The Danish Government

MAY 2022

Denmark's Convergence Programme 2022

Ministry of Finance

Content

1. Challenges and Goals for Economic Policy

1.1 The Economy Towards 2025

After a turbulent period with the COVID pandemic, the Russian invasion of Ukraine has created new disruptions to the global economy. Especially uncertainties and limitations pertaining to energy supply from Russia but also delivery and prices of other raw materials, food and intermediate goods are affected by the war and the economic sanctions. This affects the Danish economy in line with other countries. First, many households are affected by price increases, especially energy prices, which in the period leading up to the war had already risen to a high level. In addition, the war has a number of consequences in Denmark, among which is a large number of displaced persons from Ukraine, a swift effort for independence from Russian energy and new demands for defense and security policy, which will also come at a cost. However, the outlook for the Danish economy is that of a business boom despite the possibility of stagnating or faltering activity in 2022.

The Danish economy has a strong starting point following the COVID pandemic. Furthermore, there are no signs that the crisis has caused any long-term damage to the economy. This is due, among other things, to the high degree of adaptability in the Danish economy and the policies during the crisis, including a number of compensation schemes and an expansionary fiscal policy, which contributed to businesses, the self-employed and employees getting through the crisis. The reopening of the Danish economy in the spring of 2021 quickly led to increasing activity and GDP was at a higher level than before the pandemic already in the second quarter of 2021.

Despite a temporary halt in 2022 due to the war in Ukraine, economic activity is expected to remain at a high level with good prospects of activity increasing again. As a whole, during the pandemic, household savings increased extraordinarily due to their consumption possibilities being limited. Meanwhile, the economy is supported by a continuous expansion of the labour force from later retirement, influx of foreign labour and new initiatives, including reforms stemming from the reform programme *Denmark is Capable of More I.*

GDP is expected to increase by about 3½ per cent this year and almost 2 per cent next year following a GDP growth of 4.7 per cent in 2021, *cf. figure 1.1.* The tightening of the labour market reflects that the Danish economy is currently in an expansion and that production is above potential production. It is assumed in the projection that the economy will only return to its structural levels in 2028, *cf. figure 1.2.*

Figure 1.1
GDP growth, 2000-2025

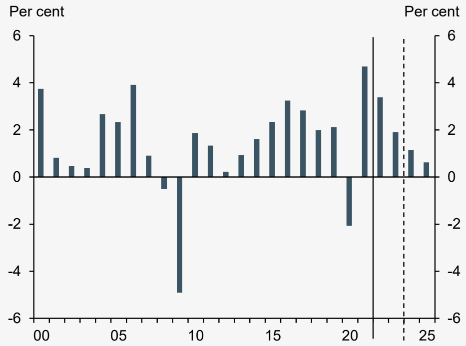
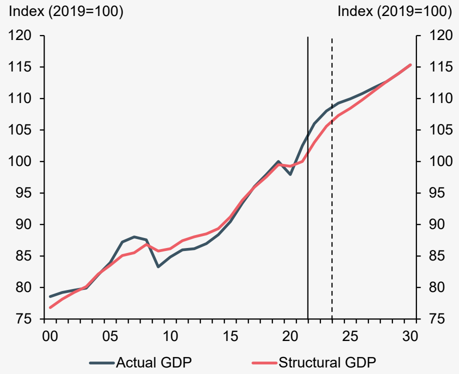


Figure 1.2
Levels of actual and structural GDP, 2000-2030



Source: Danmarks Statistik and own calculations.

Business Cycle Outlook

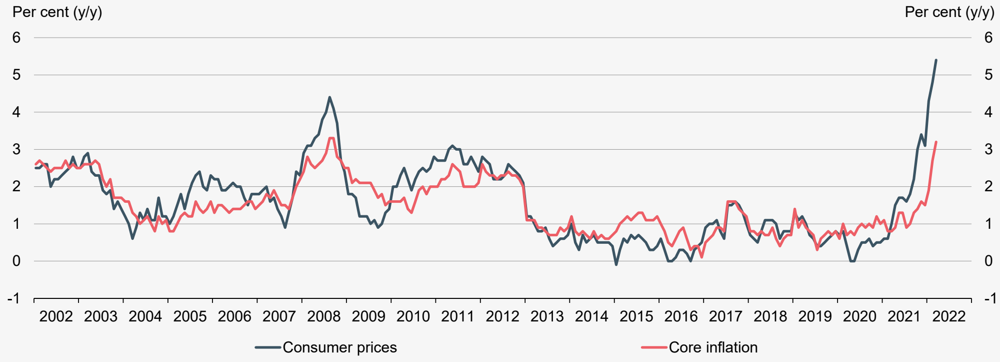
The activity in the Danish economy has been remarkably high. Russia's invasion of Ukraine will, however, have inevitable consequences for both the global economy and dampen the increase in economic activity at home. The direct effect of lower exports to Russia and Ukraine is expected to be relatively limited since these countries only receive a small part of Danish exports. Apart from the direct effect on trade with Russia and Ukraine, there will be a negative effect on exports to countries that are more exposed to the developments in Russia and Ukraine, e.g. a number of Eastern European countries as well as Germany, Finland and Sweden.

The greatest and most direct effect on the Danish economy is through higher prices on energy and other raw materials. Higher prices weaken the purchasing power of households and increases costs for businesses. This will affect Danish exports through lower growth on export markets. Greater uncertainty can also affect the economy if business investments are postponed and consumers show restraint. Consumer confidence has fallen considerably.

Prior to the Russian invasion of Ukraine, inflation was increasing, especially due to the development in energy prices. The war has led to further increases in energy prices from an already high level and they are expected to remain at a high level for a long period. Energy prices are volatile and have previously had a large impact on the total development in prices, both positively and negatively. The current price increases are extraordinarily large and the consequences will gradually be seen as businesses pass increased productions costs through to sales prices. This is reflected in the core inflation, which tracks the consumer price inflation without the direct contribution from energy and non-processed food, which has increased in the past months, *cf. figure 1.3.*

Potential disruptions in gas trade with Russia is a risk factor for the growth outlook. High energy prices will at the same time contribute to acceleration of the green transition in Europe the coming years. In Denmark, the government has presented the reform package *Denmark is Capable of More II*, the purpose of which is to ensure independence from Russian gas as quickly as possible and accelerate the green transition further.

Figure 1.3
Consumer prices and core inflation



Note: Core inflation shows the development in consumer prices without energi and non-processed food.
Source: Danmarks Statistik and own calculations.

Despite increasing prices and geopolitical uncertainty, the labour market continues to be under pressure. Actual employment exceeds the structural level by about 80,000 persons in 2022 and 75,000 persons I 2023, *cf. figure 1.4.* Similarly, Actual unemployment is roughly 30,000 persons below the estimated structural level, *cf. figure 1.5*. In the projection there is assumed a technical soft landing from the current business boom whereby the employment and unemployment gaps gradually close toward 2028. It is thereby assumed that employment will gradually fall from its current record-high level next year, and that unemployment will gradually converge to its structural level. Unemployment is assumed to increase from about 87,000 persons in 2023 to 102,000 persons in 2028.

Structural employment is estimated to increase toward 2025, which follows from reform effects of *Agreement on a New Reform Package for the Danish Economy (January 2022)*, as well as previous reforms. Altogether, structural employment is expected to increase by about 14,000 persons a year between 2022-2025.

Figure 1.4
Observed and structural employment

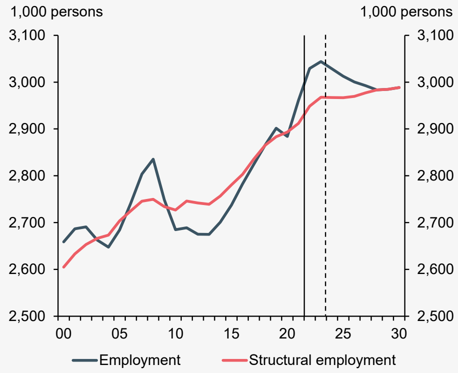
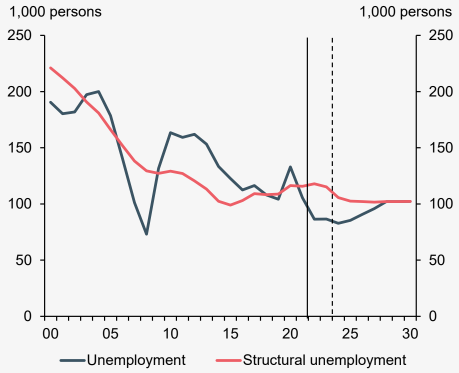


Figure 1.5
Observed and structural unemployment



Note: Employment figures includes persons on leave.
Source: Danmarks Statistik and own calculations.

Good Starting Point after the Pandemic

The Danish economy has persevered well through the COVID pandemic both in terms of health and economically. Both GDP and employment clearly exceed their levels before the crisis and even more so than in other countries, *cf. figures 1.6 and 1.7.*

Figure 1.6
GDP has increased relatively much in Denmark

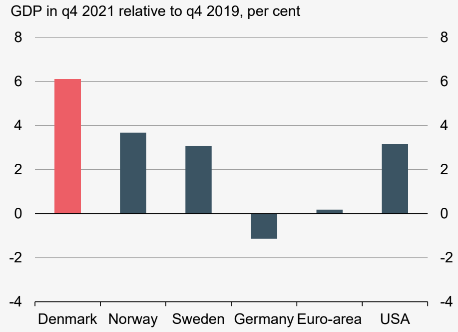
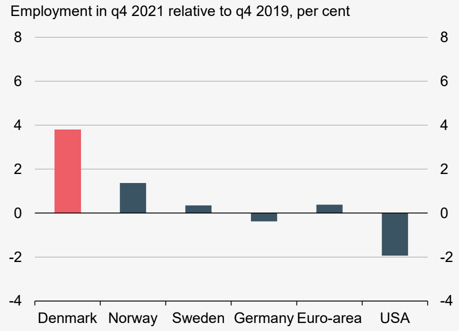


Figure 1.7
In Denmark and other countries, employment is now higher than before the crisis



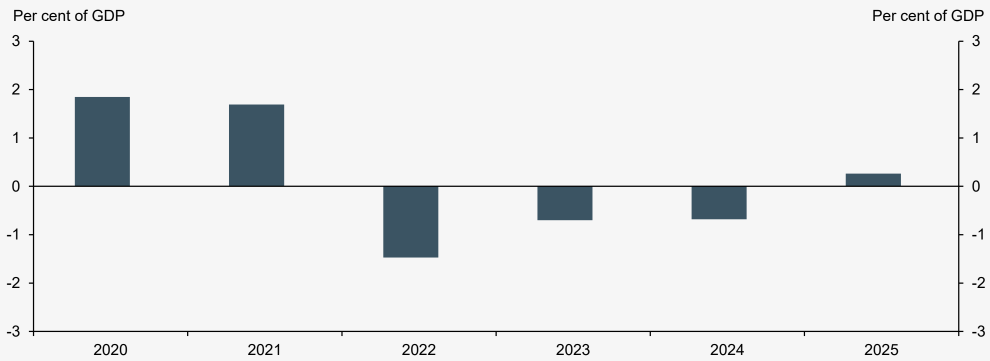
Source: Macrobond and own calculations.

Multiple aspects help explain why the Danish Economy has persevered and emerged strongly from the COVID pandemic. The economy had a good starting point before the pandemic with healthy public finances and without sign of critical imbalances that could have amplified or prolonged the setback. At the same time, Denmark has good underlying structures including a high degree of digitalization, which helped support the option to work and learn from home and helped support the use of e-commerce in the lockdown periods. Moreover, the structure of Danish commerce is characterized by a large pharmaceutical and food industry, which contributed to Danish industrial production being affected less by the pandemic than in other countries. Finally, the handling of the health crisis as well as the economic policymaking were crucial in minimizing the setback and supporting a fast normalization.

Fiscal Policy and Easing of the Budget Law

Altogether the fiscal policy supported economic activity markedly during the COVID pandemic. It is estimated that the fiscal policy stimulated the Danish economy with one-year fiscal effects of roughly 1.7 per cent of GDP in 2020 and 1.8 per cent of GDP in 2021, *cf. figure 1.8.* In the current business boom, the fiscal policy is tightened whereby the one-year fiscal effects are estimated as -1.5 per cent of GDP in 2022 and -0.7 per cent of GDP in both 2023 and 2024.

Figure 1.8
Fiscal policy is tightened amidst the business boom following the pandemic



Note: Fiscal effects are calculated as the fiscal policy one-year effect on GDP.
Source: Own calculations.

The current situation following Russia's invasion of Ukraine – which includes an increased influx of displaced persons from Ukraine to Denmark, acute need to scale up security preparedness and large increases in energy prices – constitute in the Ministry of Finance's judgement exceptional circumstances outside of the government's control with regard to the Danish Budget Law, *cf. Box 1.1.* As such, expenditures that are directly related to the aforementioned conditions can be carried out beyond the Budget Law's lower limit on structural balance. It should be noted that at the current moment exceeding the lower limit is not necessary.

Box 1.1
Temporary deviation from the Budget Law's lower limit due to exceptional circumstances

The Budget Law takes into account that situations can arise in which it will be necessary to deviate from the usual fiscal rules. According to the Budget Law's § 2, the requirement of budget balance can be temporarily deviated from if exceptional circumstances arise and the deviation does not endanger fiscal sustainability. By exceptional circumstances is meant either

1. An unusual event outside of the government's control that has an effect on the public balance, or
2. Periods of time with serious economic setbacks as outlined in the Stability and Growth pact.

As concerns the exceptional circumstances by the first definition, the rules in the Stability and Growth Pact dictate that temporary expenses directly related to the unusual event can be carried out outside of the binding legal fiscal policy rules. With regards to the Budget Law, the deficit on the structural balance can exceed the lower limit by the size of the expenditure if needed.

The Ministry of Finance's assessment is, as previously mentioned, that the current situation following the Russian invasion of Ukraine constitutes an unusual event outside of the government's control that has an effect on the public finances. On that basis it is decided that expenses directly related to the unusual event can be carried out beyond the lower limit specified in the Budget Law, *cf. Budget Law's § 2 stk. 5-6.*

In the matter of defining the expenses directly related to the exceptional circumstances, the Ministry of Finance will implement an approach that aims to follow the rules, practices and interpretation of the corresponding exception in the EU's Stability and Growth Pact. It should be noted that it is not a requirement that the expenses related to the circumstances themselves are outside of the government's control. The Ministry of Finance considers that "directly related" under the EU's set of rules can also encompass targeted and temporary measures to compensate households that are especially affected by increasing energy prices or low-income households in light of the unusual event and its consequences.

The war in Ukraine has furthermore increased the focus on strengthening the Danish Defense. The government and a broad majority of the Danish Parliament's parties entered into a *National Compromise on Danish Security Policy* in March 2022. The agreement means, among other things, that a general reserve of DKK 3.5 bn. is set aside yearly in 2022 and 2023 in light of Russia's invasion of Ukraine. The reserve is set aside for the Defense, increased preparedness, humanitarian efforts etc. The expenses for Defense and security will be increased in the long-term to 2 per cent of GDP before the end of 2033.

The parties in the agreement noted that as part of the medium-term economic planning in the coming 2030-Plan, it would be appropriate to aim toward a public deficit of around 0.5 per cent of GDP. Meanwhile the parties agreed to revise the Budget Law with an aim to lower the lower limit on the structural deficit in the Budget Law to 1 per cent of GDP. The lower limit would thereby be aligned with the EU's requirements for countries participating in the ERM2-cooperation and that have low public debt and few challenges with fiscal sustainability[1]. The easing of the Budget Law is thereby in

[1] The Danish so-called MTO (Medium-Term Objective) in the SGP is changed to -1 per cent of GDP, as the lower limit on structural deficit wrt. EU rules cannot be looser than the MTO. The new MTO in relation to the SGP does not change the medium-term goal for Danish fiscal policy of structural balance in 2025.

coherence with the EU's rules and fully aligned with continued responsible fiscal policy and low public debt.

1.2 Goals for Economic Policy

After the COVID Pandemic, the Danish government presented *DK2025 – A Green, Just and Responsible Recovery of the Danish Economy,* which includes the government's overall framework for fiscal policy toward 2025. With the 2025-framework and the agreements made since the start of the COVID pandemic, the government laid the tracks to put behind the crisis without endangering fiscal sustainability or responsibility.

The government has with *Denmark is Capable of More I* started an ambitious reform with a 10-year perspective focused on long-term solutions through reforms, innovation, education, job creation and growth. The reform sets directions for ten progress points, which will strengthen the Danish economy and the Danish societal model in areas that are crucial for Denmark's development the next 10 years. The direction also lays the foundation for a green and fair strengthening of the Danish economy within the framework of responsible fiscal policy.

Denmark is Capable of More

The government entered into an *Agreement on a New Reform Package for the Danish Economy (January 2022)* in January, which will increase employment by roughly 12,000 full-time persons toward 2030. The agreement also involves increased investment in education, research, green transition and the Danish labour market, *cf. box 1.2.*

Box 1.2
Agreement on a New Reform Package for the Danish Economy (January 2022)

In September 2021, the government launched *Denmark is Capable of More I,* which is the first proposal in the new course of reforms. In extension of the proposal, the government and a majority of the Parliament's parties entered into an agreement on the reform package *Quicker to Work, a Stronger Labour Market, Investments into the Future and Innovative Companies.* The reforms in the package are estimated altogether to increase structural employment by roughly 12,000 full-time persons in 2025 and 2030 as well as increase structural GDP by 0.7 per cent in 2030, corresponding to roughly DKK 17.5 bn. The agreement contributes to supporting the Danish model with a strong and robust labour market, innovative and strong Danish companies as well as investments into the future's education and green transition.

In addition to the above, the government and a number of the Parliament's parties have beyond the reform package suggested a new temporary supplementary Pay Limit scheme, which aims to accommodate the lack of labour supply in the coming years.

Table a
Effects on structural employment of *Agreement on a New Reform Package for the Danish Economy* (January 2022)

Full-time persons	2022	2023	2024	2025	2030
Quicker to work and a Stronger Labour Market, of which:	**700**	**5,600**	**10,000**	**11,550**	**11,700**
New graduates quicker in job	-	1,650	6,500	7,900	8,200
Investment into benefits	-	-200	-700	-750	-750
More in employment and reduced electricity duties	700	4,150	4,150	4,450	4,250
Strong and innovative businesses[1)]	**-**	**850**	**500**	**400**	**550**
Total effect	**700**	**6,500**	**10,500**	**11,950**	**12,200**

1) Can be included in the projections when the specific financing from business support reorganization is provided and the measures thereby can be implemented properly.
Effects on structural employment are rounded to the nearest whole number of 50 full-time persons. There is a correction in 2030 for temporary effects in the year reflecting indexing of the old-age pension age.
Source: Own Calculations.

Source: *Agreement on a New Reform Package for the Danish Economy (January 2022).*

With the *Agreement on a New Reform Package for the Danish Economy (January 2022)*, the government's policy measures have net contributed to an increase in structural employment, which was reduced with the *Agreement on a New Right to Early Retirement, cf. table 1.1.* A number of other measures, which were not targeted toward labour supply, are assessed likewise to have reduced structural employment a bit, e.g. the abolition of the craftsman tax deduction in the Budget Bill of 2022 and cancellation of the limit on double-educations in the Budget Bill of 2020

Table 1.1
Effects on Structural Employments of Measures Completed since the Change of Government 2019

	2025	2030
Agreement on a *New Reform Package for the Danish Economy* (January 2022)	11,950	12,200
Agreement on a *New Right to Early Retirement* (October 2022)	-9,800	-9,350
Other measures	-950	-1,250
Sum	**1,200**	**1,600**

Note: Effects on employment are associated with uncertainty.
Source: Own calculations.

In addition to the agreements included in this assessment, the government has presented the proposal *Denmark is Capable of More II – Independence from Russian Gas. Denmark Must be Greener and More Secure.* The proposal lays the tracks for Denmark to become independent from Russian gas and simultaneously accelerate the green transition. The aims are that natural gas should be phased out in Denmark, that Europe should be secured more gas (by, among other things, increased production of green gas and temporary gas production in the North Sea), to secure more green electricity at full capacity of the ocean wind potential in Denmark by improving new energy islands in the North Sea, to complete a green tax reform with a higher and more uniform taxation of CO2 and that green Danish solutions should contribute to the green transition in Europe.

1.3 Updated Projection of the Fiscal Space

The updated projection for the *Convergence Programme 2022* includes an improve of the structural budget balance of 0.1 per cent of GDP in 2024 and 2025 corresponding to around DKK 2½ bn. per year compared to the last projection from August, *cf. more in chapter 3 and 5.* The improvement in the structural balance as compared with the August-projection, is technically incorporated as an increase in the framework for public investments in 2024 and 2025.

The fiscal space towards 2025 is a measure of how much maneuver room there is for new political initiatives on the expenditure or tax front, e.g. real growth in public consumption or other political initiatives, all within the goal of structural balance in 2025. Changes in the fiscal space from 2022 to 2025 since august 2021 are first and foremost a result of changes in the estimated expenditure level for 2022, while expenditure levels for 2025 are less adjusted since the last projection, *cf. below.*

The fiscal space for a single year is implemented every year in connection with the organization of fiscal policy – i.e. in connection with economic agreements with municipalities and regions as well as the proposal for the new budget bill and the following agreements thereabout. The fiscal space for 2022 is as such implemented in connection with *Agreement on the Budget Bill of 2022.*

The fiscal space towards 2025 was last updated in August 2021, where it was calculated as approximately DKK 16 bn. measured in relation to the level of public expenditure in 2022, i.e. In relation to the budgeted level for that fiscal year.

In the *Convergence Programme 2022,* the fiscal space is estimated to around DKK 14½ bn. in 2025 (measured in relation to the level in 2022), when corrected for the effects of temporary conditions related to COVID-19. If other temporary technically-assumed expenses with regards to the situation in Ukraine (e.g. the DKK 3½ bn. in 2022 and 2023 and expenses to handle the arrival of displaced persons from Ukraine) are incorporated, the fiscal space is estimated as roughly DKK 20 bn. toward 2025 (relative to 2022).

