Economic developments in Norway

Last year was characterised by high inflation, interest rate hikes and a rebound in economic activity following the pandemic. For a little over a year, activity in the Norwegian economy has been close to or slightly higher than what we regard as a trend level, but growth has been flagging recently. At the same time, pressures in the labour market are relatively high. The key policy rate has been raised by 1.25 percentage points so far this year and is currently 4.0 per cent. Inflation measured by the consumer price index (CPI) has fallen since peaking in October last year, but underlying inflation remains

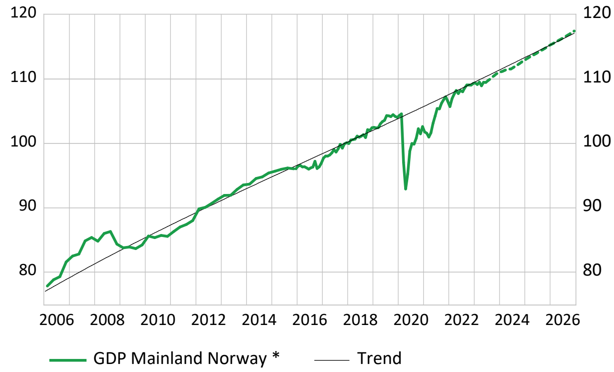
Table 1. Main macroeconomic aggregates. Accounts figures. Change from previous period. Per cent

	2021	2022	Seasonally adjusted			
			22:3	22:4	23:1	23:2
Demand and output						
Consumption in households etc.	4.4	6.9	0.2	4.4	-5.4	0.6
General government consumption	5.0	0.1	0.2	1.2	0.8	0.6
Gross fixed investment	-0.8	4.3	-0.0	1.3	-1.1	0.2
Extraction and transport via pipelines	-2.1	-6.5	-1.9	6.2	-6.3	8.2
Mainland Norway	1.7	6.7	0.3	0.6	-0.9	-1.2
Final domestic demand from Mainland Norway[1]	4.0	4.9	0.3	2.6	-2.7	0.2
Exports	5.8	5.9	4.6	-0.9	1.3	1.4
Traditional goods	4.6	-0.3	4.8	-0.6	1.1	2.5
Crude oil and natural gas	2.9	0.3	4.3	-1.4	0.4	4.7
Imports	1.7	9.2	2.7	0.4	-0.3	1.7
Traditional goods	5.7	2.5	2.5	1.3	-3.2	0.3
Gross domestic product	3.9	3.3	1.2	-0.1	0.3	0.0
Mainland Norway	4.2	3.8	0.5	0.5	0.2	-0.0
Labour market						
Total hours worked. Mainland Norway	2.5	3.9	0.4	0.3	0.4	0.2
Employed persons	1.2	3.9	0.5	0.5	0.4	0.1
Labour force[2]	1.2	1.4	0.0	-0.0	0.7	0.4
Unemployment rate. level[2]	4.4	3.2	3.2	3.2	3.7	3.3
Prices and wages						
Annual earnings	3.5	4.3	..	..	..	..
Consumer price index (CPI)[3]	3.5	5.8	2.1	1.4	1.3	1.6
CPI adjusted for tax changes and excluding energy products (CPI-ATE)[3]	1.7	3.9	1.7	1.5	1.5	1.8
Export prices. traditional goods	13.2	29.1	1.6	0.9	0.3	-0.9
Import prices. traditional goods	5.3	18.0	3.4	-0.4	1.6	0.8
Balance of payment						
Current balance. bill. NOK[4]	574	1680	588	359	280	172
Memorandum items (unadjusted level)						
Money market rate (3 month NIBOR)	0.1	1.3	1.5	2.4	2.8	3.2
Lending rate. credit loans[5]	0.5	0.7	2.9	3.8	4.4	4.8
Crude oil price NOK[6]	609	951	973	903	840	832
Importweighted krone exchange rate. 44 countries. 1995=100	108.8	110.0	110.8	112.3	116.8	122.3
NOK per euro	10.16	10.10	10.06	10.39	10.99	11.66

[1] Consumption in households and non-profit organizations + general government consumption + gross fixed capital formation in Mainland Norway.
[2] According to Statistics Norway's labour force survey (LFS).
[3] Percentage change from the same period the previous year.
[4] Current account not adjusted for saving in pension funds.
[5] Period averages.
[6] Average spot price. Brent Blend.
Source: Statistics Norway and Norges Bank.

Figure 1. GDP Mainland Norway and estimated trend

Seasonally adjusted, index 2020 = 100

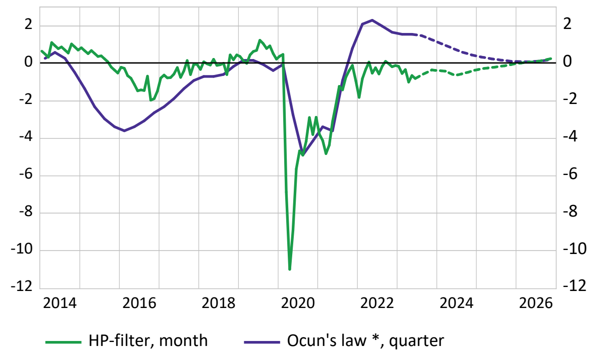


* Quarterly figures before 2016, monthly after. The trend is estimated by an HP-filter (lambda = 40 000 quarterly), but such that the trend is not directly affected by the developement of economic activity in 2020 and 2021

Source: Statistics Norway

Figure 2. Output gap, Mainland Norway

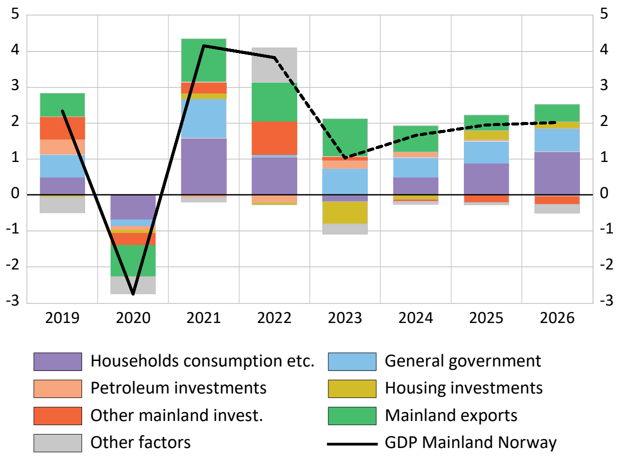
Deviation form estimated trend GDP in percent, monthly and quarterly frequency



* The series «Okun's law» is based on a one-to-one correspondence between the rate of

Figure 3. Contributions to growth in GDP Mainland Norway, import adjusted

Change from previous year in percent



Source: Statistics Norway

The demand contributions are calculated by finding the change in each variable. extracting the direct and indirect import shares. and then dividing by the mainland GDP level for the previous period. The import shares used are documented in Box 3. All figures are seasonally adjusted and in constant prices.

