Ministry of Economic Affairs

Economic Survey

March 2023
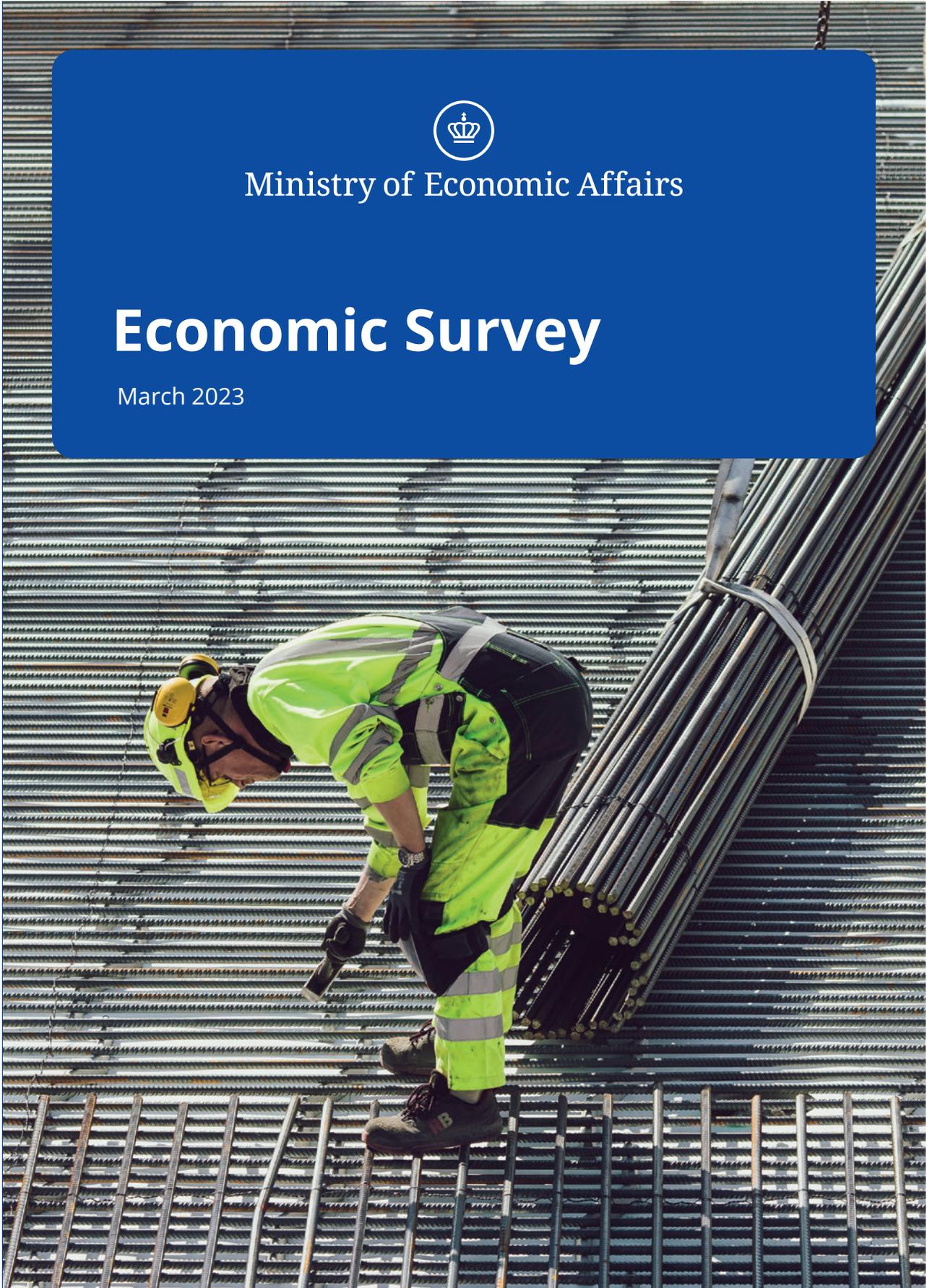
1. Summary

1.1 The current economic outlook

Inflation appears to have peaked across countries and fears of a global recession have eased. However, inflation remains at a high level, and monetary policy tightening in order to bring inflation in line with objectives has led to markedly higher market interest rates. This dampens economic growth.

There are signs that a slowdown in the Danish economy is under way. Households have reduced consumption, and companies are increasingly reporting a lack of demand. In the housing market, there has already been a significant downturn in the form of fewer transactions and falling prices. This reflects the effect of higher interest rates as well as an adjustment after a high level of housing sales during the corona pandemic. Following robust growth in the past two years, GDP is estimated to grow modestly by 0.2 per cent this year and rise by 1.5 per cent in 2024, while inflation is expected to fall gradually, *cf. figure 1.1 and figure 1.2*. The expected period of weaker growth should be seen in the light of a starting point with a high level of activity and historically high employment. Even with the expected moderation, a certain level of capacity pressure will remain in the economy, with a labor market that is still relatively tight.

Although risks in relation to energy supply, among other things, have decreased since the autumn of 2022, there is still great uncertainty about the course of economic development. This applies in particular in relation to how quickly inflation comes down. The forecast assumes that a price-wage spiral will not occur, which would make inflation persist for a longer period.

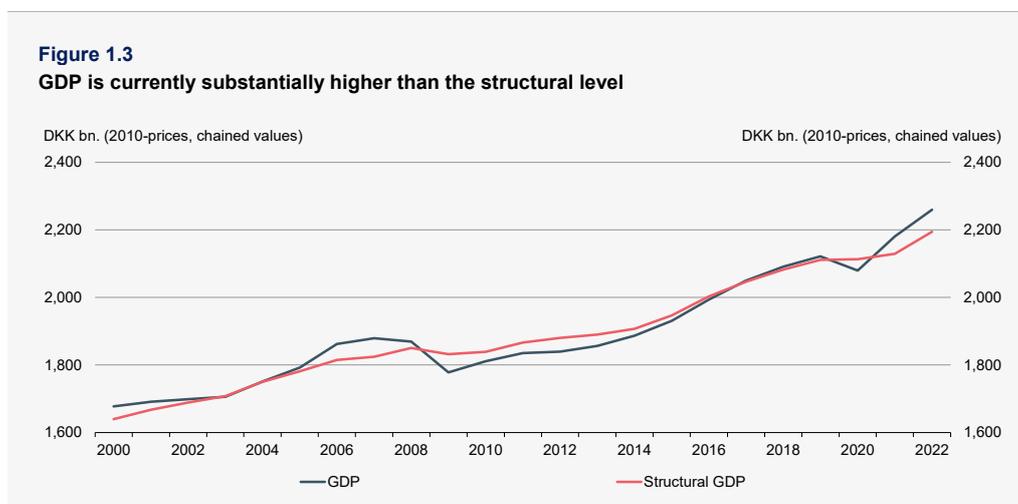| Figure 1.1	Figure 1.2
A period of weaker growth is projected	**Inflation is expected to remain at a higher level**
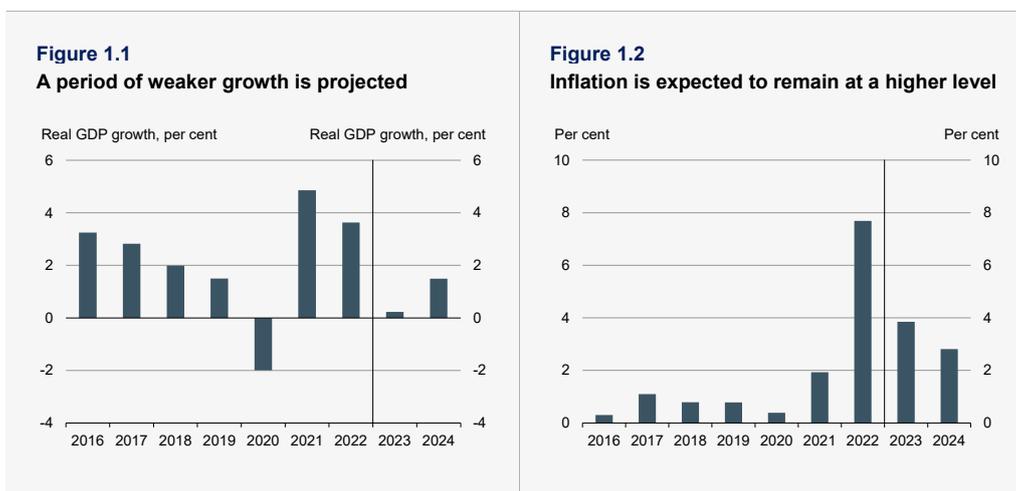
Note: Inflation shown in figure 1.2 is annual growth in consumer prices. Vertical lines depict the transition to forecast years.

Source: Statistics Denmark and own calculations.

An economic slowdown is underway

The Danish economy has been very strong for a longer period and has been resilient in the face of heightened uncertainty, which derives from Russia's invasion of Ukraine, high inflation and concern about recession in Europe. Thus, there was continued progress in the Danish economy throughout most of 2022. However, growth was higher in 2021 due to policy support and strong demand recovery after the corona pandemic. In the 4th quarter of 2022, GDP was just over 7 per cent above the level prior to the pandemic and somewhat above the level of activity that is normally compatible with stable price and wage development (i.e. structural GDP), *cf. figure 1.3*. For that reason alone, slower growth in economic activity is to be expected.

Figure 1.3
GDP is currently substantially higher than the structural level

DKK bn. (2010-prices, chained values)   DKK bn. (2010-prices, chained values)

Note: The structural GDP level is based on the estimated output gap for GVA excl. mining and quarrying.
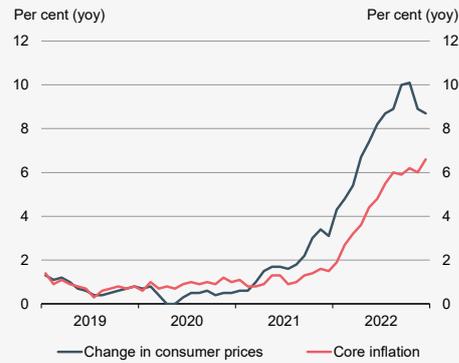Source: Statistics Denmark and own calculations.

The high annual GDP growth rate of 3.6 per cent for the year 2022 masks a somewhat weaker development throughout the year. Calculated by the development from the 4th quarter of 2021 to the 4th quarter of 2022, growth was more moderate at 1.5 per cent. Excluding an extraordinary contribution from the pharmaceutical industry at the end of 2022, GDP was roughly unchanged in the 4th quarter of 2022 compared to the same quarter the year before, *cf. chapter 4.1*.

Signs of a slowdown in the economy have also appeared in other key indicators. The assessment of economic conditions among companies and households has pointed to a deterioration for a longer period. Consumer confidence has fallen significantly since September 2021 and reached a historic low in October 2022, while business confidence has fallen to a level that signals decline in activity, *cf. figure 1.4*. The deterioration in the confidence indicators should be seen in the context of a high level of inflation, which has spread to a wider number of goods and services, *cf. figure 1.5*. Inflation appears to have peaked, but the price increases that have taken place over the past year have increased the price level significantly, and core inflation (i.e. inflation net of direct contributions from energy and food prices) has not yet reversed.

Figure 1.4
Confidence indicators show declining activity

Net balance (left axis), Net balance (right axis)

— Consumer confidence   — Business confidence (r. axis)

Figure 1.5
Inflation remains at a high level

Per cent (yoy)

— Change in consumer prices   — Core inflation

Note: In figure 1.4 the index level of 100 corresponds to the average of business confidence for the period 1990-
2018.
Source: Statistics Denmark and own calculations.

The elevated level of inflation leads to a reduction in the purchasing power of households. The fall in
real income for both wage earners and transfer income recipients, as well as uncertainty about eco-
nomic developments, pulls in the direction of less private consumption and more precautionary sav-
ing. However, nominal consumption expenditures have not fallen, but due to inflation, households re-
ceive fewer goods and services. Thus consumption in real terms has fallen. For example, retail turno-
ver has fallen significantly in terms of volume, while the same does not apply to turnover in nominal
terms, *cf. figure 1.6*.

Figure 1.6
Retail sales has declined over the recent year

Index (2015=100)

— Valueindex   — Volumeindex

Figur 1.7
**Industrial production excl. the pharmaceutical
industry stagnated at the end of 2022**

Index (2015=100)

— Manufacturing   — Manufacturing excl. pharmaceutical industry
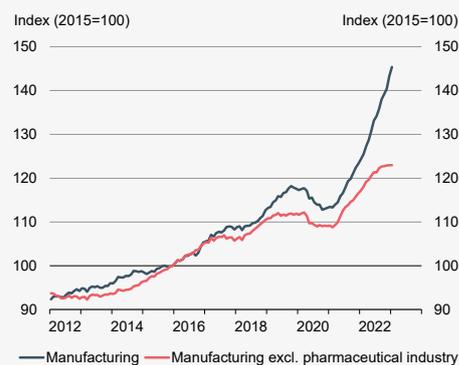
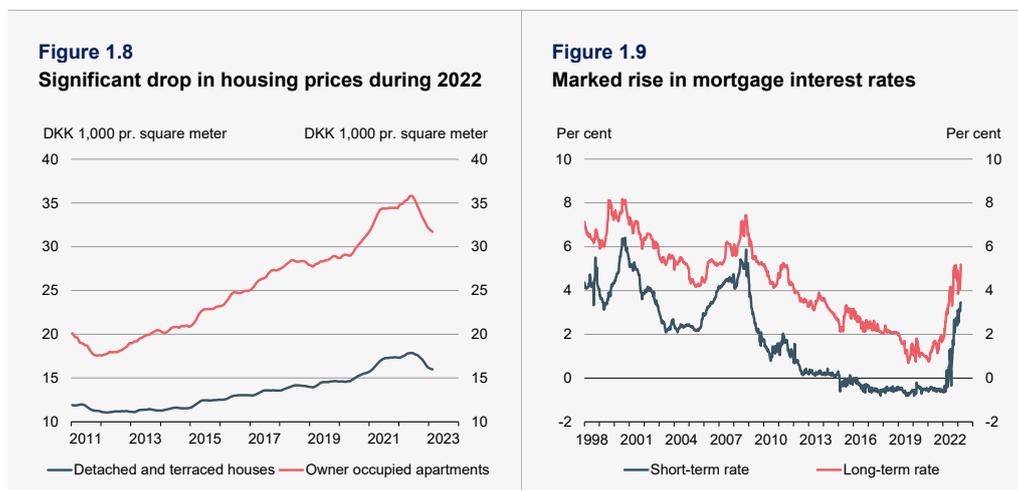Note: The charts depict a 12-month moving average.
Source: Statistics Denmark and own calculations.

The falling trend in real private consumption since the 4th quarter of 2021 is also due to a normaliza-tion following a high level of consumption in the wake of the corona pandemic.

In general, businesses are seeing rising costs, including due to energy price increases and imports that are more expensive. Against this background, businesses have to a certain extent - but with some delay - raised their sales prices. Manufacturing companies have been able to continue increas-ing production in 2022, particularly driven by the pharmaceutical industry, while progress in the re-maining manufacturing industries stagnated in the latter part of 2022, *cf. figure 1.7*. At the same time, a lack of demand and increased financial constraints have increasingly been observed, especially in the cyclically sensitive construction and construction industries, but also in several other industries. Shortages of materials and labour, on the other hand, have become less prevalent, although they re-main at a relatively high level.

The slowdown in economic growth is a result of demand from households and businesses adapting to higher prices, which are, among other things, due to changes in the energy supply and other supply conditions. Lower demand is a crucial adjustment mechanism and an essential prerequisite for lower inflation. Normalisation of supply side conditions can also contribute to this. For example, the high freight rates on sea transport have come down again after disruptions in the global supply chains dur-ing the corona-down closures.

The housing market is already in a decline. Thus, the volume of housing transactions has fallen signif-icantly in the past year, and since peak in May and June last year, the prices of owner-occupied flats and house have declined by approx. 11.5 and 10.5 per cent, respectively, *cf. figure 1.8*. The downturn should be seen in the context of significant interest rate increases and the high level of turnover on the housing market during the corona pandemic. Since the start of 2022, the interest rate on long-term fixed-rate mortgage loans has risen from below 2 per cent to almost 5 per cent, *cf. figure 1.9*.

Figure 1.8
Significant drop in housing prices during 2022

Figure 1.9
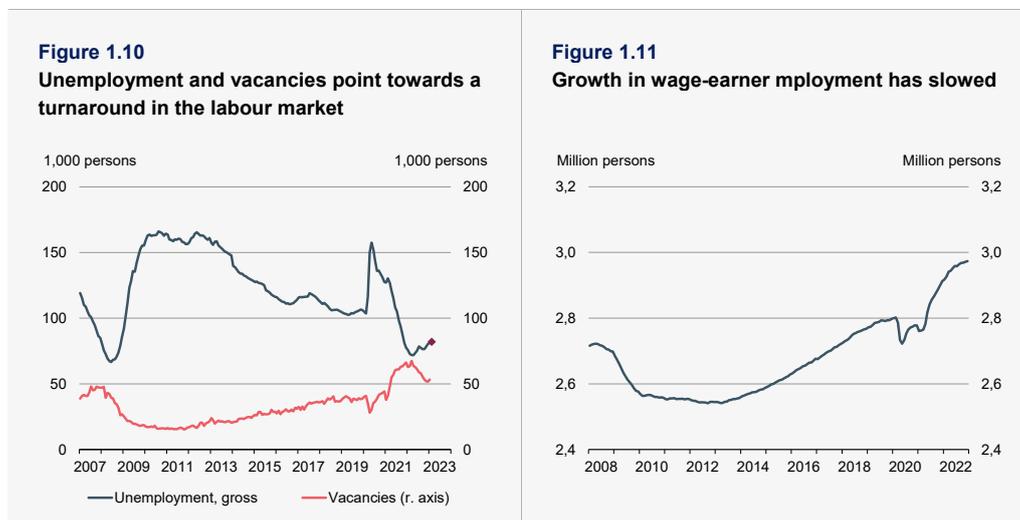**Marked rise in mortgage interest rates**

Note: In figure 1.9, the depicted interest rates are based on, respectively, 30-year, fixed-rate, callable bonds (the long-term interest rate) and non-convertible standing bonds with a remaining maturity of less than 2 years, which lie behind the provision of adjustable-rate loans (the short-term interest rate).

Source: Boligsiden, Finans Danmark and Macrobond.

Turnaround in the labour market

There are several signs that a turnaround in the labour market is taking place. The decline in unemployment which took place since mid-2020 has stopped, and the increase in unemployment since May 2022 has continued in the beginning of 2023. Moreover, the number of vacancies has declined from a high level, *cf. figure 1.10*. Furthermore, employment has slowed in recent months following a decade of increased employment, disregarding the fluctuations due to the corona pandemic, *cf. figure 1.11*. The extended period of increasing employment should be seen in the light of an inflow of foreign labour, later retirement and a greater number of immigrants entering the labour market. This has contributed to a balanced upturn during the pandemic and a quick economic rebound after the pandemic. However, the change in the business cycle is occurring now, and for several industries, including trade and transportation as well as building and construction, there has already been substantial declines in the number of persons employed during 2022.

Figure 1.10
Unemployment and vacancies point towards a turnaround in the labour market

Figure 1.11
Growth in wage-earner mployment has slowed

Note: The unemployment indicator is depicted for february 2023 in figure 1.10. Both figures show seasonally adjusted data.
Source: Statistics Denmark and own calculations.

The turnaround in the labor market is taking place from a situation with record high employment, and there are still relatively many vacancies relatively to the number of unemployed. This can lead to wage pressures. So far, wage growth has been moderate in relation to the pressures on the labour market, and the rate of wage growth increased only moderately in 2022 to 3.6 percent in the 4th quarter of 2022 according to the Confederation of Danish Employers. In the cyclically sensitive construction and construction industries, there was actually a slight decrease in the rate of wage increases at the end of the year. The agreed wage increases in connection with the collective agreement negotiations are pulling in the direction of clearly higher wage increase rates in 2023 and 2024, which in isolation can lead to further price pressures. In the forecast, it is assumed that this does not lead to mutually self-reinforcing price and wage increases.

Outlook for the coming years

The slowdown in the Danish economy is expected to broaden during 2023, and for the year as a whole, modest growth in GDP and decline in employment is expected. The development must be seen in the context of high inflation and higher interest rates that affect private consumption and investments. Thus, only weak growth in private consumption and a noticeable decline in housing investments and business investments are expected in 2023.

In addition, there are some special factors regarding inventory investments and the pharmaceutical industry's output, both of which contributed relatively much to GDP growth last year. There were extraordinarily large inventory investments in 2022, and the pharmaceutical industry achieved a record high output level in December 2022. It is assumed that these factors will not contribute to the same extent in buoying growth at the start of 2023, which in isolation will dampen GDP in the 1st quarter. The uncertainty surrounding these two special factors is considerable, and depending on the impact, they can cause significant fluctuations in GDP during 2023. However, the development in inventory investments and the output of the pharmaceutical industry are not expected to impact growth in the rest of the economy or the development in the labour market.

As inflation slows and real incomes start to rise, economic conditions are expected to improve. Energy prices have already fallen significantly, and the rate increases in producer prices and consumer prices is slowing. Based on the labour market wage agreements, real wage growth is expected to turn positive in 2023, and during 2024 most of the real wage loss in 2022 could be recovered. However, the real increase in household income is limited by the expected fall in employment. It is expected that households will convert a larger share of income into consumption after the fall in the consumption ratio during 2022, which must be seen in connection with precautionary savings, *cf. figure 1.12*.