A fiscal space of about DKK 14½ bn. in 2025 corresponds to an average highest possible growth in public consumption of about 0.9 per cent yearly. That is larger than the average yearly growth in the demographic pressure in the same period of roughly 0.5 per cent yearly, corresponding to roughly DKK 8½ bn. in 2025 (relative to 2022).

This implies that there is space for a possible growth in public consumption of roughly DKK 35 bn. towards 2025, measured relative to 2019 when the government entered into power, or roughly 1.1 per cent annually on average.

The effects of the new conditions on the estimation of the highest possible public consumption growth compared to the August 2021 estimation can be found in *box 1.4*. The estimation is measured relative to the expenditure level in 2022.

Box 1.4
Estimates of the fiscal space compared with the August 2021 projection

The fiscal space in Convergence Programme 2022 is calculated to roughly DKK 14½ bn. in 2025 (relative to the level in 2022) when corrected for the effects of temporary conditions in 2022 related to COVID-19. If other temporary technically assumed expenses with regards to the situation in Ukraine (e.g. the DKK 3½ bn. in 2022 and 2023 and expenses to handle the arrival of displaced persons from Ukraine) are incorporated, the fiscal space is estimated as roughly DKK 20 bn. toward 2025 (relative to 2022), *cf. table a.* The expenses related to Ukraine reflect, among other things, temporary technically assumed expenses related to the reception of displaced persons from Ukraine as well as the reserve of DKK 3½ bn. in 2022 and 2023. These conditions affect primarily the level of expenditure in 2022-2023 and do not significantly reduce the room for prioritization of new expenditure measures after 2023.

The adjustments in the fiscal space towards 2025 reflect multiple factors:

- *Agreement on a Budget Bill for 2022 (December 2021)* and *Partial Agreement on COVID Winter Package (December 2021)* increase the public consumption in 2022 but not correspondingly in the years after, which in isolation reduces the highest possible consumption growth toward 2025.

- *Expenses to handle the situation in Ukraine* are assumed to increase public consumption in 2022 and 2023, which also follows from the general reserve of DKK 3½ bn. set aside in 2022 and 2023 as well as technically assumed expenses for the handling of displaced persons from Ukraine. Altogether, the expenses imply an upward adjustment of public consumption in 2022 and 2023, which reduces the highest possible consumption growth toward 2025.

Box 1.4 (continued)
Estimates of the fiscal space compared with the August 2021 projection

- *Other conditions and technical adjustments:* Other conditions and technical adjustments cover, among other things, the effects of changed estimates of other ceiling-covered expenses (e.g. development expenses) as well as changed projections for price and wage developments. This includes the effects of a price and wage correction in the public sector (level correction) where the public budget for 2023 is corrected for higher estimated prices and wages in 2022 stemming from price and wage corrections in the *Proposal for a Budget Bill for 2023*. This includes an upwards adjustment of the real wage in the public expenditure in 2023 (from a lower real level in 2022), which increases the highest possible consumption growth from 2022 to 2025.

Table a
Changes to the fiscal space since August 2021

	2025
DKK bn., (2022-prices)	
***Updated 2025-projection*, August 2021 relative to 2022**	**16**
+ *Agreement on a Budget Bill for 2022 (December 2021)*	-¼
+ Expenses in relation to the situation in Ukraine	-5¾
+ Other factors, technical adjustments etc.	4¼
***Convergence Programme 2022 relative to* 2022**	**14½**
Changes relative to Updated 2025-projection, August 2021	**-1½**
Convergence Programme 2022 (corrected for expenses in relation to the situation in Ukraine)	**20**

Note: The fiscal space is measured as the largest possible increase in public consumption grwoth excluding depreciations within the target of structural balance in 2025. It is rounded to the nearest quarter of a billion DKK.
1) Other factors, techincal adjustments etc. covers amonst other things the effects of changed estimates of ceiling-covered expenses, including development aid and changes as a result of the changed projection of price and wage developments.
Source: Statistics Denmark, *Updated 2025-projection*, *august 2021* and own calculations.

1A. New Central Information and Conditions in the Projection

New central information since the last medium term projection in August 2021 is summarized in box 1.4. Detailed projections and development appear in chapter 2-6 of the Convergence Programme.

Box 1.4
Updates to the 2025-projection since August 2021

- **New business cycle foundation**: The Convergence Programme is based on a business cycle projection which uses preliminary national accounts figures covering the entirety of 2021. The projection includes estimates of key macroeconomic figures and public finances in 2022-2023. Furthermore, it includes the effects of the *Agreement for a New Reform Package for the Danish Economy* (January 2022) and it takes into account the latest developments in interest rates and energy prices.

- **Structural projection from 2028:** In the projections, business cycles as measured by output and employment gaps are estimated to be high in a historical perspective in 2021-2023. In the medium term projections, employment, GDP etc. are computationally assumed to be at their structural levels from 2028 and onwards.

- **New political agreements:** The medium term projection includes the effects of new agreements since the projection in august, including the Budget Bill for 2022 and other agreements. As mentioned this includes the effect of the agreed upon *Agreement for a New Reform Package for the Danish economy* (January 2022). It also includes the *Agreement for a Green Transition of the Danish Agriculture (October 2021)*. Furthermore, the projection includes the assumption of increased defense expenses in 2022 and 2023 that follows from the *National Comprise on Danish Security Policy* (March 2022). The projection also takes into account the effects of immigration by displaced persons from Ukraine from the assumptions in *Economic Survey*, May 2022. Finally, the *Agreement on a Targeted Heating Check*, which the government agreed upon in February and April 2022, is included.

- **Structural balance and public investment frame:** In the *Convergence Programme* the profile of the structural balance is improved by 0.1 per cent of GDP in 2024 and 2025 corresponding to around DKK 2½ bn. (2022-level) yearly compared with the latest projection in *Updated 2025-Projection, August 2021*. The amount is computationally assumed to correspond to an increase in the public investment frame in 2024 and 2025.

- **Interest rate assumptions:** A gradual normalization of interest rates is assumed. The 10-year Danish government bond is assumed to increase to 1.7 per cent in 2025 and afterwards gradually to 4 per cent in 2050, afterwards it remains constant.

- **Oil prices and revenue from activities in the North Sea:** Tax revenue from activities in the North Sea are based on Danish Energy Authority's long-term projection of oil and gas production (unchanged from August 2021) and the effects of the *Agreement on the Future of Fossil Extraction in the North Sea* (December 2020). The oil price is based on the development in the price of futures and the International Energy Agency's (IEA) newest projection (Stated Policies Scenario in World Energy Outlook from October 2021).

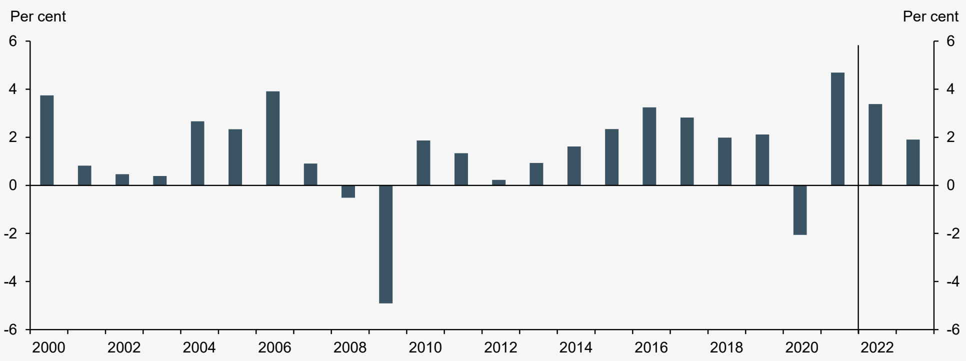
2. Economic Projections

2.1 The Economic Outlook for 2022 and 2023

The Russian attack on Ukraine comes at a time when the Danish economy is experiencing an economic expansion. The Danish economy's exposure to Russia and Ukraine is relatively limited. The increase in energy prices and the increase in the general price level will contribute to dampening the activity in the Danish economy and a high level of inflation is expected to persist throughout the year.

The Danish economy as a whole is expected to remain in an economic expansionary phase, and GDP is expected to grow 3.4 per cent and 1.9 per cent in 2022 and 2023 respectively, *cf. figure 2.1.* The growth in GDP follows a 4.7 per cent growth rate in 2021, which was the largest GDP growth rate since 1994.

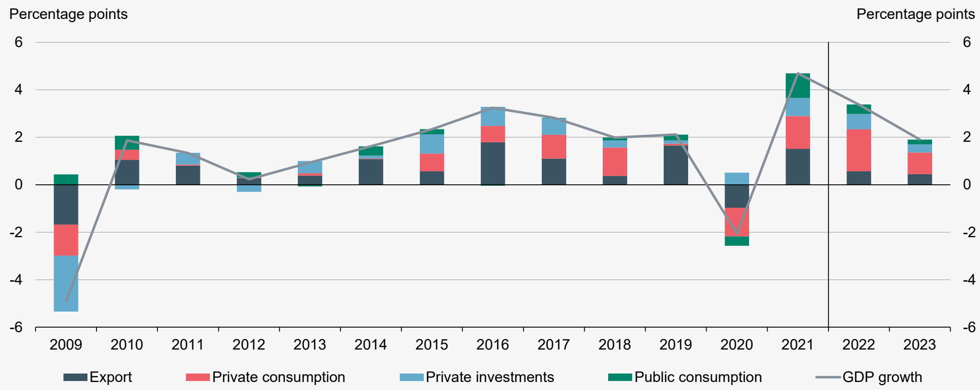
Figure 2.1
GDP growth was high in 2021 and is expected to increase further at a declining pace



Source: Statistics Denmark and own calculations.

Projections suggest private consumption will be the chief driver in aggregated demand in the coming years, *cf. figure 2.2.* Exports and private investment will likewise contribute positively to the growth in GDP, but to a lesser extent than last year. This follows the downwards adjustment in the expectations toward the world economy. Growth expectations are particularly worsened for countries highly dependent on Russian gas, and the countries that are most exposed to supply chain problems. Furthermore, the contributions from public consumption decreases as a result of the removal of extraordinary efforts in connection with the COVID pandemic.

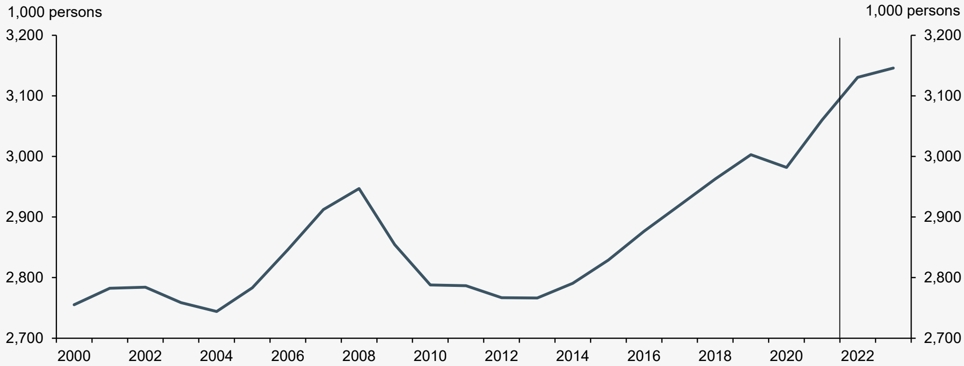
Figure 2.2
Private consumption is the main driver of GDP growth in 2021, and the coming years



Note.: The figure shows the contributions to GDP growth. Contributions to GDP growth have been adjusted for import content.
Source: Statistics Denmark and own calculations.

Employment is expected to rise with approximately 86,000 persons from 2021 to 2023, *cf. figure 2.3*. A significant part of the increase in employment has, however, already occurred. In May of last year, employment reached an all-time high, and has since increased. In the last three quarters of 2021, employment rose with 145,000 persons. The increase in employment has continued into the beginning of 2022 and a temporary slowdown through the year is expected, subsequently increasing at the end of the year. The improvement in the labour market in the coming years is supported by the reform package *Quicker to Work and a Stronger Labour Market, Investment in the Future and Innovate Businesses*. In addition, 40 per cent of the displaced persons from Ukraine are expected to find employment in Denmark.

Figure 2.3
Employment continues to grow rapidly, as a result of the economic growth, reform effect and the arrival of displaced Ukrainians



Note.: Fulltime employees, incl. persons on leave.
Source: Statistics Denmark and own calculations.

The war in Ukraine and the resulting high prices on energy and other raw materials have a dampening effect on the labour market. However, there is an expectation of continued high demand for labour and consequently, high pressure on the labour market. The special law regarding displaced persons from Ukraine provide opportunities for quicker employment. Additionally, the displaced persons from Ukraine contribute to increased private consumption, demand for housing and thus the demand in the economy as a whole, *cf. box 2.1*.

Box 2.1
The forecast basis and the effects of displaced Ukrianians on the Danish economy

The economic forecast in this Convergence Programme is based on the *Economic Survey*, *May 2022*. The projections include reform effects of Agreement on new reform package *Agreement on a New Reform Package for the Danish Economy (January 2022).* Additionally, technical assumptions are applied in order to account for the arrival of displaced peoples from the Ukraine, following the attacks from Russia.

The special law for displaced Ukrainians is based on the technical assumptions that 20,000 people will be affected by the law but noted that depending on the developments in the war, this number may potentially be significantly higher. Consequently, the state, regions and municipalities prepare for the reception of a larger number of displaced peoples. The actual number arriving in Denmark will depend on both developments in the war and the humanitarian conditions in both Ukraine and the neighbouring countries.

In the projections, it has been technically assumed that Denmark will receive 50,000 displaced persons from Ukraine, consisting of 30,000 adults, mainly women, and 20,000 children. By comparison, around 20,000 Bosnian war refugees came to Denmark during the Balkan wars in the 1990s, and Denmark received around 30,000 Syrian refugees and family members during the refugee crisis in 2015.

It is technically assumed that 19,000 and 30,000 adults will arrive in Denmark in 2022 and 2023 respectively, of which 40 per cent are assumed to enter employment. This corresponds to an increase in employment of 7,000 persons in 2022, and an increase of 12,000 persons in 2023. The displaced peoples of Ukraine will contribute to meeting the demands for labour. At the same time, they will contribute to private consumption and will increase the demand for public spending. It is technically assumed that the displaced persons from Ukraine will leave Denmark during 2024.

2.2 Assumptions About the International Economy and Financial Conditions

The war in Ukraine has resulted in increasing energy prices following the uncertainty regarding supply from Russia. Additionally, the war and subsequent sanctions affect delivery and prices of other raw materials, food and intermediate products. The effect on the Danish economy is in line with that seen in other countries. Initially, households will be impacted by the price increases, particularly the cost of energy, which had already increased to a high level leading up to the war.

The assumptions for the global economy have been based on the latest forecasts from the IMF, *World Economic Outlook*, April 2022. The projections for the financial conditions have been updated with the latest market developments. The forecast of the IMF indicates a slowdown in the economic recovery from the COVID pandemic. This is a consequence of the war in Ukraine, increased energy prices, increased commodity prices and high inflation in many countries. The trade-weighted GDP growth of trading partners is expected to be 3.6 per cent in both 2022 and 2023. This is significantly lower than the global growth of 6.1 per cent in 2021.

Table 2.1
Forecast for oil price, USD and rates

	2020	2021	2022	2023	2024	2025
Oil price (Brent), USD per barrel	43	72	104	97	91	87
USD, DKK per 100 USD	654.2	628.7	666.0	675.4	665.3	625.0
10-year Danish Government Bond interest rate, per cent.	-0.4	-0.1	1.0	1.3	1.5	1.7

Source: Statistics Denmark, Macrobond, Nordea Markets, IEA, IMF World Economic Outlook April 2021 and own calculations.

Despite the slowdown of international growth, the projections for oil prices in 2022 are relatively high with a price of USD 104 per barrel, USD 32 above the level in 2021, *cf. table 2.1*. The oil price is expected to fall to approximately USD 97 per barrel in 2023, and continue to fall in 2024 and 2025.

The oil price forecast is based on a method which includes both futures prices and medium-term projections from the International Energy Agency (IEA) in the Stated Policies scenario. In the long run, oil prices are expected to grow at the rate from IEA's Stated Policies scenario*, cf. box 2.2*.

Box 2.2
Oil price projections using IEA scenarios

Oil prices are volatile and depend on the level of production and expected demand. The COVID pandemic has resulted in extraordinary oil prices and the fluctuations have been further increased by the war in Ukraine, *cf. figure a*.

The oil price forecast is based on the current oil price, the latest development in market expectations (future prices) and the latest projections from the International Energy Agency (IEA) *Stated Policies Scenario*. The first 5 mounths are based on the expected futures. Forecasts hereafter assign equal weight to futures prices and the IEA's *Stated Policies Scenario*. The weighting reflects the desire to include both market information and relevant information from IEA's projections on demand and supply in the long run.

The *Stated Policies-Scenario* is considered to be the IEA's central scenario and reflects the principle of including the effects of already signed agreements as well as the effects of agreements and measures announced by the governments – i.e. existing policy and specific, planned initiatives. This is the principle used in the projections for the Danish economy.

The IEA publishes alternative scenarios. These include the *Announced Pledges Scenario*, *Net Zero Emissions by 2050 Scenario* and *Sustainable Development Scenario*. The *Announced Pledges Scenario* is a new scenario in which it assumed that all governments' pledges are upheld. This includes long-term goals of net neutrality. The *Net Zero Emissions by 2050 Scenario* reflects a path in which the global net emissions of CO_2 are zero in the year 2050, and the scenario complies with the central world goals of the United Nations. In the *Sustainable Development Scenario,* the UN's central goals on climate are met, including the targets in the Paris Agreement. From these, the development leading to fulfilment of the targets are derived. The scenario implies lower demand for oil and hence a lower oil price than assumed in the Stated Policies-scenario, *cf. figure b*.

Figure a
Oil prices are expected to decrease following a relatively high level in 2022

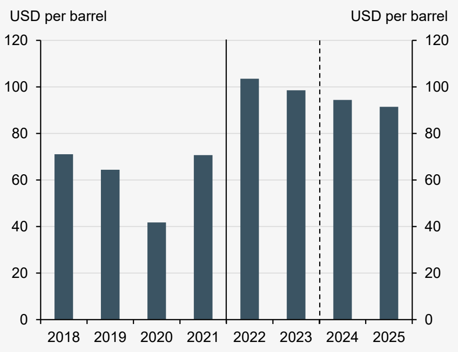
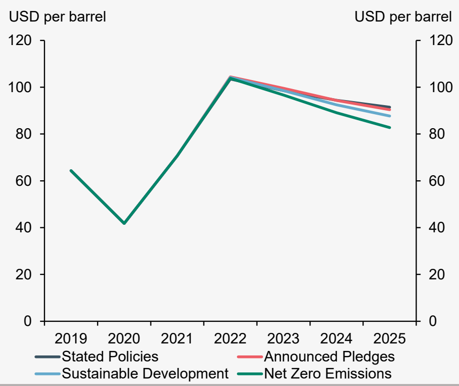


Figure b
Oil prices are expected to decrease at varying rates in the IEA's scenarios



Note: Nominal oil prices.
Source: Macrobond, IEA, World Energy Outlook, October 2021 and own caalculations.

The increase in energy prices has been a significant factor in the increasing inflation, which, in combination with the large global demand in turn has affected the inflation expectation and the nominal interest rates. The high inflation rates and increasing risk of self-reinforcing effects have made a shift in policy in monetary policies necessary, particularly in the USA.

The American Federal Reserve has implemented the first interest rate increases of 0.25 percentage points in March and 0.5 percentage points in May, and indicated that interest rates will continue to increase at a fairly brisk pace. Most recently, the central bank has signaled that interest rates will be raised by 0.5 percentage points at its next meetings. Furthermore, the central bank will begin a significant reduction in its holdings of government and mortgage bonds, which, after a short phasing-in period, will correspond to a balance sheet reduction of USD bn. 95 per month. This should be seen in the context of the central bank ending the purchasing program in March.

The growing inflationary pressure has led to expectations that the European Central Bank (ECB) may begin tightening their monetary policy in the second half of 2022. The central bank has already announced that the large-scale asset-purchasing program will be phased out completely in the third quarter and subsequent interest rates increases may be discussed.

Based on market expectations, the interest rate on Danish 10-year government bonds are assumed to remain at 1 per cent in 2022 and then gradually increase to 1.7 per cent in 2025.

2.3 Medium-term Outlook for Growth and Employment

The medium-term projections assumes the economy will be in line with the structural level in 2028, *cf. figure 2.4*.

Figure 2.4
The high GDP growth reflects a large cyclical adjustment …

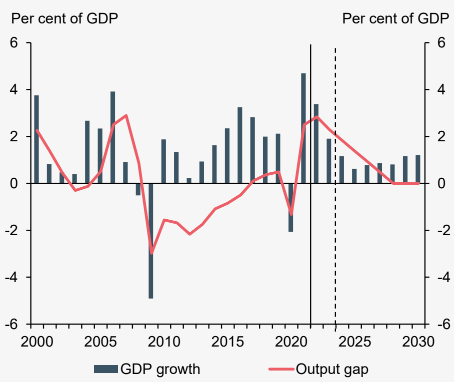
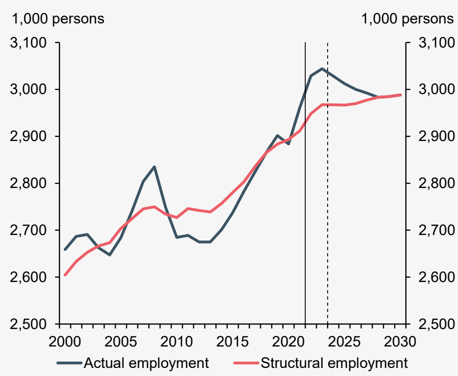


Figure 2.5
… and employment above the structural level



Note: The output gap is the difference between the actual level of GDP and the estimated level of GDP in a situation where normal business cycle conditions prevail. Employment is excl. persons on leave of absence. The solid vertical line indicates the last year of data and the dashed line shows the transition to the medium-term years.
Source: Statistics Denmark and own calculations.

