 will be smaller. Left-hand chart: The investment ratio shows business investments as a ratio of GVA in the private sector excluding housing. Right-hand chart: The consumption ratio shows private consumption relative to household disposable income adjusted for extraordinary tax from the restructuring of capital pensions.

Source: Own calculations based on Danmarks Nationalbank's macroeconomic model.

### Actual and structural employment (left) and actual and potential output (right)

Chart 9



Note: Danmarks Nationalbank's projection.  
Source: Statistics Denmark and own calculations.

### Effect of labour market reforms on the supply of labour from 2013 to 2020

Table 1

Number of full-time equivalents

Total change in structural employment	100,000
Of which:	
- Pension reforms	76,000
- Tax agreement (2012)	11,000
- Other reforms	13,000

Note: Pension reforms refer to the welfare agreement (2006) and the retirement reform (2011). Other reforms cover e.g. reforms of social pension and flexible employment schemes (2012), student grants (2013) and social benefits (2013).

Source: Reply from the Minister for Finance to question no. 30 of 22 October 2014 and no. 3 of 18 November 2014 from the Finance Committee.

not exceed productivity growth. A scenario with stronger growth than expected in the baseline projection will probably quickly lead to a widespread shortage of labour, and then to higher wage inflation and loss of competitiveness. The rate of increase in productivity in the Danish economy fell during the latest downturn, cf. Andersen et al. (2011). A recovery of productivity growth, partially driven by cyclical factors, is expected in the coming years, although it will not reach previous high levels. Together with a contribution from a higher labour market participation rate, this means that potential GDP can be expected to grow by up to 1.8 per cent annually up to 2020. This is a lower growth rate than in the previous decades.

Potential growth flattened out right after the turn of the millennium, and there was another break in 2008 in the wake of the financial crisis, cf. Chart 9 (right). The flattening was mainly attributable to weaker structural productivity. This trend is mirrored in many other comparable economies. Everything else equal, the lower potential output growth means that the economy will reach its capacity limit faster if demand increases.

To the extent that higher demand is met via imports, this is not claiming domestic labour resources, thus mitigating pressures in the economy. In this respect, imports of goods and ser-

vices can be regarded as an automatic stabiliser, but this does not solve the full domestic capacity problem, since rising demand is not only for imported goods. However, the large current account surplus leaves ample scope for higher imports.

### REFORMS HAVE INCREASED THE SUPPLY OF LABOUR AND REDUCED UNEMPLOYMENT

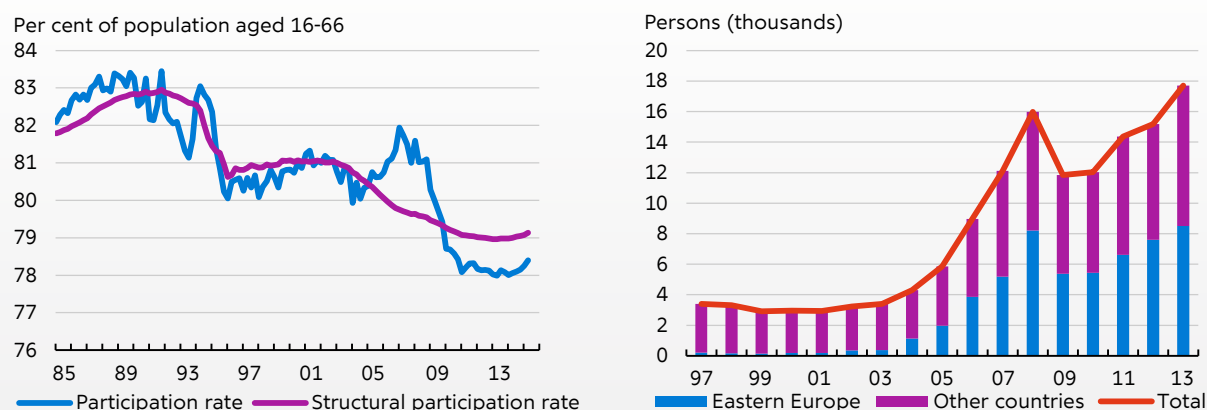
The reforms implemented since 2006 are estimated to increase the supply of labour by 100,000 persons from 2013 up to 2020, cf. Table 1. The most important policy measures have been implemented at the beginning of the period. At the same time, it has been politically decided to initiate a number of large-scale public construction projects, which will require considerable labour resources, e.g. renovation of the rail network, super hospitals, the Fehmarn Belt link, etc. These projects cannot be easily adapted to the cyclical situation, increasing the need for a higher supply of labour in a situation with rising private sector demand.