Figure 1.12
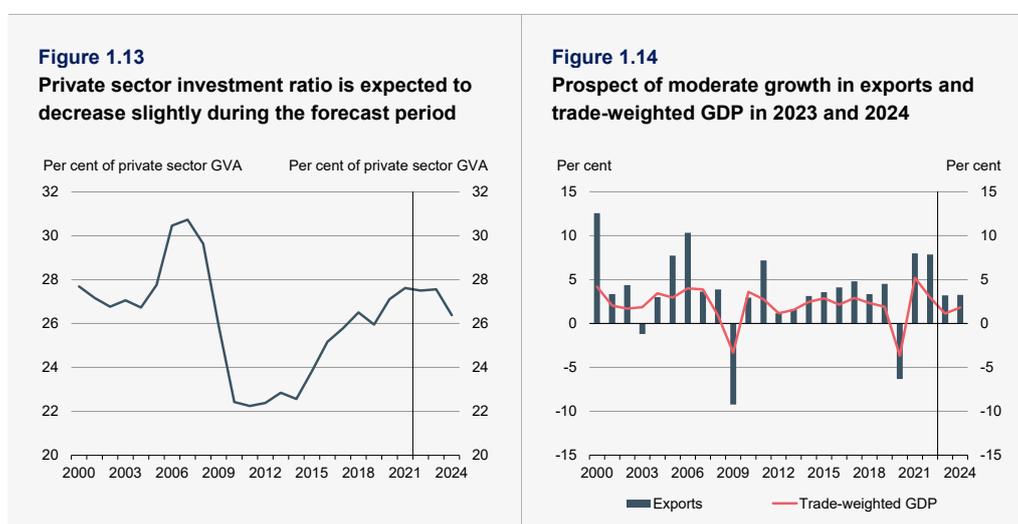**Fall in consumption ratio and wealth ratio in 2022**
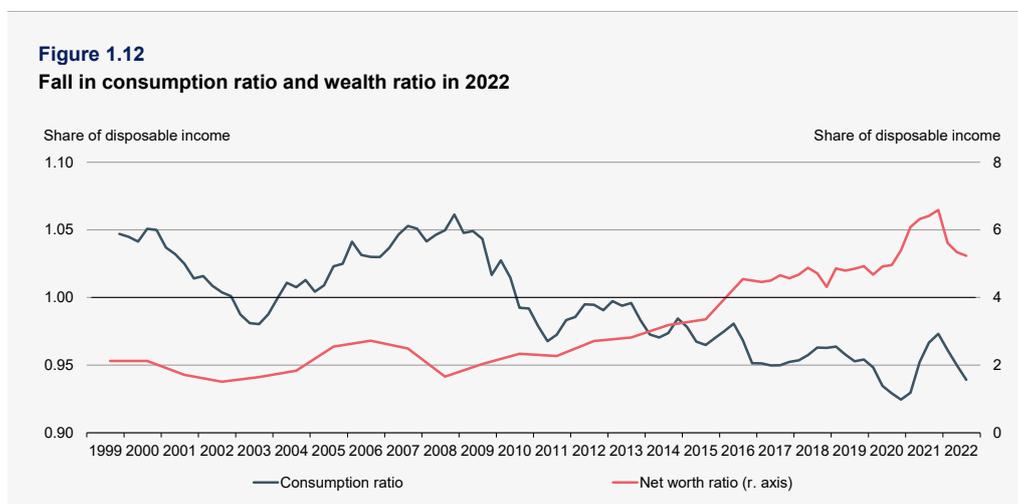
Note: This shows financial net worth (assets minus debts). The value of homes is not included. Pension assets are before tax. There is data-break between 2016 and 2017 due to a new method for calculating the financial accounts. Up to and including 2016, the net worth ratio is calculated annually. From 2017 onwards, net worth is in relation to the annualized disposable income in the quarter. In 2020 and 2021, the disposable income has been adjusted for tax payment of the release of the frozen holiday funds. The figure shows a four-quarter moving average of the consumption ratio. Data for income and consumption are seasonally adjusted.
Source: Statistics Denmark and own calculations.

The repayment to home owners who have paid tax on an excessively high assessment in the years 2011-2020 will, on the contrary, support consumption in 2024. The expected improvement in private consumption, especially in 2024, must also be seen in light of the fact that the financial position of households remains generally strong despite the decline in wealth in 2022.

While household consumption is expected to respond relatively quickly to declining inflation, it is expected that investments will be affected for a longer period by tighter financial conditions, including higher interest rates. This applies to both business investments and residential investments. However, the need for investments in energy conversion, including increased energy efficiency for both businesses and households, support total investments. In the forecast, the investment ratio – i.e. investments as a share of GVA – in the private sector as a whole is expected to fall from 2022 to 2024, but will not be low in 2024 compared to the years before the corona pandemic, *cf. figure 1.13*.

Figure 1.13
Private sector investment ratio is expected to decrease slightly during the forecast period

Figure 1.14
Prospect of moderate growth in exports and trade-weighted GDP in 2023 and 2024

Note: Investments as a share of GVA in the private sector in figure 1.13. In figure 1.14, trade-weighted GDP is calculated by weighing growth among Denmark's 36 largest trading partners by their share of Danish exports.
Source: Statistics Denmark, OECD *Economic Outlook*, June and November 2022, IMF *World Economic Outlook Update*, January 2023 and own calculations.

Abroad, there are also signs that economic activity is losing momentum in 2023. Among the international organizations, however, there is no longer the same concern about a recession as in the autumn of 2022. The reduced recessionary concerns are, among other things, due to lower risk of supply shortages of gas in particular, which has also been accompanied by a significant drop in energy prices. At the same time, it is expected that growth in the global economy will return to some extent in 2024 – assuming no escalation in the war in Ukraine and that the inflationary pressure has subsided.

Continued high core inflation across countries means that further monetary policy tightening from central banks are likely in the short term. At the same time, the international organisations, including the IMF and OECD, recommend that fiscal policy supports monetary policy in relation to curbing inflation, and that fiscal policy is generally not eased. Tight financial conditions and fiscal policy restraint will work in the direction of more subdued growth prospects both at home and abroad during the forecast period.

Against this background, growth in the Danish export markets as a whole is estimated to be slightly lower than the historical average – especially in 2023, *cf. figure 1.14*. Thus, exports are also expected to grow only moderately in the forecast years. However, the reopening of the Tyra field at the end of 2023 supports foreign trade in 2024. Increased production of energy in the North Sea is expected to support GDP growth in 2024 by almost 0.5 percentage points in the form of increased energy exports and less need for imports of oil and gas.

Overall, it is expected that GDP will grow modestly by 0.2 per cent this year and increase by a moderate 1.5 per cent in 2024. The prospect of a temporary growth slowdown is expected to lead to a drop in employment of almost 30,000 people from 2022 to 2024. The fall in employment reflects that the expected economic growth with normal productivity development will not be strong enough to muster an increase in employment.

The fall in employment is limited, however, by the fact that businesses must to a certain extent be expected to hold on to labour in view of a continued tight labour market. Thus, employment is expected to continue to be high and above the structural level in 2024, *cf. figure 1.15*.

Figure 1.15	Figure 1.16
Employment is expected to continue to exceed the structural level	**Gross unemployment is also below the structural level**
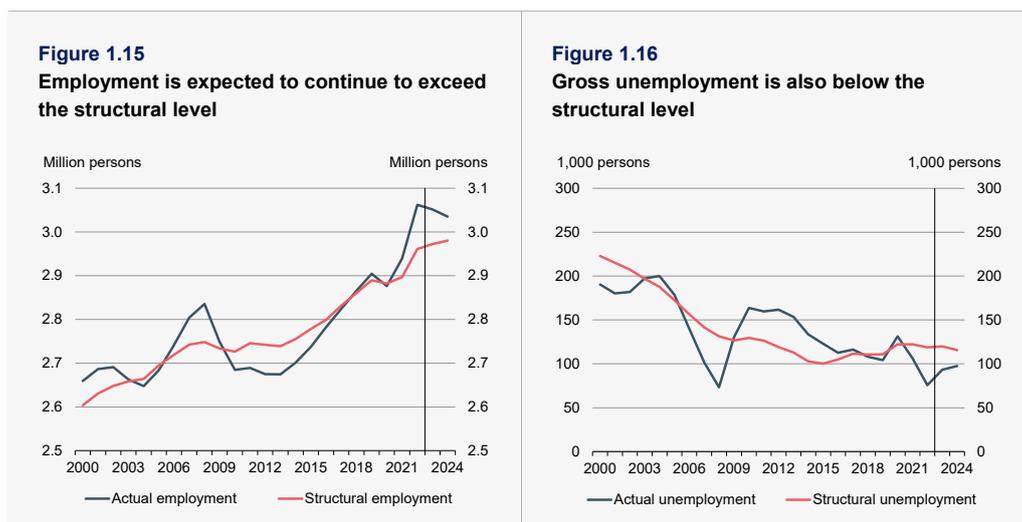
Note: Employment excl. persons on leave in figure 1.15.
Source: Statistics Denmark og egne beregninger.

The development in employment is set to lead to an increase in gross unemployment, such that it will be slightly below the structural unemployment level of approx. 115,000 people in 2024, *cf. figure 1.16*.

Overall, the expectation of developments in the labour market implies a significant narrowing of the gaps – i.e. the difference between the actual and the structural levels – on the labour market in the coming years. At the same time, a relatively small positive output gap is expected in 2024. Therefore, an actual recession in the Danish economy is not currently expected during the forecast period.

Risks have become more balanced

Russia's invasion of Ukraine and the resulting sanctions have had major consequences for the global economy during 2022, including through the impact on the energy and food markets. However, both energy prices and unprocessed food prices are on the way down again, and risks currently appear more moderate than in the fall of 2022, when concerns arose about gas supply shortages in Europe.

European countries managed to fill their gas stocks for the winter of 2022-2023, so that supply shortages could be avoided. The build-up of stocks has been conditioned by mild weather and the purchase of liquefied natural gas (LNG), which – among other things – was made easier as a result of lower consumption in China during the massive corona shutdowns. It is not a given that something similar will be the case next winter, so the risk of supply shortages extends further than just the latest winter. According to an assessment by the International Energy Agency (IEA), a complete stop of Russian gas supplies to the EU as well as the restoration of Chinese LNG imports to the level of 2021 could lead to Europe lacking half of the gas required to fill stocks to 95 per cent capacity at the start of the 2023-2024 heating season.[1] Thus, there is a continued risk of new energy price increases.

Energy prices have had a downward trend since autumn, and at first glance, inflation appears to have peaked in the US, the euro area and Denmark. However, inflation remains high, which also applies to core inflation as a result of derivative price increases on a wide range of goods and services. Inflation expectations remain well established, but in general the expectation among the international organizations is that inflation will not return to a more normal level until after 2024.

A longer period of persistently high inflation entails a risk that high price increases become embedded in expectations, and that wage and price increases may become mutually reinforcing. It will then require higher interest rates for a longer period to bring inflation under control. This risk is amplified in countries where the labour market is already tight, and increased wage demands are reinforced by a desire for compensation for high prices. At the same time, price-distorting measures aimed at mitigating the consequences of high inflation could prolong a necessary adjustment of demand to bring down inflation.

China has abandoned its zero-tolerance policy towards covid-19, which certainly appears to reduce the risk of new disruptions to global supply chains, as has been the case in connection with previous shutdowns. The re-opening can help to boost the global economy, but at the same time also help to push the prices of energy and other raw materials upwards and thus contribute to inflation on a global level and necessitate further monetary policy tightening. However, the current expectation is that growth in China will continue to be more moderate than in the years before the corona pandemic. At the same time, a deepening crisis in China's housing market remains a major source of vulnerability, with the risk of widespread loan defaults.[2]

Since the end of 2022, there has been an improvement in business confidence in the euro area, which is reflected in an expectation of a softer slowdown. Viewed in isolation, this point in the direction of greater price pressure and thus the need for further tightening of monetary policy.

---

[1] See IEA (2022): Never Too Early to Prepare for Next Winter: Europe's gas balance for 2023-2024. November 2022.
[2] See IMF (2023): *World Economic Outlook Update: Inflation Peaking amid Low Growth*. January 2023.

In the US, growth in 2022 and especially at the end of the year has been stronger than expected. However, the pace of the American economy must necessarily slow down at some point, partly because household savings are already at a very low level. However, it is rather uncertain whether the US economy is headed for a soft or a hard landing. In particular, it will depend on whether a mild easing is sufficient to bring inflation down to a level that is compatible with the central bank's objective. The recent banking problems in the US may in themselves contribute to a more restrictive lending policy, which may lead to a harder slowdown.

There are some separate risks associated with the development of the housing market here in Denmark. The rising interest rates hit the housing market at a time when there was already an adjustment underway after a very high number of housing deals during the corona pandemic. This can result in a self-reinforcing development, where house prices fall quickly and possibly relatively much. In the past, relatively large reversals in the housing market have occurred together with major setbacks in the economy in general. The risk of a significant setback on the housing market is, however, reduced by the fact that today, in contrast to previous periods of large house price declines, there have been no significant signs of prior unsustainable borrowing among homeowners.

The forecast reflects an expectation of a soft landing for the Danish economy. A soft landing among primary trading partners is also projected. Since the economic development at home is largely tied to foreign countries, a possible harsher setback from them will also affect the Danish economy. Finally, a central assumption is that a price-wage spiral does not occur, neither abroad nor at home.

Significant assumptions behind the forecast and changes since the latest assessment in *Economic Survey, August 2022* appear in box 1.1.

Box 1.1
The basis for the forecast and changes since Economic Survey, August 2022

The forecast is based on the latest national accounts data, which are available up to and including the 4th quarter of 2022, as well as a number of other indicators, the most frequent of which reach into February. This applies, among other things, to consumer and business confidence data. In addition, there are political decisions since the latest assessment in August 2022, including *Agreement on winter aid* from September 2022, *Agreement on inflation aid* from February 2023 and the abolition of Store Bededag as a public holiday in 2024. In addition, the forecast basis reflects the government's draft law for the Budget Bill for 2023, *cf. chapter 1.2*.

The national accounts data show a higher level for both GDP and employment in the 3rd and 4th quarter of 2022 than previously expected. During 2022, inflation has also shown to be slightly higher than estimated in August 2022, and as a result, interest rates have risen more than expected. Compared to the latest forecast from August 2022, estimates for growth in real GDP have been revised up in 2022 and down in 2023, *cf. figure a*. The estimated consumer price inflation has been upwardly revised both this year and next year, *cf. figure b*.

Figure a
**GDP growth**

Figure b
Inflation
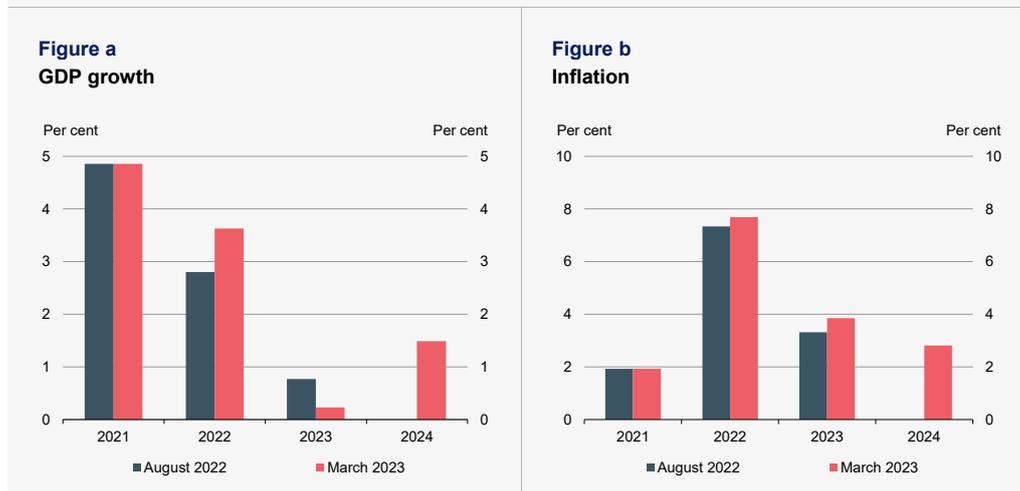
Source: Statistics Denmark and own calculations.

1.2 Fiscal policy and public finances

The continued high activity in the Danish economy up until now – despite the increased uncertainty associated with the war in Ukraine and high inflation – is also reflected in the development of public finances through high revenues from taxes, and low expenses for unemployment-related transfer payments.

The estimated public surplus amounted to approximately DKK 80 bn. in 2022, equivalent to just below 3 per cent of GDP, *cf. figure 1.17.* This is an upward revision of more than DKK 50 bn. since the August survey. The revision is mainly due to higher revenues from personal income taxes – including the capital gains tax – and corporate taxes, which are partly due to the high level of activity. The positive position on the public budget balance is expected to continue throughout the forecast period, as surpluses are also expected in 2023 and 2024. The public surpluses are expected to gradually decrease over the period as cyclical conditions become less buoyant, along with the prioritization of the Ukraine Fund in 2023 and the transition to the new property tax system in 2024. The transition to the new property tax system involves payments to homeowners in 2023 and 2024 who have paid property tax on overvalued properties since 2011, as well as tax rebates for homeowners who continue to live in their homes. Thus, no homeowners will experience an increase in their property tax when the new taxation system takes effect in 2024.

The strong public economy is also reflected in the level of public debt. The public EMU debt is estimated to be approximately 30 per cent of GDP by the end of 2022. This is among the lowest levels in the EU, *cf. figure 1.18*. The EMU debt is currently expected to remain at roughly the same level until the end of 2024.

Figure 1.17
Public budget surpluses

Figure 1.18
Danish EMU debt is among EU's lowest
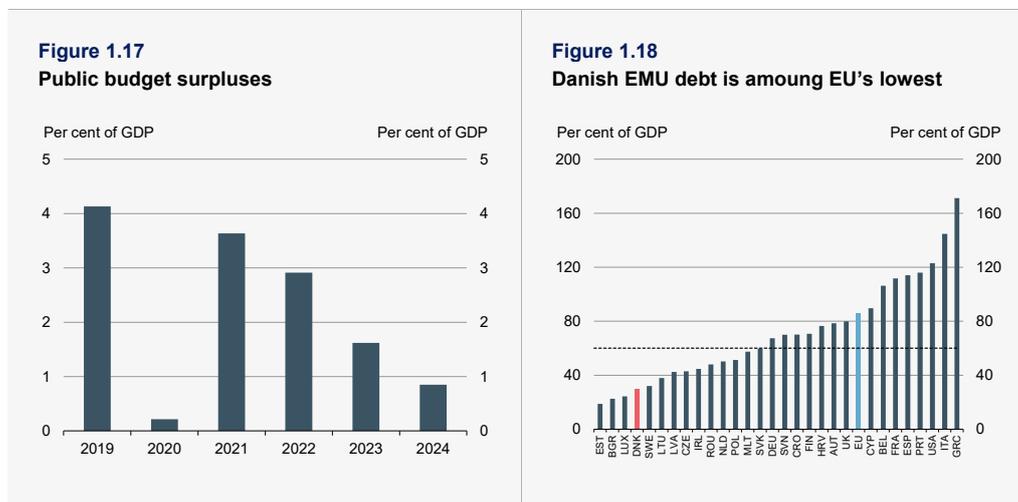
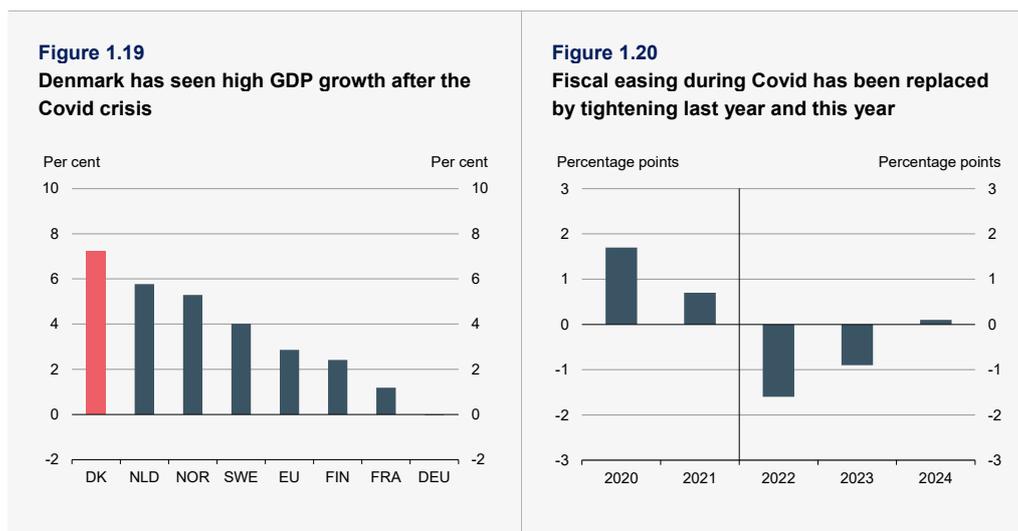Note: Figure 1.18, EMU debt estimates for 2022 from the Danish Ministry of Finance for Denmark. Estimates for other EU members is EMU debt estimates for 2022 from the EU Commission. For the UK and US is shown public gross debt in 2021. The dashed horizontal line shows the EMU debt limit of 60 per cent of GDP in the Stability and Growth Pact.

Source: Statistics Denmark, The EU Commission, OECD and own calculations.

During the pandemic, active fiscal policy played an important role in keeping the economy afloat through extensive compensation schemes, public investments, and disbursements of frozen vacation funds, among other measures. Active fiscal policy has contributed to the rapid recovery of the Danish economy, which has been stronger than in many other countries, *cf. figure 1.19*. The strong starting point is an important part of the expected relatively high activity in the Danish economy throughout the forecast period, despite the dampening effect of high inflation, tighter fiscal policy, and higher interest rates.

The continued pressure on activity, combined with high inflation, calls for continued tightening of fiscal policy to reduce the risk of inflationary pressures becoming more persistent.