In 2022, the actual employment is expected to be higher than the structural employment, i.e. the employment level compatible with stable wage and price development. The actual employment is therefore expected to fall in the years 2022-2028, while the structural employment level is expected to increase with approximately 34,000 persons, *cf. figure 2.5*.

High inflation rates, following the increased energy prices, result in an increased consumption-to-GDP ratio in 2022. This is despite the uncertainty stemming from the war in Ukraine, *cf. figure 2.6*. Thereafter, the projection assume that the consumption-to-GDP ratio will increase gradually towards 2025, albeit to a level that remains significantly below the level in the run-up to the global financial crisis. Overall, private consumption is projected to grow by around 2 per cent per year from 2020 to 2025.

As the economy improves, companies seek to increase their capital stock. In the projection period, gross investment as a share of GVA are expected to continue to grow, but at a slower pace, reflecting the deceleration in the Danish economy, *cf. figure 2.7.*

Figure 2.6
Increasing private consumption ratio from 2021 …

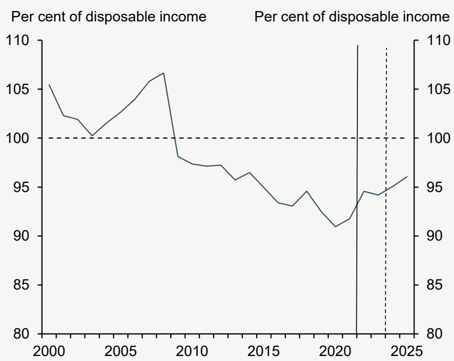


Figure 2.7
… and the private sector gross investment as a share of GVA continues to grow

Note: Gross investments are calculated as fixed gross investments incl. housing investments in the private sector, relative to gross value added in the private sector excl. raw material extraction.
Source: Statistics Denmark and own calculations.

Potential output is projected to increase by annual average of 1.5 per cent from 2020 to 2025. This is due to the increasing structural labour force and the increasing hourly productivity, *cf. table 2.1*.

Table 2.1
Contributions to growth in potential production of the entire economy

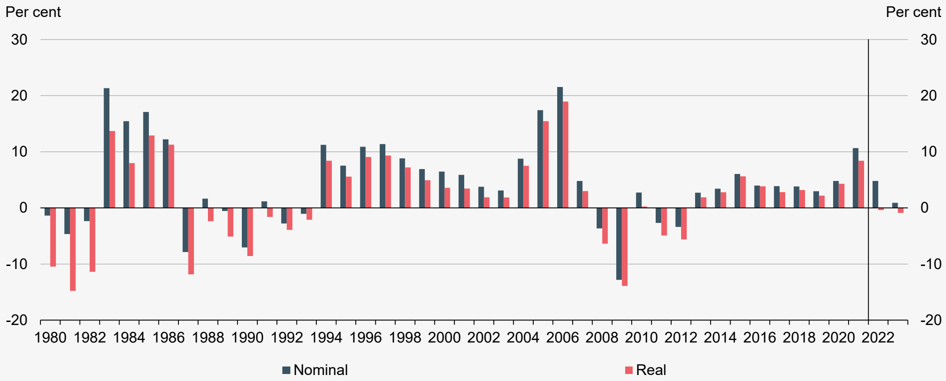
	1996-2007	2008-2009	2010-2019	2020-2023	2024-2025	2026-2030
Average annual growth, per cent						
1) Potential production (GVA)	**1.8**	**0.7**	**1.5**	**1.4**	**1.3**	**0.9**
Of which:						
- Hourly productivity	1.1	1.5	1.3	0.8	1.5	0.8
- Structural unemployment	0.5	0.2	0.0	0.1	-0.1	0.0
- Structural labour force	0.3	-0.4	0.5	0.8	-0.1	0.1
- Structural working hours	0.0	-0.6	-0.4	-0.2	0.1	0.1
2) Cyclical contribution	0.2	-2.9	0.4	0.5	-0.5	-0.2
3) Actual GVA (1+2)	**2.1**	**-2.2**	**1.8**	**1.9**	**0.9**	**0.8**
4) Net taxes	0.1	-0.5	0.0	0.1	0.0	0.0
5) Actual GDP (3+4)	**2.2**	**-2.7**	**1.8**	**1.9**	**0.9**	**0.8**

Note: There is uncertainty regarding the estimate of potential growth in periods, including the contributions from individual components. Due to rounding, the sum of individual components does not necessarily correspond to the total.
Source: Statistics Denmark and own calculations.

2.4 Housing Prices

The housing market has had an unusual development during the COVID pandemic. The demand for housing has been strong, which is not normally the case during economic downturns. This may be due to changes in preferences and limited consumption possibilities during the pandemic. Housing sales seem to have returned to a more normal level over the autumn and house price increases have slowed down, *cf. figure 2.8*. In the coming years, house prices are expected to grow moderately, even though the Danish economy is in a boom period where house prices typically grow relatively fast. This is in part due to the expected increase in interest rates, which are expected to increase faster than previously anticipated.

Figure 2.8
Lower growth in the forecast period, following high growth in 2021



Source: Statistics Denmark and own calculations.

In the longer term, the new rules for housing taxation, which are expected to be implemented in 2024, will help to stabilize fluctuations in house prices. Analyses by both Denmark's Central Bank in 2017 and the Ministry of Taxation in 2018 indicate that it will lead to slightly lower prices for owner-occupied flats, while conversely having a slightly positive effect on the price development of single-family houses for the whole country.

2.5 The Current Account

Denmark has had a large surplus on the balance of payments for a number of years, and this is expected to continue in the coming year. The current account surplus amounted to DKK 206 bn. in 2021, corresponding to 8.3 per cent of GDP, *cf. figure 2.9*. Prices for both energy and that sea freight prices are expected to gradually decline towards 2023, leading to a smaller current account surplus. However, underlying structural savings in the Danish economy will continue to support current account surpluses in the coming years.

Overall, the balance of payments surplus is expected to decline to 6.5 per cent of GDP in 2022, and 5.9 per cent in 2023, *cf. figure 2.10*. This reflects, among other things, that sea freight prices, which have contributed positively to the balance of trade in services, are expected to normalize faster than the energy prices, which have contributed negatively to the trade balance in services.

Figure 2.9
Decent start of year surplus in the current accounts

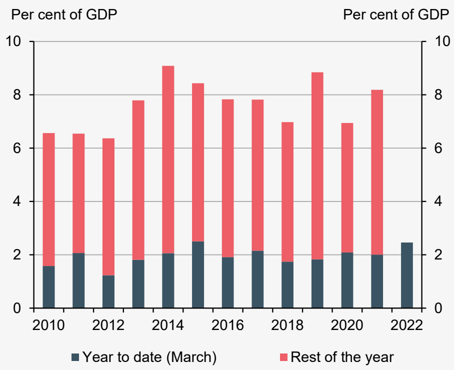
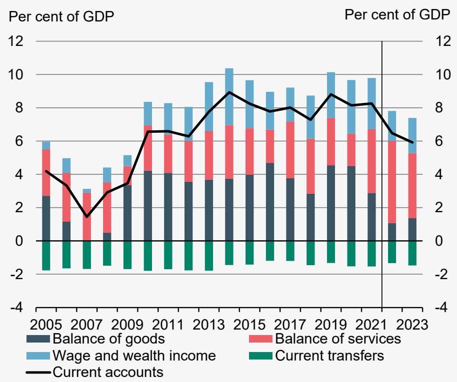


Figure 2.10
Prospects for a slightly lower surplus on the current accounts in the coming years



Source: Statistics Denmark and own calculations.

A slight deterioration of Denmark's terms of trade, that is, the relative export-to-import prices, is projected in 2022 and 2023. This follows from expectations of increases in import prices exceeding increases in export prices due to the price movements in the international economy. This comes after Danish import prices on goods and export prices have risen sharply in 2021, *cf. figure 2.11* and *cf. figure 2.12.*

Figure 2.11
Prices have increased more on the goods Denmark purchases compared to prices on goods sold

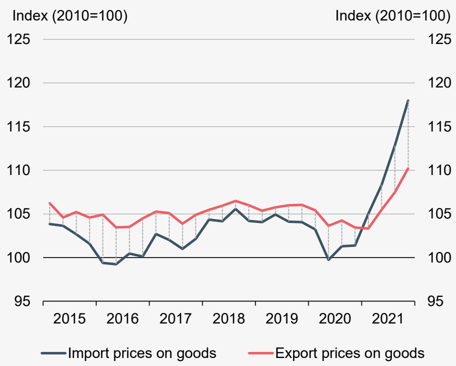
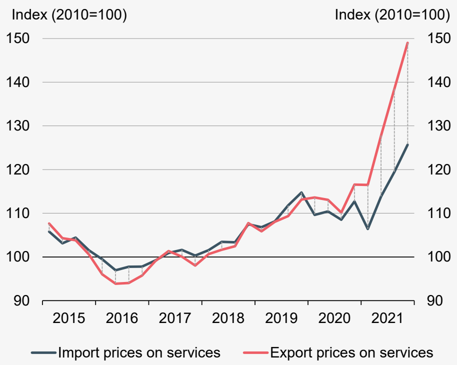


Figure 2.12
Sea freight rates increase service export prices more than service import prices



Note.: Prices are based on deflators from National Accounts, seasonally adjusted
Source: Statistics Denmark and own calculations.

Appendix 2.1
Key figures for the Danish economy 2020-2025

Appendix table 2.1
Key figures for the Danish economy 2020-2025

	2020	2021	2022	2023	2024	2025
Output gap and real growth rates, per cent						
GVA	-2.4	4.5	3.7	1.8	1.2	0.6
GDP	-2.1	4.7	3.4	1.9	1.2	0.6
Output gap (per cent of GDP)	-1.3	2.5	2.8	2.3	1.8	1.4
Demand, real growth, per cent						
Private consumption	-1.3	4.2	2.6	2.0	2.0	1.8
Public consumption[1)]	-1.7	3.7	0.8	-0.3	0.0	1.5
Gross fixed capital formation	5.1	5.6	2.4	5.3	0.9	0.3
Export	-7.0	7.8	5.1	3.7	3.3	1.1
Import	-4.1	8.2	3.1	4.0	3.5	2.4
Price development. per cent						
Consumer prices	0.5	2.1	5.2	1.8	2.0	1.9
Current account etc., per cent of GDP						
Current account	8.1	8.3	6.5	5.9	9.8	8.9
Private financial savings	8.3	6.1	5.9	5.8	9.3	8.6
Labour market and productivity						
Growth in labour force (per cent)	0.5	1.7	1.5	0.5	-0.4	-0.4
Growth in employment (per cent)	-0.6	2.7	2.3	0.5	-0.5	-0.5
Registered gross unemployment (1.000 pers.)	133	106	86	87	83	85
Structural gross employment (1.000 pers.)	116	116	118	115	106	103
Hourly productivity, entire economy	0.5	0.3	1.5	1.4	1.5	1.1
Hourly productivity, private urban industry	1.5	1.5	1.3	1.4	0.9	1.0
Growth in GVA per employed	-1.8	1.8	1.4	1.3	1.7	1.1

Note: The projection in 2023-2025 is based on a technically adjusted economic forecast.
1) Public consumption growth in 2020 and 2021 is calculated using the output method. Estimated public consumption growth in 2022-2023 is computed using the same input and output method.
Source: Statistics Denmark and own calculations.

3. Budget Balance and Public Debt Towards 2025

3.1 The Actual Budget Balance

In Statistics Denmark's preliminary national accounts for 2021, the actual budget balance is calculated to 2.3 per cent of GDP. This is an improvement of approximately 2.5 per cent of GDP compared to the estimate in *Economic Survey*, December 2021, *cf. table 1.3*. The surplus on the actual budget balance reflects, among other things, higher revenue from the pension yield tax, VAT and corporate tax due to improved economic conditions. On the expenditure side, the improvement is broadly spread between lower public consumption and public investments compared to the estimate in December 2021.

The actual budget balance is estimated to a surplus of 0.6 per cent of GDP in 2022 and 0.2 per cent of GDP in 2023. For both years this is a downwards adjustment compared to the December estimate, which should be seen, among other things, in light of the new spending priorities in relation to the war in Ukraine and lower estimates for revenues from the pension yield tax due to the prospect of higher interest rates.

Table 3.1
Overview of the actual budget balance

	2021	2022	2023	2024	2025
Per cent of GDP					
Actual budget balance	2.3	0.6	0.2	0.6	0.4

Source: Statistics Denmark and own calculations.

The estimates of the actual budget balance are subject to considerable uncertainty, due to the highly volatile pension yield tax revenues and the fact that public finances in Denmark are very sensitive to economic conditions.

Budget Balances by Sector

The public sector consists of the central government, local governments (regions and municipalities), and social security funds. In Denmark it is essentially only the central government that does not need to balance its budget. The central government surplus is estimated to 0.6 per cent of GDP in 2022, *cf. table 3.2.*

The budget balance of municipalities and regions is technically considered to be balanced throughout the projection period, i.e. from 2022 onwards. On a cash basis, local government sector (i.e. municipalities and regions) finances should be in balance, but based on national account principles there may in some years be small surpluses or deficits. The budget of the social security funds are also assumed to be balanced throughout the projection period.

Table 3.2
Overview of the actual budget balance

	2021	2022	2023	2024	2025
Per cent of GDP					
Central government	2.2	0.6	0.2	0.6	0.4
Local government	0.1	0.0	0.0	0.0	0.0
Social funds	0.0	0.0	0.0	0.0	0.0

Source: Statistics Denmark and own calculations.

3.2 Structural Budget Balance

The structural budget balance is a calculated measure of the underlying position of public finances at the given fiscal policy. The structural budget balance is in contrast to the actual budget balances, corrected for business cycles and a number of temporary conditions and is therefore a more robust measure of the underlying financial position.

The medium term projections in *Denmark's Convergence Programme 2022* is based on an updated economic assessment, new political agreements, new information etc. The structural budget balance is currently estimated at -0.1 per cent of GDP in both 2022 and 2023, *cf. table 3.3*. This is an upwards adjustment of 0.1 per cent of GDP in 2022, while the estimate in 2023 is unchanged compared to the estimates in *Economic Survey*, December 2021.

The practically unchanged structural budget balance in 2022 and 2023 covers multiple opposed movements. An array of expenditures related to the war in Ukraine – including payout of the heating check in 2022, as well as the allocated defense reserve and expenditures to displaced persons from Ukraine in 2022 and 2023 – contributes in isolation to a weakening of the structural budget balance. Conversely does, lower expenditures to renewable energy-support, higher CO2 quota revenues and higher estimated structural equity income contribute revenue to an improvement in the structural budget balance in both years. In addition, the structural employment is estimated higher than previously.

The current estimates are subject to higher than usual uncertainty. This is mainly due to high inflation, resulting in particular from high energy prices following the war in Ukraine. Higher inflation and wage increases may lead to a front-loaded increase in nominal tax revenues relative to nominal expenditure in the short term. This means that nominal government expenditure and revenue developments do not follow cyclical developments to the same extent as usual.

Structural budget balance deficits of 0.1 per cent of GDP in 2022 and 2023 are still well above the hitherto lower limit of the structural deficit set by the Danish budget law 0.5 per cent of GDP and the adjusted lower limit of the structural deficit of 1 per cent of GDP. The adjustment was agreed upon in *National Compromise on Danish Security Policy*, March 2022. In addition, expenditures directly related to the exceptional circumstances caused by the circumstances in Ukraine can be exempt from the lower limit of the Danish budget law, if relevant. It is noted that these expenditures affects the structural budget balance, i.e. they are not handled as one-offs.

Table 3.3
Estimated structural budget balance towards 2025

	2021	2022	2023	2024	2025
Per cent of GDP					
Updated 2025-projection, August 2021	-0,5	-0,2	-0,1	-0,1	0,0
Economic Survey, December 2021	-0,3	-0,2	-0,1	-	-
Denmark's Convergence Programme 2022, May 2022	0,2	-0,1	-0,1	-0,1	0,0

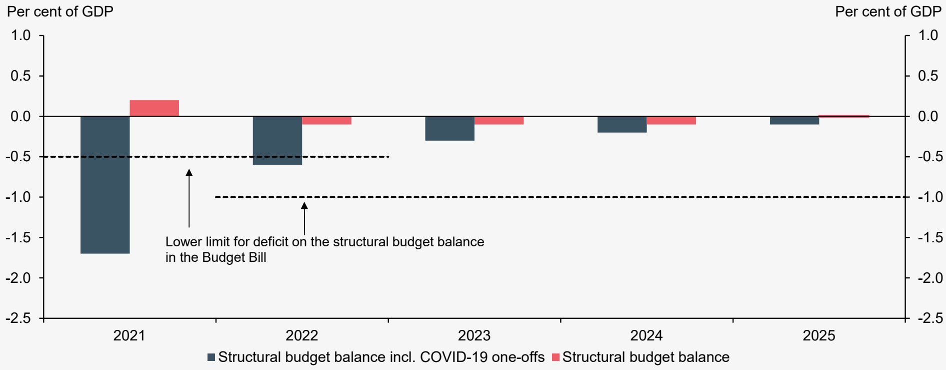
Source: *Updated 2025-projection*, August 2021, *Economic Survey*, December 2021 and own calculations.

In the updated projection in *Denmark's Convergence Programme 2022*, there is prospect of an underlying improvement of the structural budget balance of 0.1 per cent of GDP in 2024-2025 compared to the most recent medium-term projection from August 2021. The underlying improvement of the structural budget balance reflects, among other things, higher CO2-quota revenues, structural employment and higher estimated structural equity income tax revenues.

Thus, within the target of structural balance in 2025, there is room for additional fiscal dispositions. The underlying improvement of the structural budget balance of 0.1 per cent of GDP in 2024 and 2025 results technically computational in a boost of the public investments (outside the expenditure ceilings). Following the implementation of the underlying improvement, the structural budget balance is projected to -0.1 per cent of GDP in 2024 and structural balance in 2025. This is in line with the estimates from *Updated 2025-projections*, August 2021 and *Denmark's Convergence Programme 2022,* May *2022.*

The structural balance is calculated by correcting for a number of extraordinary expenditures and revenues that are considered to be one-off. These include expenditure directly related the handling of the COVID pandemic, including temporary compensation schemes. If, illustratively, COVID pandemic one-off conditions are not corrected for, the structural budget balance is estimated to -1.8 per cent of GDP in 2021. Which is projected to decline gradually to -0.6 per cent of GDP in 2022, -0.3 per cent of GDP in 2023, -0.2 per cent of GDP in 2024 and -0.1 per cent of GDP in 2025, *cf. figure 3.1*.

Figure 3.1
Structural budget balances with and without COVID pandemic one-offs



Note: Measured including COVID pandemic one-offs as well as related backflow of corporate tax and equity income tax. The dotted lines show the hitherto lower deficit limit in the Danish budget law (0.5 per cent of GDP) and the agreed-upon lower limit from *National Compromise on Danish Security Policy*, March 2022 (1.0 per cent of GDP)
Source: Statistics Denmark and own calculations.

From Actual to Structural Budget Balance

The structural budget balance is calculated by correcting the actual balance for cyclical effects and the impact of other temporary circumstances. This includes, among other things, the large fluctuations in revenue from pension yield tax, as well as corporate tax revenues. Furthermore the actual budget balance is corrected for a number of one-offs, which can have significant order of magnitude in individual years. The structural budget balance is thus, in a given year, an estimate of how large the public surplus or deficit would be with the given fiscal policy in a normal situation, where the economic activity is neither particularly high nor low, and where the public finances are not affected by temporary circumstances.

The structural budget balance is estimated to -0.1 per cent of GDP in 2022, with basis in the estimate of the actual budget balance of 0.6 per cent of GDP, *cf. table 3.4* (row 1). As the current economic situation (as measured by a weighted output and employment gap) is estimated as being better than under normal circumstances, the actual budget balance is adjusted for the positive cyclical impact on public finances. The cyclical impact on the budget balance is estimated to approximately 2.0 per cent of GDP in 2022 (row 2).

In addition, the actual budget balance is corrected for a number of fluctuations in specific budget items (row 3-9). In 2022 the actual revenues from the corporate tax is estimated to be above the structural level, while revenues from the pensions yield tax are estimated to be below the structural level. Such conditions are corrected for in the calculation of the structural budget balance, and altogether the correction in row 3-9 corresponds to -0.9 per cent of GDP in 2022.

Furthermore, a correction is made for other circumstances (row 10). This is because in some years there may be special one-off circumstances (in addition to one-offs in the special budgets items) of non-recurring nature (by virtue of their intrinsic nature), which affect the actual budget balance without affecting the underlying position of public finances. In 2022 the special circumstances relate to one-time expenditures (net) directly related to containment and mitigation of the COVID pandemic of approximately 11½ bn. (aside from those accounted for in the special budget items, etc.). These circumstances are considered to have a temporary nature and thus do not affect the structural budget balance, *cf. appendix 8.3*.