The export variable is defined as total exports excluding exports of crude oil. gas and shipping.

Other factors are defined as changes in stock and statistical deviations.

high. The depreciation of the krone so far this year contributes to the time it will take for inflation to fall towards the inflation target. Although mainland GDP growth has come to a halt, we still expect growth to be close to trend, at around 1.7 per cent (see Figure 1) and that unemployment will increase to around 4 per cent over the next few years.

The Norwegian economy currently reflects the effects of the weak krone. Whereas one euro cost NOK 10.50 at the end of 2022, the price had risen to NOK 12.00 by the end of May this year. Since then, the weakening has been reversed to some extent, but the krone is expected to depreciate by as much as an annualised 8 per cent in 2023.

Inflation rose a surprising amount in 2022. Higher prices globally, higher electricity prices and a weaker krone exchange rate have been important drivers of inflation (see Box 2). Although inflation measured by the CPI is high at present, and the krone remains weak, inflation is on the way down. Falling energy prices, in particular, are pushing down inflation. We therefore expect inflation measured by the CPI to be lower than inflation measured by the CPI adjusted for tax changes and excluding energy products (CPI-ATE). CPI and CPI-ATE inflation are forecast to be 5.8 and 6.3 per cent, respectively, this year. Underlying inflation remains at a high level because it takes time for higher labour costs and global inflationary impulses, measured in NOK, to be passed through into higher consumer prices. In the absence of a further weakening of the krone, and given relatively rapidly falling global inflation and lower energy prices, also for the business sector, underlying inflation will gradually come down. Annual CPI-ATE inflation is expected to fall to around 3 per cent by the end of 2024.

The interest rate is close to peaking. In less than two years, the policy rate has been raised from 0 per cent to 4 per cent. Norges Bank sets the interest rate primarily to stabilise inflation at around 2 per cent and to ensure financial stability. The central bank also takes into account that a higher interest rate affects activity in the Norwegian economy. We assume that the interest rate will be raised again in September, to 4.25 per cent, and expect it to remain at that level until the end of 2024. The weighting given to the various considerations plays a major part in determining how rapidly the

Table 2. Growth in GDP Mainland Norway and contributions from demand components[1]. Percentage points. Annual rate

	QNA				Projection			
	2019	2020	2021	2022	2023	2024	2025	2026
GDP Mainland Norway	2.3	-2.8	4.2	3.8	1.0	1.7	2.0	2.0
with contributions from:								
Consumption by households and non-profit organisations	0.5	-0.7	1.6	1.1	-0.2	0.5	0.9	1.2
General government consumption and investment	0.6	-0.2	1.1	0.1	0.7	0.6	0.6	0.6
Petroleum investment	0.4	-0.1	-0.1	-0.2	0.2	0.2	0.0	0.0
Housing investment	-0.1	-0.1	0.2	-0.1	-0.6	-0.1	0.3	0.2
Other mainland investment	0.6	-0.3	0.3	0.9	0.1	-0.1	-0.2	-0.2
Exports from mainland Norway[1]	0.7	-0.9	1.2	1.1	1.1	0.7	0.4	0.5
Other factors etc.[1]	-0.4	-0.5	-0.1	0.9	-0.3	-0.1	-0.1	-0.2

[1] See explanation under Figure 3.
Source: Statistics Norway.

interest rate should be cut in the years up to 2026 (see Box 1).[1] In our projection, the policy rate will be cut towards the end of 2024 as a consequence of increasing unemployment and lower inflation, and in 2026 will come down towards 3 per cent.

Fiscal policy as presented in the Revised National Budget is having a weakly expansionary effect on the Norwegian economy this year. Growth in general government consumption, particularly local government, was high in the first half of the year. In the Government's budget proposal for 2023, spending of petroleum revenue is projected to be 3 per cent of the value of the Government Pension Fund Global (the petroleum fund) at the beginning of the year. This spending amounts to NOK 372.6 billion, and more than NOK 20 billion of the increase on 2022 can be related to the war in Ukraine. The weak krone exchange rate and high return on the petroleum fund's investments have resulted in a substantial increase in value, which gives latitude, through the fiscal rule, for increased spending of petroleum revenue in the coming years. At the end of September, the petroleum fund was worth almost NOK 15 200 billion, about NOK 2 800 billion more than at the start of the year. However, we have assumed that spending of petroleum revenue will be kept under the 3 per cent target because of the uncertainty associated with share prices and exchange rates, coupled with an increasing funding requirement in the slightly longer term. Real growth in public consumption, investment and transfers is nonetheless expected to be higher than trend growth in the economy in the years ahead.

Household consumption, which accounts for around half of mainland GDP, rose by as much as 6.9 per cent last year, despite a high rise in prices for a number of goods and services. Consumption of both goods and services fell slightly in the first half of 2023. According to our projections, real disposable income will fall slightly this year, but increase from 2024 as a result of higher wage growth and falling inflation. Higher real disposable income will be reflected in consumption gradually picking up from a decline of just over 0.5 per cent this year to growth of almost 4 per cent in 2026. Weak developments in real house prices are slowing the rise in consumption. The saving ratio excluding share dividends will thus gradually rise from a low level this year to a more normal level of around 2.5 per cent in the years ahead.

House prices will probably continue to fall through the autumn. According to Real Estate Norway's monthly house price index, house prices fell by 1.2 per cent from April through August. Prices are still rising in Kristiansand and Stavanger, however. The interest rate hikes, coupled with lower real disposable income, will contribute to pushing down house prices a little for the rest of the year. At the same time, both sales of new dwellings and housing construction are at a low level, which will curb the expected fall in house prices. Housing investment, which accounts for approximately 20 per cent of mainland investment, is expected to continue falling slightly in the time ahead. In the course of next year, housing investment will pick up cautiously, prompted in part by housing shortages in several major cities.

In the past two years, business investment has increased significantly. This investment, which

[1] See also Box 1 in Economic Survey 1/2023.