While fiscal policy was expansionary during the pandemic, the expiration of temporary support schemes and other tightening measures are expected to have a significant dampening effect on economic growth in 2022 and 2023. Last year, the growth damping effect was 1.6 percentage points, and with the proposed fiscal budget for 2023, a further dampening effect of 0.9 percentage points is expected, *cf. figure 1.20*. In 2024, fiscal policy is estimated to be approximately neutral for growth with current assumptions.[3]

Figure 1.19	Figure 1.20
Denmark has seen high GDP growth after the Covid crisis	**Fiscal easing during Covid has been replaced by tightening last year and this year**

Note: Figure 1.19 shows real GDP growth from fourth quarter 2019 to fourth quarter 2022. Figure 1.20 shows how much changes in fiscal and structural policies affects the output gap relative to the previous year measured by the one-year fiscal effect. With Economic Survey, March 2023 the fiscal effects are calculated using the new macroeconomic model MAKRO, cf. chapter 8.

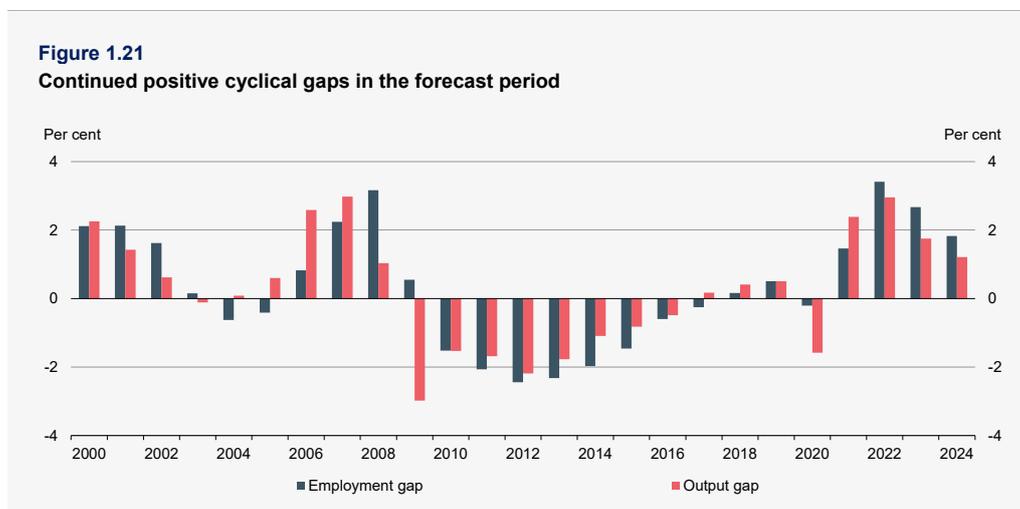Source: OECD, Statistics Denmark and own calculations.

Although inflation has decreased since its peak in October 2022, it is still high. High inflation harms real income for all groups in society, but is particularly challenging for low-income households with

---

[3] The fiscal policy for 2024 will be reflected in the 2024 budget bill and the economic agreements with municipalities and regions for 2024.

limited financial reserves. In February 2023, an Inflation Relief Agreement was agreed, which – in addition to the agreements reached in 2022 – includes targeted assistance for selected groups. The Inflation Relief Agreement is fully funded and is estimated not to add to inflation.

The high economic activity in Denmark is reflected in the estimates of the output and employment gaps, which measure the capacity pressure in production and in the labour market. For 2022, the gaps are estimated to be positive and at a level roughly equivalent to the period prior to the financial crisis. Both the output and employment gaps are expected to gradually decrease in 2023 and 2024 as the combination of tight fiscal policy, higher interest rates, and erosion of purchasing power due to high inflation leads to a demand moderation. This year, the output gap is estimated to decrease to less than 2 percent, and it is assumed to decrease further in 2024, *cf. figure 1.21*.

Figure 1.21
Continued positive cyclical gaps in the forecast period

Source: Statistics Denmrak and own calculations.

The fiscal policy is reflected in the government's proposed budget bill for 2023. With the budget bill fiscal policy is tightened, which contributes to dampen capacity pressures in 2023. At the same time, the budget proposal tackles a range of urgent challenges within a responsible economic framework, *cf. box 1.2*.

Box 1.2
Featured main priorities on the budget proposal for 2023

- **Establishment of a Ukraine Fund in 2023**
  Supporting Ukraine's fight for freedom is a top priority. Denmark should continue to be among the countries that support Ukraine the most relative to size. Therefore, the government, together with a broad majority in the Danish parliament, has established a Ukraine Fund with a total budget of approx. DKK 7.0 bn. in 2023. The Ukraine Fund is allocated within responsible fiscal limits.

- **Agreement on Inflation Relief**
  With the Agreement on Inflation Relief (February 2023), the government and a broad majority of parties in the Danish parliament have agreed to allocate DKK 2.4 bn. for temporary and targeted inflation relief. The funds are intended to help some of those who are hit hard by high prices.

- **Emergency Plan for the Hospital Sector**
  With the Agreement on an Emergency Plan for the Hospital Sector, the government and Danish Regions have agreed to prioritize an emergency plan totaling DKK 1.0 bn. in 2022/2023 and DKK 1.0 bn. in 2024. The emergency plan is intended to help stabilize and strengthen hospitals in the short term, including strengthening emergency departments and reducing waiting lists for non-urgent treatments and surgeries.

The strong development in public finances in 2022 is reflected in the estimate for the structural budget balance. The structural surplus is currently estimated at 1.2 percent of GDP in 2022, when excluding extraordinary COVID-19 expenses and other one-off factors. The estimated structural surplus reflects, among other things, that public consumption expenditures were lower than originally budgeted, which alone implies an improvement in the structural balance of about 0.3 per cent of GDP in 2022, compared to the *Economic Survey*, August 2022. In addition hereto comes an upward revision of the estimated structural employment, which mainly reflects a large influx of foreign labour, cf. below.

Including the establishment of the Ukraine Fund (with an effect on the structural budget balance of -0.2 percent of GDP) and other budgeted expenses in the 2023 budget proposal, the structural budget balance is estimated to be 0.7 percent of GDP in 2023. Based on assumptions regarding fiscal policy in 2024, there is currently an estimated structural surplus of 0.6 percent of GDP next year. The estimate for 2024 includes, among other things, the effect of temporary rebates for homeowners, etc., in connection with the transition to the new property tax system.

The uncertainty around the estimates of the structural budget balance is particularly high in these years due to the extraordinary circumstances arising from the pandemic and the subsequent high inflation. Generally, in addition to changes in fiscal and structural policies, the structural budget balance is also affected by underlying shifts in the economy – such as changes in interest rates or changes in consumption behavior. The annual movements in the structural balance since 2019 are to a significant extent influenced by factors other than the annual changes in fiscal policy as measured by the calculation of direct revenues, *cf. chapter 8*.

Compared to the August survey, the estimates for the structural budget balance have been significantly revised upwards. In 2022, as mentioned, part of the upward revision can be attributed to lower expenses within public consumption. Furthermore, the upward revisions in all three years can mainly

be attributed to a higher estimated structural employment, mainly due to the unusually large net immigration in 2022 and thus influx of foreign labour, *cf. box 1.3*.[4] This boost to the labour force is assumed to persist throughout the forecast period. In 2024, the upward revision of the structural budget balance also reflects updated estimates for the early retirement scheme, which points to fewer early retirees going forward, which also contributes to increasing structural employment. In 2024, the upward revision of the structural budget balance since the assessment in August 2022 corresponds to 0.4 per cent of GDP.

The upward revision of the structural budget balance in 2023 and 2024 partly reflects higher private wage increases, which in the short term result in increased tax revenue. Over time, however, there will be an impact on the adjustment of transfer incomes and public wage increases through the regulation scheme. The expenses related to this will occur mainly after the forecast years and will reduce the structural budget balance after 2024.[5]

---

[4] See *chapter 8* for a breakdown of the revisions.
[5] Projections towards 2030 are published later in the spring in *Denmark's Convergence Programme 2023*.

Box 1.3

High influx of foreign labour in 2022 contributes to higher actual and structural employment

In 2022, the net immigration of people of working age was nearly 45,000 individuals. This is more than double the average net immigration during the period of 2015-2021 and an upward revision of almost 14,000 individuals compared to Statistics Denmark and DREAM's population forecast, which was used for *Economic Survey,* August 2022, *cf. figure a*.

The higher net immigration than anticipated in August 2022 was observed despite there being slightly fewer Ukrainian refugees of working age than previously estimated. It is mainly citizens from Romania, Poland, and Germany who have contributed to the net immigration.

Overall, the number of foreign employees grew by approximately 45,000 individuals in 2022, which was more than twice as much as in the previous years of economic upturn in the period of 2016-2019 and in 2021, *cf. figure b*.

A larger net immigration and an updated early retirement projection contribute to an upward revision in structural employment of approx. 15,000 individuals in the years 2022-2024. Higher structural employment increases the capacity in the economy and thus contributes to both GDP and tax revenues becoming structurally higher.

Figure a

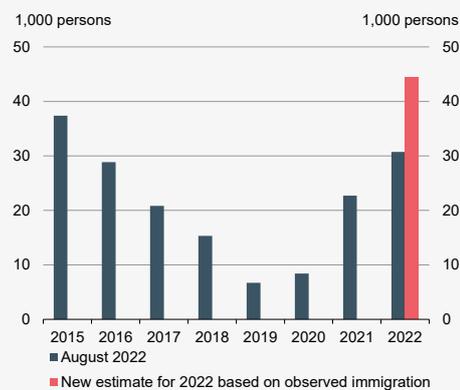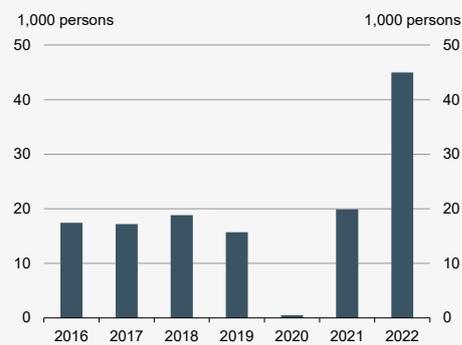**Net immigration of 15-66 year olds was higher than predicted in 2022**

Figure b

Growth in number of foreign employess was high in 2022

Source: Statistics Denmark, Economic Survey, August 2022 and own calculations.

When estimating the structural budget balance, adjustments are made for a number of extraordinary expenses and revenues that are deemed to be of a one-off nature. This includes spending directly related to handling of Covid, including the temporary compensation schemes. If Covid one-off items are not corrected for, the structural budget balance is estimated to be -0.9 per cent of GDP in 2020, -0.9 per cent of GDP in 2021, and 0.7 per cent of GDP in 2022, *cf. figure 1.22*.

Figure 1.22
Structural budget balance with and without Covid one-offs
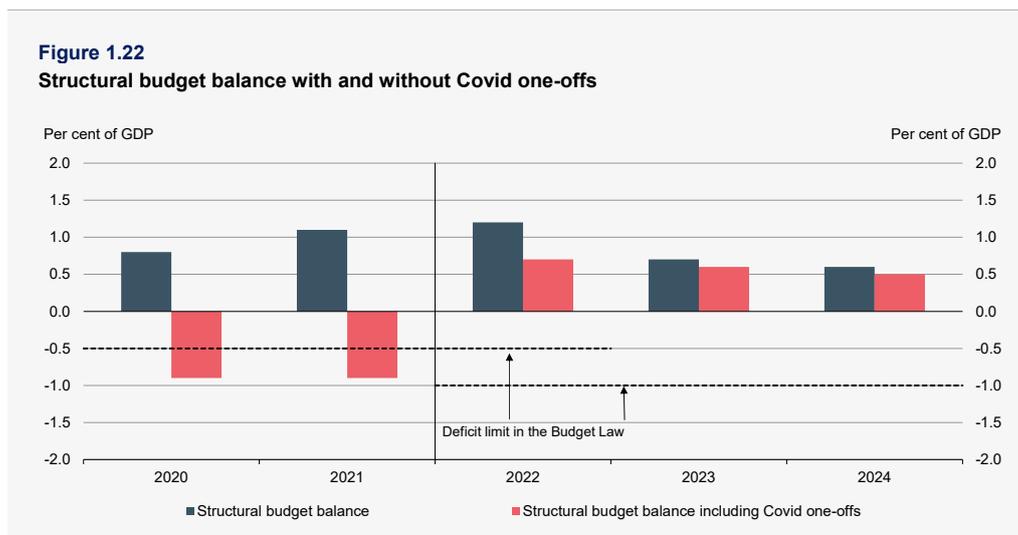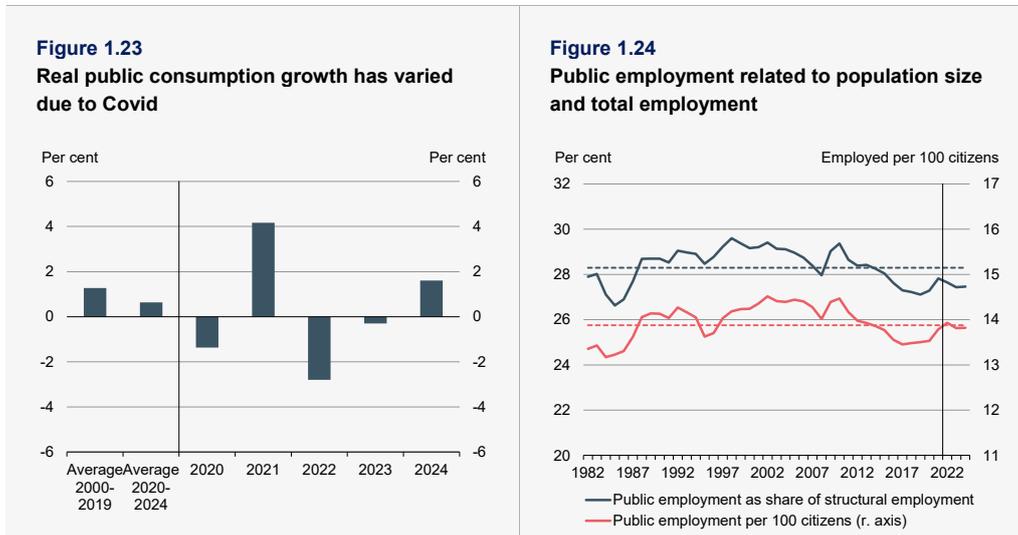

Note: The red columns are calculated including Covid one-offs and related spill offs on corporate taxes etc. The dashed lines shows the former Budget Law deficit limit of 0.5 per cent of GDP and the current deficit limit of 1.0 per cent of GDP.
Source: Statistics Denmark and own calculations.

Public consumption growth has been heavily influenced by factors related to Covid in recent years. According to Statistics Denmark's preliminary quarterly national accounts, real public consumption fell by 2.8 per cent in 2022, following high growth in 2021, *cf. figure 1.23*.

According to the preliminary national accounts, nominal consumption expenditures in 2022 are ap-prox. DKK 5¾ bn. lower than projected in *Economic Survey*, August 2022. Based on the govern-ment's budget proposal for 2023 and the economic agreements with municipalities and regions for 2023, real growth in public consumption is estimated to be -0.3 per cent in the current year. When ac-counting for extraordinary additional costs in 2022 related to Covid measures, which will be disappear in 2023, real growth in public consumption is estimated to be 1.5 percent in 2023.

In 2024, a contribution of approximately DKK 3 bn. to the fiscal space (and thus technically the real public consumption) is included in accordance with the law that makes Great Prayer Day a regular workday. The real growth in public consumption is technically estimated to be 1.6 percent in 2024.

Figure 1.23
Real public consumption growth has varied due to Covid

Figure 1.24
Public employment related to population size and total employment

Note: The dashed lines in figure 1.24 shows average levels through the period 1982-2021.
Source: Statistics Denmark and own calculations.

Despite the decline in real public consumption in 2022, public employment increased by more than 12,000 persons from 2021 to 2022, and public employment is historically high. However, the size of public employment should be seen in relation to the size of the total population and employment. The number of public employees per 100 citizens currently corresponds roughly to the historical average for the last 40 years, while the share of total employment currently lies below the historical average for the same period, *cf. figure 1.24*.

Key figures for estimates of public finances in the period 2022-2024 are shown in table 1.1. The assessment of public finances is further elaborated in chapter 8 (only available in Danish).

Table 1.1
Key figures relating to fiscal policy

	2021	2022	2023	2024
Structural budget balance, per cent of structural GDP	1.1	1.2	0.7	0.6
Structural budget balance including net expenditures to Covid, per cent of structural GDP	-0.9	0.7	0.6	0.5
Actual budget balance, per cent of GDP	3.6	2.9	1.6	0.8
Public financial net assets, per cent of GDP	12.6	14.1	16.0	16.3
EMU debt, per cent of GDP	36.6	29.5	31.1	29.9
Public consumption growth, per cent [1]	3.6	-2.8	-0.3	1.6
Multi-year fiscal effect, percentage points of GDP [2]	2.3	0.6	-0.5	-0.5
One-year fiscal effect, per cent of GDP [3]	0.7	-1.6	-0.9	0.1
Output gap, per cent [4]	2.4	3.0	1.8	1.2
Employment gap, per cent [4]	1.5	3.4	2.7	1.8

[1]   The estimated growth in public consumption is technically assumed to be the same using the input and output method. The shown growth in 2021 is reported using the input method.

[2]   The multi-year fiscal effect is a measure of how changes in the fiscal and structural policy in a given year affects the output gap (level effect compared to 2019). The effect is including contributions from temporary compensation schemes amd payment of frozen holiday allowances etc.

[3]   The one-year fiscal effect is a measure of how changes in the fiscal and structural policy in a given year affects the output gap in a given year.

[4]   Calculated measure of how far production and employment are from their structural levels. When the gaps are positive, it indicates that resources in the economy are scarce compared to a normal cyclical position.

Source: Statistics Denmark and own calculations.

1.3 Annex table

Table 1.2
Key figures from the March survey and comparison with the August survey

|	2022		2023		2024
	August	**March**	**August**	**March**	**March**
Real change, per cent					
Private consumption	0.5	-2.5	1.1	0.2	1.4
Total government demand	0.3	-2.5	-0.3	-0.2	1.7
- of which government consumption	0.7	-2.8	-0.7	-0.3	1.6
- of which government investments	-2.3	-0.2	2.9	0.7	2.5
Housing investment	5.8	7.8	-8.0	-9.8	-8.4
Business fixed investment	4.2	11.1	1.3	-6.6	-1.6
Inventories (cont. to GDP-growth)	0.4	0.9	0.0	-1.2	0.6
Total final domestic demand	1.8	1.0	0.2	-3.0	1.0
Exports	3.6	7.9	2.3	3.2	3.3
- of which manufacturing exports	2.8	8.8	0.8	5.6	3.0
Total demand	2.5	3.7	1.0	-0.3	2.0
Imports	2.0	3.8	1.4	-1.2	2.8
- of which imports of goods	0.2	-2.3	0.8	-0.5	2.0
GDP	2.8	3.6	0.8	0.2	1.5
Gross value added	3.3	4.4	0.7	0.5	1.6
- of which non-farm private sector	3.8	6.0	0.8	0.3	0.7
Change in 1,000 persons					
Labour force, total	79	88	7	6	-14
Employment, total	108	118	-8	-11	-17
- of which private sector	102	106	-5	-9	-20
- of which public sector	6	12	-3	-2	3
Gross unemployment	-28	-31	15	18	4
Cyclical developments, per cent					
Output gap	3.1	3.0	2.0	1.8	1.2
Employment gap	3.4	3.4	2.6	2.7	1.8
Unemployment gap	-1.5	-1.4	-0.9	-0.8	-0.6

Note: Public consumption is calculated using the input-method.
Source: Statistics Denmark and own calculations.