Table 3.4
From actual to structural budget balance

	2021	2022	2023	2024	2025
Per cent of GDP					
1. Actual balance	**2.3**	**0.6**	**0.2**	**0.6**	**0.4**
Contribution to the actual budget balance:					
2. Cyclical adjustment	1.5	2.0	1.8	1.4	1.1
3. Corporate taxes[1)]	1.4	0.6	0.3	0.0	0.0
4. Vehicle registration duty	-0.1	-0.1	0.0	0.0	0.0
5. Equity income tax	-0.1	0.0	0.0	0.0	0.0
6. Pension yield tax	1.3	-1.0	-1.0	-0.9	-0.8
7. North Sea revenues[2)]	-0.1	-0.1	0.0	0.1	0.1
8. Net interest payments[1)]	0.0	0.0	0.1	0.1	-0.1
9. Special budget items[3)]	-0.2	-0.4	-0.8	0.0	0.0
10. Other circumstances[4)]	-1.5	-0.4	0.0	-0.1	0.0
- hereof COVID-19 related measures	-1.9	-0.4	0.0	0.0	0.0
- hereof tax revenue from the payment of frozen holiday pay	0.5	0.0	0.0	0.0	0.0
11. Structural balance (1-2-3-4-5-6-7-8-9-10)[5)]	**0.2**	**-0.1**	**-0.1**	**-0.1**	**0.0**
Illustrative structural budget balance COVID-19 one-off conditions[6)]	*-1.7*	*-0.6*	*-0.3*	*-0.2*	*-0.1*

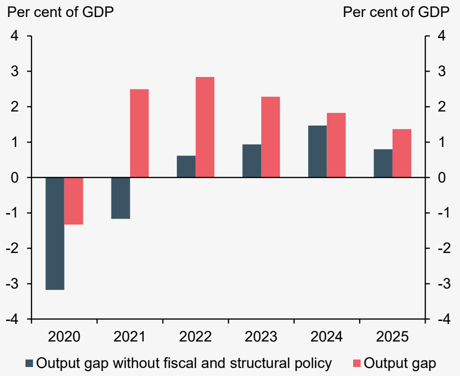
1) Excl. revenue relating to North Sea activities.
2) The structural level is based on the structural revenue, that were calculated when setting the expenditure ceilings (2025-projection, August 2017 for 2021, *Updated 2025-projection*, August 2018 for 2022, *Updated 2025-projection*, October 2019 for 2023, *DK2025*, August 2020 for 2024 and *Updated 2025-projection*, August 2021 for 2025), adjusted for the effect on fiscal sustainability fue to revised future North Sea revenues compared to the projections when setting the expenditure ceilings. The permanent effect of updated revenues corresponds to approximately -0.04 per cent of GDP in 2020, -0.03 per cent of GDP in 2022-2023, 0.0 per cent of GDP in 2024 and 0.02 per cent of GDP in 2025.
3) Corrections are made for a number of expenditures directly related to the containment and mitigation of COVID-19 corresponding to approx. DKK 3.6 bn. in 2021, DKK 6.0 bn. in 2021 and approx. DKK 5.7 bn. in 2023. A correction is made for the refund of property taxes as following *Argeement on property taxation* (May 2017). It is technically assumed that the refund of property taxes to home owners amounts to approx. DKK 1.4 bn. in 2022 and DKK 13.4 bn. in 2023. Furthermore, 2022 is corrected for the payment of eraly retirement contributions as a consequence of the *Agreement on new right to early retirment* (October 2020) corresponding to approx. DKK 2.1 bn.
4) Corrections are made for a number of expenditures (net) directly related to containment and mitigation of COVID-19, corresponding to DKK 47 bn. in 2021, DKK 11.4 bn. in 2022, DKK 1.0 bn. in 2023 and DKK 0.9 bn. in both 2024 and 2025. Additional corrections are made for the one-off tax revenue of approximately DKK 13.3 bn. in 2021 linked to the payment of frozen holiday pay. In 2021 and forward are corrected for discreptancies from balance between revenue and expenditures in Employers' Reimbursement System. Furthermore a correction is made for the fighter jet investment, which is planned in 2021-2026, but affects the strucutral budget balance through a 7-year moving average. Other circumstances include differences between commitment level and payment regarding foreign aid and conversions from per cent of actual GDP to structural GDP.
5) The structural budget balance is recorded in per cent of structural GDP.
6) Calculated incl. COVID-19 one-off conditions and related revenue from corpoorate tax and equity tax.

Source: Statistics Denmark and own calculations.

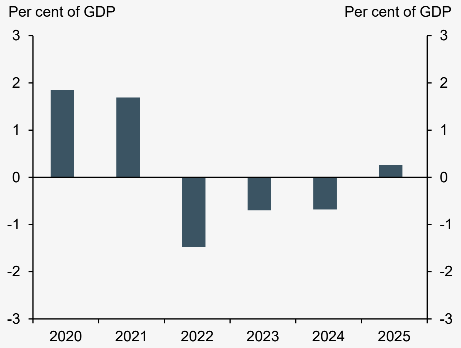
3.3 Fiscal Impact on Economic Activity

During the COVID pandemic, the fiscal policy contributed to supporting employment and economic activity with both compensation schemes and stimulus packages. The combined support of economic activity amounted to approximately 1¾ per cent in 2020 and 3¾ per cent in 2021. Without this contribution there would have been negative output gaps in 2020-2021, *cf. figure 3.2*. The economy recovered faster than expected in 2021. In 2022, 2023 and 2024 a tightening of the fiscal policy is planned, in line with the economic conditions improving since the outbreak of the COVID pandemic in 2020, *cf. figure 3.3*.

Figure 3.2
Output gap



Figur 3.3
One-year fiscal effect



Note.: The one-year fiscal effect is a measure of the fiscal and structural policy contribution to changes in output gap in one year.
Source: Statistics Denmark and own calculations.

The tightening of fiscal policy in 2022 is mainly due to the expansionary impact of the COVID-19 compensation schemes in 2020 and 2021 disappears, as the temporary schemes expire. Furthermore a tightening of the fiscal policy (excluding temporary COVID-19 measures) is planned. The tightening covers, among other things, the effect of *Agreement on the 2022 Budget Bill* and a general low growth in expenditures as well as the decision to postpone projects within the framework of The National Building Foundation. The decision to pay a heating check to households hardest hit by the high energy prices, and other expenditures related to the war in Ukraine, will in isolation contribute to more expansionary fiscal policy.

Table 3.5
Fiscal and structural policy effect on the capacity utilization (multi-year effects)

	2020	2021	2022	2023	2024	2025
Per cent of GDP						
1. Effect on output gap excl. temporary COVID-19 measures [1)]	0.5	1.7	1.4	1.1	0.4	0.7
2. Effect of temporary compensation schemes etc. related to COVID-19	1.4	1.9	0.8	0.3	-0.0	-0.1
3. Effect on output gap incl. temporary COVID-19 measures (1+2)	**1.8**	**3.7**	**2.2**	**1.3**	**0.4**	**0.6**

Note.: The fiscal and structural policy effect on the cyclical gaps describe the contribution of fiscal and structural policies on the output and employment gap in the individual years.
1) Calculated excl. the effect of COVID-19 measures, which are treated as one-off conditions in the calculation of the structural balance, including compensation schemes etc. Contains the activity effect of the payment of frozen holiday pay in 2020 and 2021, investments under the auspices of The National Building Foundation in continuation of the housing agreement from 2020 and derivative private investments as a result of the *Climate Agreement on Green Tax Reform*, including the impact of the investment windowin 2021 and 2022.
Source: Statistics Denmark and own calculations.

The fiscal and structural policy effect on business cycles can be calculated with the one-year or the multi-year fiscal effect. The one-year fiscal effect reflects the year-to-year effect of fiscal and structural policy, and can be interpreted as the contribution to changes in output gap. A yearly tightening of fiscal policy calculated by the one-year fiscal effects is estimated in the period 2022-2024, *cf. table 3.6*. Using the current premises for the technical projection a positive one-year fiscal effect is projected in 2025, which is mainly due to derived private investments from *Climate agreement for Energy and Industry etc.*, June 2020, which should be seen in the light of the planned establishment of energy islands in Denmark[1].

Table 3.6
Fiscal and structural policy effect on the capacity pressure (one-year effects)

	2020	2021	2022	2023	2024	2025
Per cent of GDP						
Fiscal and structural policy effect on the capital exploitation excl. temporary COVID-19 measures	0.5	1.1	-0.4	-0.1	-0.4	0.4
Effect of temporary compensation schemes etc.	1.4	0.6	-1.1	-0.6	-0.3	-0.1
Fiscal effect incl. COVID-19 measures	**1.8**	**1.7**	**-1.5**	**-0.7**	**-0.7**	**0.3**

Note: The one-year fiscal effect is a measure of the contribution of the fiscal and structural policy to changes in output gap for a single year.
Source: Statistics Denmark and own calculations.

[1] The activity effect from *Climate Agreement for Energy and Industry etc.*, June 2020, must be seen in the light of the planned establishment of energy islands, which by changed framework conditions is estimated to have a positive activity effect through higher private investments.

3.4 Fiscal Space

Denmark's Convergence Programme 2022 contains an updated estimate of the fiscal space towards 2025. The fiscal space is a measure of the resources available for new political expenditure and tax initiatives, including real growth in public consumption or other political initiatives, within the objective of fiscal balance in 2025. Changes in the fiscal space from 2022 to 2025, since August 2021, is mainly a result of changes in the estimated expenditure level for 2022, while the expenditure level for 2025 is changed to a lesser extent compared to the most recent projection, *cf. below.*

The fiscal space for the individual years is allocated each year in connection with the planning of the fiscal policy – i.e. in the budget agreements with municipalities and regions as well as the central government draft budget proposal and the subsequent budget bill. Thus the fiscal space in 2022 is allocated in connection with the budget bill for 2022 etc.

Table 3.7
Updated fiscal space

	2023	2024	2025
Measured compared to the level in 2022 (DKK bn., 2022-price level)			
Updated 2025-projection, August 2021	3	7½	16
Denmark's Convergence Programme 2022, May 2022 (*not corrected for the handling of the Ukraine situation*)	6½	6½	14½
Memo: Denmark's Convergence Programme 2022, May 2022 (*corrected for the handling of the Ukraine situation*)	8	11½	20

Note: The fiscal space is corrected for temporary measures related to COVID-19. The fiscal space is calculated with uncertainty, rising in time.
Source: *Updated 2025-projection: Basis for expenditureceiling 2025*, August 2021 and own calculations.

The fiscal space toward 2025 was last updated in *Updated 2025-projection*, August 2021. It was estimated to approximately DKK 16 bn. I 2025, measured in relation to the expenditure level in 2022, i.e. in relation to the budgeted level for the budget bill year.

In *Denmark's Convergence Programme*, 2022, the fiscal space is calculated to be approximately DKK 14½ bn. in 2025 (relative to the level in 2022), when corrected for the effects of temporary measures related to COVID-19*, cf. table 3.7*. Taking into account further temporary additional expenditures related to the situation in Ukraine – including the allocated defense reserve of DKK 3½ bn. in 2022 and 2023, which by technical calculations is included in public consumption and additional expenditure for dealing with displaced persons from Ukraine – the fiscal space is approximately DKK 20 bn. towards 2025 (relative compared to 2022, *cf. box 3.1)*. These circumstances which mainly affect the level of expenditure in 2022 and 2023, do not in fact reduce the space for expenditure measures after 2023.

Box 3.1
Agreement of National Compromise on Danish Security Policy (March 2022)

As part of the *National Compromise on Danish Security Policy,* the parties behind the agreement agreed to ensure the needed resources to handle the current security situation. Thus it was decided to allocate a general reserve of DKK 3½ bn. (2022 prices) in both 2022 and 2023 to handle current economic imbalances in the armed forces, increase preparedness, derived operations, strengthened diplomacy, humanitarian efforts etc. The reserve is included in the projection as part of public consumption for technical calculations.

In connection with the *Agreement on National Compromise on Danish Security Policy*, it was also decided that a key task in a future Defense Agreement would be to ensure that Denmark's defense and security expenditure is permanently raised to 2 per cent of GDP by the end of 2023. This is currently estimated to imply that defense expenditures will have to be raised by around DKK 19½ bn. in 2033 (measured in 2022 prices) compared with a technical computed continued level. The additional expenditures has been calculated on the basis of the defense expenditure level assumed in the Budget Bill for 2022, which after 2023 is technically continued and corrected for the costs of the fighter jet acquisition and addendum to *Agreement on Defense 2018-2023* (January 2019). It should be noted that, based on based on the August 2021 projection, defense expenditure was estimated to increase by approximately DKK 18 bn. to reach 2 per cent of GDP in 2033. In *Denmark's Convergence Programme 2022*, the GDP level in 2033 is estimated to be higher, such that the target is expected to imply an increase of approximately DKK 19½ bn.

No defense agreement has been reached for the years after 2023, which is why no concrete position has been taken at present time on the phase-in of defense expenditures to 2 per cent of GDP by 2023. Nor has a position been taken on how much of the fiscal space, if any, should be reserved for raising defense expenditure after 2023. The fiscal space towards 2030 will be calculated in connection with the Governments' upcoming 2030-plan.

The updated fiscal space must, among other things, be seen in connection with a number of opposing factors, described in box 3.2.

Box 3.2
Changes in the fiscal space since August 2021

Since the medium-term projection in August 2021, new information which affects the fiscal space has been included in the calculations, *cf. table a*.

- **Agreement on Budget Bill for 2022 (December 2021) and Partial Agreement on COVID Winter Package (December 2021):** The effects of the agreements increase the public consumption in 2022, but not correspondingly, in the years after, as the corona-winter package expires after 2022. In isolation, this implies an upward adjustment of public consumption in 2022, reducing the highest possible consumption growth towards 2025.

- **Expenses to handling the situation from Ukraine:** The situation in Ukraine is projected to increase the public consumption in 2022 and 2023. The upward adjustment of public consumption includes both the allocated security reserve in 2022 and 2023 of DKK 3½ bn. and technically assumed expenditures to handle displaced persons from Ukraine. In isolation, this implies an upward adjustment of the public consumption in 2022 and 2023, which reduces the highest possible consumption growth towards 2025.

- **Other circumstances and technical adjustments etc.:** Other circumstances, technical adjustments etc. includes, among other things, the effect of changed projections for other ceiling-covered expenses (including foreign aid), as well as changed projections for price and wage development. This includes the impact of a price and wage correction in the central government (level correction), where the government budget for 2023 is corrected for higher estimated prices and wages in 2022 in connection with the price and wage enumeration on the Budget Bill Draft for 2023. Overall, this implies an upward revision of real growth in public consumption in 2023 (derived from a lower real level in 2022), increasing the highest possible consumption growth from 2022 to 2025.

Table a
Changes in the fiscal space since August 2021

	2025
DKK bn. (2022-prices)	
***Updated 2025*-projection, August 2025 relative to 2022**	**16**
+ *Agreement on the 2022 Budget Bill etc.*	-¼
+ Expenditure to deal with the situation in Ukraine	-5¾
+ Other circumstances, technical adjustments etc.	4¼
***Convergence Programme 2022* relative to 2022**	**14½**
Changes compared Updates 2025-projection, August 2021	**-1½**
Memo: Convergence Programme 2022 (corrected for expenditure to deal with the situation in Ukraine)	**20**

Note: The fiscal space is calcuated as highest possible public consumption growth excl. depreciation within the objective of structural balance in 2025 and rounded to the nearest quarter DKK bn.

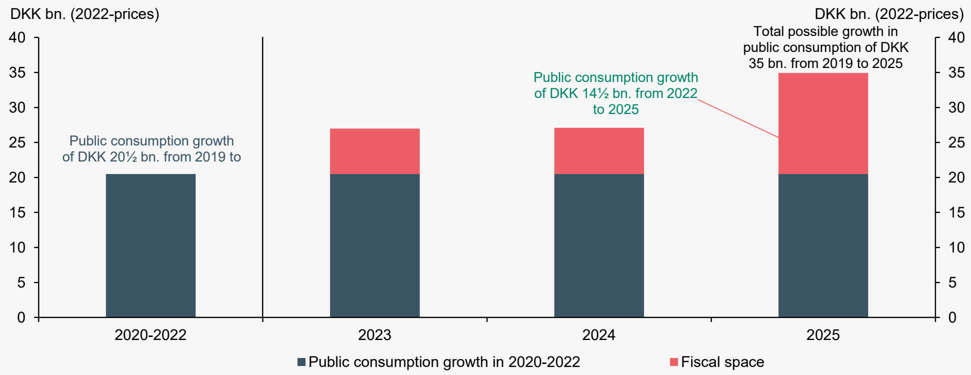
1) Other circumstances, technical adjustments etc. cover, among other things, the effect of technical amendments, estimates of other ceiling-covered expenses, including, among other things, foreign aid, changes following changes projections of price and wage development.

Source: Statistics Denmark, *Updated 2025-projection: Basis for expenditureceilings 2025*, August 2021 and own calculations.

A fiscal space of DKK 14½ bn. in 2025 corresponds to an average highest possible growth in the public consumption of approximately 0.9 per cent per year, *cf. section 3.5*. This is higher than the average yearly growth in the demographic pressure on approximately 0.5 per cent per year, which corresponds to approximately DKK 8½ bn. in 2025 in relation to 2022.

This implies that there is space for a possible growth in public consumption of approximately DKK 35 bn. towards 2025 relative to 2019, where the government took office or approximately 1.1 per cent per year on average, *cf. figure 3.4*.

Figure 3.4
Public consumption growth and fiscal space, 2020-2025



Note: Public consumption is calculated using the input method (excl. depreciations). The public consumption growth and fiscal space is corrected for temporary measures related to COVID-19. There is however not corrected for temporary additional expenditure related to dealing with the situation in Ukraine etc.
Source: Statistics Denmark and own calculations.

The fiscal space towards 2025 is limited and will have to be prioritized with care – including measures related to the demographic pressure and other public priorities etc. Among other things, this must be viewed in connection with the fact that a part of the fiscal space is reserved for the agreed boost of the armed forces in the *Defense Agreement* (January 2018) and a reserve for ensuring favorable conditions in continuation of the *North Sea Agreement* (March 2017). Excluding these reserved means, the fiscal space for other priorities is approximately DKK 13¼ bn. in 2025 relative to 2022, *cf. appendix 3.3*.

The reserve for ensuring favourable conditions for Danish businesses was partly implemented in connection with *Agreement on A New Reform Package for the Danish Economy* (January 2022). No defense agreement has been reached for the years after 2023, which is why no concrete position has been taken at present time on the phase-in of defense expenditures to 2 per cent of GDP by 2023. Nor has a position been taken on how much of the fiscal space, if any, should be reserved for raising defense expenditure after 2023, *cf. box 3.1*. In the absence of new financing, the fiscal space must, among other things, cover the annual budget bills as well as the budgets of municipalities and regions and unavoidable additional expenses, etc.

3.5 Public Consumption, Demographic Pressure and Public Investments

Public Consumption and Demographic Pressure

Assumptions about the public consumption in 2022 and 2023 are described in detail in *Economic Survey*, May 2022.

The real growth in public consumption is estimated to 0.8 per cent of GDP in 2022, while it is currently estimated to -0.3 per cent of GDP in 2023, based on technical calculation assumptions about expenditure policy next year, *cf. figure 3.5*.

In 2024 to 2025, public consumption growth corresponds to the highest possible public consumptions growth given the expenditure ceilings, which are aligned with the medium-term objective of structural balance in 2025. In the projection public consumption expenditures (excl. depreciations) grows, on average, with approximately 0.7 per cent per year in 2024 and 2025. This should be seen in context of a calculated growth in the demographic pressure of approximately ½ per cent per year in the same period.

Figure 3.5
Public consumption growth, 2000-2025

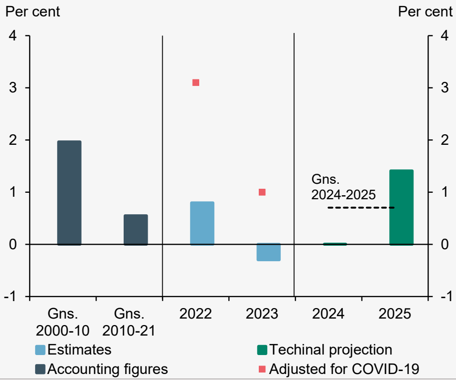
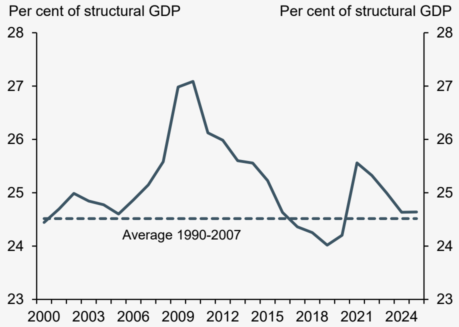


Figure 3.6
Public consumption, 2000-2025



Note: Public consumption growth is calculated with the input method (excl. depreciations).
Source: Statistics Denmark and own calculations.

Given the assumed real growth in public consumption, the share of public consumption expenditures as share of GDP is estimated to be lower in the period 2024-2025 than was the case in the period 2022-2023, *cf. figure 3.6*. In the period 2022-255 the public consumption expenditures share of GDP is still above the historic average before the financial crisis (1990-2007).

Public Investments

Public investments, as a share of GDP, have been at a historically high level in recent years and is also expected to remain so in the coming years, *cf. figure 3.7*.

Compared to *Updated 2025 Projection: Basis for Expenditure Ceilings 2025*, August 2021, the investment framework has been technically revised upwards by approximately DKK 1¼ bn. In 2024 and approximately DKK 3 bn. in 2025. The upwards adjustment primarily reflects an upwards adjustment of around approximately DKK 3 bn. (incl. VAT) due to technically assumed use of the underlying improvement of the structural budget balance in the first two years, *cf. section 3.2*. In 2024 the upward adjustment is partly offset by a downward adjustment of approximately DKK 1¾ bn., as a result of the prioritization of funds from the investment framework for financing new grant schemes, subsidies etc. as part of *Agreement on Green Transition of Agriculture and Environment*, October 2021.

Overall, public investment in the period 2022-2025 is estimated to be between 3.3 and 3.7 per cent of GDP. The path towards 2025 implies that total public investments increases from approximately DKK 86½ bn. in 2022 to almost DKK 99 bn. in 2023, before declining to approximately DKK 96 bn. in 2025 (2022 prices).

The majority of public investments consist of investments in buildings and facilities, while a share corresponding to approximately 1 per cent of GDP consists of research and development, *cf. figure 3.8*.