Table 3. Main economic indicators 2022-2026. Accounts and forecasts. Percentage change from previous year unless otherwise noted

	Acco-unts 2022	Forecasts										
		2023			2024			2025			2026	
		SN	NB	MoF	SN	NB	MoF	SN	NB	MoF	SN	NB
Demand and output												
Consumption in households etc.	6.9	-0.7	-1.6	-0.4	1.2	0.1	0.7	2.8	2.1	..	3.8	2.6
General government consumption	0.1	2.7	1.6	1.4	1.4	1.1	..	1.8	1.1	..	2.1	0.8
Gross fixed investment	4.3	-0.2	..	-0.2	1.9	..	0.4	0.9	..	..	-0.2	..
Extraction and transport via pipelines	-6.5	8.0	5.0	3.0	5.0	3.0	4.0	1.0	2.0	..	-1.0	0.5
Industries	14.5	1.6	2.7	0.6	-0.8	-0.4	2.0	-3.0	2.2	..	-3.5	1.3
Housing	-1.4	-13.1	-10.7	-5.3	-2.9	-2.1	-2.1	6.7	2.8	..	4.7	3.8
General government	1.2	1.2	..	1.2	4.5	..	..	3.7	..	..	2.4	..
Demand from Mainland Norway[1]	4.9	-0.1	-0.6	0.0	1.0	0.3	0.5	2.0	1.8	..	2.4	1.9
Exports	5.9	5.2	..	4.1	4.2	..	3.0	1.9	..	..	1.0	..
Traditional goods[2]	-0.3	4.9	6.1	5.6	3.2	2.4	3.9	3.2	3.1	..	3.0	3.2
Crude oil and natural gas	0.3	3.2	..	3.1	5.1	..	4.0	1.2	..	..	-2.7	..
Imports	9.2	3.0	3.1	1.1	2.4	0.6	1.5	2.0	3.8	..	2.7	2.1
Gross domestic product	3.3	1.2	1.3	1.3	2.0	0.5	1.2	1.9	1.1	..	1.6	1.0
Mainland Norway	3.8	1.0	1.2	1.0	1.7	0.2	1.0	2.0	0.9	..	2.0	1.4
Labour market												
Employed persons	3.9	1.4	1.2	0.8	0.5	-0.2	0.2	0.4	0.2	..	0.5	0.6
Unemployment rate (level)	3.2	3.5	..	3.6	3.8	..	3.7	3.9	..	..	4.0	..
Prices and wages												
Annual earnings	4.3	5.5	5.5		5.1	4.7	..	3.8	4.3	..	3.8	3.7
Consumer price index (CPI)	5.8	5.8	6.0	5.4	4.0	3.9	3.7	2.6	2.9	..	2.3	2.4
CPI-ATE[3]	3.9	6.3	6.3	5.8	4.0	4.6	3.8	2.8	3.3	..	2.4	2.4
Housing prices[4]	5.2	-0.3	-0.5	..	-0.6	0.3	..	0.4	3.4	..	2.9	4.9
Balance of payment												
Current balance (bill. NOK)[5]	1 680	889	..	969	1 175	..	..	1 131	..	..	954	..
Current account (per cent of GDP)	30.2	17.7	..	18.8	21.3	..	..	20.0	..	..	16.8	..
Memorandum items:												
Money market rate (level)	2.1	4.2	..	3.9	4.7	..	3.5	3.9	..	..	3.3	..
Crude oil price NOK (level)[6]	951	876	..	912	896	..	845	846	..	..	808	..
Import weighted krone exchange rate (44 countries)[7]	1.2	8.1	8.5	8.2	-0.2	-1.1	0.9	0.0	-1.3	..	0.0	-0.3

[1] Consumption in households and non-profit organizations + general government consumption + gross fixed capital formation in Mainland Norway.
[2] Norges Bank forecasts exports of traditional goods and services from Mainland Norway. Ministry of Finance forecasts exports of goods exclusive of oil and natural gas.
[3] CPI adjusted for tax changes and excluding energy products (CPI-ATE).
[4] Norges Bank forecasts the housing price index published by Eiendom Norge.
[5] Current account not adjusted for saving in pension funds.
[6] Average spot price. Brent Blend.
[7] Increasing index implies depreciation.
Source: Statistics Norway (SN). Ministry of Finance. Meld.St.1. (2022-2023) (MoF). Norges Bank. Pengepolitisk rapport 2/2023 (NB).

accounts for about 13 per cent of mainland GDP, is normal relatively volatile, and thus contributes more to cyclical fluctuations than this share would suggest. Last year there was especially high growth in investment in services. According to Norges Bank's Regional Network, service businesses report somewhat lower investment next year, partly as a result of lower activity and reduced profitability. A slight increase appears likely for business investment as a whole, which can be attributed mainly to higher investment in manufacturing. The global downturn, coupled with higher interest rates in Norway, will place a damper on investment in the years ahead. The investment level in the projection period is nonetheless likely to remain higher than prior to the pandemic.

Petroleum investment is projected to rise to some extent this year and next. A large number of new developments have been initiated on the Norwegian continental shelf recently, and we therefore expect the falling trend of recent years to be reversed. A number of businesses have also brought forward their investment plans. This concerns both construction of infrastructure for new fields and production drilling. Several recent discoveries close to existing fields also increase the possibility of some new developments being triggered, and of larger investment volumes in ongoing or already planned developments than previously planned. Although almost half of the deliveries of capital goods for the petroleum industry are imported from abroad, the deliveries also involve considerable demand directed at mainland Norway. Some field developments are likely to be completed in 2025 and 2026, and we expect the investment level to fall a little in 2026, but to still remain slightly higher than the level in 2019.

Nominal wage growth last year was 4.3 per cent, a full 1.5 percentage points lower than consumer price inflation. In this year's wage settlement, the norm for wage growth in overall manufacturing under the Confederation of Norwegian Enterprise (NHO) was 5.2 per cent. Figures for the average basic monthly wage for 2023 Q2 show growth of 5.2 per cent compared with the same quarter last year, which was considerably higher than first-quarter growth in 2023 of 4.4 per cent. The labour market is still tight, and this factor in isolation could exert upward pressure on pay. According to our projections, annual wage growth in the economy as a whole will be 5.5 per cent this year. Given expected annualised inflation of around 5.8 per cent, this implies a slight fall in real wages. If this projection is correct, there will not have been real wage growth in Norway since 2015. Moving forward to 2026, we expect inflation to slow, and that real wage growth will pick up to about 1.5 per cent in 2026.

There are few signs as yet of any decline in the high labour market pressures. A year ago, unemployment measured by the Labour Force Survey (LFS) was around 3.1 per cent, while in recent months it has been around 3.5 per cent. This is still relatively low in a historical and macroeconomic perspective. The average unemployment rate in the 2000s was 3.9 per cent. High and rising interest rates coupled with weaker global growth prospects and lower demand in many industries will dampen labour market pressures, particularly in construction. Employment is therefore not expected to increase as much as growth in the working age population. According to our projections, unemployment will increase slightly in the years ahead, to around 4 per cent in 2025.