Tabel 1.2 (continued)
Key figures from the March forecast and comparison with the August forecast

	2022		2023		2024
	August	**March**	**August**	**March**	**March**
Change, per cent					
House prices (single family homes)	3.1	-0.2	-4.8	-8.4	-0.5
Consumer prices	7.3	7.7	3.3	3.9	2.8
Hourly earnings in the private sector	3.6	3.6	3.6	4.5	5.3
Real disposable income, households	-0.1	1.5	-0.2	-1.3	1.4
Productivity in the private non-farm sector	0.1	0.1	1.7	1.5	1.6
Per cent p.a.					
1-year rate loan	0.4	0.9	1.4	3.8	4.0
10-year government bond	0.9	1.5	1.2	2.7	2.7
30-year mortgage credit bond	3.4	3.7	3.7	4.7	4.6
Public finances					
Actual public balance (DKK bn.)	32	82	22	45	24
Actual public balance (per cent of GDP)	1.2	2.9	0.8	1.6	0.8
Structural public balance (per cent of GDP)	0.3	1.2	0.4	0.7	0.6
Gross debt (per cent of GDP)	32.2	29.5	31.4	31.1	29.9
Labour market					
Labour force, total (1,000 persons)	3.230	3.238	3.237	3.245	3.231
Employment, total (1,000 persons)	3.153	3.164	3.145	3.153	3.136
Gross unemployment (yearly average, 1,000 persons)	78	76	93	93	97
Gross unemployment (per cent of labour force)	2.4	2.3	2.9	2.9	3.0
External assumptions					
Trade-weighted international GDP-growth	2.7	3.0	1.7	1.1	1.8
Export market growth (manufactured goods)	5.5	7.1	3.3	2.3	3.0
Exchange rate (DKK per USD)	6.9	7.1	7.3	7.0	7.0
Oil price, dollars per barrel	104.3	100.8	94.1	83.2	82.2
Balance of payments					
Current account balance (DKK bn.)	231	371	208	269	264
Current account balance (per cent of GDP)	8.5	13.2	7.5	9.7	9.2

Source: Statistics Denmark. OECD. Macrobond. Confederation of Danish Employers and own calculations.
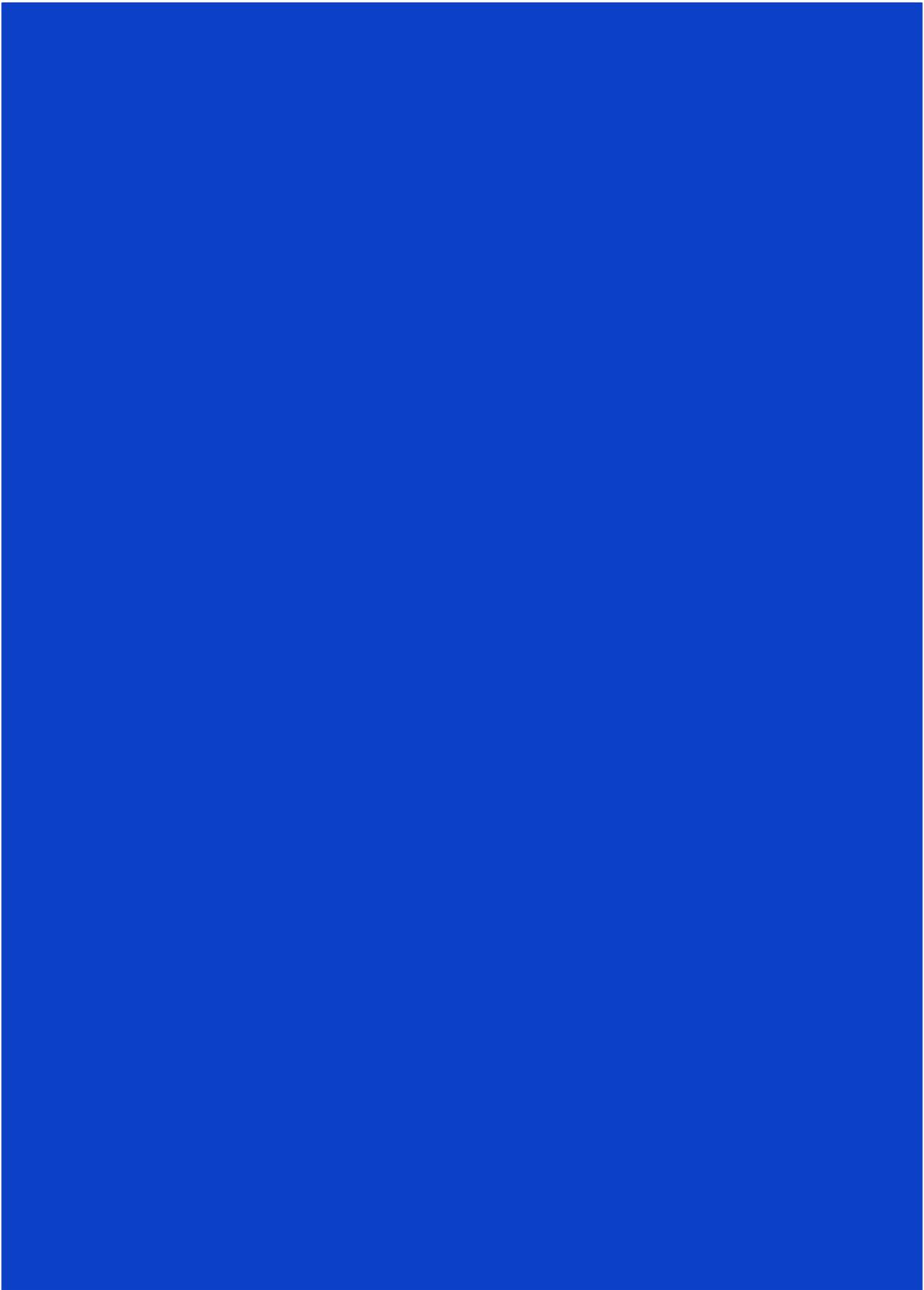
2. Cyclical turnaround in the labour market

Since the infection wave and shutdown in the beginning of 2021, employment has risen sharply and unemployment has declined. During this period, more than 200,000 persons have entered employment. Such rapid gains in the labour market have not occurred before and should be seen in light of the fall in employment during the corona crisis.

Meanwhile, the Danish economy has been under pressure due to external factors in the form of higher prices, higher interest rates and increased uncertainty that has lowered growth prospects for the coming years. This will also be reflected in the labour market, where a slowdown is anticipated to lead to a decline in employment and an increase in unemployment. This chapter draws on experiences from previous cyclical turnarounds to elucidate which dynamics come into play when there are fluctuations in the labour market, and which population groups may be particularly vulnerable.
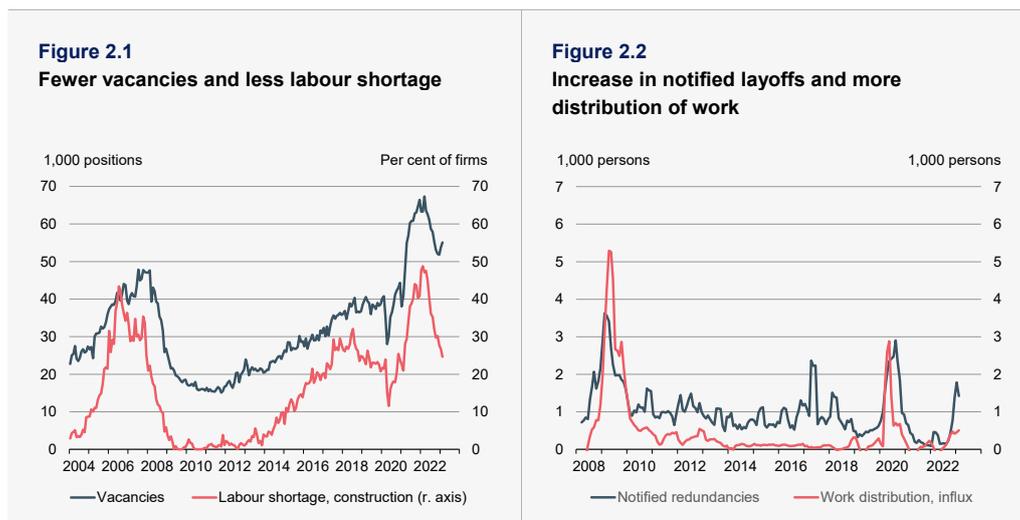
The main conclusions of the chapter are:

- In the beginning of 2023, the labour market has a strong starting point with a historically high employment. There are many vacancies, which can act as a buffer against the expected turnaround.

- There have been large differences in previous slowdowns in the labour market – both in scope, length and which industries were affected most. Compared to previous large and long-lasting slowdowns in the labour market in the late 1980s and during the financial crisis, the coming slowdown is expected to be considerably more moderate.

- The Danish labour market is both dynamic and flexible in an international and historical perspective. This means that workers in Denmark relatively quickly finds its way to the industries where it is most in demand, which makes the labour market and the economy more adaptable.

- Employment in some industries is more sensitive to cyclical fluctuations. Those employed in construction are particularly affected when the economy slows down, while workers in public employment do not tend to lose their jobs to a significant degree during slowdowns. In fact, employment in the public sector has tended to be countercyclical.

- Across demographics and education, it is particularly men, young persons, the elderly, persons with a non-Western background and persons with short or vocational training, who are, in general, more cyclically sensitive to the labour market. This may be due, for example, to the fact that they to a greater extent work in industries that are sensitive to economic conditions or have weaker ties to the labour market. Geographically, the greatest fluctuation in unemployment is generally in rural municipalities and to a lesser extent in the larger cities. This should be viewed in light of differences in the industry structure across municipalities.

- Since the financial crisis, the labour market attachment of immigrants and descendants, especially with non-Western origins have gradually increased.

- Public employment, foreign labour, average working hours and wages usually takes part of the adjustment to lower demand for labour and can thereby dampen the impact on employment and unemployment of an economic slowdown.

2.1 First signs of a turnaround are starting to show

The slowdown in the labour market has so far only appeared to a very limited extent. However, the first signs are starting to show. The number of vacancies has fallen by just over 12,000 positions since the peak in March 2022, which corresponds to a drop of approximately 19 percent, *cf. figure 2.1*. In the same period, firms' reports of labour shortages have also fallen sharply. Within construction – which is typically the industry that first reacts to turns in the business cycle – the share of firms with a lack of labour as a production limitation has fallen from almost half to less than a third. The demand for labour has thus fallen significantly over the past year – and the trend is downward moving. However, both the number of vacancies and the lack of labour remain at high levels.

Figure 2.1	Figure 2.2
Fewer vacancies and less labour shortage	**Increase in notified layoffs and more distribution of work**

Note: Figure 2.1 shows the employment-weighted share of firms reporting labour market shortage as a production
          limitation. Own seasonal adjustment. Numbers in figure 2.2 are shown as a three-month moving average.
Source: Statistics Denmark, Jobindsats and own calculations.

Correspondingly, there are initial signs that companies are scaling back on the workforce. Around the turn of the year, the number of notified redundancies had thus risen to the highest level since the summer of 2020, higher than before the pandemic, *cf. figure 2.2*. The increase comes after a few years with very few announced layoffs. At the same time, more persons are included in work distribution. From November to February, the supply of persons for work distribution was thus at levels that

have only been seen higher in the period during and after the financial crisis and during the corona pandemic.[1]

Finally, unemployment increased by approximately 5,700 persons from October to February, and the turnaround is expected to gain strength from here.

2.2 The labour market comes from a strong position

The labour market is coming from a very strong position, and an easing of labour market tightness is inevitable sooner or later, *cf. chapter 5*. Employment has increased by more than 215,000 persons since early 2021, while unemployment has fallen to its lowest level since the overheating of the economy leading up to the financial crisis, *cf. figure 2.3*. At the same time, it is estimated that in 2022 the labour market participation was at the highest level, with historically high levels for both the employment rate and the share of the population that is employed, *cf. figure 2.4*. Thus, the economic expansion of recent years has contributed to more Danes than ever participating in the labour market – including many who previously had weaker ties, e.g. non-Western immigrants, *cf. chapter 5 and below*.

Figure 2.3
Employment at a historically high level and unemployment at its lowest since the financial crisis

Figure 2.4
High growth in the labour force participation rate
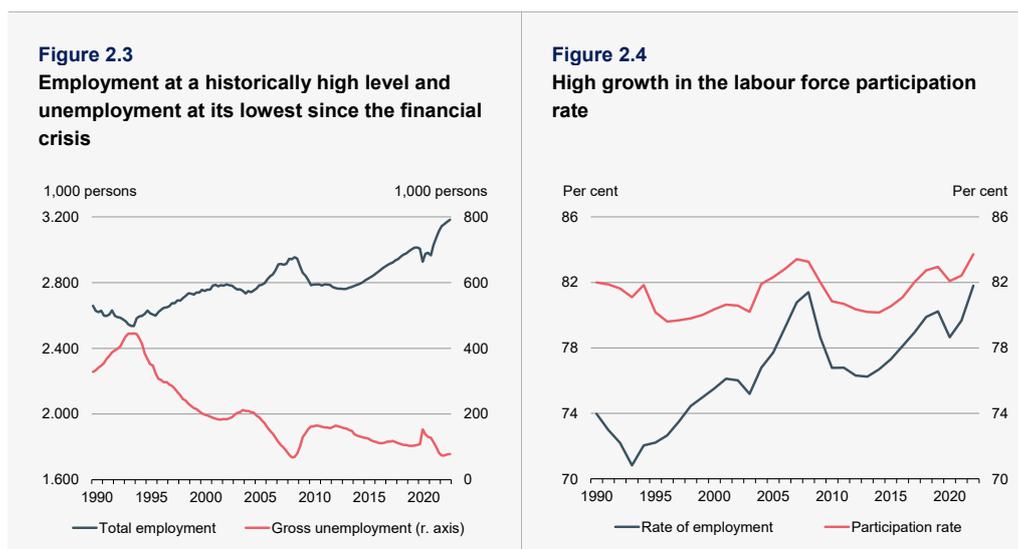
Note: The latest observation in figure 2.3 is the 4th quarter of 2022. Before 2008, gross unemployment is based on own calculations of the net unemployed and job activated. Figure 2.4 shows employment and the workforce as a share of the average population in a year with an age between 15 and the national pension age. Estimates are shown for 2022.
Source: Statistics Denmark and own calculations.

The strong recovery after the corona crisis and the favourable economic situation have also contributed to a degree of labour market tightness rarely seen before. Employment is significantly above the

---

[1] In the case of a work distribution, the working hours of employees are reduced, as the firm cannot employ the employees fully. Thus, it is a tool, which can be used to avoid layoffs during periods of temporarily declining demand.

structural level consistent with a cyclically neutral economic situation, *cf. figure 2.5*. Tightness in the labour market tightness is only partially countered by the fact that structural employment is estimated to have increased by approximately 71,000 persons from 2019 to 2022. This corresponds to approximately 45 percent of the actual employment growth in the period. This can be attributed, among other things, to the increasing retirement age and other policy reforms. In line with the development in employment, the number of unemployed is now also significantly below the structural level, *cf. figure 2.6*.

Figure 2.5
The economic situation has pushed actual employment significantly above its structural level…

Figure 2.6
… and at the same time pushed unemployment below the structural uemployment
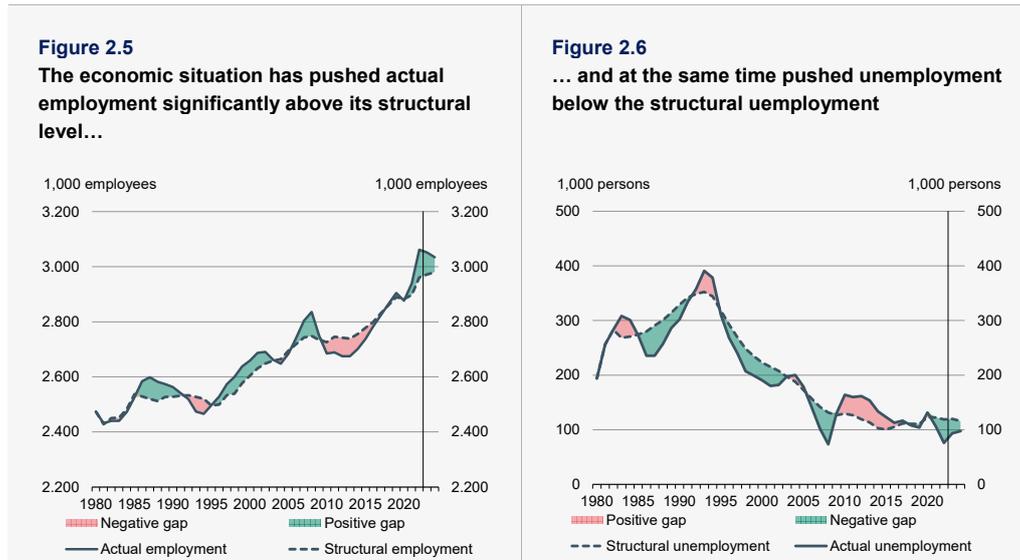
Note: Actual employement is measured as total employment excluding persons on leave, while acual unemployment shows the number of gross unemployed.
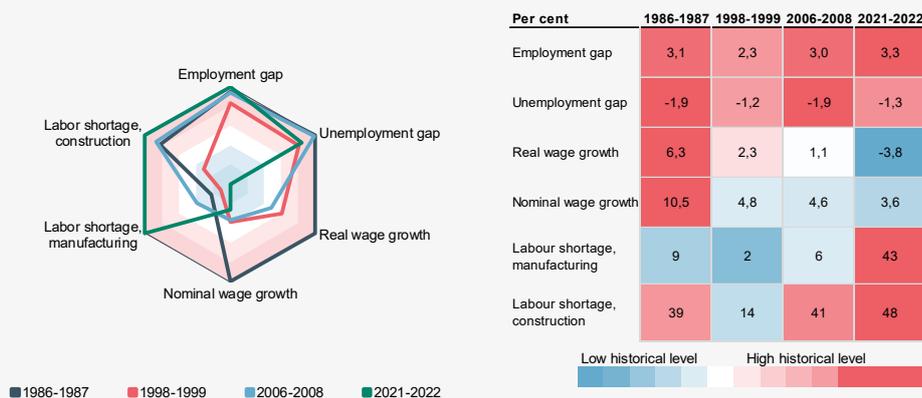
Source: Statistics Denmark and own calculations.

The high pressure on the labour market has shown itself, among other things, by the fact that a large share of firms have reported a shortage of labour. In the first half of 2022, more than 40 percent of firms in manufacturing, construction and the service industry reported labour shortages. The shares have since fallen somewhat, but are still relatively high in all three main industries. However, it is not the first time there is such great pressure on the labour market. The same was the case in the late 1980s, late 1990s and before the financial crisis, *cf. box 2.1*. Despite the similarities with high employment gaps and unemployment gaps, there are also significant differences. Thus, in the past year, a significantly higher degree of labour shortage has been reported than in previous periods – however, wage growth has been more moderate, both nominally and especially in real terms given the high consumer price increases.

Eventually, it is inevitable that the current labour market tightness will have to subside. However, the external downturn driven by war, high inflation and energy prices as well as rising interest rates is expected to contribute to a faster and more pronounced turnaround in the labour market. The scope for the decline is still very large and uncertain, and there are examples of both soft and hard landings after previous booms.

Box 2.1

High pressure on the labour market has been seen before – but with different characteristics

Since 1980, there have been three periods of particularly high pressure on the labour market: 1) the late 1980s from 1986 to 1987, 2) the late nineties from 1998 to 1999 and 3) the years leading up to the financial crisis from 2006 to 2008. These periods were characterised by great progress, and employment rose to levels significantly above the structural level. Correspondingly, there were large negative unemployment gaps, and varying degrees of wage increases and labour shortages. Some indicators, which for example are based on survey responses, can be difficult to compare over time. Nevertheless, comparing the pressure in the four periods, a number of interesting differences emerge, *cf. figure a*.

The employment gap is estimated to have been largest in 1986-1987 and in 2021-2022, while the unemployment gap was largest in 1986-1987 and before the financial crisis. The rate of wage increases have been more moderate in the recent period, and in 2022 there was a significant decrease in real wages as a result of the high inflation. Labour shortage in the current period has on the other hand, been highest within construction and especially within manufacturing, which has not previously had such widespread reports of labour shortages. However, this must be viewed in light of major shifts in the labour market during the corona crisis, which have only gradually normalised.

Figure a

Comparison of pressure on the labour market during previous booms

Per cent	1986-1987	1998-1999	2006-2008	2021-2022
Employment gap	3,1	2,3	3,0	3,3
Unemployment gap	-1,9	-1,2	-1,9	-1,3
Real wage growth	6,3	2,3	1,1	-3,8
Nominal wage growth	10,5	4,8	4,6	3,6
Labour shortage, manufacturing	9	2	6	43
Labour shortage, construction	39	14	41	48

Low historical level   High historical level

■ 1986-1987   ■ 1998-1999   ■ 2006-2008   ■ 2021-2022

Note: In the cobweb figure, the center and the outer edge respectively indicate the lowest and highest pressure relative to historical values. For the employment and unemployment gap, the peak is shown for a given period. Annual wage growth rates for the private sector are for the most recent year in the period. Labour shortage shows the proportion of firms surveyed that have reported labour shortage as a factor limiting production. For both measures, the largest share measured in the period is shown. Included periods are 2nd quarter 1986, respectively 3rd and 4th quarter 1998, respectively 3rd quarter 2006 and 2nd quarter 2007 and 1st and 2nd quarter 2022. Color codes are based on historical levels, where blue is low, white is moderate, and red is high in a historical perspective. In this context, the unemployment gap is considered with the opposite sign. Figures for labour shortages in manufacturing are based on Larsen and Langager (1998).

Source: Statistics Denmark, Confederation of Danish employers, Larsen og Langager (1998): *Evaluation of the labour market reform III* and own calculations.

2.3 Different trajectories during previous turnarounds

There is a wide range of outcomes in terms of both the magnitude and duration of a labour market downturn. This is evident when comparing past turnarounds in the labour market.

Both actual and underlying structural employment have grown significantly since 1980. However, this growth has not come without bumps in the road. Thus, there have been a number of temporary reversals in the labour market during the period, where employment growth has been replaced by declines of varying length and magnitude, *cf. figure 2.7.*

Figure 2.7

Large differences in both the magnitude and duration of previous labour market turnarounds
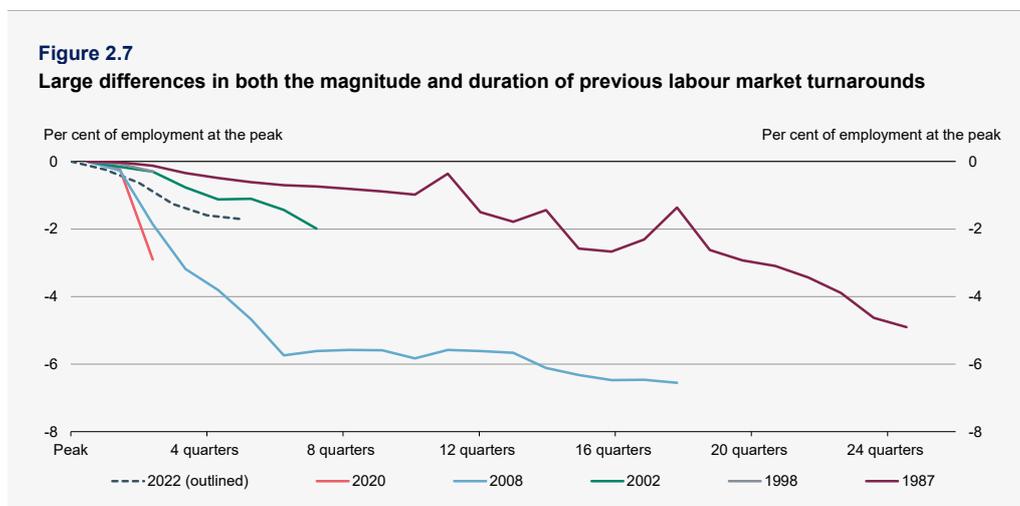
Note: The figure shows the change in quarterly employment measured relative to the local peak. The end point of each graph is the point at which employment turns persistently positive. Quarterly data before 1990 are interpolated annual values. The peaks are set to be 2nd quarter 1987, 4th quarter 1998, 2nd quarter 2002, 3rd quarter 2008, 4th quarter 2019 and 4th quarter 2022.