Figure 3.7
Public investments, as share of GDP

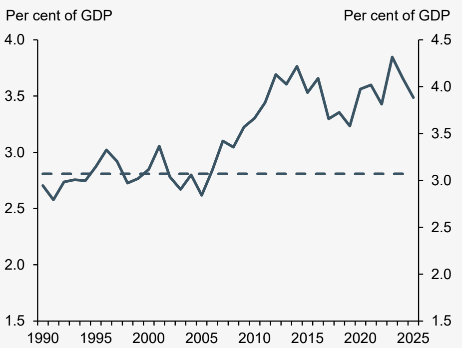
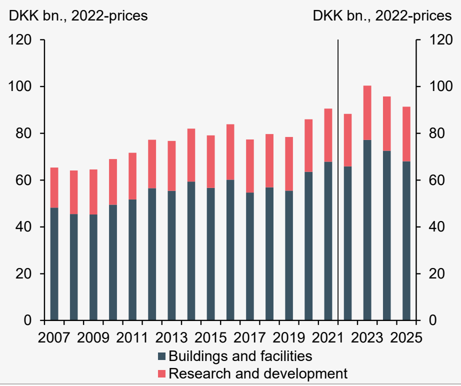


Figure 3.8
Public investments by category



Source: Statistics Denmark and own calculations.

3.6 Expenditures and Revenues as a Share of GDP

Public Expenditures

Total public expenditures contribute to approximately 50 per cent of GDP in 2021, according to Statistics Denmark's preliminary national accounts from March 2022. The expenditures share of GDP are estimated to decrease to approximately 47¼ per cent of GDP in 2022 and 47¾ per cent of GDP in 2023, *cf. table 3.8*. The expenditure development towards 2023 should be seen in the context of the assumed elimination of extraordinary temporary expenditures in light of COVID-19. After 2023, the total government expenditures as share of GDP is estimated to decline to approximately 46¾ per cent of GDP in 2024 and 2025.

Table 3.8
Composition of public expenditure

	2021	2022	2023	2024	2025
Per cent of GDP					
Total public expenditures (expenditure ratio)[1)]	49.9	47.3	47.7	47.0	47.3
Primary expenditures	49.4	46.7	47.2	46.6	46.9
- public consumption	24.4	23.7	23.5	23.4	23.8
- public investments	3.5	3.3	3.7	3.6	3.4
- income transfers	15.5	14.7	14.7	14.9	15.1
- subsidies	2.5	1.5	1.5	1.5	1.5
- other primary expenditures[2)]	3.5	3.4	3.9	3.2	3.1
Interest expenditures	0.5	0.6	0.5	0.4	0.4

1) The calculation of total public expenditures (and revenue) differs from Statistics Denmark's calculation. The expenditure ratio is calculated on the basis of a measure of total expenditure, where all sub-elements of public consumption – including e.g. imputed expenditure in the form of depreciation and revenue in the form of sales of goods and services – are attributed to the expenditure side.
2) Other primary expenditures includes funds to handle COVID-19 in 2022-2024, which is estimated at DKK 1.8 bn. in 2022, DKK 2.2 bn. in 2023 and DKK 1.7 bn. in 2024. The high level in 2023 is partly due to the expected repayment of property taxes.

Source: Statistics Denmark and own calculations..

Public consumption expenditures amounted to approximately 24½ per cent of GDP in 2021 and is estimated to decline to approximately 23½ per cent of GDP in 2023, after which the expenditure share is expected to remain around this level until 2025. The reduction in public consumption as share of GDP should be seen in particular in light of the phasing out of temporary government expenditures for public authority tasks related to COVID-19 etc.

Public investments amounted to approximately 3½ per cent of GDP in 2021 and is estimated to be between 3¼ and 3¾ per cent of GDP in the period until 2025. The expenditure path must be viewed in the light of the underlying profile in the politically decided frame for public investments in buildings and facilities towards 2025.

Income transfers amounted to 15½ per cent of GDP in 2021 and is estimated thereafter to amount to approximately 14¾-15 per cent of GDP towards 2025. This development must be seen, among other things, in the light of improved economic conditions and lower unemployment, resulting in lower unemployment related expenditures. In addition, the development reflects the effects of political agreements reached, including the downwards adjustment included in the *Agreement on Tax Reform*, June 2021, changed regulation of old-age pension etc., pursuant to the *Agreement on new regulation of the state pension and the introduction of compulsory savings for the public transfer recipients*, November 2018, as well as the effects from *Agreement on New Right for Early Retirement*, October 2020, and *Agreement on A New Reform Package for the Danish Economy* (January 2022).

Subsidies is estimated to approximately 2½ per cent of GDP in 2021, which is significantly above the normal levels. This reflects the extraordinary expenditures on compensations schemes for Danish businesses etc. in light of the COVID pandemic. In contrast, with the current situation with high electricity prices, the support for renewable energy is lower. Overall, the subsidies as share of GDP is expected to amount to 1½ per cent towards 2025.

The *public interest expenditures* amount to ½ per cent of GDP in 2021. Towards 2025 the expenditures are estimated to be at the same share of GDP.

Public Revenues

Total public revenues are estimated to be reduced from approximately 52 per cent of GDP in 2021 to approximately 38 per cent of GDP in 2025, *cf. table 3.9*. Among other things, the development must be viewed in connection with the fact that in 2021 some volatile sources of revenue were particularly high, while the estimate in 2025 is based on structural assumptions.

Among other things, the development is affected by the fact that revenue from the *pensions yield tax* – which depends on the development in the financial markets and thus fluctuate significantly from year to year – was relatively high in 2020 and 2021, corresponding to 2.1 and 2.5 per cent of GDP respectively. In 2025, the revenue from the pension yield tax is assumed to amount to 1.2 per cent of GDP. Besides stocks etc., the pension funds have a relatively high share of their assets invested in bonds, the value of which, all other things equal, fall if interest rates rise. Interest rates are expected to rise in the coming years until 2025, leading to lower or negative return on the pensions funds bond holdings. This could have a relatively large impact on the measured tax burden and the actual budget balance in individual years. However, the fiscal policy is planned in accordance with the structural budget balance, such that annual fluctuations in the pension yield tax do not affect the conducted fiscal policy.

Moreover, *personal income tax revenues* are estimated to decline to approximately 20.0 per cent of GDP in 2025 compared to 20.7 per cent of GDP in 2021. This is partly due to extraordinary high revenues in 2020 and 2021 as a result of the payment of frozen holiday pay. In addition, interest deductions for households will increase as interest rates rise. In isolation, this decreases tax revenues.

Other indirect taxes primarily include excise duties in the form of, among other things, energy and environmental taxes, taxes on tobacco and spirits and gambling. In addition, indirect taxes include the vehicle registration duty, the municipal property taxes (i.e. land tax etc.), motor vehicle weight duty for businesses, payroll tax and stamp duties. The tax revenue from other indirect taxes are estimated to decrease from approximately 5.9 per cent of GDP in 2021 to 5.4 per cent of GDP in 2025. This reflects, among other things, that revenues from energy taxes decline relative to GDP.

Corporate taxes in 2021 amounted to approximately 3.8 per cent of GDP, which is high compared to earlier years. Thus the revenue from corporate taxes are expected to decline gradually towards 2025 to 2.7 per cent of GDP. According to Statistics Denmark, *VAT revenues* in 2021 amounted to approximately 10.0 per cent of GDP and is expected to remain at an approximately unchanged level until 2025.

Table 3.9
Decomposition of public revenue

	2020	2021	2022	2023	2024	2025[8)]
Per cent of GDP						
Personal income tax etc.[1)]	21.9	20.7	20.0	20.1	20.1	20.2
Labour market contributions	4.5	4.4	4.3	4.4	4.4	4.4
Pension yield tax	2.1	2.5	0.3	0.2	0.4	0.5
Corporate tax	2.6	3.8	3.0	2.9	2.7	2.7
- corporate tax from hydrocarbon producers	0.0	0.0	0.1	0.1	0.1	0.1
- other coroprate tax	2.6	3.7	3.0	2.8	2.6	2.6
Value added tax (VAT)	9.9	10.0	9.9	9.9	10.0	10.0
Other indirect taxes	6.2	5.9	5.7	5.6	5.5	5.4
Other taxes[2)]	0.2	0.1	0.0	0.0	0.0	0.0
Tax burden	47.4	47.4	43.3	43.3	43.0	43.2
Interest income[3)]	0.9	1.0	1.0	0.9	0.8	0.7
Other revenues[4)]	4.1	4.0	3.9	3.8	4.0	4.1
Duties etc. to EU[5)]	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2
Total public revenue[6)]	52.2	52.3	47.9	47.9	47.7	47.8
Memo item: North Sea revenues[7)]	0.0	0.0	0.1	0.1	0.2	0.2

1) Personal income tax etc. include basic income tax, property value tax, motor veicle weight duty from households, gift- and heritage tax and other personal taxes.
2) Other taxes include media license (primarily for Danish Radio) and mandatory pension contributions for civil servants in public owned companies etc.
3) Incl. dividends and profits from Danmarks Nationalbank.
4) Other revenues include, among other things, profits from public enterprises, operating and capital transfers from other domestic sectors and the EU, as well as imputed (calculated) revenues from both the gross operating surplus and the contributions to civil servant pensions. Furthermore, it also includes central government revenues from state participation in the oil and gas production in the North Sea and the hydrocarbon tax.
5) According to national accounting principles, these revenues are categorized as taxes and are therefore included in the tax burden, but since the revenues are going to the EU, they are not included in the revenue burden.
6) The calculation of total public revenue differs from Statistics Denmark, that, among other things, attributes the sale of public goods and services to the revenue side and not, as here, to the expenditure side as part of the total consumption expenditure. Total revenues are calculated incl. imputed gross operating surplus being matched by the imputed depreciation costs included in the calculation of public consumption.
7) Total North Sea revenues consists of hydrocarbon tax, corporation tax on hydrocarbon manufacturing and dividend from the Danish North Sea Fund. The North Sea revenues are included in corporate taxes, interest revenues and other revenues.
8) Beyond 2023, projected levels are based on technical principles.

Source: Statistics Denmark and own calculations.

3.7 Public Debt

As a results of the COVID pandemic, the EMU debt increased to approximately 42 per cent of GDP by the end of 2020 compared to the approximately 34 per cent of GDP by the end of 2019, i.e. before the COVID pandemic. The subsequent recovery of the Danish economy and surplus on the actual budget balance is estimated to reduce the EMU debt to approximately 33 per cent of GDP by the end of 2022. This is expected to bring the EMU debt to slightly below the level prior to the COVID-pandemic. In the years towards 2025, a small increase in EMU debt is expected, reflecting the fact that EMU debt is also affected by planned relending to state-owned enterprises, *cf. table 3.10*.

Denmark's EMU debt is low in a international perspective and is well below the debt limit of 60 per cent of GDP as stated in the Stability and Growth Pact in EU. The low debt contributes to Denmark continuing to have the highest international credit rating (AAA-rating).

Table 3.10
Overview of public cebt, end of year

	2020	2021	2022	2023	2024	2025
Per cent of GDP						
Gross debt (EMU definition)	42.1	36.7	33.3	32.5	34.0	33.9
Net public debt	-11.3	-11.1	-11.2	-11.1	-12.1	-12.8
Memo item: Actual budget balance	*-0.2*	*2.3*	*0.6*	*0.2*	*0.6*	*0.4*

Source: Statistics Denmark and own calculations.

The public net debt includes public financial assets, including the government's deposit in Denmark's Central Bank and equities in different firms, e.g. Ørsted A/S. The public sector in Denmark has a financial net wealth (corresponding to negative net debt). By the end of 2021 the net wealth is approximately 11 per cent of GDP and is estimated to rise slightly towards 2025. The net debt/net wealth is the key to assessing long-term financial sustainability and solvency of the government.

The estimated year-on-year development in net debt is subject to uncertainty, as the development in net debt in addition to the position on the budget balance also depends on price adjustments on government assets and liabilities. Price adjustments on public liabilities will tend to level off over the years. For public assets, positive revaluations are generally expected on average over the years.

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Appendix 3.1 Calculation of structural balance 2021-2023

Appendix table 3.1.1
Actual and structural specific budget items in the calculation of the structural budget balance

	2021	2022	2023
Per cent of GDP			
1. Actual budget balance	**2.3**	**0.6**	**0.2**
Cyclical adjustment			
i) Output gap	2.5	2.8	2.3
ii) Employment gap	1.7	2.7	2.6
a) Weighted cyclical gap = i)*0.4+ii)*0.6	2.0	2.8	2.5
b) Budget factor	0.74	0.73	0.73
c) 1-(output gap/100)	0.97	0.97	0.98
2. Cyclical contribution = a)*b)*c)	**1.5**	**2.0**	**1.8**
Corporate tax			
Actual revenue	3.7	3.0	2.8
Structural revenue	2.4	2.3	2.5
3. Correction for corporate tax	**1.4**	**0.6**	**0.3**
Vehicle registration duty			
Actual revenue	0.7	0.6	0.7
Structural revenue	0.8	0.7	0.7
4. Correction for vehicle registration duty	**-0.1**	**-0.1**	**0.0**
Equity income tax			
Actual revenue	1.1	1.2	1.2
Structural revenue	1.2	1.2	1.2
5. Correction for equity income tax	**-0.1**	**0.0**	**0.0**

Appendix table 3.1.1 (continued)
Actual and structural specific budget items in the calculation of the structural budget balance

	2021	2022	2023
Per cent of GDP			
Pension yield tax			
Actual revenue	2.5	0.3	0.2
Structural revenue	1.2	1.2	1.2
6. Correction for pension yield tax	**1.3**	**-1.0**	**-1.0**
North Sea revenue			
Actual revenue	0.0	0.1	0.1
Structural revenue	0.2	0.2	0.2
7. Correction for North Sea revenue	**-0.1**	**-0.1**	**0.0**
Net interest payments			
Actual revenue	0.5	0.4	0.5
Structural revenue	0.4	0.4	0.4
8. Correction for net interest payments	**0.0**	**0.0**	**0.1**
Special budget items			
Actual revenue before corrections for one-offs etc.	-0.7	-0.9	-1.3
Actual revenue corrected for one-offs etc. for calculation of structural revenue. cf. appendix table 3.2.1	-0.6	-0.6	-0.6
Structural revenue	-0.5	-0.5	-0.5
9. Correction for special budget items	**-0.2**	**-0.4**	**-0.8**
10. Other corrections (cf. appendix table 3.2.1)	**-1.5**	**-0.4**	**0.0**
- Hereof COVID-19 one-off conditions	-1.9	-0.4	0.0
- Hereof one-off tax revenues from payment of frozen holiday pay	0.5	0.0	0.0
11. 1-2-3-4-5-6-7-8-9-10 Structural budget balance	**0.2**	**-0.1**	**-0.1**

Appendix 3.2 One-offs in 2021-2023

Appendix table 3.2.1
One-off corrections to the structural budget balance

	2021	2022	2023
Per cent of GDP			
One-off conditions related to COVID-19	-0.1	-0.2	-0.2
Extraordinary refund of property taxes	0.0	-0.1	-0.5
Payment of early retirement contributions	0.0	-0.1	0.0
One-offs corrected for in the special budget items in total	**-0.1**	**-0.4**	**-0.7**
Other corrections			
One-off conditions related to COVID-19	-1.9	-0.4	0.0
- Hereof as transfers to households	-0.1	0.0	0.0
- Hereof as subsidies	-1.1	-0.1	0.0
- Hereof as public consumption	-1.0	-0.3	0.0
- Hereof as VAT revenue	0.1	0.0	0.0
- Hereof as backflow via tax revenues[1)]	0.2	0.0	0.0
- Hereof as contributions to EU	0.0	0.0	0.0
One-off revenue from payment of frozen holiday pay	0.5	0.0	0.0
Foreign aid – difference between political commitment level and payments in relation to the actual balance	0.0	0.0	0.0
Corrections for information on the revenue side	-0.2	0.0	0.0
Corrections regarding Employers' Reimbursement System (AUB)	0.0	0.1	0.1
Corrections for investments in fighter jets[2)]	0.0	0.0	-0.1
Conversion to per cent of structural GDP	0.0	0.0	0.0
Other corrections in total	**-1.5**	**-0.4**	**0.0**

1) Calculated excl. one-offs related to backflow via corporate tax and equity income tax.
2) Investments in fighter jets is treated as net purchases of buildings and other existing investment goods in the calculation of the structural budget balance and is included via a 7 years moving average.

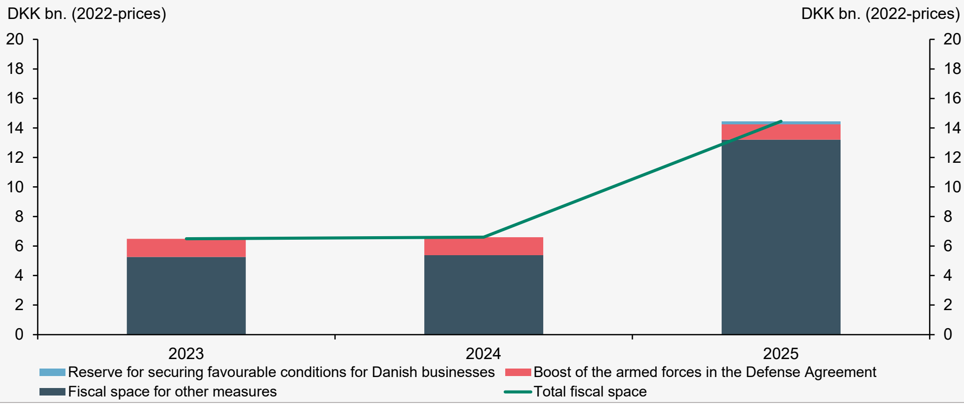
Appendix 3.3 Reservations in the fiscal space

Appendix figure 3.3.1 shows the fiscal space in 2023-2025, including funds reserved for the decided boost of armed forces in the *Defense Agreement* (January 2018) and a reserve for ensuring favorable conditions for Danish businesses in continuation of the *North Sea Agreement* (March 2017). It should be noted that the reserved funds for ensuring favorable conditions for Danish businesses was partly implemented in continuation of *Agreement on A New Reform Package for the Danish Economy* (January 2022). Excluding these reserved funds, the fiscal space for priorities is approximately DKK 17½ bn. in 2025 measured in relation to 2021 (corrected for the impact of temporary circumstances related to COVID-19).

If temporary additional expenditures related to the situation in Ukraine are also taken into account, the fiscal space for other priorities amounts to approximately DKK 18¾ bn. in 2025 measured relative to 2022.

Finally, it should be noted that no defense agreement has been reached for the years after 2023, which is why no concrete position has been taken at present time on the phase-in of defense expenditures to 2 per cent of GDP by 2023. Nor has a position been taken on how much of the fiscal space, if any, should be reserved for raising defense expenditure after 2023.

Appendix figure 3.3.1
Fiscal space towards 2025



Note: The *Defense Agreement* covers the period 2018-2023. The part of additional appropiations for armed forces, that is categorised as public consumption for technical calculations is financed within the fiscal space and the boost of the armed forces following *Defense Agreement* is technically maintained at the 2023-level in 2024-2025. The fiscal space does not account for temporary technical assumed additional expenditures related to the situation in Ukraine. These factors, which mainly affect expednture levels in 2022 and 2023, do not effectively reduce room for additional expenditure measures after 2023.
Source: Statistics Denmark and own calculations.

4. Sensitivity Analysis and comparison with CP21

4.1 Sensitivity Analysis

In the following, several scenarios are presented which illustrate the sensitivity of the Danish economy to altered assumptions following the requirements set out in the Code of Conduct for the EU countries' Stability and Convergence Programmes. The sensitivity is illustrated by comparing the projection of the *Convergence Programme* with a scenario in which the European Commission's assumptions about the international economy and financial conditions for 2022 and 2023 are taken into account. Furthermore, two additional alternative scenarios for short-term growth are compared, one that is more negative and one that is more positive.

Finally, the projection of selected key figures up until 2025 in the *Convergence Programme* 2022 are compared with the *Convergence Programme* 2021.

Scenario with the European Commission's External Assumptions

The assumptions in the *Convergence Programme* 2022 concerning the international economy and financial conditions are largely in line with the European Commission's assumptions in their spring forecast, *cf. table 4.1*.

Table 4.1
External assumptions in the Convergence Programme 2022 and the European Commission's spring forecast

	2021	2022		2023	
	CP22	CP22	EU	CP22	EU
Growth in export markets, per cent[1)]	13.0	5.5	4.9	4.5	4.8
Crude oil price, USD per barrel	70.7	103.5	102.8	98.6	94.0
Short-term interest rate, percentage point[2)]	-0.2	0.1	0.1	1.1	1.3
Long-term interest rate, percentage point.[2)]	-0.1	1.0	0.8	1.3	1.0

1) Growth in export markets concern industrial goods and is shown as real growth in per cent.
2) Numbers refer to European interest rates. The levels of the corresponding Danish rates have been modified in order to ensure that the spread to the Euro area remains unchanged relative to the assumptions in CP22.
The external assumptions are based on the European Commission's 2021 spring forecast, with the exception of export market growth, which is based on a weighting of the European Commision's latest official estimates for EU countries along with GDP and export market growth for the rest of the world based on the Commission's preliminary external assumptions from the spring forecast. The weighting is done on the basis of Danish export weights.
Source: The European Commission and own calculations.

In both years the *Convergence Programme* 2022 assumes slightly higher oil prices and slightly higher long-term interest rates than in the European Commission's assumptions. Furthermore, the *Convergence Programme* 2022 assumes slightly higher export market growth in 2022 and slightly lower export market growth in 2023. The assumptions in the *Convergence Programme* 2022 are based on information up untill the 20th of april 2022.

The alternative scenario with external assumptions implies, all together, that GDP growth is reduced by around 0.1 percentage points in 2022 and increased by about ¼ percentage points in 2023. Employment in 2023 is around 5,000 persons higher than in the *Convergence Programme* 2022. The budget balance as a share of GDP is roughly unchanged in 2022 and improved by about 0.1 percentage points in 2023.