The strong increase in gas prices and depreciation of the krone contributed to a record high trade surplus of NOK 1 570 billion last year. The surplus looks set to be halved this year, and to decline further during the projection period. It will still end up close to the 2008 peak level of NOK 635 billion. The current account balance as a share of GDP is expected to fall from 30 per cent last year to approximately 18 per cent this year and further to 16 per cent in 2026.

The Norwegian economy is currently reflecting the effects of several different shocks. The weak krone exchange rate has caused unemployment to remain low despite the fact that households have had their purchasing power constrained by high prices and higher interest rates. Inflation is on the way down, but appears likely to take some time to come right down to the inflation target. The output gap is not directly observable, and different indicators provide slightly different pictures of what stage we are at in the business cycle (see Figure 2). In terms of unemployment, the economy has been in a moderate expansion for the past year and a half. Activity measured by mainland GDP is at about trend, and hence cyclically neutral. Going forward, mainland GDP growth is expected to remain close to trend, and unemployment to rise a little. Given this scenario, both indicators imply an approximately cyclically neutral situation at the end of the projection period.

Greater fiscal scope for manoeuvre

General government consumption increased by 0.6 per cent in 2023 Q2. There was no growth in central government consumption in Q2, despite growth of 0.8 per cent in defence consumption, while local government consumption increased by 1.3 per cent. Public transport, administration, care services and municipal roads contributed most to the growth. General government payroll costs increased by 2.3 per cent in Q2, pushed up by health and care payroll costs in particular. Gross general government investment edged down 0.1 per cent in Q2. Gross local government investment shrank by 1.4 per cent due to lower investment in teaching and local government administration. Central

Box 1. Should the interest rate be raised in the face of higher global inflation and a weaker krone?

In 2022, inflation as an annual average, measured by the consumer price index, rose to 5.8 per cent. Our projections imply more or less equally high inflation this year. Inflation in Norway has not been this high since the late 1980s. Norges Bank, like many other central banks, has reacted to the high inflation by raising the key policy rate quite sharply. However, economists have disagreed on how Norges Bank should manage imported inflation.

The Storting and the Government have defined the central bank's mandate in law and regulation. The primary objective of its mandate is to maintain monetary stability and promote stability in the financial system, while also placing emphasis on the objectives of high and stable output and employment.[1] Given more objectives than instruments, Norges Bank must strike a balance between the different objectives in its implementation of monetary policy. The central bank's trade-off between stable inflation and high activity in the Norwegian economy can be described by means of a so-called loss function, where the parameter λ determines the tradeoff between inflation and activity level. If λ is large (close to 1) the considerations of output and employment are given a high weighting, and the consideration of inflation a low one, while if λ is small (close to 0) a high weighting is given to inflation and a low one to output and employment. In the loss function in Norges Bank's main NEMO model, λ is set as equal to 0.23.[2] At the same time, it is stressed that the interest rate should not be changed too rapidly or deviate too much from a normal level.

In this box we take a closer look at how monetary policy based on the loss function specified in NEMO will respond to higher global prices and a weaker krone when it is used in the KVARTS macroeconomic model.[3] To illustrate the significance of how the different objects are weighted, we consider the case where the consideration of inflation is given a high weighting (λ = 0.1) and the case where the consideration of output and employment is given a high weighting (λ = 0.9). Norges Bank places great emphasis on the labour market in its calculations of the output gap; see for example Furlanetto et al. (2023). In our calculations we have therefore assumed that there is a one-to-one relationship between developments in unemployment and the output gap (Okun's law).[4]

The conduct of monetary policy becomes extra demanding if the economic shocks that arise create a conflict of objectives. For example, in the case of a shock that results in both high unemployment and high inflation, the central bank has to make a choice: should it raise the interest rate in order to reduce inflation, or should it reduce the interest rate in order to reduce unemployment? A crucial question for monetary policy will therefore be whether higher global inflation and a weaker krone give rise to such a conflict or not.

The economic shocks we are analysing are based on economic developments since the beginning of 2022. We define economic shocks as something unforeseen, and identify them by comparing the projections in *Økonomiske analyser* 1/2022 (ØA 1/2022) with historical developments up to the present combined with the projections in *Økonomiske analyser* 3/2023 (ØA 3/2023). For example, at the beginning of 2022 we forecast that inflation in the euro area would be around 5 per cent in 2022. The ex post outturn for 2022 was inflation of 8.4 per cent. This year we expect euro area inflation to be between

[1] In the comments to the legal provisions in the proposed new Norges Bank Act, Prop. 97 L (2018- 2019, page 142 - in Norwegian) it is specified that the first paragraph of the purpose of central banking activities expresses the primary objectives.

[2] The loss function based on the one in NEMO is given by: $\sum_{t=0}^{T} \beta^t[(1-\lambda)\hat{\pi}_t^2 + \lambda\hat{y}_t^2 + \gamma\hat{\imath}_t^2 + \delta\Delta i_t^2]$, where β is a discounting factor for quarterly frequency, $\hat{\pi}_t$ represents inflation measured as deviation from the inflation target in the period t, $\hat{y}_t$ is the output gap, $\hat{\imath}_t$ is the money market rate measured as deviation from a normal interest level and Δi_t represents the change in the money market rate from one period to the next. In Norges Bank's specification of NEMO, the coefficient for the inflation gap is equal to 1, and the coefficient for the output gap is equal to 0.3, which gives the ratio $\lambda/(1-\lambda) = 0{,}3$, and so we use $\lambda = 0{,}3/1{,}3 = 0{,}231$. In addition to the value of λ the following parameter values are used: $\beta = 0{,}99$, $\gamma = 0{,}02/1{,}3$ and $\delta = 0{,}4/1{,}3$; see Kravik and Mimir (2019, p. 74) and the description in Norges Bank's monetary policy handbook (Norges Bank, 2022, pp. 41–43)

[3] See Boug et al. (2023) for a more detailed description of KVARTS.

[4] See Box 1 in Economic Survey 4/2022 for a more detailed description of this relationship.