Source: Statistics Denmark and own calculations.

As well as the magnitude and duration of the downturns, the drivers of the employment reversals have been very different:

1987-1993:   "The seven lean years" followed a sharp tightening of economic policy in Denmark with the aim of increasing savings in the economy. The "potato diet" and the reduction in the tax value of the interest deduction as a result of the 1987 tax reform were followed by a long period of weak growth in the Danish economy and a significant decline in employment, which was exacerbated by high interest rates during the EMS crisis. Consequently, employment fell by just over 130,000 persons over a period of almost 7 years.

1998-1999:   After a period of strong growth throughout the 1990s, economic policy was tightened with the Pentecost package in 1998. This was followed by a soft landing and a temporary downturn in the economy and the labour market, with a short-term decline in employment of about 8,000 persons from the top to the bottom.

2002-2004:   The burst of the IT bubble in the US triggered an international downturn that led to a couple of years of recession in Denmark. During this period, employment fell by around 55,000 persons.

2008-2013:   The financial crisis led to a significant downturn in both the international and Danish economy. In Denmark, the downturn was exacerbated by the deterioration in competitiveness in the years leading up to the crisis and the bubble in the housing market and rapid credit growth. In the years following the financial crisis, the private sector deleveraged, limiting domestic demand, and the euro crisis hit, contributing to the continued decline in employment in Denmark until early 2013.[2] By then, employment had declined by more than 190 000 persons.

2020:   The coronavirus pandemic led to a very unusual and sharp contraction in the economy and employment. Employment fell by almost 90,000 in two quarters, but the reopening and subsequent strong recovery meant that employment had already recovered by spring 2021.
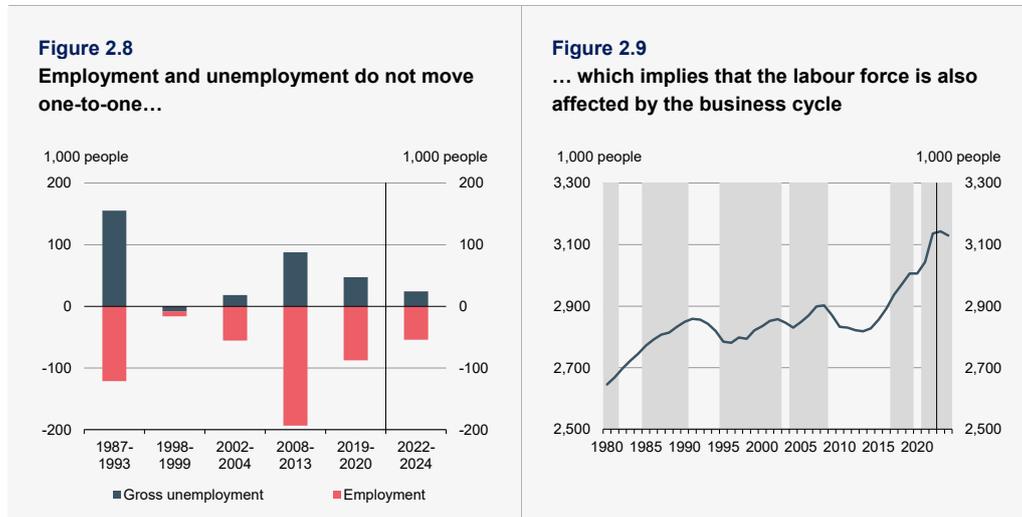
While some of the above turnarounds have been driven by domestic economic policy tightening, others were caused by external shocks such as the coronavirus pandemic. Some have been very severe and long-lasting, while others have been mild and short. The turnaround expected in the forecast will be driven by external shocks, particularly in the form of high energy prices, inflation and significant interest rate increases. However, the turnaround is expected to be relatively moderate in both magnitude and duration, as it is not amplified by particular vulnerabilities in the form of large macroeconomic imbalances.

During previous downturns, declines in employment have been accompanied by increases in unemployment, although with significant differences across cyclical turns, *cf. figure 2.8*. Often, some of the persons who leave employment will also temporarily or permanently leave the labour force altogether, e.g. because they either enrol in education or retire. It could also be the case that foreign workers enter Denmark at a lower rate, or choose to move abroad and therefore do not appear in the unemployment statistics. Thus, in previous turns, unemployment has generally increased less than employment has fallen.[3]

The size of the labour force thus also fluctuates to some extent in line with the business cycle, *cf. figure 2.9*. Over time, there has been a tendency for the labour force to become more cyclical and for more employed persons to leave the labour force altogether rather than become unemployed. This should be seen, among other things, in the context of the increasing importance of foreign labour and the fact that more students have entered employment.

---

[2] See e.g. *Finansredegørelsen 2014*.
[3] During certain downturns, the labour force has increased, but in all cases to a lesser extent than the structural labour force has increased at the same time.

Figure 2.8
Employment and unemployment do not move one-to-one…

Figure 2.9
… which implies that the labour force is also affected by the business cycle
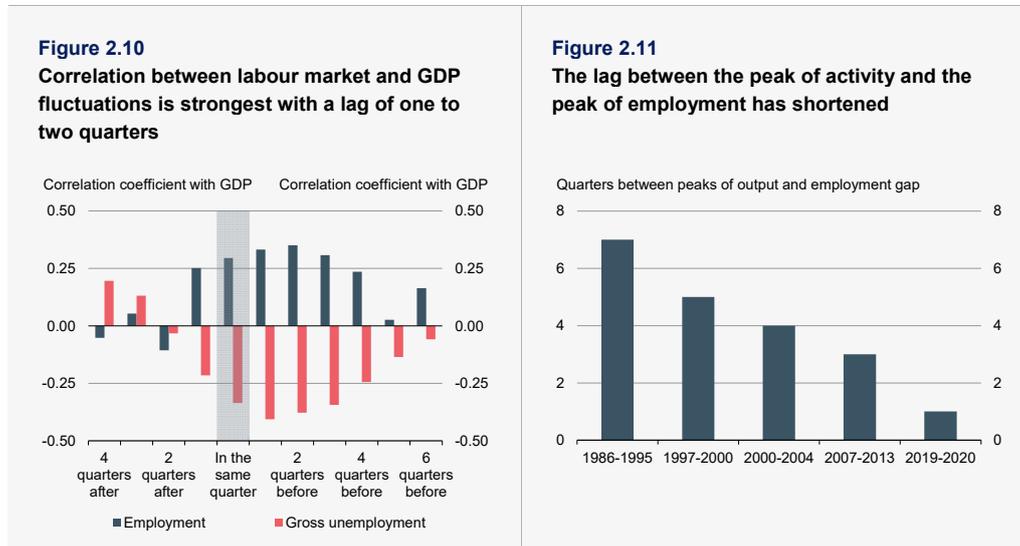

Note: Unemployment and labour force are defined on the basis of gross unemployment. Employment and labor force also include persons on leave. In figure 2.8, the changes in unemployment in the three earliest periods are annualized, as is the case for employment in the earliest period, while the remaining periods are quarterly from bottom to top in line with the periods in figure 2.7. In figure 2.9, shading indicates periods with a positive output gap.

Source: Statistics Denmark and own calculations.

The previous employment turnarounds have all come with a lag relative to the slowdown in overall economic activity. Typically, a turnaround in employment occurs one to four quarters after a turnaround in overall economic activity as measured by GDP. Part of this can be explained by so-called labour hoarding: firms are typically reluctant to lay off employees in the early part of a downturn, perhaps in order to retain good job matches and skilled workers who may be needed when demand picks up again.

The correlation between growth in overall activity and employment is generally highest with a lag of one to two quarters, *cf. figure 2.10*. However, the correlation remains high with a lag of several quarters, which may reflect the fact that the pass-through from activity to employment often occurs gradually. To some extent, the trend is also self-reinforcing, as falling employment requires lower demand, which in turn has a negative impact on output and employment.

Figure 2.10
Correlation between labour market and GDP fluctuations is strongest with a lag of one to two quarters

Figure 2.11
The lag between the peak of activity and the peak of employment has shortened

Note: Correlation coefficients are measured on the growth rates of employment and gross unemployment against GDP growth at different lags. The time period is quarters from 1992 to 2019.
Source: Statistics Denmark and own calculations.

In general, there is a large difference between how quickly the pass-through from activity to employment has occurred in recent turns, *cf. figure 2.11*. Since the 1980s, a turnaround in the business cycle as measured by the output gap has been reflected in a turnaround in the employment gap with a lag of between one and seven quarters. There has been a declining trend in this lag, but the recent slow-down during the coronavirus pandemic should be examined separately from the other reversals. From an international perspective, the Danish labour market is relatively flexible and dynamic, which can be attributed in part to Denmark's so-called *flexicurity* model, *cf. box 2.2*.

Box 2.2
The Danish labour market is flexible and dynamic in an international context

The Danish labour market is generally known for its *flexicurity* model, which is characterized by a high degree of job flexibility, a good safety net for the unemployed and an active labour market policy.[4] Flexibility implies both that it is easy for employers to hire and fire and that it is easy for employees to switch between jobs.

Thus, the high degree of flexibility implies that the labour market adjusts to changes in demand relatively quickly in both downturns and upturns. One measure of this is the relationship between GDP and employment as well as unemployment. Across countries, there is generally a positive relationship between GDP and employment and a negative relationship between GDP and unemployment. For a single country over time, this regularity is also known as Okun's law. From this perspective, Denmark is roughly average compared to other advanced economies, *cf. figure a*. In general, the link between GDP and the labour market is stronger in Denmark than in countries such as France and Germany, which have a higher degree of protection of employees against dismissals. Conversely, the link is weaker than in a country like the United States, where there is generally high flexibility but a smaller safety net, or a country like Spain, where there are many temporary job contracts.[5] Thus, the Danish labour market to a large extent follows aggregate activity downwards during slowdowns. Similarly, a recovery may also occur more quickly than in countries with more rigid labour markets.

The high flexibility of job change in Denmark is also reflected in the fact that relatively many of the employed start a new job every quarter, *cf. figure b*. On average, in the period from the 1st quarter of 2009 to the 2nd quarter of 2022, this has been just over 6 per cent of the employed in Denmark, which in Europe is only surpassed by two other Scandinavian countries, Sweden and Finland. This share is significantly higher than the EU average of just over 4 per cent. High job turnover can also be beneficial during labour market transitions, as labour can be more easily reallocated across industries and job functions.

Figure a
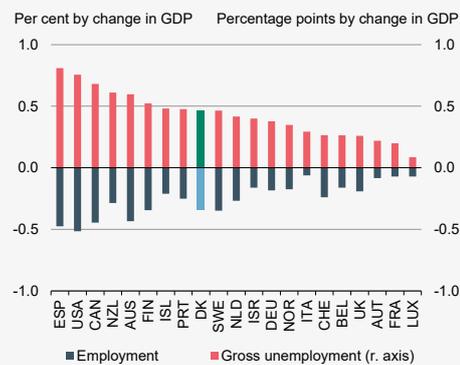**The Danish labour market follows the overall economy to an average degree**

Figure b
Job turnover is high in Denmark

Note: Figure a shows the coefficient of annual GDP growth from a linear regression on the per cent growth in employment and on the change in the unemployment rate in percentage points, respectively .

Source: IMF (2022): *World Economic Outlook October 2022*, Eurostat and own calculations.

---

[4] See e.g. Kreiner and Svarer (2022): "Danish Flexicurity: Rights and Duties", *Journal of Economic Perspectives*, vol. 36, no. 4.
[5] See e.g. fx Disruptionsrådet (2018): "Servicetjek af Flexicuritymodellen", Ilsøe (2007): "The Danish Flexicurity model – a Lesson for the US?" and OECD's *Strictness of employment protection index*.
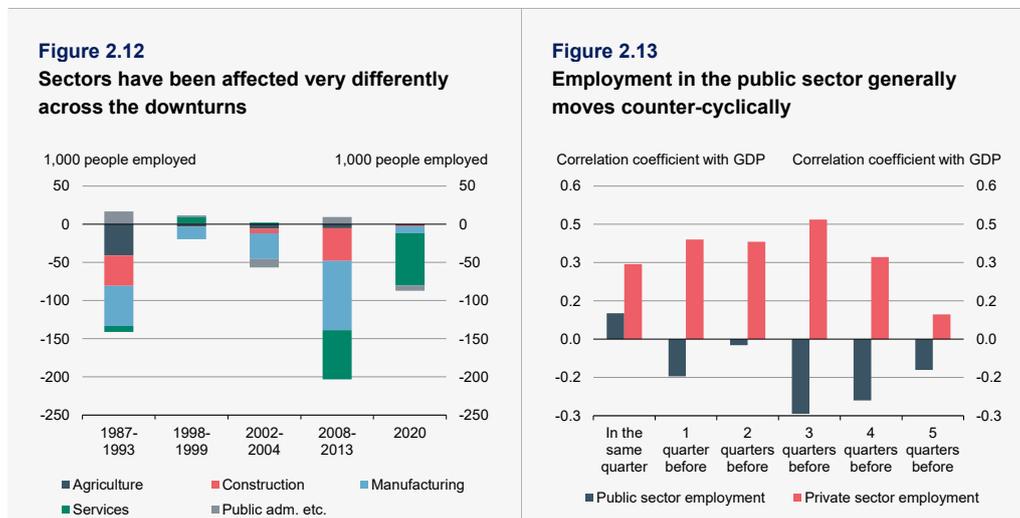
2.4 The impact of labour market fluctuations varies across the economy

The magnitude and duration of a downturn will generally have an impact on how it affects employment and unemployment in different industries and population groups. Looking at historical fluctuations, there are significant differences across industries, age groups, gender, ancestry, education and regions.

Some sectors are more cyclical than others

In most of the recent labour market downturns, employment in manufacturing has fallen the most in terms of persons, *cf. figure 2.12*, although this should be considered in conjunction with the declining trend in manufacturing employment. In 1987-1993 and during the financial crisis, there were large adjustments in the construction sector, while there were only limited adjustments during the other downturns. The services sector was particularly affected in 2020 during the coronavirus outbreaks, which greatly impacted their activities, but there was also a significant contraction during the financial crisis.

Public administration, education and health accounts for about one third of employment, and employment in this sector has shown only very small fluctuations during the downturns. This should be seen in the context that public sector employment is largely politically determined and that demand for health and education, for example, is not particularly cyclical. Historically, employment in the public sector has been countercyclical - that is, employment in the sector tends to grow when GDP falls, and vice versa, *cf. figure 2.13*. This also implies that employment in the public sector has in the past acted as a cushion for employment during downturns.

Figure 2.12
Sectors have been affected very differently across the downturns

Figure 2.13
Employment in the public sector generally moves counter-cyclically
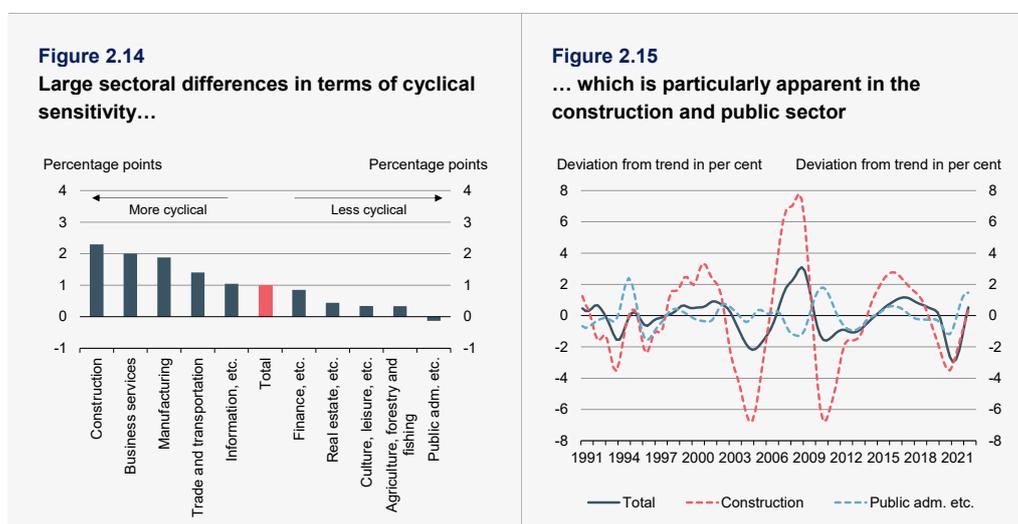

Note: In figure 2.12, the change in 1987-1993 is measured on an annual basis, while the remaining periods are measured on a quarterly basis from employment peak to bottom. Figure 2.13 shows the correlation coefficient between GDP and private as well as public employment. The figures cover data from 1990 to 2019.

Source: Statistics Denmark and own calculations.

Conversely, the construction sector is a highly procyclical sector, where employment is very sensitive to cyclical fluctuations, *cf. figures 2.14 and 2.15*. The value of the bars in the figure is a measure of the extent to which employment in the industry in question fluctuates with cyclical fluctuations in employment in the other industries. Thus, employment in construction shows about twice as large cyclical fluctuations as other employment. Sectors such as business services, manufacturing, and trade and transportation are also relatively sensitive to cyclical fluctuations. Conversely, the cultural and agricultural sectors are only sensitive to cyclical fluctuations to a relatively limited extent.
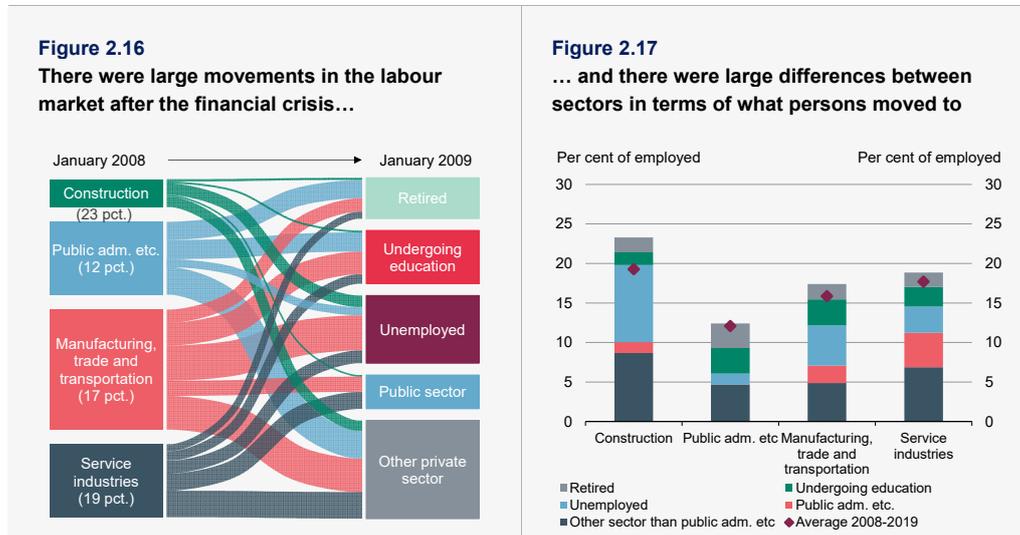
In the current environment, eroded purchasing power and higher interest rates in particular are expected to lead to a slowdown at home and abroad. It is therefore expected that it is largely sectors such as construction that are most exposed to a downturn - albeit from an elevated level. In the 4th quarter of 2022, the construction sector employed around 210,000 persons, which was about 10 per cent more than at the end of 2019.

Figure 2.14
Large sectoral differences in terms of cyclical sensitivity…

Figure 2.15
… which is particularly apparent in the construction and public sector

Note: Figure 2.14 shows the coefficient from a linear regression of the trend deviation for total employment
          excluding the shown sector on the trend deviation for the sector in question. The trend deviation is used as
          an approximation for employment fluctuations in the sector in question, adjusted for structural factors that
          have a major impact over time (e.g. a tendency for lower employment in manufacturing and agriculture and
          higher employment in services over time). The trend is calculated as a CF filter for the period from the 1st
          quarter of 1990 to the 2nd quarter of 2022, calibrated with the assumption that business cycle fluctuations
          can last between 1 and 10 years. The figure shows the 10 largest sectors in terms of employment. Figure 2.15
          shows the percentage deviations from the CF filter for total employment, construction and public
          administration, etc. as a three-month moving average.
Source: Statistics Denmark and own calculations.

The high sensitivity to the business cycle in the construction sector can also be seen in the large movements out of the sector in general and particularly into unemployment at the start of the financial crisis, which covers the period from January 2008 to January 2009, *cf. figures 2.16 and 2.17*. The corresponding movements from, for example, the public sector were much smaller.

Figure 2.16
There were large movements in the labour market after the financial crisis…

Figure 2.17
… and there were large differences between sectors in terms of what persons moved to

Note: In figure 2.16, the numbers under the sectors on the left indicate proportions of those employed in the industry in January 2008 who had left the sector by January 2009. The width of the individual flow from each sector indicates the proportion of these who switched to the different labour market statuses to the right. Figure 2.17 shows the same, except all numbers are in shares of employment in the industry in January 2008. The figure also shows an average for outward movements from the sector over the period 2008-2019. Persons who have not changed sector, died, emigrated or left the labour force in some other way are not shown in the figures. The figure does not capture the inflows into employment in the different industries over the same period and the net movements are therefore smaller. *Public adm. etc.* covers public administration, health and education. *Manufacturing, trade and transportation* covers manufacturing, trade, transport, and agriculture. *Service industries* cover culture and leisure, information, finance, real estate and business services. For further description of the data see box 2.3.

Source: Statistics Denmark and own calculations.

Of those employed in the construction sector in January 2008, 23 per cent were no longer employed in the same sector one year later, which is slightly higher than in an average year. Of those, 42 per cent had become unemployed, which should be viewed in the context of the sharp downturn experienced by the sector and the rest of the economy during the period. 43 per cent changed sector, while 8 per cent retired and 7 per cent entered education.