While cyclical fluctuations in the past mainly caused unemployment to rise, it was primarily the labour market participation rate that changed in the latest downturn. Also in future, inflows to and outflows from the labour market will play a key role in ensuring a sufficient supply of labour, supported by the implemented reforms, especially the pension reforms.

Gross unemployment has been falling for some time and was less than 5 per cent of the labour force in the spring, which is low in a longer-term perspective. The only time the level was lower was during the overheating of the Danish economy in the years leading up to the financial crisis – and this was not sustainable. The potential for a further reduction of structural unemployment is smaller than previously. A few decades of important labour market reforms, including reduction of the unemployment benefit period, tightening of the right to regain benefit eligibility and a generally active labour market policy, have reduced the level of structural unemployment to less than half of the level in the early 1990s. At present, unemployment exceeds its structural level by only approximately 10,000 persons. Unemployment is expected to fall by just under 25,000 until the end of 2017. This means that the growth in employment needs to be fuelled primarily by a higher labour market

**Actual and structural labour market participation rate (left) and employment-related immigration (right)**

Chart 10



Note: Right-hand chart: Gross immigration for employment and contract work, i.e. a flow variable. The figures are excluding asylum seekers, au pairs and students. They also exclude immigrants from the Nordic countries.

Source: Statistics Denmark and own calculations.

participation rate for Danish residents or via more immigration or commuting. The structural reforms implemented in recent decades must therefore result in a sufficiently higher supply of labour. Demographic factors cannot be expected to contribute to any notable extent, given the weak growth in the working age population in the coming years. The increased supply of labour should therefore come mainly from expanding the share of the population of working age in the labour market.

The labour market participation rate, measured as the number of employed plus unemployed persons as a share of 16-66-year-olds, declined substantially in the years following the overheating of the Danish economy, but this has been partially redressed in recent years, cf. Chart 10 (left). However, there is still potential for attracting more labour to the labour market.

The structural labour market participation rate has been declining over time. The strong drop in the 1990s was the result of several schemes, including the transitional allowance and leave schemes, which took people out of the labour market. But since these schemes were temporary, they would not, in principle, influence the structural level. The continuation of the decline in the structural participation rate after the turn of the millennium can be attributed to the age group composition of the labour force. After the

large post-war generations there are now smaller generations, implying a lower average participation rate, given that the participation rate declines with increasing age. An additional explanation is that more young people than previously are taking education of long duration.

A higher labour market participation rate and a fall in unemployment to the structural levels will increase employment by around 90,000 persons. But this expansion of the supply of labour is far from sufficient to cover the need in the event of a fast and strong increase in demand, cf. Box 1. The constructed scenarios are far from unrealistic seen in the perspective of other upswings, such as 2005-07 and the 1990s, but this is not Denmark's Nationalbank's baseline forecast.

#### IMMIGRANTS AND STUDENTS ARE SOURCES OF AN INCREASED SUPPLY OF LABOUR

During the boom up to the financial crisis, external labour contributed significantly to easing pressures on the Danish labour market, and this still applies to a certain extent, cf. Chart 10 (right). Employment-related immigration was just under 18,000 persons in 2013, i.e. almost twice the current unemployment gap. This kind of immigration may thus to a considerable extent contribute to mitigating labour market pressures, inter alia because it can respond relatively quickly.

During the boom in 2005-07, most employment-related immigration was from Eastern Europe. Today, many of these countries have relatively high growth rates and rising wage levels, while population numbers are falling. In addition, there is solid growth in Denmark's neighbouring countries such as Germany, Sweden, the UK and Norway, which also, by tradition, attract labour from Eastern Europe. This means that it might be more difficult to attract the right kind of labour to Denmark from other countries in future.

Students are also a source of labour and can to a certain extent contribute to easing labour market pressures in a boom. The share of a generation in education is rising. There was a break in the years 2006-09, when the Danish economy was overheating, but the study frequency has since returned to its long-term trend. All in all, the potential for increasing the supply of labour via these sources is probably limited and smaller than previously.

## CONCLUSION

The overall outlook for the Danish economy in the coming years is positive, with rising growth and employment and moderate price and wage inflation. However, experience from previous upswings in Denmark shows that an upswing will, sooner or later, become unsustainable in terms of self-reinforcing increases in house prices, a widespread shortage of labour and subsequently excessive wage growth resulting in loss of competitiveness. Avoiding such a scenario makes demands on economic policy, both cyclical and structural policies. The assessment is that such an unfortunate scenario can be avoided by means of relatively limited measures, if they are implemented at the right time with the right focus.

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