Table 1. Higher global inflation and a weaker krone
Assumptions underlying the calculations. Difference between ØA 3/2023 and ØA 1/2022 in per cent unless otherwise specified[1]

	2022	2023	2024	2025
NOK per euro[2, 3]	2.2	15.7	17.1	17.1
Electricity prices[4]	21.1	23.7	22.3	28.1
Consumer prices, euro area	3.7	8.2	9.0	9.0
Inflation, euro area	3.8	4.4	0.8	0.0
Oil price, USD	-1.2	-5.3	3.2	2.1
Gas price, NOK	76.0	9.9	82.8	85.3
Prices, processed manufactured goods	3.0	7.5	8.9	9.1
Interest rate, euro area	0.9	3.4	2.4	1.0
Export market indicator	-0.3	-4.2	-8.0	-10.2
Import prices, goods, mainland Norway[2]	7.3	11.6	12.2	12.6

[1] The data series from ØA 1/2022 have been extended with more recent data on historical developments. There may therefore be differences between the growth rates published in ØA 1/2022 and the assumptions shown above.

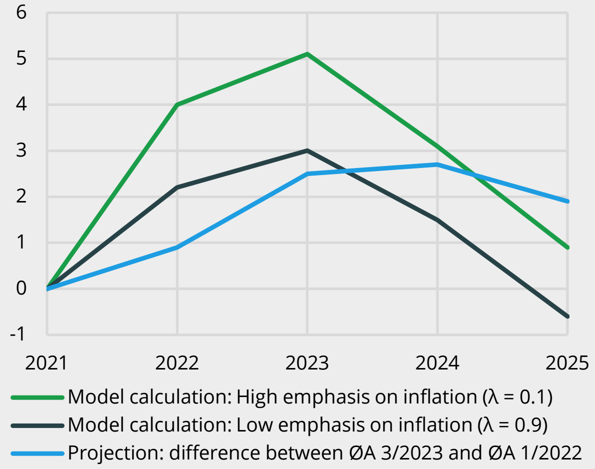
[2] For the exchange rate and import prices, which are endogenous in the model, the shock represents unexplained developments in the period from 2022 Q1 to 2023 Q2. The table shows the difference in per cent between the projections for developments in the exchange rate and in import prices in ØA 1/2022 and ØA 3/2023.

[3] A negative sign means appreciation. In our projections we assume an unchanged exchange rate, and it is deviations from this that are used to identify the economic shock in the foreign exchange market; see Hungnes (2023) for an analysis of our exchange rate forecasts. In the model calculations, the exchange rate equation described in Benedictow and Hammersland (2023) is used to capture the fact that the exchange rate is affected by interest rate differentials.

[4] The effect of the electricity support is included in the assumptions for the calculations, so that there is a large difference in electricity price developments for consumers and businesses.

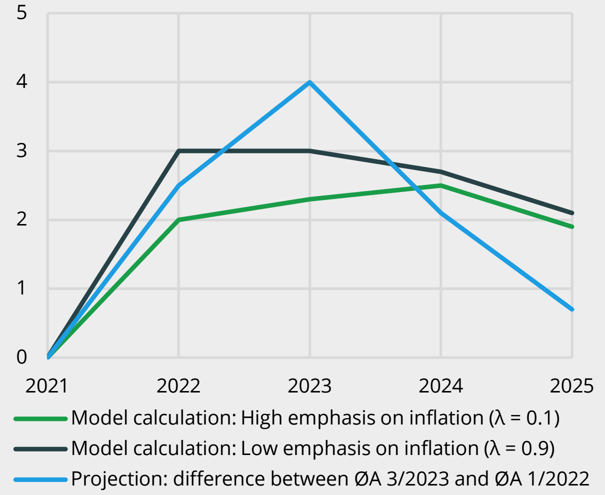
Source: Statistics Norway

Figure 1. Money market rate[1]
Difference from projection in ØA 1/2022. Percentage points



[1] The line "Projection: difference between ØA 3/2023 and ØA 1/2022 shows the difference between the projections in these two reports.
Source: Statistics Norway

Figure 2. Inflation
Avvik fra anslag i ØA 1/2022. Prosentpoeng



Source: Statistics Norway

5 and 6 per cent, and that it will gradually fall towards 2 per cent in 2025. Similarly, prices for gas, electricity and processed consumer goods produced by our trading partners and many other imported goods have become substantially higher than we forecast at the beginning of 2022. The exchange rate has also weakened more than the exchange rate fundamentals would indicate.[5, 6] All this has contributed to pushing up inflation in Norway. On the other hand, developments in global activity have been considerably weaker than indicated by the outlook in 2022, the oil price has been somewhat lower and policy rates in the euro area have increased more. Table 1 sums up the assumptions upon which our calculations are based.

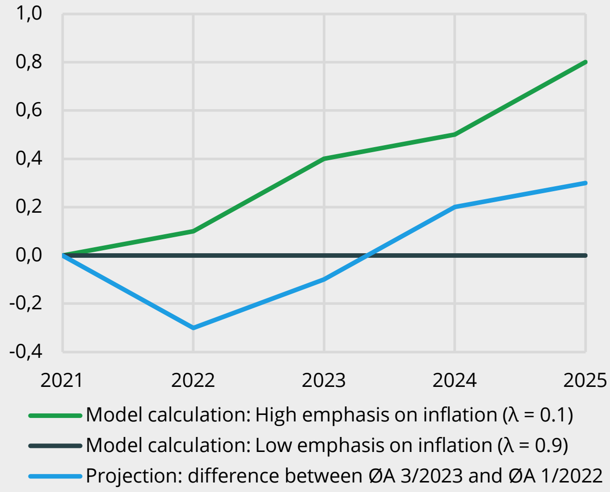
Our KVARTS model calculations compute different interest rate paths starting from 2022 Q1, given high and low inflation weightings and the assumptions in Table 1. Figures 1 to 3 and Tables 2 and 3 show the results of the calculations. Despite the fact that higher global prices for various intermediate goods increase businesses' costs, in the absence of a monetary policy response the sum of the various economic shocks result in higher economic activity, lower unemployment and higher inflation. Thus no clear conflict of objectives between the consideration of inflation on the one hand and unemployment on the other arises for the central bank's setting of interest rates The interest rate therefore increases markedly in both scenarios, prompted by the depreciation of the krone; see Figure 1. Although a weaker krone results in lower real disposable income and consumption, all else being equal, it also boosts the activities of export-oriented businesses, particularly in services: for example, a weaker krone makes it cheaper for foreigners to holiday in Norway. In the case where inflation is given a high weighting ($\lambda = 0.1$), the interest rate increase in 2023 is around 5 percentage points, while it is around 3 percentage points when inflation has a low weighting ($\lambda = 0.9$). By way of comparison, it now looks as though the money market rate will be around 2.5 percentage points higher in 2023 than it was forecast to be at the beginning of 2022. The fact that the interest rate increase in the model calculations is more pronounced than the actual outturn in 2022 must be viewed bearing in mind that in the two scenarios it is implicitly assumed that the central bank has full information about the sorts of shocks that occur, their duration, and when they occur. In order to counteract the depreciation pressure, in both scenarios the interest rate will be raised so much in 2022 that the krone strengthens that year, before weakening. The inflationary pressures will thus be smoothed out over a period of several years, and the central bank can allow the krone to gradually depreciate more than we have experienced so far. The deviation from actual developments must also be viewed in light of the fact that the Norwegian economy has been subjected to shocks other than those analysed in this box. Our calculations should therefore not be interpreted as an evaluation of the money policy conducted since the beginning of 2022.