Moreover, more persons than usual changed sector in the other sectors, although considerably fewer than in the construction sector, and fewer became unemployed. Thus, only 11 per cent of those who left public administration, etc. became unemployed, while the proportion was 18 per cent in business services and 29 per cent in manufacturing, etc. Similarly, more persons in the other sectors retired or entered education compared to the construction sector.

Relatively more persons in both manufacturing and business services switched to the public sector. 13 per cent and 23 per cent, respectively, left their sector, compared to only 6 per cent in construction. This may reflect the fact that the skills of employees in construction are only modestly in demand in public administration, health and education. On the other hand, it may be easier to move from a service sector to the public sector, which to a large extent also provides services.

The opportunity to change sector will also largely depend on how a downturn in demand affects different sectors, and additionally, compositional effects such as age and education can play a significant role.

Fluctuations in the labour market affect young persons, older persons, men and migrants more

Whether across gender, age groups or other factors, the overall labour market attachment of individual groups is important in determining how they are affected by fluctuations in the economy. However, the exposure of groups to different sectors and their alternative employment options also play an important role.

In general, the greatest fluctuations over time in the employment rate are for employees in the youngest and oldest age groups, and for men and immigrants, *cf. figure 2.18*.

Figur 2.18

Employee frequencies vary across age, gender and ancestry
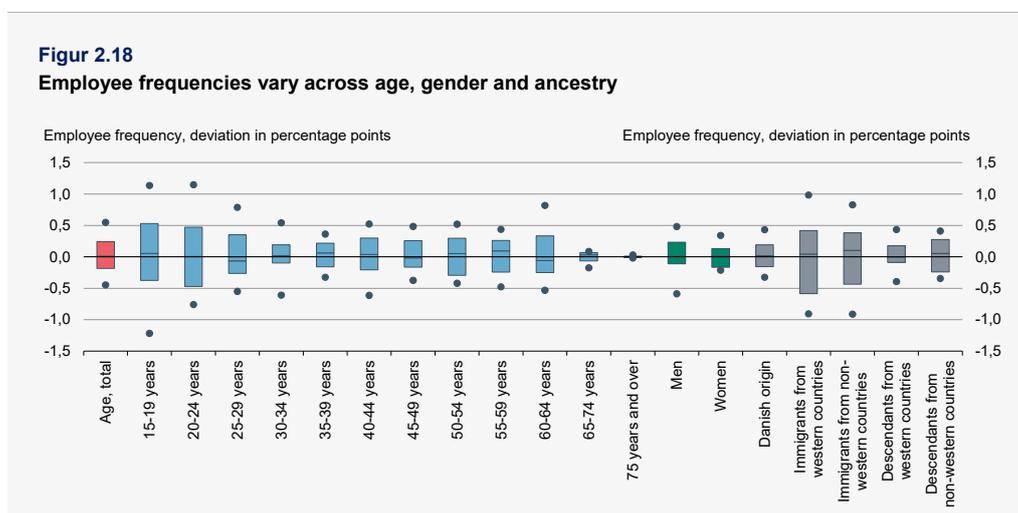
Note: The box plot shows the percentiles: 10, 25, 50, 75 and 90. A percentile indicates a certain share of the observations. For example, the 50th percentile indicates that 50 per cent of the observations (here deviation from trend in the employee frequency) are below the given value. Employee frequencies are adjusted for trend by an HP filter with λ = 1600. This is done to take into account structural changes such as changes in retirement age, integration rate, etc. Data from 2008 to 2019 are used.

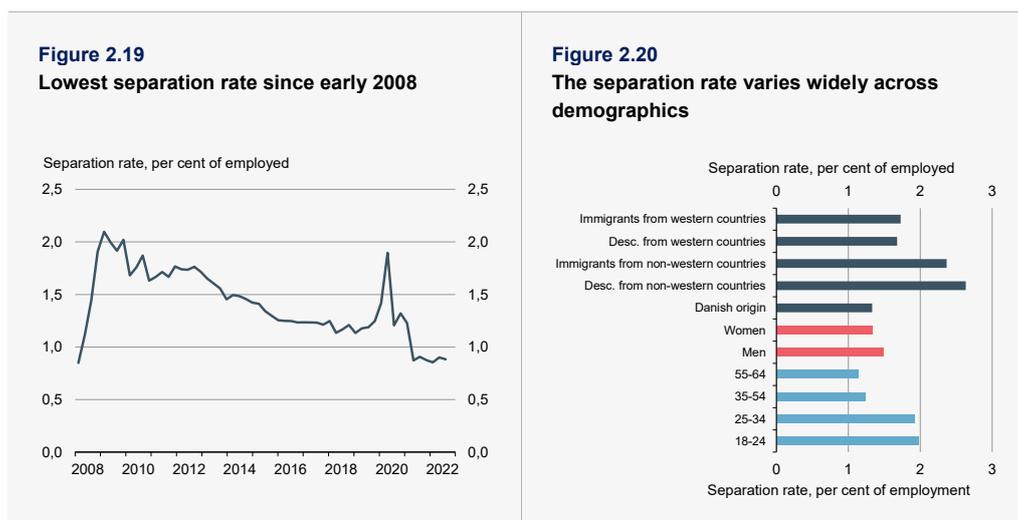Source: Statistics Denmark and own calculations.

The fact that younger and older persons in particular have relatively large fluctuations in the employee frequency reflects that they are more likely than other age groups to leave the labour market during economic downturns. This should be seen, among other things, in the light of their opportunities, for example, to start studying while receiving a student grant or retire from the labour market, e.g. on early retirement. For young persons, a generally weaker attachment to the labour market may also play a role, given that they have generally had fewer years in the labour market, less experience and a larger degree of part-time work. Conversely, the fluctuations in the employment rate for the age groups from 30 to 60 years are generally smaller, which can be attributed to a stronger attachment to the labour market and fewer alternatives to unemployment.

There are generally greater cyclical fluctuations in the employment rate for men than for women. This should be seen in the context that men are more likely to be employed in more cyclical sectors such as construction or manufacturing, while the share of women in the public sector is high.

Immigrants have the largest fluctuations in the employee frequency across ancestry, while the fluctuations are less pronounced for both descendants of immigrants and persons with Danish origin. The larger fluctuations for immigrants apply to persons with both Western and non-Western ancestry, which may reflect, among other things, a generally lower degree of attachment to the Danish labour market.

The cyclical situation also has a strong influence on the share of the employed moving into unemployment each quarter, the so-called separation rate, as well as the share of the unemployed moving into employment, the so-called hiring rate.[6] In general, the separation rate falls during economic booms and rises during recessions, while the reverse is true for the hiring rate.

Since 2008, the separation rate has been highest in the years following the financial crisis, and it has since declined significantly, excluding the coronavirus pandemic, *cf. figure 2.19*. The separation rate was particularly low in 2022 - and at the lowest level since the beginning of 2008.

Figure 2.19
Lowest separation rate since early 2008

Figure 2.20
The separation rate varies widely across demographics

Note: Figure 2.19 shows the share of persons in employment at the beginning of a quarter that has moved to unemployment by the end of the quarter. For further description of the data, see Box 2.3. Figure 2.20 shows the average quarterly separation rate for various segments of the population over the period from the 1st quarter 2008 to the 3rd quarter 2022.
Source: Statistics Denmark and own calculations.

In addition to fluctuating with economic cycles, the separation rate varies considerably across both age, gender and origin, *cf. figure 2.20*. It appears that particularly young persons as well as non-Western descendants and immigrants have more often gone from employment to unemployment in

---

[6] Roughly speaking, the two ratios can be interpreted as the unconditional probability of each quarter changing from unemployment to employment and vice versa.

the period from 2008 to 2022. In addition, men also have a slightly higher separation rate, which re-
flects that men are more frequently employed in cyclically sensitive industries, cf. above. Therefore,
these groups are generally more affected during a turnaround in the labour market.

Contrary to the separation rate, the hiring rate has risen to very high levels in recent years, after
briefly hovering at low levels both during the coronavirus pandemic and in the years from the financial
crisis to 2012. A low separation rate and a high hiring rate have underpinned much of the employment
growth in recent years. However, in recent quarters, the hiring rate has declined, which may be an
indicator of a slowdown in the labour market. However, it may also reflect the fact that persons who
are unemployed at the end of a labour market expansion typically have a lower attachment to the la-
bour market.

Like the separation rate, the hiring rate depends on demographics. In general, in each quarter since
2008, a higher proportion of young unemployed persons than older unemployed persons have moved
from unemployment to employment. Thus, although fewer older persons are moving from employ-
ment to unemployment, the older persons who do so generally find it more difficult to move into em-
ployment than the younger age groups. Moreover, the hiring rate has also been higher for unem-
ployed persons of Danish origin than for unemployed persons of other origins. This gives an indica-
tion of how costly it can be for different groups if they lose their jobs during an upcoming turnaround.
Job loss is always associated with costs for the individual and society, but the costs are higher if it is
difficult to find new employment.

Figure 2.21	Figure 2.22
Hiring rates have risen sharply – but fell in 2022	**Older persons and persons of non-Western origin generally have more difficulty moving from unemployment to employment**
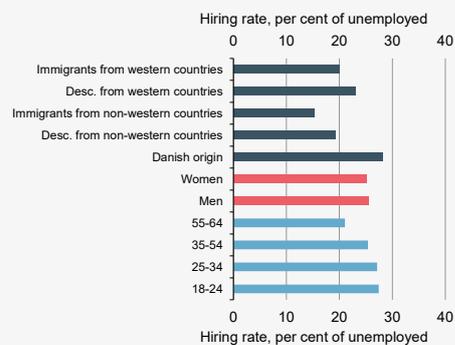
Note: Figure 2.22 shows the share of unemployed persons at the start of a quarter who have moved into
          employment by the end of the quarter. For further description see notes to figures 2.19 and 2.20.
Source: Statistics Denmark and own calculations.

However, the employment and separation rates of individual groups change over time. Across age
groups, the separation rate has changed since 2008, particularly for 18-24-year-olds, *cf. figure 2.23*.

In the years from 2008 to 2013, around 3 per cent of young persons in employment moved from employment to unemployment every quarter, while it was 1-2 per cent for older age groups. Since then, the trend has reversed and the 18-24-year-olds are now the group with the lowest separation rate.

This reveals another aspect of the cyclicality of youth employment: they are more vulnerable during downturns but perform well during upturns. In general, the exit rate to unemployment is least volatile for older age groups, which is related to the fact that older persons are more likely to leave the labour force altogether when they leave employment, including transfer schemes other than unemployment benefits and cash benefits.

Figure 2.23
Larger fluctuations in young persons's likelihood of moving from employment to unemployment

Figure 2.24
Men had significantly higher separation rates than women after the financial crisis
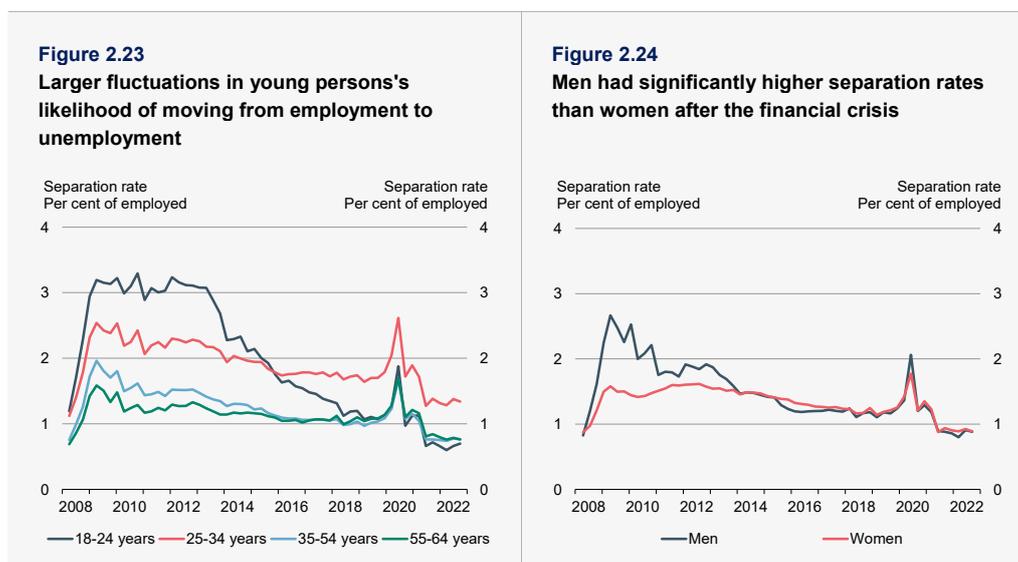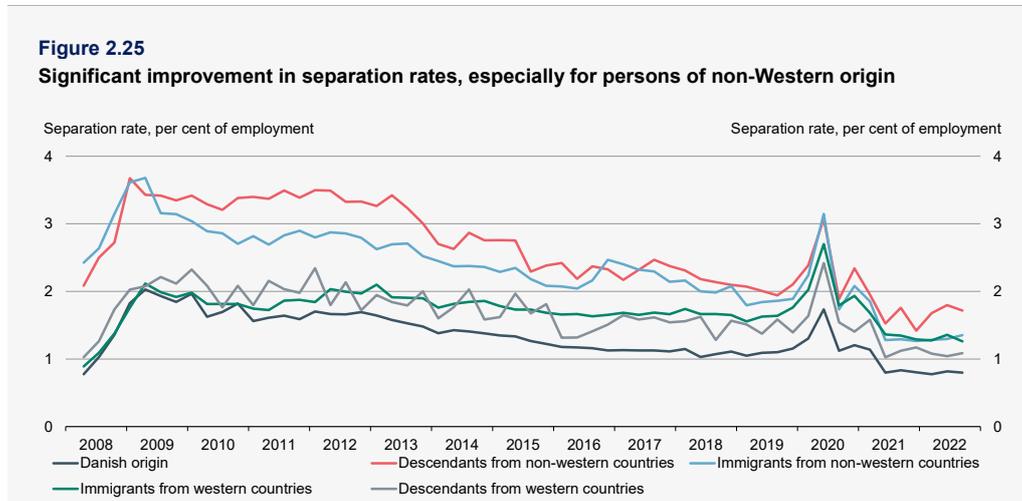

Note: For further description see note to figures 2.19 and 2.20.
Source: Statistics Denmark and own calculations.

Across genders, the separation rate seems to fluctuate more for men than women, *cf. figure 2.24*. There was a particularly large difference in the years after the financial crisis. This supports the view that male employment is generally more sensitive to fluctuations in the labour market and that a turnaround could therefore affect men to a greater extent. As for young persons, the separation rate for men is now also slightly higher than at the beginning of 2022.

The separation rate is generally higher for immigrants and descendants and especially for persons of non-Western origin, *cf. figure 2.25*. However, the difference to the other groups has narrowed considerably since the financial crisis. However, there is a risk that the improved attachment to the labour market that persons of non-Western origin have seen over the past two decades may be set back somewhat during a turnaround in the labour market. The separation rate for non-Western descendants is now somewhat higher than at the end of 2021.
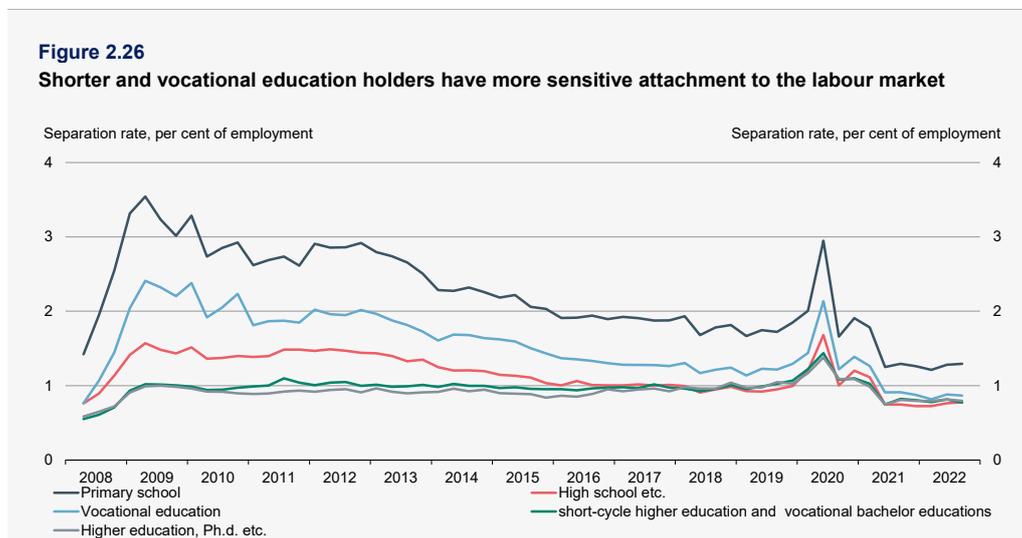
Figure 2.25
Significant improvement in separation rates, especially for persons of non-Western origin

Separation rate, per cent of employment   Separation rate, per cent of employment

Danish origin · Descendants from non-western countries · Immigrants from non-western countries · Immigrants from western countries · Descendants from western countries

Note: For a description of the data see note to figure 2.19 and figure 2.20.
Source: Statistics Denmark.

Workers with lower education and vocational training are particularly exposed to a turnaround

Labour market attachment also varies considerably across educational pathways. In particular, there is a tendency for persons with shorter education and vocational education to have a higher risk of moving from employment to unemployment, *cf. figure 2.2*6*.

Figure 2.26
Shorter and vocational education holders have more sensitive attachment to the labour market

Separation rate, per cent of employment   Separation rate, per cent of employment

Primary school · High school etc. · Vocational education · short-cycle higher education and vocational bachelor educations · Higher education, Ph.d. etc.

Note: The figure shows the separation rate across different educational groups. Education groups are defined based
              on the individuals' highest completed education. For further description see note to figure 2.19 and figure
              2.20.
Source: Statistics Denmark and own calculations.

Following the financial crisis, those in employment whose highest level of education was primary or vocational education were more likely to become unemployed. Persons with higher levels of education have generally had a lower likelihood of becoming unemployed and this group has been significantly less affected by the cyclical situation over the period. The gap between educational attainment groups has narrowed over the period, but those with primary education as their highest level of attainment continue to have a looser attachment to employment.

Therefore, in a future downturn, those with shorter and vocational educations are more likely to become unemployed. This should also be viewed in light of the fact that they are more exposed to more cyclically sensitive industries such as construction, which – just like after the financial crisis – are expected to be particularly exposed in the coming years. There could also be a self-reinforcing effect. The higher job separation rate for persons with shorter educations means that on average they acquire fewer firm-specific skills, which can be difficult to re-establish when demand picks up again. Employers tend to retain employees with firm-specific human capital to a greater extent. It is a typical pattern – across countries and over time.[7]

The different types of movements in the labour market are computed using data at the individual level. The individuals are tracked in quarterly periods, so that their labour market status can be followed over time, *cf. box 2.3*.

---

[7] See e.g. Cause, Luu & Abendschein (2021): ”Labour market transitions across OECD countries: Stylised facts”, *OECD Economics department working papers no. 1692.*

Box 2.3
Data for labour market movements

The calculations of labour market movements are based on register data from Statistics Denmark. A population has been formed which consists of everyone in the population between the ages of 18 and 64. For all individuals there is information of their labour market status, which is gathered on a monthly basis form January 2008 to September 2022. Based on this information, labour market movements can be calculated. The movements are calculated as the change in the individuals primary labour market status from the first to the last month in the quarter. For the 1st quarter, the movement will thus be the change in labour market status from December to March.

Each labour market status is characterized by the fact that the individual meets certain criteria in a given month. In the data set, individuals are employed if their employment rate is greater than their gross unemployment rate and if they are not eligible for social security in the month. Conversely, they are unemployed if they have a gross unemployment rate that is higher than their employment rate. If they are employed, their industry is decided as the industry from which they receive the highest salary.

In order to shed light on movements in the labour market for different population groups, a number of background variables are obtained. These include age, gender, ancestry and level of education. The level of education is registered for September each year. Since there is not yet data for September 2022, educational level is assigned to the level in September 2021. In order to get as far forward in time as possible, less precise data has been used in figures that go to September 2022 than in the figures that cover earlier periods. For these figures, the category *in education* is defined as individuals who are enrolled in full-time education on the 15th of the month, which also includes students who are not eligible for state educational support. *Retired* in these figures cover individuals who have received an early retirement pension, flexible benefit or state pension in the month.

Source: Statistics Denmark.

Larger fluctuations in rural municipalities

There are also differences in unemployment fluctuations across municipalities, *cf. figure 2.27*. In general, the largest fluctuations in unemployment are found in South, West and Central Jutland and in selected rural municipalities. These are largely the same regions of the country with the lowest unemployment. The differences reflect some of the demographic and industry patterns previously mentioned. For example, West Jutland and South Jutland have a higher proportion of wage earners than other parts of the country within the relatively cyclically sensitive industries manufacturing, mining and quarrying as well as utility services. For instance, this was 20 percent and 19 percent respectively in the 2nd quarter of 2022, e.g., compared to 3 percent in the city of Copenhagen. In addition, matching challenges can be a bigger problem in municipalities where the concentration of firms is smaller, since the demand for given qualifications will then be spread over fewer firms.