Alternative Scenarios

The Danish economy is fundamentally healthy with well-functioning structures and a high degree of flexibility. This was evident during the COVID pandemic. For example, the labour force in industries that were more severely affected moved to other industries. After the reopening in the spring of 2021, the economy has experienced substantial growth especially driven by household consumption. Capacity pressure has increased to an extent such that the Danish economy is now in an expansion but without wage growth increasing at an unsustainable level.

There is a possibility of an even larger increase in domestic demand than estimated in the forecast, in which the development in 2022 is flat, amongst other things due to the Russian invasion of Ukraine. Households have generally been reluctant with consumption during the COVID pandemic partly due to limited consumption possibilities. This has led to households having a large surplus savings. If consumption grows more than expected despite rising consumer prices and increased uncertainty, the domestic demand can become larger than in the baseline projection.

- Scenario with more activity: Households increase consumption by 0.3 percentage points more in 2022 and 2023, primarily, in purchasing services but also a slightly larger consumption of goods. In this projection GDP growth is increased by about 0.2 percentage points in both 2022 and in 2023. Employment is increased by around 8,000 persons in 2023. The budget balance is improved by around 0.1 per cent of GDP in 2022 and around 0.2 per cent of GDP in 2023. Wage growth is increased by around 0.1 percentage point more in both 2022 and 2023, while inflation (measured by increases in the consumer price index) is roughly unchanged.

The risk of a projection with lower activity is estimated to stem from global activities, for example from a long-term disruption of global supply chains and higher prices on raw materials as a result of the conflict in Ukraine.

- Scenario with lower activity[1]: As a consequence of the conflict in Ukraine, a cessation of all Russian gas deliveries to Europe and increased uncertainty, all import prices including oil prices increase more than expected in the baseline scenario, however, without any noticeable effect on Danish competitiveness. At the same time, growth in export markets is reduced by 2.4 percentage points in 2022 and by 0.4 percentage points in 2023. This implies that GDP growth is reduced by around 1.4 percentage points in 2022, while growth in 2023 is reduced by around 0.3 percentage points. In total, employment is reduced by almost 34,000 persons in 2023 compared to the baseline, while the budget balance is worsened by 0.5 per cent of GDP in both 2022 and 2023. The consumer price inflation is increased by 0.9 percentage points more in 2022 and by 1.3 percentage points more in 2023.

The Danish economy is in a good starting position, and a more negative growth projection will not strain the government budget considerably. In both the baseline projection and the alternative scenarios there is a surplus on the budget balance in 2022, while the scenario with lower activity only entails a small deficit on the budget balance in 2023. In both alternative scenarios, Denmark will comply with the normal requirements for government deficit and the public gross debt (EMU definition) in the Stability and Growth Pact with a considerable margin, cf. *table 4.2*. Other more severe scenarios than those presented here can of course not be ruled out.

[1] This scenario is based on an adjustment of the baseline scenario with differences in oil and gas prices along with growth on export markets corresponding to the severe to medium scenario in *Scenarios for the Danish economy from Russia's invasion of Ukraine, Ministry of Finance, 21st of March 2022*. The underlying method also corresponds to the approach behind the severe scenario.

Table 4.2
Alternative scenarios

	2022	2023
Convergence Programme 2022		
GDP growth, per cent	3.4	1.9
Employment, 1,000 persons	3,130	3,146
Unemployment, per cent of labour force	2.8	2.8
Budget balance, per cent of GDP	0.6	0.2
Public gross debt (EMU definition), per cent of GDP	33.3	32.5
Scenario with higher activity		
GDP growth, per cent	3.6	2.1
Employment, 1,000 persons	3,134	3,154
Unemployment, per cent of labour force	2.7	2.6
Budget balance, per cent of GDP	0.7	0.4
Public gross debt (EMU definition), per cent of GDP	33.1	32.0
Scenario with lower activity		
GDP growth, per cent	2.0	1.7
Employment, 1,000 persons	3,106	3,112
Unemployment, per cent of labour force	3.3	3.5
Budget balance, per cent of GDP	0.1	-0.3
Public gross debt (EMU definition), per cent of GDP	34.1	33.0

Note: The table shows the effect on registered gross unemployment. Gross employment excludes persons on leave of abscene.
Source: Own calculations using ADAM.

4.2 Comparison with Convergence Programme 2021

Expectations for the average GDP growth in 2022-2025 are slightly adjusted downwards in the *Convergence Programme 2022* compared to the *Convergence Programme 2021*, cf. *table 4.3*. The adjusted growth outlook is especially due to growth in 2021 being substantially higher than expected but also in part due to dampened activity stemming from the Russian invasion of Ukraine.

The stronger than expected growth in 2021 is reflected in a positive output gap which carries into the subsequent year. Despite an assumed gradual decrease of output and employment gaps, the gaps are still larger than 1 per cent in 2025.

Expectations for the budget balance are adjusted upwards in the *Convergence Programme* 2022 compared to the *Convergence Programme 2021*, especially in 2021. The large surplus on the budget balance in 2021 reflects, amongst other things, that the Danish economy – despite the COVID pandemic and partial lockdowns – has shown a strong expansion. The adjustment compared to the *Convergence Programme 2021* is especially due to higher revenue from the pension yield tax, corporate tax and VAT. The adjustment of the projection for the budget balance towards 2025 is primarily due to an upwards adjustment for public revenue from personal taxes and VAT.

In all years up to 2025, the public gross debt (EMU definition) in Denmark's *Convergence Programme* 2022 is estimated to be stable under 35 per cent of GDP, i.e. with a considerable margin to the 60 per cent of GDP limit given by EU's Stability and Growth Pact. This is an improvement compared to the projection the *Convergence Programme,* 2021, where public gross debt 2025 was estimated to be in the region of 40 per cent of GDP.

Table 4.3
Changes compared to the Convergence Programme 2021

	2021	2022	2023	2024	2025
	Yearly change in per cent				
Real GDP growth, per cent					
Convergence Programme 2022, May 2022	4.7	3.4	1.9	1.2	0.6
Convergence Programme 2021, May 2021	2.1	3.8	2.3	1.3	1.3
Change	2.6	-0.4	-0.4	-0.1	-0.7
	Per cent of GDP				
Output gap					
Convergence Programme 2022, May 2022	2.5	2.8	2.3	1.8	1.4
Convergence Programme 2021, May 2021	-0.8	0.2	0.0	0.0	0.0
Change	3.3	2.7	2.3	1.8	1.4
Budget balance					
Convergence Programme 2022, May 2022	2.3	0.6	0.2	0.6	0.4
Convergence Programme 2021, May 2021	-3.3	-0.9	-0.7	-0.6	0.0
Change	5.6	1.5	0.8	1.2	0.4
Public gross debt (EMU definition)					
Convergence Programme 2022, May 2022	36.7	33.3	32.5	34.0	33.9
Convergence Programme 2021, May 2021	40.7	41.3	41.6	41.3	39.7
Change	-4.0	-8.0	-9.1	-7.4	-5.8

Source: *Danish Convergence Programme 2021* and own calculations.

5. The Period Beyond 2025 and Long-Term Fiscal Sustainability

5.1 Development Beyond 2025

In the coming years, fiscal policy is planned in accordance with the objective of structural budget balance in 2025 and to ensure fiscal sustainability. Beyond 2025, the projection is based on technical principles and assumptions*, cf. section 5.3*, the aim being to assess the long-term outlook of public finances given the presupposed fiscal policy in the medium-term planning horizon.

Based on the updated 2025-projection as well as reforms that have already been adopted, including the current indexation rules of the old age pension and early retirement etc., fiscal policy is more than sustainable as projections estimate a positive sustainability indicator of around 1.4 per cent of GDP. This implies that, given the technical projection assumptions and additional already adopted policies, the policies planned towards 2025 can be maintained in the long-term without giving rise to unsustainable increases in debt.

However, the demographic development with more elderly people in the coming decades imply that after 2025 the structural budget balance is worsened for a number of decades, being restored in the middle of the century, *cf. figure 5.1.* The development in the budget balance in the coming 30-40 years is called the hammock challenge.

Figure 5.1
Demographic dvelopment puts pressure on the budget balance after 2025…

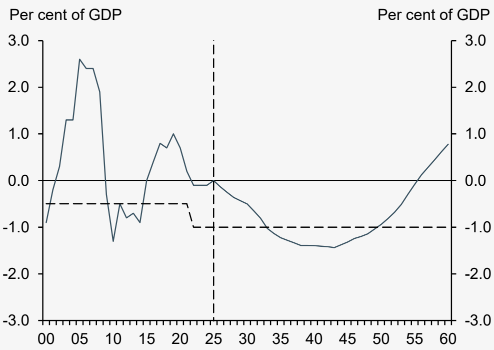
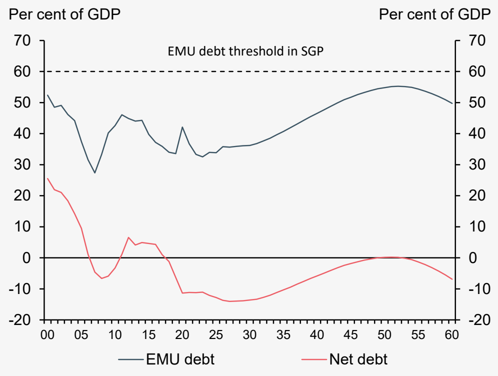


Figure 5.2
... but there is still a net public wealth and a EMU-debt below 60 per cent of GDP



Note: Actual and structural budget balance is technically assumed equal after 2028.
Source: Statistics Denmark and own calculations.

Public net debt measures the difference between public financial assets and liabilities and thus reflects the net position of the public sector. The net debt is the key measure with regard to assessing long-term fiscal sustainability. In the long-term projection, there is a net wealth of 10 per cent of GDP in 2025, meaning that public assets exceed the total public gross debt. In the years following 2025, the net wealth gradually decreases due to the deficits in the hammock years. There is however a net wealth throughout almost the entire projection.

With regards to the EU's Stability and Growth pact, the so-called EMU debt is the key debt measure. Contrary to the public net debt, the EMU debt is purely a gross debt concept. That is, in addition to changes in the budget balance of public finances, the EMU debt is for instance also subject to parallel changes in public assets and liabilities[1]. In the period beyond 2025 and until 2050, EMU debt is projected to increase to just around 55 per cent of GDP and then decrease again, cf. *figure 5.2.*

The increase in the EMU debt in the period until 2050-2060 thus partly reflects the demographic challenges, the agreement on housing taxes (2017) as well as the agreement on financing of public housing (2017), which entail an increase in both public assets and liabilities. – i.e. a so-called balance sheet expansion. This thereby increases the EMU debt without having any implications for the net debt/wealth. The projection takes into account the effect of agreements on premature payment of the frozen holiday pay in 2022 and 2023.

Figure 5.3
Lower growth in the labour force but a higher grwoth in the number of above 70 year olds towards 2045

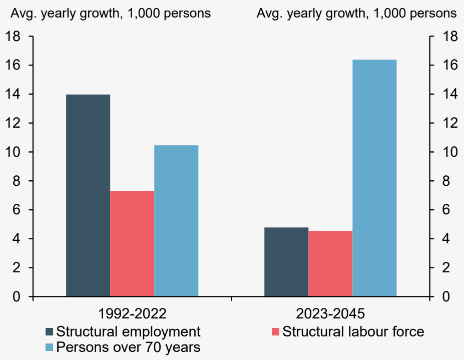
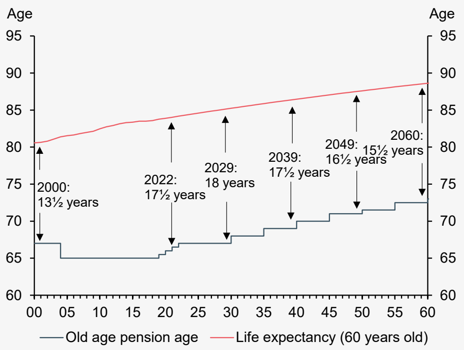


Figure 5.4
Generations that retire before 2040 have a relatively long pension period



Source: Statsitics Denmark and own calculations.

The outlook for structural deficits in the coming decades is largely due to the fact that the share of the population that is employed is expected to fall from around 2025 till 2045. The average yearly growth

[1] Thereby the EMU-debt depends on how many assets, the state and municipalities hold (apart from the assets that are included). It is technically assumed that assets in 2050 consist of amongst other thing public ownership in completely or partially publically owned public companies and re-lending etc. For the 2022 Convergence Programme a new principle for projecting public sector assets has been made, *cf box 5.3.*

in employment and labour force is expected to be considerably lower than the growth in the population above 70 years old, *cf. figure 5.3.* More elderly people implies an upward pressure on expenses related to elderly care and health. This development partly reflects the fact that the generations that enter the labour force between 2025 and 2045 will be smaller than the generations entering retirement. It also reflects the fact that the generations entering retirement in the coming years, on average, can expect to have a longer retirement period both compared to previous and later generations, *cf. figure 5.4*.

With the assumed pension eligibility age regulations, the share of employed will increase again after 2045, likewise the growth in health and elderly care conditional on demographics will decrease slightly again.

Figure 5.5
Revenue from North Sea activity falls away in the long-term

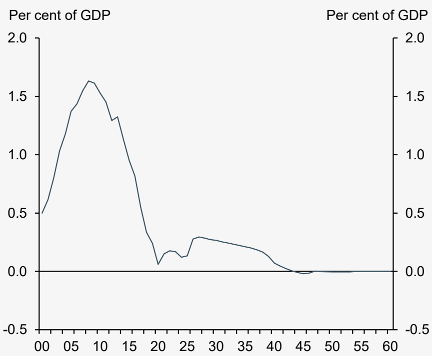
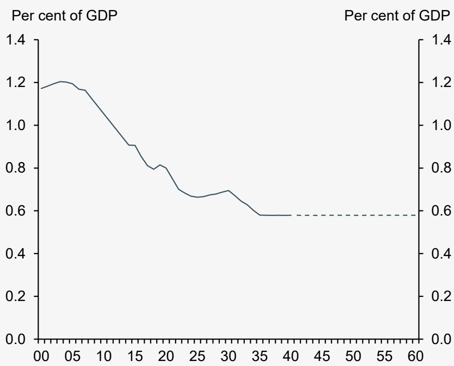


Figure 5.6
Revenue from the vehicle registration duty decrease along the increased use of low emission cars etc.



Note: Figure 5.5 shows the structural development in revenue from the North Sea. Figure 5.6 is based on information from the Ministry of Taxation based on the Danish Energy Authority's *Climate Projection 2022*.
Source: Statistics Denmark and own calculations.

The projection of the budget balance and thereby the profile of the hammock challenge is in the long-term affected by the development in revenue from activity in the North Sea. This revenue plays a much smaller role today than it did in the early 2000s and a stop for extraction in 2050 has been adopted, *cf. figure 5.5.* With the current assumptions about production, oil prices etc. revenue as a share of GDP is expected to be stabile from 2025 towards 2035-40, hereafter, it is expected to fall close to zero from around 2045.

The need for a climate transition will have an impact on the revenue collected from a number of taxes and duties for a given set of agreed upon policies. The revenue from the vehicle registration duty is in this projection based upon estimates from the Ministry of Taxation which includes the Danish Energy Authority's *Climate Projection* 2022. The revenue is updated for the years up to 2040 and includes the changes to the vehicle registration duty in the *Agreement for a Green Transition of Road Transport* (2020). The revenue is estimated to gradually decrease from around 0.7 per cent of GDP in 2021 to about 0.6 per cent of GDP in the long-term. The slightly fluctuating profile between 2025 and 2040 must be considered in connection with the phasing in of zero and low emission cars in the vehicle registration duty. The projection assumes a higher average price for electric cars than for conventional cars, which are crowded, because the operating costs, such as ownership duties and fuel, are lower which within the same total budget makes it possible to undertake a larger cost at the time of the purchase.

5.2 Importance of the Life Expectancy Indexation of the Retirement Age

The Welfare Agreement (2006) and the *Early Retirement Reform (2011)* have established an indexation of the age of eligibility for public pensions corresponding to increases in life expectancy. This entail that increase life expectancy implies more years on the labour market, *cf. figure. 5.7.* This contributes to ensuring a better balance between the share of the population that is active on the labour market and the share that is not, for example children, young people and people that have retired. When life expectancy increases, regulating the eligibility age is central for the sustainability of fiscal policy and thereby also the long-term financing of public welfare.

The life expectancy indexation principles are determined by law and are therefore considered part of the adopted politics in projections by the Ministry of Finance. However, the Danish parliament is required to pass a bill every fifth year in order to confirm the specific adjustments to the retirement age. This ensures a notice period of 15 years for adjustments of the retirement age.

In 2020, the Parliament confirmed the increase in the age limit of early retirement age to 66 in 2032 and the old age pension age to 69 in 2035 in accordance with the legislated life expectancy indexation. Given the existing indexation rules, the next adjustment will raise the old age pension age to 70 in 2040.

If the retirement age is not indexed according to legislation, the generations who retire in the coming years will have a significant increase in the number of years where they are eligible for public pensions compared to earlier generations*, cf. figure 5.8*. Specifically, if the old age pension age is held constant at 69 years, the expected retirement period will be of 21½ years in 2080. In comparison, the expected retirement period is approximately 17 years in 2035.

Figure 5.7
The indexation follows the increased life expectancy in the population

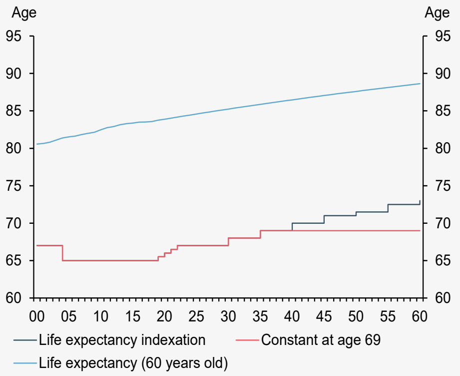
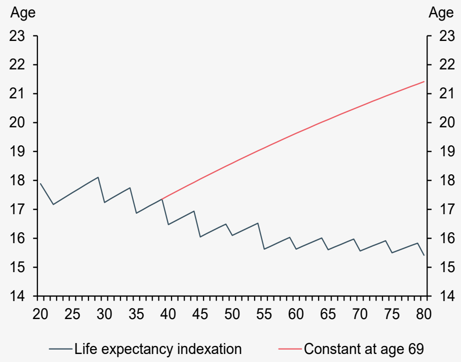


Figure 5.8
Life expectancy indexation ensures an expected life after retirement of about 15-17 years



Note: Figure 5.8 shows the expected period receiving public pensions calculated with the expected remaining life amongst 60 year olds.
Source: Statistics Denmark and own calculations.

With the retirement age held constant at 69 year, public finances would become unsustainable, *cf. figure 5.9 and 5.10*. Such a scenario would result in gradually larger and larger public deficits and the EMU-debt as a share of GDP would increase to more than 60 per cent of GDP and afterwards continue to increase. To ensure sustainable public finances, fiscal policy would have to be tightened equivalent to an annual effect on the public budget balance of approximately DKK 18 bn. – or around 0.7 per cent of GDP. Holding the retirement age constant at the latest age that was agreed upon would thereby make a considerable tightening of necessary public finances.

Figure 5.9
Sustainability of fiscal policy is ensured by the life expectancy indexation of the retirement age…

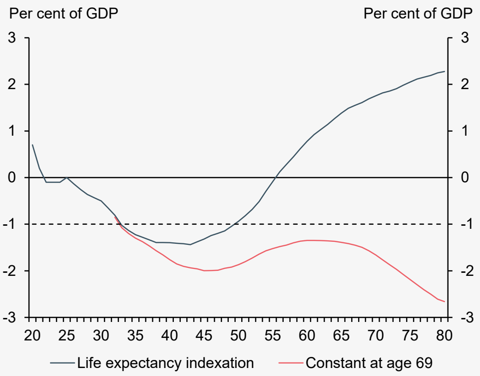
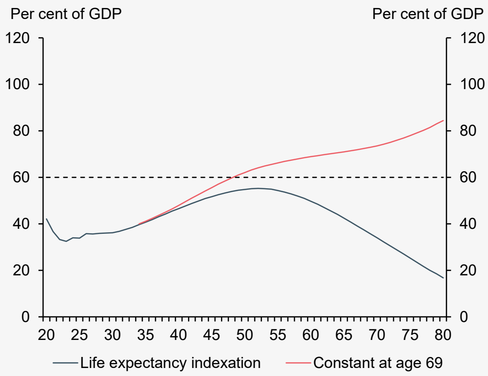


Figure 5.10
… and it keeps the EMU-debt within the legal limits



Note.: The dotted lines in figure 5.9 and 5.10 represent the limit of ½ per cent of GDP for the annual structural budget deficit according to the Danish Budget Law and the debt limit as stated by the Stability and Growth Pact, respectively.
Source: Statistics Denmark and own calculations.

However, life expectancy is increased more than earlier estimated, which contributes to the retirement age increasing more in the long term and public finances becoming exceedingly sustainable. This led the government and the parties behind the *Agreement on the right to Senior Pensions for Worn Out Workers* in August 2020 to appoint a Pension Commission. This commission presented its recommendations for a more balanced pension system in May of 2022, including a change to the life expectancy indexation, *cf. box 5.1*.

Box 5.1
Pension Commission: recommendations for a changed life expectancy indexation

In November 2020 the Government and the parties behind the *Agreement on the right to Senior Pensions for Worn Out Workers* appointed the *Pension Commission*. The Commission was tasked with investigating whether the current pension system had the right balances and if it was strong enough to sustain gradual changes in the health, life expectancy and preferences for the life of the elderly.