Higher global prices and a gradually weaker krone result in a clear increase in inflation in the case of both a high and a low λ value; see Figure 2. In 2023, inflation is raised by 2.3 percentage points if the consideration of inflation receives a high weighting ($\lambda = 0.1$) and 3.0 percentage points if output and employment considerations receive a high weighting ($\lambda = 0.9$). By way of comparison, it now looks as though inflation will be 4.0 percentage points higher in 2023 than what we assumed about 2023 at the beginning of 2022. In both scenarios, inflation gradually falls, and even in 2025, inflation has risen by a bare 2 percentage points in the case where emphasis is placed on stabilising inflation. Thus prices will rise more in Norway than in the euro area. Higher costs detract from the profitability of wage leader businesses and contribute to pushing down nominal wage growth. In both scenarios, real wages are reduced by around 10 per cent in 2025. Higher interest rates combined with lower wage growth and lower real disposable income exert strong downward pressure on house prices in 2024 and 2025.

→

[5] This means that the krone has depreciated more than indicated by the exchange rate equation in KVARTS; see Benedictow and Hammersland (2023) for further details of these fundamentals.
[6] If the exchange rate at the beginning of September remains constant for the remainder of the year, it will have depreciated against the euro by just under 16 per cent as an annual average from 2022 to 2023; see Table 1. By way of comparison, our calculations show that the exchange rate would have weakened by around 30 per cent during the same period if the policy rate in Norway had not been raised since the beginning of 2022. A euro would then have cost about an annualised average of NOK 13 in 2023.

Figur 3. Unemployment rate
Difference from projection in ØA 1/2022. Percentage points



Source: Statistics Norway

The different weighting of the two considerations is of great significance for the labour market. In the case of strong emphasis on output and employment (λ = 0.9) the interest rate will come down again relatively rapidly. This rapid reduction of the interest rate is necessary for keeping unemployment approximately unchanged; see Figure 3. In the case with the strong emphasis on inflation (λ = 0.1), the interest rate is kept high for longer. The result will be slightly lower inflation than in the case with (λ = 0.9), but at the expense of higher unemployment. With a high emphasis on inflation, unemployment is 0.8 percentage point higher in 2025 than in the scenario with low emphasis on inflation.

In this box, we have considered in more detail how the central bank should react to higher global prices and a weaker krone. Our calculations have been based on the loss function used in Norges Bank's main NEMO model, and have been carried out using the KVARTS macroeconomic model. Because of the weakening of the krone, no direct conflict of objectives arises as a consequence of the economic shocks and our calculations show that the interest rate should be raised, irrespective of whether the central bank places most emphasis on stabilising inflation or on output and employment. How much the interest rate should be raised, and how rapidly it should be cut again after it has peaked, depend, however, on the emphasis placed by the central bank on the different objectives.

There is uncertainty associated with both the loss function in NEMO and the KVARTS model. First, there is uncertainty associated with how a central bank loss function should be specified, and what the correct value is for the parameter λ. Debortoli et al. (2019) find support for a dual mandate in a model for the US, and for placing the same emphasis on the considerations of output and employment as on the consideration of inflation; in other words, λ = 0.5, partly because activity developments also correlate strongly with other variables that are closely associated with the welfare of the population. In a similar model framework for the US with a rule-based monetary policy response, Deák et al. (2023) find some support for a dual mandate, but find that the consideration of stabilising output and employment should receive considerably less emphasis than the objective of stabilising inflation. In a study of changes in quality of life for 141 countries, including Norway, El-Jahel et al. (2022) find that the ratio between welfare loss ensuing from inflation and unemployment is 6.2, which can be interpreted as λ = 0.4.[7] In the analysis above, we have used the symmetrical loss function in Norges Bank's NEMO model. However, the socioeconomic costs of economic fluctuations are probably asymmetric, which Norges Bank attempts to take into account in its setting of interest rates (Norges Bank, 2022, p.24).

There is also uncertainty associated with the mechanism of the Norwegian economy and how other economic policy responds. With the exception of the effect of electricity support on the consumer price index, we have disregarded a fiscal policy response in our calculations. In 2023, for example, fiscal policy was adjusted to reduce the economic burden of inflation and increased interest rates for those who earn least. Moreover, KVARTS represents a simplified description of the economy and the model does not necessarily capture all relevant relationships in the Norwegian economy.

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[7] If the ratio in a quadratic loss function between the output gap and the inflation gap is given by $\lambda/(1-\lambda)$, and given Okun's law $\hat{u}_t = -\gamma\hat{Y}_t$, where $\hat{u}_t$ the unemployment gap and $\hat{Y}_t$ the output gap, the relationship between unemployment and inflation can be written as: $(\lambda/\gamma^2)/(1-\lambda) = 6.2$. Given $\gamma = 0.31$ (see Box 1 in Economic Survey 4/2022, $\lambda \approx 0.4$.

Table 2. Scenario with strong emphasis on inflation: λ=0.1
Deviation from the projection in ØA 1/2022 in per cent unless otherwise indicated

	2022	2023	2024	2025
Mainland GDP	-0.8	-3.0	-4.0	-4.3
Consumption	-1.4	-7.2	-11.4	-13.1
Business investment	-2.9	-11.6	-13.2	-9.9
Exports excl. oil and gas	-1.0	-1.6	-0.7	-0.3
Imports	-1.3	-6.7	-10.9	-12.8
Unemployment rate (pp.)	0.1	0.4	0.5	0.8
Annual wages	-0.4	-1.8	-2.2	-1.9
Number employed	-0.2	-1.0	-1.4	-2.0
Household real disposable income	-3.7	-11.6	-12.5	-12.3
House prices	-1.0	-10.8	-22.2	-28.5
Consumer price index (CPI)	1.9	4.2	6.8	8.8
Inflation, CPI (pp.)	2.0	2.3	2.5	1.9
Money market rate (pp.)	4.0	5.1	3.1	0.9
Exchange rate, NOK per euro[1]	-10.5	6.5	19.3	26.4