Figure 2.27
Larger fluctuations in unemployement in rural municipalities than in cities
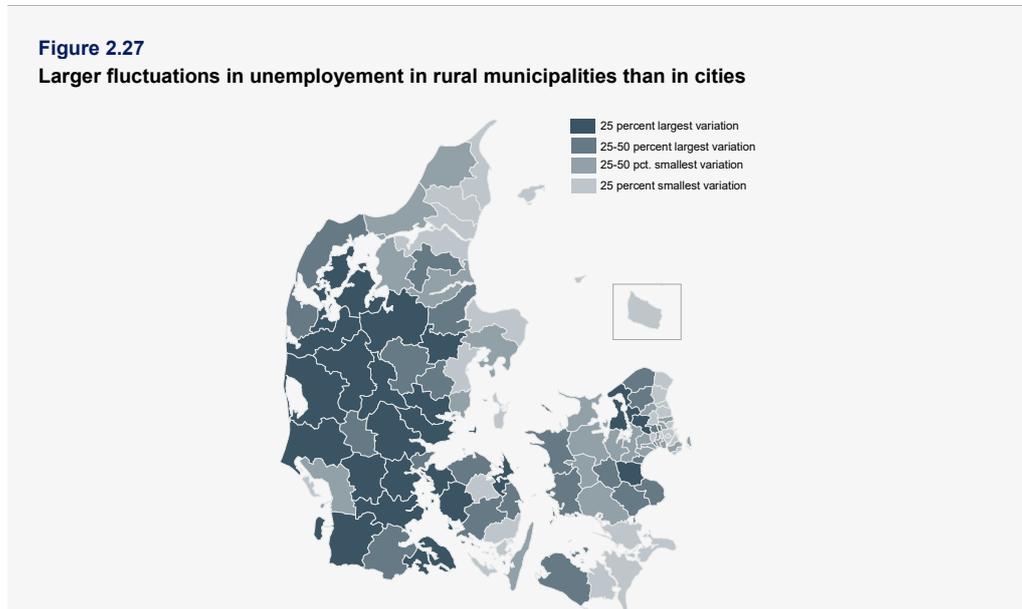
Note: Figure 2.27 is based on the coefficient of variation of unemployment in each municipality for the period 2007
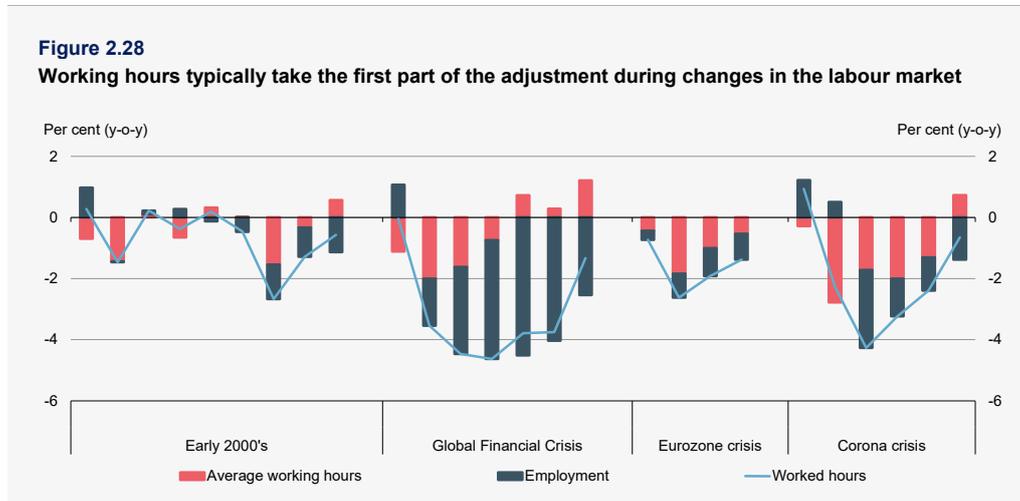   to 2019. Based on municipalities of residence.
Source: Statistics Denmark and own calculations.

2.5 Working hours, foreign labour and wages are part of the adjustment

It is not only employment that falls when the demand for labour reverses. Part of the adjustment in the labour market also happens in other ways, which helps to limit redundancies as well as the decline in recruitment.

First, the average hours worked per employed generally decreased during previous turns in economic activity. When demand falls, part of the adjustment in the labour market has thus been persons working less instead of being made redundant. It may have been in the form of less overtime or actual reductions in working hours, both at the behest of employees and employers. Businesses have the option of making use of work distribution schemes, where the working hours for employees are reduced temporarily in return for supplementary unemployment benefits. This is a way to retain employees and good job matches in periods when the business' need for labour decreases.
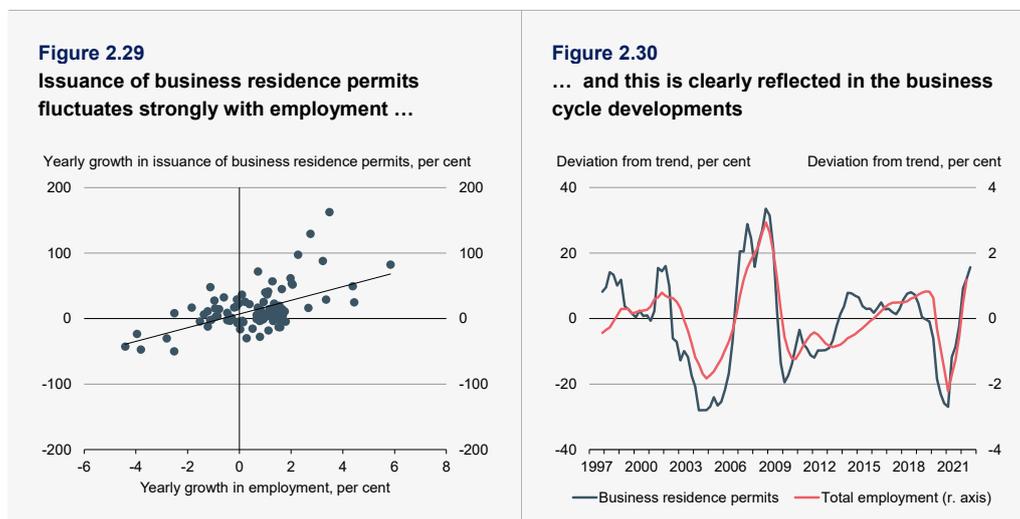
During previous turns in economic activity, it is particularly in the first quarters that a decrease in working hours has met a reduced demand for work, *cf. figure 2.28*. During these periods, average working hours have accounted for the majority of the decline in the total number of hours worked in the economy. Only later during the downturn does employment contribute to a decline in the total work effort. Decreases in average working hours can both slow down and reduce the overall decline in employment during downturns.

Figure 2.28
Working hours typically take the first part of the adjustment during changes in the labour market

Per cent (y-o-y)   Per cent (y-o-y)

| Early 2000's | Global Financial Crisis | Eurozone crisis | Corona crisis |

■ Average working hours   ■ Employment   — Worked hours

Note: Growth in hours worked is decomposed into approximate growth contributions through log-log-differences.
         Periods shown cover 4th quarter 2001 to 4th quarter 2003, 4th quarter 2008 to 2nd quarter 2010, 1st quarter 2012
         to 4th quarter 2012 and 4th quarter 2019 to 1st quarter 2021.
Source: Statistics Denmark and own calculations.

Second, foreign labour can also generally act as a dampener on the labour market. For example, the growth in the issuance of residence permits is strongly positively correlated with overall employment growth in Denmark. Thus, the issuance of residence permits increases in percentage terms by approx. the tenfold increase in employment in a given quarter, *cf. figure 2.29*.

Figure 2.29
Issuance of business residence permits fluctuates strongly with employment …

Yearly growth in issuance of business residence permits, per cent

Yearly growth in employment, per cent

Figure 2.30
… and this is clearly reflected in the business cycle developments

Deviation from trend, per cent   Deviation from trend, per cent

— Business residence permits   — Total employment (r. axis)

Note: Residence permits are defined here as issued residence permits with a basis in either profession or paid work
         for EU/EEA citizens. In figure 2.30, developments are cleaned of the growing trend over time using an HP
   filter.
Source: Statistics Denmark and own calculations.

In full accordance with this, there is a clear positive correlation between cyclical fluctuations in the issuance of business residence permits and employment, *cf. figure 2.30*.

Thus, foreign labour helps to reduce some of the pressure on the labour market during economic expansions, but a reduced influx of employed persons from abroad can also contribute to an adjustment to lower demand on the labour market.

Third, wages are an additional adjustment mechanism, which can mitigate the impact of economic slowdowns on employment. Wages are a large part of businesses' costs and are therefore an item on which they can save significantly when demand for their products falls. They can either do this by letting employees go, or by letting them work fewer hours or take a wage-cut. In general, there is considerable slack in wage formation, as wages are often negotiated in advance for a given period. Incidentally, *nominal* wage decreases are generally rarely seen. Wage inertia in Denmark is, however, relatively limited in an international perspective.[8]

Thus, there is also a clear negative correlation between the nominal wage development and the unemployment gap in Denmark, *cf. figure 2.31*. However, it also reflects that it is only when unemployment has risen to a high level that wages contribute to reducing the impact on employment.

Figure 2.31
Close correlation between wage growth and unemployment gap
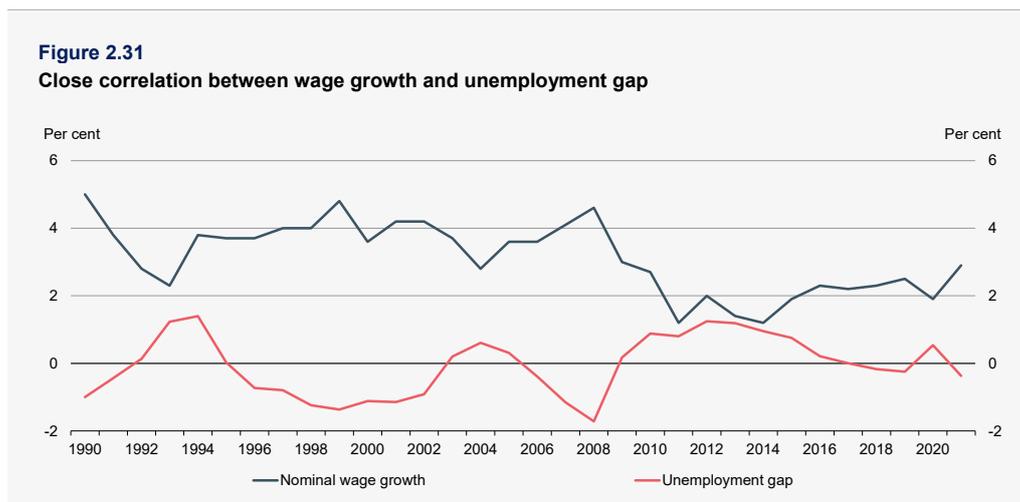
Note: The unemployment gap measures the difference between actual unemployment and structural
         unemployment. Nominal salary increase rates excl. inconvenience supplements follow DA's structural
         statistics.
Source: Statistics Denmark, Danish Confederation of Employers and own calculations.

---

[8] Kristoffersen (2016): "Geographical job mobility and wage flexibility", Danmarks Nationalbank, *Monetary Review, 3rd quarter, 2016*.

Annex tables

Table B.1
Demand, import and production

	2022	2023	2024	2022	2023	2024	2022	2023	2024
	DKK bn.			Volume, per cent			Prices, per cent		
Private consumption	1.196	1.245	1.298	-2,5	0,2	1,4	7,4	3,9	2,8
Public consumption[1]	620	637	670	-2,8	-0,3	1,6	4,9	3,0	3,6
Public investments[2]	90	94	99	-0,2	0,7	2,5	5,6	3,4	3,1
Residential investment	172	162	154	7,8	-9,8	-8,4	6,0	4,6	3,4
Fixed business investment	387	380	382	11,1	-6,6	-1,6	5,6	5,1	2,2
Domestic demand excl. inventory investment	2.468	2.523	2.607	0,1	-1,6	0,4	6,3	3,9	3,0
Inventory investment[3]	33	-1	16	0,9	-1,2	0,6			
Total domestic demand	2.502	2.522	2.623	1,0	-3,0	1,0	6,5	3,9	3,0
Exports of goods and services	1.920	1.882	1.969	7,9	3,2	3,3	19,1	-5,0	1,3
Total demand	4.421	4.404	4.592	3,7	-0,3	2,0	11,6	-0,1	2,3
Imports of goods and services	1.603	1.638	1.726	3,8	-1,2	2,8	17,3	3,5	2,5
Gross domestic product	2.819	2.765	2.866	3,6	0,2	1,5	8,6	-2,1	2,1
Taxes on products, net	334	336	350	-1,5	-1,7	1,0	3,3	2,4	3,1
Gross value added	2.485	2.429	2.516	4,4	0,5	1,6	9,4	-2,7	2,0
- Non-farm private sector[4]	1.568	1.628	1.682	6,0	0,3	0,7	1,8	3,5	2,6
Gross national income	2.905	2.831	2.931						

Note: The division into volume and price components is made based on a fixed price calculation in the previous year's prices.

1) The change in volume for public consumption is calculated using the output method. For 2023-2024, growth in public consumption using the input method is assumed to equal growth using the output method.

2) Public investments exclude general government net purchases of buildings, and therefore the figures will deviate from public investments in table B.7.

3) The volume figures reflect changes in inventories compared to GDP.

4) Non-farm private sector consists of manufacturing, construction and private service excluding shipping.

Source: Statistics Denmark and own calculations.

Table B.2
Interest rates, oil price and exchange rates and external assumptions

Interest rates, per cent		2020	2021	2022	2023	2024
USA	Federal Funds Target Rate	0,3	1,9	5,5	5,2	3,4
	3-month LIBOR	0,2	2,4	5,6	5,6	3,5
	10-year government bond	1,4	3,0	3,9	4,0	2,7
Euro area	Main Refinancing Operations Rate	0,0	0,6	3,4	3,5	1,5
	3-month EURIBOR	-0,4	0,4	3,4	3,6	1,2
	10-year government bond (Germany)	-0,4	1,2	2,5	2,6	1,1
Denmark	Certificates of deposit rate	-0,6	0,0	2,9	3,1	0,9
	3-month CIBOR	-0,2	0,6	3,6	3,7	1,3
	1-year adjustable mortgage rate	-0,5	0,9	3,8	4,0	1,4
	10-year government bond	-0,1	1,5	2,7	2,7	1,2
	30-year mortgage interest rate	1,5	3,7	4,7	4,6	3,7
	Average interest rate	0,4	2,0	3,7	3,7	2,2
Oil price						
Dollar per barrel		41,8	70,7	100,8	83,2	82,2
DKK per barrel		273,2	444,4	713,4	579,9	573,3
Exchange rate						
DKK per 100 dollar		654,2	628,7	707,9	697,2	697,2
DKK per 100 euro		745,4	743,7	744,0	743,8	743,8
Effective Krone Rate Index (1980=100)		102,9	102,9	101,9	103,4	103,4
		Real growth rate, per cent				
External assumptions						
Export market growth[1], per cent		-4,7	10,2	7,1	2,3	3,0
Trade weighted GDP-growth[2], per cent		-3,7	5,2	3,0	1,1	1,8

Note: The projections are based on data through February 28th, 2023. Annual averages are own calculations. For monetary policy interest rates, the interest rate estimate is based on an assessment of the latest announcements by central banks and market expectations. For money market rates and the yield on 10-year government bonds, estimates are based on market expectations, which are based on the prices of swap interest rates. For the 1-year and 30-year mortgage rate bonds, data is Finance Denmark's bond rates and estimates are based on spreads to the 3-month money market rate and the 10-year government bond rate respectively. Estimates for exchange rates are calculated technically by assuming that the exchange rate for the remaining forecast period corresponds to the average during the last ten days prior to the estimation. Estimates for the oil price are based on the International Energy Agency, World Energy Outlook, October 2022, as well as futures prices.

1) Calculated as the weighted average of import growth in Denmark's 36 most important trade partners. The weights reflect the countries' share of Danish manufacturing exports in 2020.

2) Calculated as the weighted average of the GDP-growth in Denmark's 36 most important trade partners. The weights reflect the countries share of Danish export of goods and services in 2020.

Source: Macrobond, Nordea Markets, The International Energy Agency, *IMF World Economic Outlook update january 2023, OECD Economic Outlook, november 2022* and own calculations.

Table B.3
Population and labour market

	2020	2021	2022	2023	2024
1.000 persons					
Total population	5,831	5,857	5,884	5,904	5,923
- Labour force	3,103	3,151	3,238	3,245	3,231
- Total employment	2,973	3,046	3,164	3,153	3,136
- Ordinary employment[1]	2,883	2,949	3,133	3,041	3,021
- Subsidised employment[2]	90	96	105	112	116
- Gross unemployment (incl. activation)[3]	131	106	76	93	97
- Net unemployment	119	94	64	76	80
- Outside the labour force	2,729	2,706	2,645	2,659	2,692
- Recipients of unemployment benefits and cash benefits in activation outside the labour force	93	85	82	85	84
- Early retirement pensioners outside the labour force	191	199	205	205	204
- Senior pensioners outside the labour force	3	11	17	23	29
- Voluntary early retirement	48	52	47	35	27
- Persons under 15 years	951	947	944	941	940
- Pensioners outside the labour force	977	974	961	968	983
- Others outside the labour force	466	438	389	401	424

Note: Recipients of education assistance benefit, the special education benefit and other temporary benefits (kontantydelse) are included as cash benefit recipients.

1)   Calculated as the difference between employment as determined in the national accounts and subsidised employment, which is based on data from AMFORA. Due to differences in the definition of employment in the two sources, the data is subject to a degree of uncertainty

2)   Includes persons in employment with wage subsidies (including flex jobs and light duty jobs

3)   The number of unemployment benefit recipients in activation and labour-market-ready cash benefit recipients includes persons in subsidised employment.

Source: Statistics Denmark and own calculations.

Table B.4
Employment by industry including leave

	2020	2021	2022	2023	2024
1.000 persons					
Employment, total	2,973	3,046	3,164	3,153	3,136
- Service industries	1,556	1,595	1,687	1,691	1,683
- Construction	194	203	211	199	191
- Manufacturing	303	307	316	315	312
- Agriculture	68	67	67	66	66
- Public sector	833	854	867	865	868

Note: The industry division is based on the division in the ADAM model, which are not identical to the division in the national accounts.
Source: Statistics Denmark and own calculations.

Tabel B.5
Unemployment

	2020	2021	2022	2023	2024
1.000 persons					
Gross unemployment	131	106	76	93	97
- per cent of workforce	4.2	3.4	2.3	2.9	3.0
Net unemployment	119	94	64	76	80
LFS unemployment (per cent)	5.6	5.1	3.9	4.5	4.5

Note: Differences in the definition of the labour force between the Ministry of Economic Affairs and the Ministry of Finance on one side and Statistics Denmark on the other means that the gross unemployment rate in per cent of the workforce is estimated at a lower level.
Source: Statistics Denmark and own calculations.

Table B.6
Benefit recipients etc.

	2020	2021	2022	2023	2024
1.000 persons					
Unemployment benefits (excl. activation)	101	82	52	61	67
Cash benefits (excl. activation)	85	75	66	68	71
Recipients of unemployment benefits and cash benefits in activation[1]	24	22	23	27	30
Holiday benefit	3	3	2	2	2
Early retirement pensioners[2]	210	218	225	225	224
Senior pension	3	12	19	25	32
Resource assessment benefit	36	33	38	38	38
Voluntary early retirement	48	52	47	35	27
Early retirement	0	0	7	14	18
Flex job scheme benefit	3	3	3	3	2
Disablement rehabilitation benefit[3]	3	2	2	1	1
Sickness benefit[4]	76	84	83	74	74
Maternity leave	51	52	51	52	53
Benefit for unemployed	18	16	13	14	15
Self-support, home-travelling and transitional benefits[5]	12	10	15	20	10
Total	674	664	645	660	666
Student grant (SU)	318	315	301	302	300
Total, including SU	992	979	946	962	966
Pensioners	1,124	1,116	1,099	1,110	1,128
Total, including SU and pensioners	2,116	2,095	2,045	2,072	2,094
Subsidised employment[6]	90	96	105	112	116
Total, including SU, pensioners and subsidised employment	2,206	2,191	2,150	2,184	2,209

Note: Recipients of education assistance benefit, the special education benefit and other temporary benefits (kontantydelse) are included as cash benefit recipients.

1) The data does not cover persons in subsidised employment and thereby differs from other register-based data and table B,3. Furthermore, both labour market ready and non-labour market ready cash benefit recipients are included in the group of recipients of unemployment benefits and cash benefits in activation schemes.

2) Early retirement and retirement pension include pensioners living abroad as well as pensioners, who are employed.

3) Excl. persons on disablement rehabilitation with wage support.

4) The number of sickness benefit recipients does not reflect the total absence due to illness. It includes the part of the sickness absence, which is not covered by the employer. Specifically, this covers sickness absences longer than 30 days as well as sickness among the unemployed.

5)   The number of self-support and home-travelling as well as transitional benefits are calculated excl. recipients of wage subsidies
6)   Includes persons in employment with wage subsidies (including flexi-jobs and sheltered jobs).
Source: Statistics Denmark, DREAM and own calculations.

Table B.7
Gross investments

	2022	2020	2021	2022	2023	2024
	DKK bn.	Real growth rate, per cent				
Gross fixed capital formation	649	5.1	6.2	8.3	-6.2	-2.9
Divided into groups:						
- Construction investments	321	4.7	8.9	6.5	-5.7	-4.8
- Tangible and intangible investments	328	5.6	3.6	10.2	-6.7	-1.0
Divided into groups:						
- Residential investments	172	9.1	9.9	7.8	-9.8	-8.4
- Public investments[1]	89	14.1	0.3	-1.2	2.6	1.5
- Total business investments	387	1.2	6.3	11.1	-6.6	-1.6
- Construction investments	99	-5.1	7.9	7.6	-2.7	-2.5
- Tangible and intangible investments	288	3.7	5.6	12.3	-7.9	-1.3

1)   Public investments are incl. public acquisitions of buildings, which is why numbers differ from what is stated in table B,1.
Source: Statistics Denmark and own calculations.