In the mission statement for the Commission, it was tasked with detailing the effects of a more lenient life time expectancy indexation, such that the eligibility age increases slower across generations that retire from 2040. In May 2022 the Commission has recommended that the indexation from 2045 should not be based on the remaining life time of 60 year olds, but instead of the people at the retirement age. Furthermore, the eligibility age is not increased one to one with life expectancy increases, but only with 80 per cent of the increase. Finally, the Commission recommends that the 0.4 years that is left over in 2040 in the transition to the recommended indexation is dropped. In total, the recommendations of the Commission entails that, given the current life expectancy prognosis, that the expected eligibility age for retirement in 2080 is 73 instead of 75, cf. *figure a.*

A more lenient indexation entails that the expansion of the labour force after 2040 will be smaller than with the current indexation mechanism. It will also mean that more people receive public pensions. In a calculation based on the updated baseline in the *Convergence Programme* 2022, this will mean that the sustainability indicator of the fiscal policy is reduced from about 1.4 per cent of GDP with the current indexation mechanism to around 0.7 per cent of GDP (about DKK 16 bn.), when using the indexation that the Commission recommends. The calculation still shows a long-term surplus on the public finances, given technical assumptions, *cf. figure b*.

Figure a
The Pension Commission recommends a more lenitin indexation after 2040…

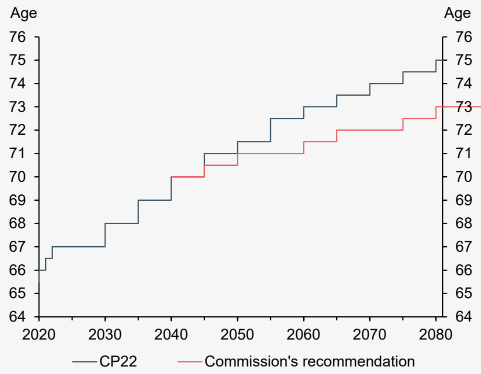
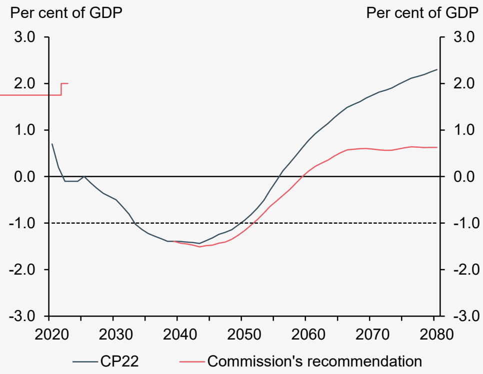


Figure b
… but there is still a long-term surplus on the public finances



Note: Figure a shows the projected retirement age at the current indexation and with the more leniont one suggested by the Pension Commission. Figure b shows the budget balance in these two scenarios. The dottet line shows the agreed upon defecit limit of -1 per cent of GDP in the Budget Law.
Source: Own calculations and *Securing a Strong Pensions System, May 2022*

5.3 The Starting Point for the Long-Term Projection – Key Principles and Assumptions

The starting point for the long-term projection is a medium-term trajectory characterized by structural budget balance in 2025. Beyond 2025, the projection is based on technical principles and assumptions, including Statistics Denmark's and DREAM's demographic projection and The Danish Energy Authority's projection of production and gradual depletion of the Danish oil and gas resources in the North Sea.

The aim is to assess the long-term outlook of public finances including whether the economic policy is maintainable beyond the planning horizon without leading to a persistent and unsustainable increase in the public debt. The medium-term trajectory is characterized by structural budget balance in 2025 and the sustainability indicator is – given the assumptions regarding the development of life expectancy and the retirement age etc. – positive and equivalent to approximately 1.4 per cent of GDP.

Fiscal sustainability is assessed under the assumption of an unchanged tax burden beyond 2025 as well as technical projection assumptions concerning public spending, e.g. that the development of expenditures per person (at a given age) follows the wage development.

The technical assumptions used in long-term projections by the Ministry of Finance as well as in the assessment of fiscal sustainability are described in further detail in box 5.2.

Box 5.2
Principles for the projection after 2025
The projection principles after 2025 generally reflect an extrapolation of the structures of the economy as they appear in 2025 with the addition of agreed initiatives with a longer time horizon.

- Nominal public consumption expenditures are projected based on an assumption that expenditures per user grow in line with wages, while the number of users of public services evolves in line with the calculated impact of changing demographics, including a correction for healthy aging. Public sector wages grow in line with private wages, and public wage expenditures make up a constant share of public consumption expenditures.

- Social benefit rates are projected in accordance with the current regulation towards 2030, including the effect from *Agreement on New Regulation of the State Pension and the Introduction of Compulsory Savings for the Public Transfer Recipients (November 2018),* where compulsory savings is gradually build up in accordance with the agreement. Beyond 2030, the social benefit rates are presumed to increase in line with wage growth in the private sector, thus assuming that the degree of compensation during unemployment etc. is constant overall.

- From the outset, labour participation rates and the propensities at which various social benefits are received are assumed constant across age, gender and origin. However, the ratios are adjusted to account for the expected effects of changes in education composition as well as the duration of immigrants' stay in Denmark and adopted reforms. This includes the effects of reforms that increase labour supply over time by increasing the retirement age according to the indexation rules of the *Welfare Agreement* (2006) and the *Early Retirement reform* (2011).

Box 5.2
Principles for the projection after 2025

- Gross public investment is projected in order to ensure that the growth in the public capital stock (gross and efficiency corrected) equals the increase in a weighted development in gross value added (GVA) in the public and private sector (weight of 70 per cent for public GVA and 30 per cent for private GVA). The private sector share reflects the public investment directed towards infrastructure etc. and thereby supports private sector production.
- Public subsidies and net foreign transfers are constant relative to GDP.
- Besides the effects of adopted tax policy, the tax burden is projected to remain unchanged after 2025, i.e. tax rates in per cent remain constant, while excise duties etc. set in nominal terms are technically assumed to increase in line with price development.
- The total revenue follows the Danish Energy Authority's projection of the Danish car stock towards 2035, hereafter, the revenue is technically assumed to make up a constant share of GDP. The fall towards 2035 must be seen in connection with the larger use of zero emission cars.
- Property taxes are projected in accordance with the rules of the *Agreement on Security Regarding Property Taxation* (May 2017). The projection accounts for the postponement of the property valuation, the agreement *Compensation for Property Owners and Continued Security Regarding Property Taxation (May 2020) etc*.
- The revenues from the North Sea activities are based on The Danish Energy Authority's long-term projection of oil and gas production and the effects of *Agreement on the Future of Fossil Extraction in the North Sea* (2020). Long-term oil price assumptions are described in chapter 2 and are based on market expectations as well as IEA's newest projection (Stated Policies Scenario in World Energy Outlook, October 2021).
- Towards 2030, the projection includes a development in energy consumption, etc., in line with the base projection (2021) of The Danish Energy Authority including The Energy Agreement (2020). Beyond 2030, the technical setting of the projection presumes a gradual reduction of the energy intensity in both consumption and production, which reflects the ongoing improvements in energy efficiency.
- A gradual normalization of interest rates is assumed. Thus, the 10-year interest rate on government bonds is assumed to increase to 1.7 per cent in 2025 and further to 4 per cent in 2050, and remaining unchanged thereafter.

For this and future projections there is a new principal for projecting the development in publicly owned financial assets in the long run, *cf. box 5.3*.

Box 5.3
New principal for projection for publical sector assets

The public sector holds a range of financial assets. The assets consists amongst other things of the government and municipalities' bank deposits, arrears, re-lending, ownership in businesses and ownership of stocks etc. Thus far, in the Ministry of Finance's medium-term projections all these assets have been projected to have the same development. In the new principal the assets are divided in two classes:

- *Interest-bearing assets*: This class consist of all types of assets that generate interest rate payment e.g. arrears, re-lending and deposits. A technical assumption is made of a certain share of GDP, based on the level of the public sectors assets in 2019, corrected for the fact that arrears are expected to depreciate towards 2025. 2019 is used as a basis year as it is the last year before the COVID pandemic, which brought along a number of aid packages, which amongst other things increased the public sectors interest bearing assets. Furthermore, it takes into account the increasing amount of re-lending in connection with political agreements, *cf. section 5.1.*

- *Non-interest-bearing assets*: This includes the public sector stock of ownership shares (publicly traded and not). It is technically assumed that the ownership share makes up a constant share of GDP stemming from the latest historic data year, *cf. figure a.*

The transition to the new principal includes no changes to the primary budget balance. The transition is also virtually neutral in terms of projections of the EMU-debt since the baseline for the EMU-debt in the latest business cycle projection is lower than that in the *Updated 2025-projection, August 2021, cf. figure b.* The transition, however, has slightly larger average reassessments on the public sector owned assets than previously, which implies that the fiscal policy sustainability indicator is improved in the order of 0.05-0.1 per cent of GDP as a result of this new principle.

Figure a
Public sector assets

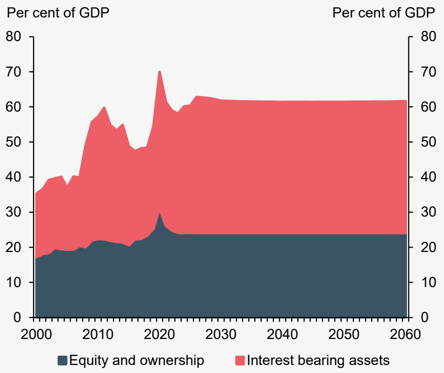
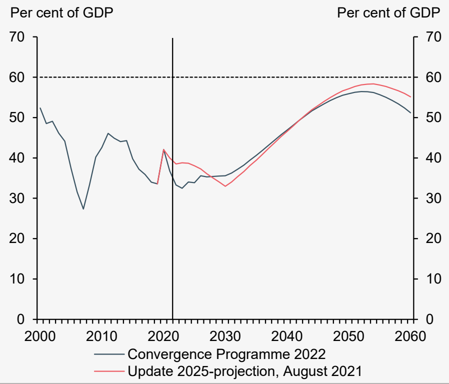


Figure b
EMU debt



Note: The red line in figure b shows the limit for the EMU-debt from the EU's Stability and Growth Pact.
Source: *Updated 2025-projection, August 2021,* Statistics Denmark and own calculations.

Appendix 5.1
Development in the Structural Budget Balance and Public Debt Compared to the Latest Projection from August 2021

The Convergence Programme 2022 includes an underlying improvment of the structural budget balance in 2025 of around 0.1 per cent of GDP compared to the projection in *Updated 2025 Projection, August 2021*. This reflects, amongst other things a higher estimated level for the structural employment and an increase of government revenue from selling CO_2-quotas. On top of this is a range of movements in opposite directions, cf. *Appendix table 5.1.*

Appendix table 5.1
Changes to the structural budget balance and fiscal policy sustainability indicator compared to *Updated 2025-projection, August 2021*

Per cent of GDP	2025	2030	HBI
Updated 2025-projection, August 2021	**0.0**	**-0.7**	**1.1**
Changes			
Capital income tax[1)]	0.1	0.1	0.1
Revenue from selling CO_2-quotas[2)]	0.05	0.05	0.05
Structural employment (base year; excluding. *Denmark can do more I* etc.)	0.05	0.05	0.05
North Sea revenue	0.00	0.05	0.00
Vehicle registration duty[3)]	-0.05	0.05	-0.05
New pension data etc.[4)]	0.0	0.05	0.15
Lower public net debt	0.05	0.05	0.0
Quicker interest rate normalization (capital taxes)	-0.1	-0.1	0.0
New principal for public sector assets (*cf. box 5.3*)	0.0	0.0	0.1
Other factors, rounding etc.	0.0	0.0	-0.1
Convergence Programme 2022, before adjustment for target of structural budget balance in 2025	**0.1**	**-0.4**	**1.4**
Increased public investment frame in 2024 and 2025	-0.1	-0.1	-0.05
Convergence Programme 2022	**0.0**	**-0.5**	**1.4**

1) Updated structural revenue is calculated based on data for household stock for stocks, ownership shares and investment certificates with an unchanged method.
2) Upwards adjustment for the estimate of revenue from selling CO_2-quotas is primarily due to an upwards adjustment to the price of CO_2-quotas as compared with the projection in *Updated 2025-projection, August 2021*.
3) The updated structural revenue is calculated using information from the Ministry of Taxation including the *Climate Projection 2022* from the Danish Energy Authority.
4) New pension data etc. covers amongst other things a new data basis and updated assumption about the distribution of payments in taxable and deductable schemes at the time of payment.

Note: Numbers are rounded to the nearest 0.05 per cent of GDP.
Source: Statistics Denmark, Updatet 2025-projection, August 2021 and own calculations.

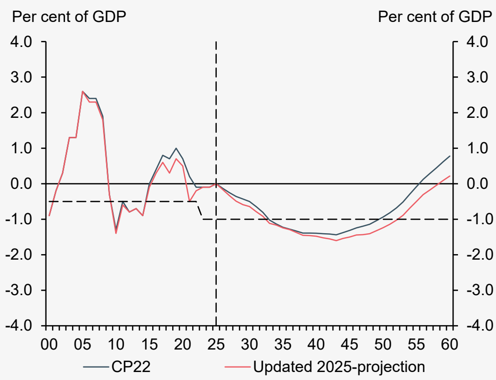
After 2025 the projection is based on technical assumptions. In 2030 the budget balance is about -0.5 per cent of GDP. That is an improvement compared to *Updated 2025 Projection, August 2021*, where the budget balance was estimated at -0.7 per cent of GDP in 2030. The improvment can be in seen in connection with the previously mentioned conditions for 2025 (higher structural employment and CO_2-quota revenue), along with these conditions are higher revenues from oil and gas extraction in the North Sea and a slightly higher estimated level for the structural revenue from the vehicle registration duty.

The fiscal policy sustainability indicator in the projection is positive and corresponds to 1.4 per cent of GDP. That is higher than in *Updated 2025 Projection, August 2021,* where the indicator was estimated at 1.1 per cent of GDP. The adjustment should be viewed in connection with new information and data on payments to and from pension schemes, along with the new projection principal for the public sector's assets and liabilities, *cf. box 5.3.*

The positive fiscal policy sustainability must – as in the projection from August – be seen in connection with the long-term recovery of public finances beyond the middle of the century. Compared to the latest projection from August 2021 there is a slightly smaller dip in the hammock profile for the budget balance, *cf. appendix figure 5.1.*

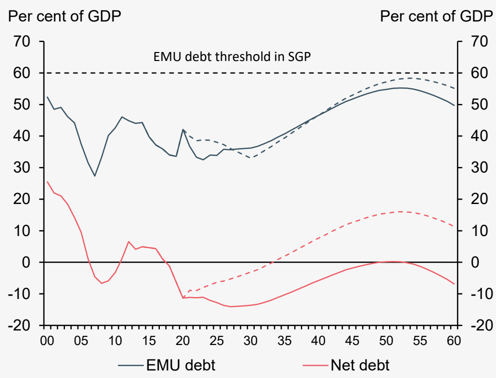
Appendix figure 5.1

The hammock-challenge is estimated to be slightly smaller compared to earlier…



Appendix figure 5.2

… and the EMU and net debt er generally low



Note: The doted lines in appendix figure 5.2 reflect the EMU-debt and the net debt in the *Updated 2025-projection, August 2021.*
Source: Statistics Denmark, *Updated 2025-projection, August 2021* and own calculations.

At the end of 2021, net public debt amounted to approximately -11 per cent of GDP. In 2025 net public debt is expected to amount to around -13 per cent of GDP and it is expected to improve in the years after, *cf. appendix figure 5.2*. The EMU-debt is estimated to amount to almost 34 per cent of GDP in 2025, which is about 5 per cent of GDP lower than the august projection. The EMU-debt is below 60 per cent of GDP in the entire projection.

6. Public finances and institutional framework

6.1 Institutional framework

Economic policy is planned within the framework given by the Danish Budget Law and the government's 2025 plan along with the Stability and Grow Pact. The framework specifies concrete objectives for public finances in the form of long-term sustainability and structural budget balance in 2025. The objectives are supported by multiannual expenditure ceilings, which are set for a continuous four-year forward-looking period for central government, municipalities and regions respectively. The expenditure ceilings are based on a medium-term projection, which implements a precautionary principle, whereby only the impact of reforms and initiatives agreed upon by a majority in the Danish Parliament are incorporated.

The expenditure ceilings are subject to continuous evaluation and monitoring to ensure compliance. Economic sanctions support compliance with the adopted expenditure ceilings, and compliance with approved budgets has strengthened since the introduction of the Budget Law.

With the Budget Law from 2012, a structural budget deficit limit of ½ per cent of GDP has been adopted. Thus, the structural budget balance, as the key measure in planning and monitoring fiscal policy, has been fixed by law. The balance requirement of the Fiscal Compact is operationalized by the Budget Law. Furthermore, the Budget Law introduced binding and multiannual expenditure ceilings for central government, municipalities and regions, respectively, starting from 2014.

With the *National compromise on Danish security policy* (March 2022), it was agreed to lower the Budget Law's deficit limit to 1 per cent of GDP with effect from the 1st of July 2022.

Experiences with the Budget Law 2014-2020 (April 2022) analysis the impact of the Budget Law. The analysis show that implementing the expenditure ceilings for the central government, municipalities and regions has contribute to improve expenditure planning and meanwhile it has not had any noticeable negative consequences. The analysis also shows that lowering the deficit limit to 1 per cent of GDP is fully in line with a responsible fiscal policy with a low and stable public debt and does not risk Denmark's AAA credit rating.

Key elements of the Danish Budget Law are described in box 6.1.

Box 6.1
Key elements of the Danish Budget Law

- Within the framework of a sustainable fiscal policy, a budget balance requirement is introduced. The annual structural budget balance must not exceed a deficit of ½ percent of GDP at the time of the budget proposal for a given fiscal year, unless extraordinary circumstances are present. Moreover, an automatic correction mechanism is activated in case of significant estimated deviation from the budget balance requirement.

- Expenditure ceilings support compliance with the overall fiscal policy targets. The ceilings set legally binding limits for expenditures in central government, municipalities and regions, respectively. The expenditure ceilings are to be adopted by the Danish Parliament (Folketinget) and cover a continuous forward-looking period of 4 years. Improved budget management and economic sanctions support compliance with the expenditure ceilings.

- The Danish Economic Council continually (annually) assesses long-term fiscal sustainability and the mediumterm development in the budget balance, and further that the expenditure ceilings are complied with and aligned with the medium-term fiscal objectives.

The key focal points for Danish economic policy – fixed exchange rate policy and stability oriented fiscal policy – are as follows: Since 1982, Denmark has pursued a fixed exchange rate policy, initially against the German/Deutsche Mark (DEM), and since 1999 against the euro (EUR). Due to the fixed exchange rate policy, the Danish monetary policy is solely aimed at maintaining a stable level of the krone vis-à-vis the euro. A responsible and stability-oriented economic policy contributes to a credible fixed exchange rate policy, which supports continued low interest rates.

Fiscal policy is planned to ensure that the annual structural deficits do not exceed the limits set out in the Budget Law and furthermore that the target of a structural budget balance is achieved in 2025. Fiscal policy is planned in order to achieve a long-term sustainable development in public finances (i.e. the so-called sustainability indicator HBI must always be at least zero). As stated in the Budget Law, fiscal policy is subject to a precautionary principle, which implies that planned development of public spending can rely only on reforms and initiatives backed by a majority in the Danish Parliament.

The expenditure policy supports compliance with the fiscal policy objectives through expenditure ceilings for central government, municipalities and regions that normally cover approximately ¾ of total public expenditures. The expenditure ceilings support that public expenditure evolves in accordance with medium-term fiscal objectives and priorities.

The government's tax policy is based on the notion that the taxes should not increase for ordinary Danes. Furthermore, the tax policy is based on a number of political agreements. Since the August projection, the Deal for the Budget Bill for 2022 was agreed upon which includes getting rid of tax reductions from crafts services. On top of this, as a part of the Deal for a new reform package for the Danish economy a number of policies were adopted including an increase in the limit of the employment deduction and a decrease in the electricity duty.

6.2 Flexibility in the institutional framework in the light of exceptional circumstances

The total framework of the Budget Law takes into account that situation can arise where there is a need to deviate from the regular framework for expenditure and fiscal policy. This flexibility has been used in connection to the COVID pandemic and is expected to also be usable in the current situation with the Russian invasion of Ukraine.

COVID pandemic
Expenses directly related to containing and mitigating the COVID pandemic are considered one time expenses and are therefore neutral in terms of the structural budget balance. This includes expenses to compensate businesses but also additional expenses directly related to handling the pandemic.

A large part of the additional expenses concern extraordinary authority effort (e.g. purchasing of protective equipment, infection tracing, test, purchasing of vaccines etc.) along with compensation schemes etc. for businesses, which under normal circumstances would be within the expenditure ceiling for the central government, municipalities and regions.

In order to support the flexibility needed to deal with the COVID-19 crisis, executive orders have been issued for both 2020 and 2021, which exempt COVID-19 related additional expenses from the expenditure ceilings in the state, municipalities and regions. The executive orders have been issued in accordance with § 12 of the Budget Law, which authorizes the Minister of Finance to lay down detailed rules on the composition of the state, municipal and regional expenditure ceilings. In 2020-2022, a number of COVID pandemic related expenses are those separate from the expenditure ceilings.

Russian invasion of Ukraine
The budget balance requirement can be deviated from temporarily, if it is due to exceptional circumstances – provided that the temporary deviation does not risk the sustainability of the fiscal policy. The current situation stemming from the Russian invasion of Ukraine and the considerable amount of refugees coming to Denmark, an up scaling of security preparedness and very large increasing in energy prices etc. is assessed to make up an exceptional situation outside the government’s control, which has essential implications for public finances (an exceptional circumstance)

For an exceptional circumstance outside the government’s control, the EU rules in the Growth and Stability Pact dictate that temporary expenses directly related to the specific incident can be held outside the framework for fiscal policy. In the current situation, the structural budget balance will be worsened beyond the deficit limit corresponding to the additional expenses that follow from the situation in Ukraine, if it becomes relevant.

An executive order is issued in accordance with § 12 of the Budget Law, which exempts expenses – that are encompassed by the exemption regulation – for the central government, municipal and regional expenditure ceilings.