[1] A negative sign means appreciation
Source: Statistics Norway

Table 3. Scenario with strong emphasis on output and employment: λ=0.9
Difference from the projection in ØA 1/2022 in per cent unless otherwise indicated

	2022	2023	2024	2025
Mainland GDP	-0.6	-1.5	-2.0	-1.9
Consumption	-1.6	-5.9	-9.4	-10.5
Business investment	-2.2	-4.9	-4.6	-0.3
Exports excl. oil and gas	-0.3	0.4	1.4	1.8
Imports	-1.4	-5.2	-8.6	-9.9
Unemployment rate (pp.)	0.0	0.0	0.0	0.0
Annual wages	-0.2	-0.6	-0.1	1.0
Number employed	-0.1	-0.3	-0.3	-0.4
Household real disposable income	-3.8	-9.9	-10.5	-9.5
House prices	0.7	-4.9	-13.2	-17.1
Consumer price index (CPI)	2.9	5.9	8.8	11.1
Inflation, CPI (pp.)	3.0	3.0	2.7	2.1
Money market rate (pp.)	2.2	3.0	1.5	-0.6
Exchange rate, NOK per euro[1]	-2.8	16.2	28.3	34.9

[1] A negative sign means appreciation
Source: Statistics Norway

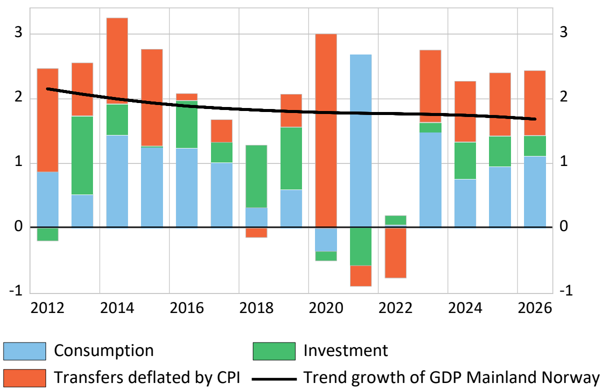
government investment increased by a total of 0.7 per cent, pushed up by defence investment in particular.

The National Budget for 2023 (NB 23) forecast consumption of petroleum revenue, measured in terms of the structural, non-oil budget deficit, of NOK 316.8 billion in 2023. The changes proposed in the Revised National Budget 2023 (RNB 23) pushed up spending of petroleum revenue by a further NOK 55.8 billion. The structural, non-oil budget deficit is accordingly projected to be NOK 372.6 billion. More than NOK 20 billion of the increase can be related to the war in Ukraine. The remaining budgetary weakening can be largely attributed to price and wage adjustments and to the effects of lower than expected electricity prices. In the Government's budget proposal for 2023, spending of petroleum revenue is forecast to be 3 per cent of the value of the petroleum fund at the beginning of 2023. Spending of the fund's capital as a share of trend mainland GDP has increased substantially in recent years.

The value of the fund at the beginning of 2023 was NOK 12 429 billion. Net capital added in the first half of 2023, i.e. capital added from petroleum activities less capital withdrawals, amounted to NOK 389 billion. The value of the fund at the end of the first half of 2023 was NOK 15 299 billion, which means that the total return was NOK 2 481 billion. The depreciation of the krone increased the

Figure 4. Contributions to growth in general government

Change from previous year in percent



Source: Statistics Norway

value of the fund by NOK 980 billion. Income from interest and dividends plus gains on exchange and losses that cannot be related to exchange rate changes thus amount to NOK 1 501 billion. In RNB 23, the Norwegian State's net cash flow from petroleum activities is forecast to be NOK 1 015.5 billion in 2023, down from the NOK 1 384 billion forecast in NB 23. The downward revision is due to lower oil and gas prices. We assume that the real return on the fund will be 3 per cent, and that the contributions will be based on oil and gas prices that reflect forward prices. The result will be developments in the fund further along the projection path that create greater fiscal scope for manoeuvre. We have assumed that spending of petroleum revenue will be maintained at slightly below the 3 per cent target because of the uncertainty associated with share prices and exchange rates, coupled with a growing funding requirement in the slightly longer term.

The Norwegian economy entered 2023 with a higher level of activity, higher numbers employed and considerably higher inflation than the assumptions upon which NB 23 was based. The interest rate was gradually raised to curb economic activity. Higher inflation than was assumed in NB 23 also meant that the original budget would have been tighter than intended. RNB 23 therefore aimed for price and wage adjustment that, according to the Government, resulted in a more even distribution of the burdens associated with high inflation. Activity measured by mainland GDP has now levelled off. We assume that activity will increase and that the interest rate will gradually be lowered along the projection path. The interest rate cuts and increased activity will reduce the need for fiscal stimulation.

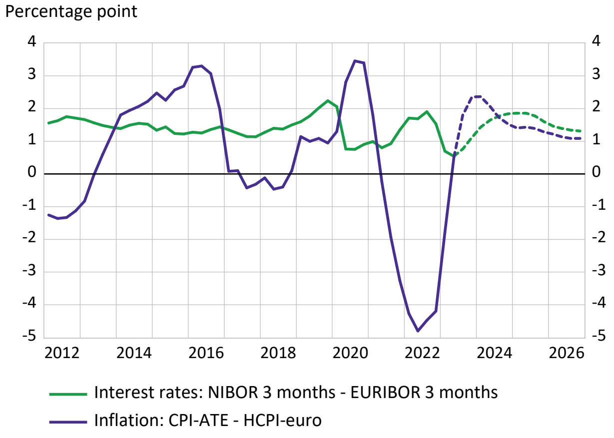
NB 23 forecast increases in general government consumption and in gross general government investment of 1.3 and 0.8 per cent, respectively, in 2023. In RNB 23 the projections were revised up to 1.4 and 1.2 per cent, respectively. These projections are identical with those in our previous report. In our current report, growth in public consumption has been revised up to 2.7 per cent in 2023 on the basis of updated data on local government consumption in the first half of the year. Public consumption will then increase by just under 2 per cent in subsequent years. The Government has signalled increased defence investment in the time ahead in order to meet the NATO target in 2026. We expect deliveries of F-35 fighter aircraft to extend well into 2025, and that army, navy and air force programmes will entail extensive investment. Gross public sector investment is forecast to increase by 1.2 per cent in 2023, 4.5 per cent in 2024, and just under 4 per cent the following year. Growth projections further along the projection path have been revised slightly upward compared to our last report in view of the increased fiscal scope for manoeuvre. The real value of transfers is expected to increase by 3.4 per cent in 2023, partly due to high old-age pension disbursements. The upward revision of just under 1 percentage point compared with the last report is mainly due to increased sick pay and disability benefits. Transfers are projected to increase by about 3 per cent in the following years. An increasing need for health and care workers is also expected in the time ahead.