Table B.8
Balance of payments

	2020	2021	2022	2023	2024
DKK bn.					
Goods exports	780	893	1,043	1,113	1,180
Goods imports	675	814	947	966	1,017
Goods balance, total	105	79	96	147	164
Service exports	496	601	877	769	788
Service imports	454	501	655	673	709
Service balance, total	42	100	221	96	79
Balance of goods and services	147	179	317	244	243
- Per cent of GDP	6.3	7.1	11.3	8.8	8.5
Investment income from abroad, net	85	98	99	79	80
Wage income from abroad, net	-14	-14	-16	-17	-17
EU payments, net	-16	-16	-11	-16	-18
Other current transfers from abroad, net	-20	-20	-19	-22	-23
Net transfers from abroad, total	36	47	53	25	21
Current account, total	183	226	371	269	264
- Per cent of GDP	7.9	9.0	13.2	9.7	9.2
Net assets against other countries	1,626	1,928	2,736	3,319	3,941
- Per cent of GDP	70.0	77.0	97.1	120.0	137.5

Source: Statistics Denmark and own calculations.

Table B.9
Exports og imports

	2022	2020	2021	2022	2023	2024
	DKK bn.	Real growth rate, per cent				
Exports						
Goods, total	1,043	-0.8	11.4	5.4	3.6	4.0
- Agricultural goods etc.	143	1.0	5.6	-2.0	0.0	1.7
- Industrial goods (excl. ships etc.)	788	0.5	10.9	8.8	5.6	3.0
- Other goods[1]	112	-14.8	31.4	-9.5	-5.9	16.8
Services, total	877	-14.2	2.6	11.5	2.8	2.2
- Sea transport	527	-5.4	5.8	0.5	1.0	1.0
- Other services	286	-13.2	-1.1	16.0	5.5	4.2
Total	1,920	-6.3	8.0	7.9	3.2	3.3
Imports						
Goods, total	947	-0.7	10.5	-2.3	-0.5	2.0
- Agricultural goods etc.	107	-5.6	6.0	-3.8	3.2	3.8
- Industrial goods (excl. ships etc.)	590	2.3	12.1	-2.6	-0.5	4.0
- Other goods[2]	251	-6.3	7.7	-0.5	-2.1	-4.9
Services, total	655	-7.6	4.2	13.8	-2.2	3.9
Total	1,603	-3.6	8.0	3.8	-1.2	2.8
Memo		Nominal growth rate, per cent				
Export of basic goods[3]	972	0.5	10.6	15.9	9.2	5.2
Export prices		Change, per cent				
Goods, total	-	-0.2	-1.5	2.8	8.4	3.0
Services, total	-	4.7	3.9	18.0	11.6	-9.0
Total	-	1.8	0.5	8.4	9.7	-2.2
Import prices						
Goods, total	-	-2.9	9.2	19.0	2.4	3.2
Services, total	-	0.0	5.9	15.0	4.9	1.5
Total	-	-1.8	7.9	17.3	3.5	2.5

1)   Raw materials, energy and ships etc.
2)   Raw materials, energy, cars and ships etc.
3)   Export of basic goods consists of export of goods excluding energy, ships and airplanes.
Source: Statistics Denmark and own calculations.

Table B.10
Private consumption

	2022	2020	2021	2022	2023	2024
	DKK bn.	Real growth rate, per cent				
Total consumption	1,196	-1.4	4.2	-2.5	0.2	1.4
Retail trade	396	6.2	5.0	-5.0	-2.7	0.0
- Food, drinks and to-bacco	175	4.1	3.3	-8.0	0.1	1.0
- Other goods	221	7.9	6.3	-2.6	-4.9	-0.8
Purchase of vehicles	43	0.9	0.3	-18.1	1.8	3.6
Electricity, fuels and gas	70	-0.7	5.1	-8.8	1.9	4.1
Gasoline and similar	34	-9.3	3.3	-0.4	2.7	-0.5
Housing	271	1.4	1.1	1.6	1.8	1.4
Other services	408	-12.5	4.6	7.2	0.7	1.6
Tourist expenditures	37	-47.2	26.8	12.9	15.0	5.0

Source: Statistics Denmark and own calculations.

Table B.11
Net lending by sectors

	2020	2021	2022	2023	2024
DKK bn.					
Private sector, total	177	138	289	225	241
- Households	35	-8	66	48	67
- Corporations	143	146	223	176	173
- Non-financial corporations	106	89	189	156	145
- Financial corporations	37	57	34	20	28
General government	5	91	82	45	24
Total	182	229	371	269	265

Note: Net lending of general government corresponds to the general government budget balance. The total (except for the typically small net capital transfers from abroad) corresponds to the current account balance, *cf. table B,8*.
Source: Statistics Denmark and own calculations.

Table B.12
Gross value added (GVA)

	2022	2020	2021	2022	2023	2024
	Share, per cent	Real growth rate, per cent				
Total GVA	100	-2.4	5.1	4.4	0.5	1.6
Public sector	18	-4.2	3.3	1.1	-0.1	1.0
Private sector	82	-2.0	5.5	5.2	0.6	1.7
Private sector excl. mining and quarrying	80	-1.7	5.5	5.3	0.7	1.0
Non-farm private sector[1]	63	-2.2	6.1	6.0	0.3	0.7

1)   Non-farm private sector consists of manufacturing, construction and private services excluding shipping.
Source: Statistics Denmark and own calculations.

Table B.13
Hourly productivity in selected industries

	Avg. 1998-2022	2020	2021	2022	2023	2024
Real growth rate, per cent						
Total	1.0	0.6	1.2	-0.1	1.5	2.0
Public sector	0.5	-2.2	0.7	-0.4	0.2	0.3
Private sector	1.2	1.4	1.2	-0.4	1.9	2.5
Private sector excl. mining and quarrying	1.4	1.6	1.2	-0.4	2.0	1.9
Non-farm private sector[1]	1.3	1.3	1.4	0.1	1.5	1.6

Note: Hourly productivity is defined as gross value added in constant prices relative to the total number of
          hours.
1)   Non-farm private sector consists of manufacturing, construction and private services excluding shipping.
Source: Statistics Denmark and own calculations.

Table B.14

Contributions to growth in households' real disposable income[1]

	2020	2021	2022	2023	2024
Real growth rate, per cent					
Disposable income[2]	0.0	-0.5	1.5	-1.3	1.4
Contribution, percentage points					
Compensation of employees[3]	1.1	3.6	-0.2	-1.0	1.8
Social benefits	1.7	-0.5	-2.5	0.5	0.4
Income taxes	-2.4	-2.0	1.7	1.6	-0.6
Net interest income	-0.7	0.2	-0.4	-0.5	-1.3
Dividend etc,[4]	-0.8	0.2	2.3	-2.8	0.5
Pension contribution	0.6	-0.7	1.2	-0.4	-0.1
Payment from pension schemes[5]	0.0	-0.6	1.2	0.3	0.2
Others[6]	0.5	-0.8	-1.7	1.0	0.4

1)   The household sector in the Economic Survey includes Non-Profit Institutions Serving Households (NPISH).
2)   Taxation on payments of frozen holiday funds is subtracted in the calculation of disposable income.
3)   Covering only employees residing in Denmark.
4)   Incl. dividends from investment funds.
5)   Occupational pensions etc. (but not individual pension schemes in banks, etc.)
6)   Including the self-employed.
Source: Statistics Denmark and own calculations.

Table B.15
Households' net lending[1]

	2020	2021	2022	2023	2024
DKK bn.					
Disposable gross income[2]	1,142	1,159	1,263	1,295	1,350
Private consumption	1,074	1,142	1,196	1,245	1,298
Gross investment[3]	111	123	140	132	126
Net capital transfers[4]	4	-2	0	6	9
Direct net lending	**-40**	**-108**	**-72**	**-75**	**-66**
Adjustment for the change in pension entitlements[5]	75	100	139	124	133
Net lending[6]	**35**	**-8**	**66**	**48**	**67**
Per cent of disposable gross income					
Direct net lending	-3.5	-9.3	-5.7	-5.8	-4.9
Net lending	3.0	-0.7	5.3	3.7	5.0

1) The household sector in the Economic Survey includes Non-Profit Institutions Serving Households (NPISH).
2) Taxation on payments of frozen holiday funds is subtracted in the calculation of disposable income.
3) Households' gross investments include investments in owner-occupied housing and investments in buildings and materials by sole proprietors.
4) Net capital transfers in 2022 include property taxes refunded to owner-occupied property owners, funds for specific challenges as a result of covid-19 and further stimulants as well as reimbursement of contributions to the voluntary early retirement scheme.
5) Net payments to and returns (excl. tax on pension yield) on household capital in life insurance companies and pension funds.
6) Households' (net) acquisition of financial assets (incl. shares) in other sectors.
Source: Statistics Denmark and own calculations.

Table B.16

Real estate market and construction

	2020	2021	2022	2023	2024
Per cent					
Change in the price of traded single-family houses[1]	4.8	10.5	-0.2	-8.4	-0.5
Housing gross investment (real growth)	9.1	9.9	7.8	-9.8	-8.4

1)   The change is adjusted for developments in the volume of housing sales.
Source: Statistics Denmark and own calculations.

Table B.17

Labour wage ratio, wage increases and computational preconditions

	2020	2021	2022	2023	2024
Labour wage ratio, per cent					
Private sector	59.0	57.4	53.2	56.8	57.4
The entire economy	64.0	62.6	58.8	61.9	62.4
Wage increase, per cent					
Private sector					
- Hourly earnings (excl. nuisance bonus)	1.9	2.9	3.6	4.5	5.3
Public sector					
- Hourly earnings (excl. nuisance bonus)	2.5	2.5	2.4	-	-
- Budgetary impact	2.5	1.3	1.9	2.4	4.1
Wage adjustment rate, per cent[1]	2.0	2.0	1.2	2.7	3.3

Note: The labour income ratio is calculated as aggregated labour income relative to the GVA (gross value added) and adjusted for the number of self-employed. The hourly wage increases in the private sector in 2020-2021 are published by The Confederation of Danish Employers. The hourly wage increases in the public sector are a weighted average of wage indices for the state, the municipalities and the counties, all reported by Statistics Denmark. No estimates are made on the development in public sector hourly earnings. The budgetary impact is based on the contractually agreed wage increases including contributions from the adjustment scheme (reguleringsordningen) but excluding any residual increases. The hourly wage increases for the private and public sectors are not comparable.
1)   The wage adjustment rate stated for 2020-2024 is the announced wage adjustment rate.
Source: The Confederation of Danish Employers, Statistics Denmark, and own calculations.

Table B.18
Price developments and explanatory factors

	2020	2021	2022	2023	2024
Change, per cent					
Net price index	0.4	1.5	7.7	4.3	2.6
Tariffs and housing benefits, contribution	0.0	0.5	0.0	-0.4	0.3
Consumer price index	0.4	1.9	7.7	3.9	2.8

Note: The contribution from tariffs and housing benefits is computed as the difference between the consumer price inflation and the net price inflation. Changes in the prices of taxed goods such as energy can therefore influence the contribution from taxes, even though the tax level remains unchanged.

Source: Statistics Denmark and own calculations.

Table B.19
Public finances

	2020	2021	2022	2023	2024
DKK bn.					
Public consumption	575.4	608.4	620.1	636.9	670.2
Income transfers[1]	385.8	388.0	385.4	406.8	423.4
Investments	83.9	85.3	90.0	93.6	99.0
Interest expenditures	12.8	14.1	21.5	16.3	14.2
Subsidies	75.6	63.3	40.8	37.3	38.8
Other expenditures[2]	86.9	86.6	80.7	94.8	98.6
Total expenditure[3]	1,220.4	1,245.7	1,238.5	1,285.7	1,344.3
Personal income taxes, etc,[4]	510.3	542.6	563.2	564.3	585.5
Labour market contributions	106.3	112.2	118.3	121.7	126.7
Pension yield taxation	48.2	63.8	11.3	9.1	10.3
Corporate taxes	66.6	93.6	88.2	84.2	83.4
VAT	231.6	250.0	265.7	269.2	277.5
Other duties	142.4	147.4	144.4	144.9	143.1
Other taxes[5]	4.0	2.8	1.0	1.0	1.0
Interest revenues	20.3	24.5	28.4	34.4	36.0
Other revenues[6]	98.8	103.5	103.6	105.3	108.9
Tariffs etc. to the EU	-3.1	-3.7	-3.6	-3.6	-3.8
Total revenue[7]	1,225.4	1,336.7	1,320.6	1,330.4	1,368.6
General government budget balance	5.0	91.0	82.1	44.7	24.3
Net interest expenditure	-7.5	-10.4	-6.9	-18.0	-21.8
General government primary balance[8]	-2.5	80.6	75.1	26.7	2.6

1)   Income transfers exclude other regular transfers to households such as mileage allowance and index supplement.

2)   Other expenditures include capital transfers, transfers to the Faroe Islands and Greenland and the Danish EU-contributions.

3)   Total expenditure differs from Statistics Denmark's equivalent. Total expenditure is calculated from a definition of the total expenditure, where all sub-elements of public consumption – e.g. imputed expenditure from depreciation and revenue from sales of goods and services – are defined as expenditures.

4)   Personal income taxes include withholding taxes, tax on imputed income from owner-occupied dwellings, specific taxes from households, tax on estates of deceased persons and other personal taxes.

5)   Other taxes include media license and mandatory pension payments for civil servants.

6)   Other revenues include profits from public enterprises, current and capital transfers from other domestic sectors and the EU, and imputed (calculated) revenues such as contributions to civil servants' earned pension. Moreover, revenues from oil and gas explorations in the North Sea, duty on pipelines, and the hydrocarbon tax are included in other revenues.

7)   Total revenue differs from Statistics Denmark's equivalent, where the sales of public goods and services are counted as revenue and not – like here – counted as a part of the total expenditures. Furthermore, total revenue here includes a revenue-counterpart to the imputed depreciation expenditures included in public consumption.

8)   The general government primary balance states the balance of the general government finances before net interest expenditures.

Source: Statistics Denmark and own calculations.

Table B.20
Taxes and tax burden

DKK bn.	2019	2020	2021	2022	2023
Indirect taxes	365.2	371.0	393.7	408.1	419.8
- VAT	223.2	231.6	250.0	265.3	271.8
- Registration tax	20.3	18.7	16.4	14.6	16.9
- Excise duties	69.0	68.8	71.7	67.5	68.3
- Energy (incl. PSO)	38.3	37.3	37.6	35.2	34.4
- Environmental	3.3	3.5	3.7	3.8	3.8
- Tobacco and spirits etc.	11.6	12.6	13.2	10.9	11.9
- Others	15.9	15.4	17.1	17.6	18.1
- Property taxes	30.6	31.6	32.4	32.9	33.7
- Motor vehicle tax paid by businesses	3.9	3.9	4.0	4.0	4.1
- Other indirect taxes	18.2	16.3	19.3	23.7	25.0
Direct taxes	719.9	727.3	781.5	732.8	744.2
- Withholding taxes[1]	463.8	488.1	497.6	513.7	526.7
- State tax	163.4	172.7	178.1	183.1	189.0
- Bottom-bracket tax	143.4	151.6	155.0	160.7	165.2
- Top-bracket tax	17.6	18.8	20.3	19.9	21.2
- Health contributions	0.0	0.0	0.0	0.0	0.0
- Limited tax liability	2.3	2.3	2.8	2.5	2.6
- Total municipal tax	247.7	263.0	270.9	276.3	282.8
- Property value tax	14.8	15.0	13.8	14.1	13.9
- Other withholding taxes[2]	38.0	37.5	34.8	40.3	41.0
- Pension yield tax	63.4	48.2	63.2	6.5	5.6
- Corporate tax	72.8	66.6	93.6	82.5	79.4
- Other personal taxes	8.2	8.3	8.1	7.9	7.2
- Media license	3.5	2.7	1.2	0.0	0.0
- Motor vehicle tax paid by households	7.3	7.2	7.3	7.4	7.6
- Labour market contributions	100.8	106.3	110.4	114.7	117.8
Social security contributions[3]	1.0	1.4	1.5	1.0	1.0
Capital taxes	8.6	6.7	6.6	5.7	5.5
Customs and import duties (collected by the EU)	3.1	3.1	3.7	3.7	3.8
Total taxes	1,097.8	1,109.4	1,187.1	1,151.4	1,174.3
GDP	2,311.0	2,323.9	2,504.2	2,704.9	2,774.3
Total taxes, share of GDP	47.5	47.7	47.4	42.6	42.3

1)   For 2020-2022, the distribution of withholding taxes to the state and municipalities is from Statistics Denmark. For 2023-2024, an estimate is used based on the Ministry of Finance's tax base forecast.

2)   Includes equity income tax, tax on estates of deceased persons and revenue from the Danish business scheme etc.

3)   Includes mandatory pension payments for civil servants in public enterprise etc.

Source: Statistics Denmark and own calculations.

Table B.21

Development in the tax base for municipalities

	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
	DKK bn.					Per cent				
August 2019	1,033.8	-	-	-	-	2.8	-	-	-	
December 2019	1,035.9	1,073.4	-	-	-	2.9	3.6	-	-	
Maj 2020	997.6	1,042.7	-	-	-	-1.1	4.5	-	-	
August 2020	1,054.6	1,044.9	-	-	-	4.3	-0.9	-	-	
December 2020	1,063.6	1,070.7	1,087.2	-	-	5.6	0.7	1.5	-	
Maj 2021	1,060.5	1,070.3	1,085.6	-	-	5.3	0.9	1.4	-	
August 2021	1,058.3	1,075.5	1,081.7	-	-	5.1	1.6	0.6	-	
December 2021	1,064.4	1,094.1	1,104.2	1,153.8	-	5.7	2.8	0.9	4.5	
Maj 2022	1,064.4	1,102.1	1,105.9	1,148.2	-	5.7	3.5	0.3	3.8	
August 2022	1,064.4	1,136.4	1,122.8	1,148.8	-	5.7	6.8	-1.2	2.3	
Marts 2023	1,064.4	1,132.9	1,154.2	1,185.7	1,233.2	5.7	6.4	1.9	2.7	4.0

Note: Rows show the time of the budgeting of the municipal tax base. The columns show the tax base in the year concerned.

Source: Statistics Denmark and own calculations.

Table B.22
Income transfers

	2020	2021	2022	2023	2024
DKK bn.					
Unemployment benefits (excl. activation)	21.2	17.7	11.3	13.8	16.2
Cash benefits[1] (excl. activation)	26.4	26.9	28.2	31.7	33.4
Vacation allowance	0.7	0.6	0.4	0.3	0.4
Anticipatory pensions[2]	44.1	46.3	47.2	49.0	50.4
Resource rehabilitation allowance	6.3	5.8	6.7	6.7	7.0
Early retirement benefit	8.5	8.9	8.0	5.7	4.6
Rehabilitation benefit	0.6	0.5	0.4	0.3	0.3
Sickness benefit	14.1	16.2	15.4	14.6	15.1
Maternity pay	12.0	12.1	11.8	12.6	13.2
Rent benefit	15.4	15.5	15.6	16.2	16.9
Child and youth benefit	14.8	14.9	14.9	15.9	16.3
Other transfers[3]	24.6	22.0	23.7	25.7	23.2
Student grants (SU)	20.9	21.0	20.1	20.8	21.4
Public pension scheme[4]	144.6	146.2	145.6	154.2	162.5
Other pension schemes[5]	31.5	33.5	36.1	39.3	42.7
Total[6]	385.8	388.0	385.4	406.8	423.4
Total, excl. public and other pensions	209.7	208.3	203.7	213.3	218.3
Total, excl. education grants, public pensions and other pensions	188.8	187.4	183.6	192.5	196.9

1) Taxable and non-taxable benefits incl. the integration benefit.
2) Incl. early retirement benefits to retired citizens in foreign countries.
3) Activation benefits, dependent child allowance, subsidy for childcare, unemployment benefits, special education benefit, green check and pay scheme for holders of flexi-jobs etc.
4) Incl. differentiated allowances and heating allowance for pensioners. Incl. pension schemes for citizens in foreign countries.
5) Civil servants in public enterprises and part-time early retirement scheme etc.
6) Income transfers exclude other regular transfers to households such as mileage allowance and index supplement.
Note: The expenditures to income transfers is not directly eqvivalent to the number of benefits recipients in table B,6.
Source: Statistics Denmark and own calculations.

Table B.23
Key figures estimated at different times

	Maj 2021	Aug. 2021	Dec. 2021	Maj 2022	Aug. 2022	Mar. 2023
2021						
GDP (real growth rate, per cent)	2.4	3.8	3.9	4.7	4.9	4.9
Gross unemployment (1.000 persons)	122	114	107	106	106	106
Consumer prices (change, per cent)	1.1	1.3	1.8	1.9	1.9	1.9
Balance of payments (DKK bn.)[1]	160	165	181	206	219	226
Actual budget balance (DKK bn.)	-74	-47	-5	59	65	91
2022						
GDP (real growth rate, per cent)	3.6	2.8	2.8	3.4	2.8	3.6
Gross unemployment (1.000 persons)	115	104	78	86	78	76
Consumer prices (change, per cent)	1.5	1.5	2.2	5.2	7.3	7.7
Balance of payments (DKK bn.)[1]	182	175	186	170	231	371
Actual budget balance (DKK bn.)	-16	10	25	17	32	82
2023						
GDP (real growth rate, per cent)	-	-	2.1	1.9	0.8	0.2
Gross unemployment (1.000 persons)	-	-	77	87	93	93
Consumer prices (change, per cent)	-	-	1.8	1.8	3.3	3.9
Balance of payments (DKK bn.)[1]	-	-	174	160	208	269
Actual budget balance (DKK bn.)	-	-	20	5	22	45
2024						
GDP (real growth rate, per cent)	-	-	-	-	-	1.5
Gross unemployment (1.000 persons)	-	-	-	-	-	97
Consumer prices (change, per cent)	-	-	-	-	-	2.8
Balance of payments (DKK bn.)[1]	-	-	-	-	-	264
Actual budget balance (DKK bn.)	-	-	-	-	-	24

1)   The current account balance.
Source: Statistics Denmark and own calculations.

oem.dk