Appendix tables according to EU's Code of Conduct

Table 1a
Macroeconomic prospects

	2021	2021	2022	2023	2024	2025	2026	2027
	Data		Prognosis		Medium-term			
	Bn. DKK	Change, per cent						
Real GDP	2,189	4.7	3.4	1.9	1.2	0.6	0.8	0.9
Nominal GDP	2,497	7.2	5.2	3.1	3.4	2.9	2.7	2.8
Components of real GDP								
Private consumption expenditure	1,015	4.2	2.6	2.0	2.0	1.8	1.6	1.5
Government consumption expenditure[1]	537	3.7	0.8	-0.3	0.0	1.5	1.3	1.3
Gross fixed capital formation	496	5.6	2.4	5.3	0.9	0.3	0.5	0.3
Changes in inventories [2]		0.3	0.1	-0.2	0.0	0.0	0.1	0.0
Exports of goods and services	1,279	7.8	5.1	3.7	3.3	1.1	0.3	0.9
Imports of goods and services	1,164	8.2	3.1	4.0	3.5	2.4	1.2	1.4
Contributions to real GDP growth		Percentage points						
Final domestic demand		4.1	1.9	2.1	1.2	1.3	1.2	1.1
Changes in inventories		0.3	0.1	-0.2	0.0	0.0	0.1	0.0
External balance of goods and services		0.3	1.4	0.1	0.0	-0.7	-0.5	-0.2

1) Government consumption in table 1a is including depreciation. Public consumption growth in 2020 is calculated using the output method. Calculated using the input method, including depreciation, public consumption growth is 0.6 per cent in 2020. The estimated growth in public consumption from 2021 onwards is assumed to be the same for the input and output methods.
2) Contribution to GDP growth.
Source: Statistics Denmark and own calculations.

Table 1b
Price developments

	2021	2021	2022	2023	2024	2025	2026	2027
	Level	Rate of change, per cent						
GDP-deflator	114.1	2.4	1.8	1.2	2.2	2.3	1.9	1.9
Private consumption deflator	112.2	2.1	5.2	1.8	2.0	1.9	1.8	1.8
Consumer price index	112.9	1.8	5.2	1.8	2.0	1.9	1.8	1.8
HICP	111.6	1.9	5.2	1.8	2.1	2.1	1.9	1.8
Net price index	112.6	1.8	6.7	2.2	2.0	2.0	1.8	1.8
Investment deflator	112.8	1.7	3.5	1.6	1.5	1.3	1.8	1.8
Export price deflator	116.3	7.9	3.5	-2.7	1.5	1.4	1.3	1.3
Import price deflator	113.3	8.1	7.2	-1.9	1.2	0.8	1.4	1.5

Note: For all price indices, 2010=100.
Source: Statistics Denmark and own calculations.

Table 1c
Labour market development

	2021	2021	2022	2023	2024	2025	2026	2027
		Rate of change, per cent						
Employment, (1,000 persons)	3,060	2.6	2.3	0.5	-0.5	-0.5	-0.4	-0.2
Employment, hours worked (mill. hours)	4,172	4.2	2.2	0.4	-0.4	-0.5	-0.4	-0.2
		Pct.						
Unemployment rate (per cent) harmonized EU-definition 1)		5.2	4.3	4.3	4.1	4.3	4.6	4.8
		Rate of change. per cent						
Labour productivity, persons (DKK 1,000)2)	614	1.9	1.4	1.3	1.6	1.1	1.1	1.0
Labour productivity, hours worked (DKK)2)	450	0.3	1.5	1.4	1.5	1.1	1.1	1.0
Compensation of employees (DKK bn.)3)	1,289	6.2	3.8	4.2	3.4	3.0	3.0	3.1
Compensation per employee4)	462	3.1	1.5	3.6	3.8	3.5	3.4	3.4

1) The number corresponds to the EU-harmonized unemployment in per cent of the labour force. The data is based on Statistics Denmark's Labour Force Survey (AKU).
2) Productivity is measured as GVA.
3) Based on current price, i.e. growth rates are in nominal terms-
4) Calculated as compensation per employed wage earner.
Source: Statistics Denmark and own calculations.

Table 1d
Sectoral balances

	2021	2022	2023	2024	2025	2026	2027
	Per cent of GDP						
Net lending/borrowing vis-a-vis the rest of the world	8.3	6.5	5.9	9.8	8.9	7.8	7.2
Of which:							
- Balance of goods and services	6.7	6.0	5.3	5.4	4.9	4.3	3.9
- Balance of primary income and transfers	1.7	0.5	0.7	4.5	4.0	3.6	3.4
- Capital accounts	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Net lending/borrowing of the private sector	6.1	5.9	5.8	9.3	8.6	7.3	7.2
Net lending/borrowing of general government	2.3	0.6	0.2	0.6	0.4	0.6	0.1
Statistical discrepancy	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Statistics Denmark and own calculations.

Table 2a
General government budgetary prospects

	2021	2021	2022	2023	2024	2025	2026	2027
	Bn. DKK	**Per cent of GDP**						
Net lending by sub-sector								
General government	58.7	2.3	0.6	0.2	0.6	0.4	0.6	0.1
Central government	55.2	2.2	0.6	0.2	0.6	0.4	0.6	0.1
Local government	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Social security funds	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
General government								
Total revenue	1,305	52.3	47.9	47.9	47.7	47.8	48.7	48.7
Total expenditure	1,246	49.9	47.3	47.7	47.1	47.4	48.1	48.7
Net lending/borrowing	58.7	2.3	0.6	0.2	0.6	0.4	0.6	0.1
Interest expenditures	13.5	0.5	0.6	0.5	0.4	0.4	0.5	0.5
Primary balance1)	72.2	2.9	1.3	0.7	1.0	0.8	1.1	0.6
One-off and other temporary measures2)	16.2	0.6	-1.3	-1.5	-0.8	-0.7	0.0	0.0
Selected components of revenue								
Total taxes3)	1,180	47.3	43.1	43.1	42.9	43.0	43.7	43.7
Taxes on production and imports	393	15.8	15.4	15.4	15.3	15.3	15.3	15.3
Current taxes on income and wealth etc.	779	31.2	27.4	27.5	27.4	27.5	28.2	28.2
Capital taxes	6.6	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Social contributions4)	1.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Property income.5)	24.8	1.0	1.0	1.0	0.9	0.8	0.9	1.0
Other (residual)6)	99.5	4.0	3.8	3.8	3.9	3.9	4.0	4.1
Total revenues	1,305	52.3	47.9	47.9	47.7	47.8	48.7	48.7
p.m.: Tax burden7)	1,184	47.4	43.3	43.3	43.0	43.2	43.9	43.8

Table 2a (continued)
General government budgetary prospects

	2021	2021	2022	2023	2024	2025	2026	2027
	Bn. DKK	**Per cent of GDP**						
Selected components of expenditure								
Compensation of employees and intermediate consumption	600	24.0	23.3	23.1	23.0	23.3	23.7	23.9
- Compensation of employees	373	15.0	14.4	14.4	14.4	14.6	14.8	15.0
- Intermediate consumption	227	9.1	8.9	8.7	8.6	8.8	8.9	9.0
Total social transfers	421	16.8	16.0	16.0	16.2	16.4	16.6	16.8
- Social transfers in kind[6)]	32.9	1.3	1.3	1.3	1.3	1.3	1.3	1.3
- Social transfers other than in kind	394	15.8	14.9	14.9	15.1	15.3	15.5	15.7
Interest expenditures	13.5	0.5	0.6	0.5	0.4	0.4	0.5	0.5
Subsidies	62.9	2.5	1.5	1.5	1.5	1.5	1.5	1.5
Gross fixed capital formation	81.3	3.3	3.2	3.6	3.6	3.4	3.5	3.5
Capital transfers	10.4	0.4	0.7	1.2	0.4	0.4	0.4	0.4
Other (residual)[6)]	51.1	2.0	1.7	1.7	1.8	1.8	1.9	1.9
Total expenditure	1,246	49.9	47.3	47.7	47.1	47.4	48.1	48.7
p.m.: Public consumption (nominal)	609	24.4	23.7	23.5	23.4	23.8	24.1	24.4

1) Defined as the EDP-definition of net lending plus the EDP-definition of interest expenditures.
2) Based on the calculation of the structural budget balance and includes temporary variations in revenues from pension yield taxation, North Sea activities, net interest, corporate taxes and other special items.
3) Defined as the sum of taxes on production and imports, current taxes on income, wealth, etc. and capital taxes. Does not include compulsory social contributions, which are traditionally included in the tax burden.
4) Does not include voluntary and imputed social contributions, since these are not included in the tax burden .
5) Includes interest income and dividends and land rent etc .
6) Statistic Denmark does not publish figures for all the subgroups (P.11+P.12+P.131+D.39+D.7+ D.9 (other than D.91), D.6311, D.63121, D.63131, D.29+D.4 (other than D.41) +D.5+D.7+D.9+P.52+ P.53+K.2+D.8), and no estimates are available for these individual components in the projections.
7) Defined as the sum of taxes on production and imports (incl. those collected by the EU), current taxes on income, wealth etc. and capital taxes and compulsory social contributions .

Source: Statistics Denmark and own calculations.

Table 2b
No-policy change projections

	2021	2021	2022	2023	2024	2025	2026	2027
	Bn. DKK	**Per cent of GDP**						
Total revenue at unchanged policies	1,304.7	52.3	48.0	47.8	47.8	47.9	-	-
Total expenditure at unchanged policies	1,246.0	49.9	48.9	49.5	48.9	49.3	-	-

Note.: The projections of total expenditure under unchanged policies should be seen in the context of the temporary compensation schemes etc. related to the COVID pandemic.
Source: Statistics Denmark and own calculations

Table 2c
Amounts to be excluded from the expenditure benchmark

	2021	2021	2022	2023	2024	2025	2026	2027
	Bn. DKK	**Per cent of GDP**						
Expenditure on EU programmes fully matched by EU funds revenue	0	0	0	0	0	0	0	0
- Of which: investment fully matched by revenue from EU funds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Cyclical unemployment benefit expenditure	20.9	0.8	0.6	0.6	0.5	0.6	0.6	0.6
Effect of discretionary revenue measures	3.40	0.1	0.0	0.2	-0.3	0.0	-	-
Revenue increases mandated by law	0	0	0	0	0	0	0	0

Note.: The cyclical unemployment benefit expenditure consists of the cost of unemployment benefits and social assistance for unemployed (both excluded the cost of people in activation programmes).
Source: Statistics Denmark and own calculations.

Table 3
General government expenditure by function

	COFOG	2020	2025
		Per cent of GDP	
General public service	1	6.3	
Defence	2	1.2	
Public order and safety	3	1.0	
Economic affairs	4	5.1	
Environmental protection	5	0.4	
Housing and community amenities	6	0.2	
Health	7	8.9	
Recreation, culture and religion	8	1.7	
Education	9	6.4	
Social protection	10	22.4	
Total expenditures[1)]	TE	52.4	47.4

Note: Short-term and longer-term projections do not include general government expenditures by function. The focus of both short-term and longer-term projections is public expenditures by type of transaction
1) The estimate for the total expenditure-to-GDP ratio in Statistics Denmark's calculation deviates from the estimate in table 2a due to definitional differences in the approach of calculation (table 2a includes depreciations in public consumption, which is not the case in Statistics Denmark's approach).
Source: Statistics Denmark and own calculations.

Table 4
General government debt developments

	2021	2022	2023	2024	2025	2026	2027
				Per cent of GDP			
Gross debt	36.7	33.3	32.5	34.0	33.9	35.8	35.6
Change in gross debt ratio[1)]	-5.4	-3.4	-0.8	1.5	-0.1	1.9	-0.1
Change in gross debt[2)]	-2.5	-1.6	0.2	2.5	0.9	2.8	0.8
Contributions to change in gross debt							
Primary balance[3)]	-2.9	-1.3	-0.7	-1.0	-0.8	-1.1	-0.6
Interest expenditure[4)]	0.5	0.6	0.5	0.4	0.4	0.5	0.5
Other factors[5)]	-0.2	-1.0	0.4	3.1	1.2	3.4	0.9
p.m. implicit interest rate on debt[6)]	1.4	1.8	1.5	1.2	1.3	1.4	1.6
Other relevant variables							
Central government account in Danmarks Nationalbank	6.0	4.6	2.1	2.4	2.3	2.1	2.1
Public net debt[7)]	-11.1	-11.2	-11.1	-12.1	-12.8	-13.7	-14.0
Net debt in central and local governments[7)]	-11.1	-11.2	-11.0	-12.1	-12.8	-13.7	-14.0

1) Change in gross debt ratio is defined as $D_t/GDP_t - D_{t-1}/GDP_{t-1}$, where D is public debt measured in nominal terms (DKK).
2) Change in gross debt is defined as $D_t/GDP_t - D_{t-1}/GDP_t$, where D is public debt measured in nominal terms (DKK).
3) As defined in table 2a.
4) As defined in table 2a.
5) At present information is not available to split stock-flow adjustment into subgroups.
6) Proxied by interest expenditures divided by the debt level of the previous year.
7) In the estimate of the public net debt and the net debt in central and local governments, the central governments deposit in Danmarks Nationalbank together with the central governments additional assets are subtracted.

Source : Statistics Denmark and own calculations.

Table 5
Cyclical developments

	2021	2022	2023	2024	2025	2026	2027
				Per cent			
Real GDP growth	4,7	3,4	1,9	1,2	0,6	0,8	0,9
				Per cent of GDP			
Net Lending of general government	2,3	0,6	0,2	0,6	0,4	0,6	0,1
Interest expenditure[1)]	0,5	0,6	0,5	0,4	0,4	0,5	0,5
One-off effects	0,6	-1,3	-1,5	-0,8	-0,7	0,0	0,0
- Of which, revenue	2,9	-0,4	-0,7	-0,8	-0,6	0,0	0,0
- Of which, expenditure	-2,3	-0,9	-0,8	0,0	-0,1	0,0	0,0
				Per cent			
Potential GDP growth[2)]	0,8	3,0	2,5	1,6	1,1	1,2	1,3
				Percentage points			
Of which, contributions from:							
- Labour	0,4	0,8	0,4	0,0	0,0	0,1	0,2
- Capital	0,8	0,8	0,9	0,9	0,9	0,8	0,7
- Total factor productivity	-0,4	1,5	1,2	0,7	0,2	0,4	0,4
				Per cent of GDP			
Output gap	2,5	2,8	2,3	1,8	1,4	0,9	0,5
Cyclical components[3)]	1,5	2	1,8	1,4	1,1	0,7	0,4
Structural balance[4)]	0,2	-0,1	-0,1	-0,1	0	-0,1	-0,3
Primary structural balance[4)]	-0,2	-0,5	-0,5	-0,4	-0,3	-0,4	-0,5

1) As defined in table 2a.
2) Including a contribution from indirect taxes.
3) The calculation of the cyclical component is based on both the output gap and the employment gap.
4) The structural budget balance is not calculated on EDP-basis. The calculations of structural budget balance are based on public finances according to national account principles. The primary structural budget balance is based on an actual primary balance defined via net interest expenditures and not gross interest expenditures.

Source: Statistics Denmark and own calculations.

Table 6
Divergence from previous update

	2021	2022	2023	2024	2025	2026	2027
				Rate of change, per cent			
Real GDP growth							
Previous update	3.8	2.8	1.5	1.0	0.8	1.3	1.4
Current update	4.7	3.4	1.9	1.2	0.6	0.8	0.9
Difference	0.9	0.6	0.5	0.2	-0.1	-0.5	-0.5
				Per cent of GDP			
Output gab (per cent of GVA)							
Previous update	0.5	1.1	0.7	0.4	0.0	0.0	0.0
Current update	2.5	2.8	2.3	1.8	1.4	0.9	0.5
Difference	2.0	1.8	1.6	1.5	1.4	0.9	0.5
General government net lending							
Previous update	-1.9	0.4	-0.5	-0.4	-0.5	-0.1	-0.4
Current update	2.3	0.6	0.2	0.6	0.4	0.6	0.1
Difference	4.3	0.3	0.6	1.0	0.9	0.7	0.5
General government gross debt							
Previous update	40.0	38.5	38.8	38.7	38.0	37.3	36.1
Current update	36.7	33.3	32.5	34.0	33.9	35.8	35.6
Difference	-3.2	-5.2	-6.3	-4.7	-4.2	-1.5	-0.4

Source: Own calculations.

Table 7
Long-term sustainability of public finances

	2007	2010	2020	2030	2040	2050	2060
				Per cent of GDP			
Total expenditure	48.9	55.5	52.4	49.5	51.6	51.7	49.5
Of which:							
Age-related expenditure	26.5	30.0	28.1	28.3	29.1	28.4	26.8
Pension expenditure	9.1	10.0	9.7	9.4	9.2	8.4	7.2
- Old-age and early pensions	7.1	7.8	7.9	7.5	7.3	6.4	5.1
- Other pensions (disability, survivors)	2.0	2.2	1.9	1.9	1.9	2.0	2.1
Occupational pensions (if in general government)	-	-	-	-	-	-	-
Health care[1)]	5.6	6.3	6.2	5.9	6.1	6.1	5.9
Long-term care[1)]	2.7	3.0	3.0	3.3	3.8	4.1	4.3
Education expenditure	4.8	5.5	5.1	4.6	4.8	4.9	4.6
Other age-related expenditures	4.4	5.2	4.1	5.1	5.2	4.9	4.8
Interest expenditure	1.6	1.9	0.5	0.7	1.5	2.4	2.2
Total revenue	53.9	52.8	52.2	49.0	50.2	50.8	50.3
Of which:							
- Property income[2)]	2.4	2.4	1.0	1.0	1.3	1.7	1.7
- From pensions contributions	-1.3	-0.9	-0.6	-0.2	0.0	0.2	0.2
Pension reserve fund assets	124.2	139.3	193.0	202.4	225.9	239.6	248.2
Of which:							
Public pension fund assets	0.1	0.0	0.1	0.0	-0.1	-0.2	-0.3

Table 7 (continued)
Long-term sustainability of public finances

	2007	2010	2020	2030	2040	2050	2060
				Per cent			
Assumptions							
Labour productivity growth	-1.7	4.3	-1.8	1.1	0.8	0.9	0.9
Real GDP growth[3)]	0.9	1.9	-2.1	1.2	1.2	1.4	1.4
Participation rate, males (aged 20-64)	82.9	80.1	81.3	81.5	82.2	82.3	82.5
Participation rate, females (aged 20-64)	73.9	72.6	74.3	74.7	75.4	75.9	75.9
Total participation rate (aged 20-64)	78.5	76.4	77.8	78.1	78.8	79.2	79.3
Unemployment rate[4)]	3.5	5.8	4.4	3.3	3.3	3.3	3.3
Structural unemployment[4)]	4.8	4.6	3.9	3.3	3.3	3.3	3.3
Population aged 65+, over total population	15.4	16.5	20.0	22.8	24.8	24.5	24.9

1) The cost of nursing homes is included in long-term care.
2) Includes public revenues from interest income and dividends.
3) In some years after 2025 GDP growth is effected by the regulation of early- and old age person ages in line with longevity.
4) Registered gross unemployment (including people in activation programmes).
Source: Statistics Denmark and own calculations.

Table 7a
Contingent liabilities

	2021	2022
	Per cent of GDP	
Public guarantees	13.9	13.2
- of which: linked to the financial sector	1.1	1.1

Note: Does not include deposit guarantees. Public guarantees consists of "statsforskrivninger", guarantees concerning loans and other guarantees. Guarantees linked to the financial sector consists of the Financial Stability Company.
Source: Government accounts for the fiscal year 2021.

Table 8
Basic assumptions

	2021	2022	2023	2024	2025	2026	2027
Short term interest rate (annual average)	-0.2	0.1	1.1	0.7	1.0	1.3	1.5
Long term interest rate (annual average)	-0.1	1.0	1.3	1.5	1.7	1.9	2.1
USD/EUR exchange rate (annual average)	118.3	111.7	110.1	111.8	119.0	119.0	119.0
Nominal effective exchange rate (1980=100)	102.9	102.1	101.6	101.6	101.6	101.6	101.6
World excluding EU, GDP growth[1)]	6.2	3.7	3.7	3.6	3.7	3.6	3.6
EU GDP growth[1)]	5.4	2.9	2.5	2.1	1.9	1.8	1.7
Growth of relevant foreign markets[1) 2)]	9.5	5.5	4.5	3.4	3.2	3.1	3.1
World import volumes, excluding EU[1) 3)]	11.1	5.3	4.4	3.8	3.8	3.7	3.6
Oil prices (Brent), USD per barrel	70.7	103.5	98.6	94.4	91.5	89.3	87.7

1) Based on IMF World Economic Outlook April 2021.
2) Calculated as a weighted average of the import growth of Denmark's 36 most important trading partners, where the weights reflect the country's importance for Danish industrial exports in 2020.
3) Import growth in the world excluding the EU is based on IMF estimates for world and euro area import growth. Euro area import growth is used as a proxy for total EU import growth. It is assumed that import growth in the EU is included with a weight of 32.5 per cent, which is based on the latest full forecast of the European Commission, *European Economic Forecast, Autumn 2021*.

Source: Statistics Denmark, EU Commission Autumn Forecast November 2020, IMF World Economic Outlook April 2021, OECD Economic Outlook October 2020, Macrobond, Nordea Markets and own calculations

Table 9a

Impact of expected repatriation of funds from the EU Recovery and Resilience Facility

	2021	2022	2023	2024	2025	2026	2027	2028
	Per cent of GDP							
Revenue from RRF grants								
1. RRF GRANTS as included in the revenue projections	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0
2. Cash disbursements of RRF GRANTS from EU	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0
Expenditure financed by RRF grants								
3. Total current expenditure	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4. Total capital expenditure	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- Gross fixed capital formation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- Capital transfers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other costs financed by RRF grants								
5. Reduction in tax revenue	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
6. Other costs with impact on revenue	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7. Financial transactions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Own calculations.

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Ministry of Finance
Christiansborg Slotsplads 1
1218 Copenhagen K

Tel. : +45 7228 2400
E-mail: fm@fm.dk

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Ministry of Finance
Christiansborg Slotsplads 1
1218 Copenhagen K
Tlf.: 7228 2400
E-mail: fm@fm.dk