The interest rate is close to peaking

In less than two years, the policy rate has been raised from 0 per cent to 4 per cent. The most recent interest rate hike occurred in August this year, when the key policy rate was raised by 0.25 percentage point. Since March this year, Norges Bank has raised the policy rate at every monetary policy meeting. The money market rate has shadowed the key rate with a premium. In summer 2021, the 3-month money market rate was down to 0.2 per cent, and by the start of September this year it had risen to 4.7 per cent.

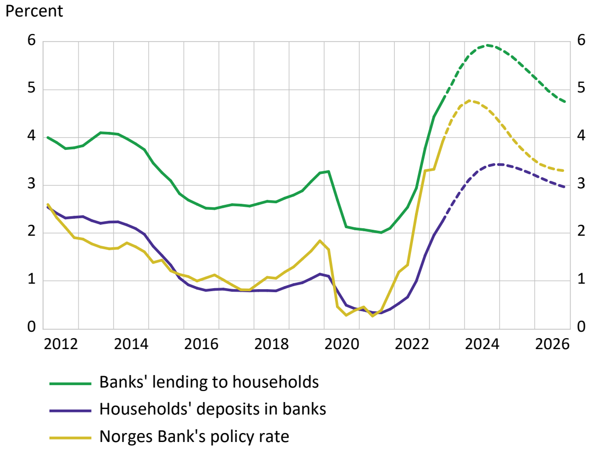
Deposit and lending rates have also increased from record low levels in 2021 Q2 and Q3. The average

Figure 5. Interest rate and inflation differential between NOK and euro



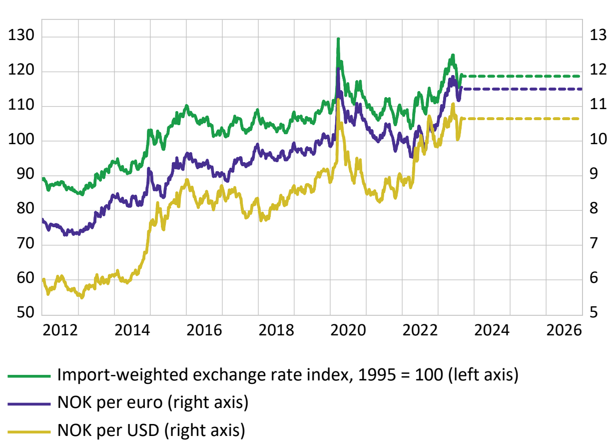
Source: Norges Bank and Statistics Norway

Figure 6. Norwegian interest rates



Source: Norges Bank and Statistics Norway

Figure 7. Exchange rates



Source: Norges Bank

interest rate on loans secured on dwellings had risen from 2.0 per cent at the end of 2021 Q3 to 5.0 per cent at the end of Q2 this year. Of this increase, 2.35 percentage points have been added in the last four quarters. Deposit rates have risen by about 2 percentage points over the past two years. Most of the increase has also taken place in the last four quarters.

Foreign central banks have also raised their policy rates sharply to rein in the high inflation. The money market rate in the euro area had risen to 3.8 per cent at the beginning of September, so the rate in Norway is almost 1 percentage point higher. However, it is usual for interest rates in Norway to be higher than in the euro area. In the years 2008–2022, the interest rate differential averaged almost 1.5 percentage points. Despite a higher money market rate in Norway than in the euro area since the financial crisis in 2008, the krone has depreciated sharply during the period. Whereas 1 euro cost NOK 8 in 2008, at the end of August this year the price had risen to NOK 11.60. It would therefore appear that the money market rate in Norway needs to be considerably higher than the corresponding rate in the euro area if we are not to see a further weakening of the krone. We have assumed in our projections that the policy rate will be raised at the next monetary policy meeting in September, and then kept unchanged for the year ahead. The money market rate may then increase a little from the current level before gradually falling from the end of next year as a result of policy rate cuts.

The krone depreciated sharply during the first 5 months of this year. Whereas one euro cost NOK 10.50 at the end of 2022, the price had risen to NOK 12.00 by the end of May this year. Since then, some of the weakening has been reversed, and at the beginning of September the euro exchange rate was back at NOK 11.50. We assume that exchange rates will remain unchanged in the near term. The currencies in the import-weighted krone exchange rate will then be an annualised 8 per cent more expensive in 2023. The weakening of the krone means that imported goods will become more expensive, and hence push up inflation in Norway this year.

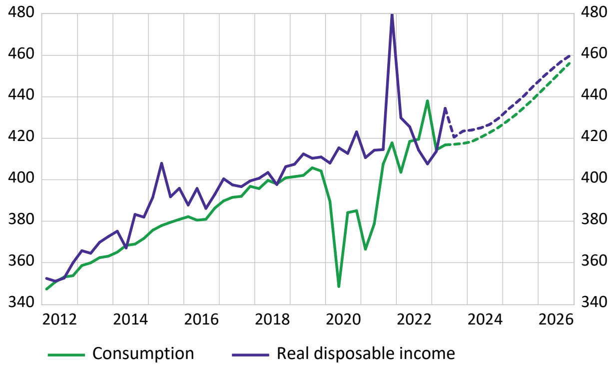
Saving ratio towards a normal level

According to the non-financial sector accounts, the real disposable income of households and non-profit organisations fell by 2.4 per cent in 2022. If we exclude share dividend disbursements, which were record high in 2021 because of adaptation to higher dividend tax from 2022, growth in real disposable income was 2.7 per cent last year.[2] Real disposable income excluding dividends increased sharply in Q1 last year, but then fell for the next three quarters. This revenue item showed virtually zero growth through the first half of this year. Developments through last year and so far this year are largely attributable to increased wage income as a consequence of employment growth, higher net interest expenses due to higher lending rates, and large price increases for a number of products.

According to the quarterly national accounts, total consumption by households and non-profit organisations increased by as much as 6.9 per cent in 2022. The level of overall consumption was thus around 4.5 per cent higher in 2022 than in 2019. Consumption of services in particular, with large contributions from hotel and leisure services and passenger transport, drove the strong growth in consumption through 2022. At the same time, goods consumption increased sharply in Q4 last year as a consequence of record high car purchases prior to the introduction of taxes on electric cars from 1 January 2023. Towards the end of 2022, the ratio between consumption of goods (excluding car purchases) and services reverted to the pre-pandemic level. Fluctuations in car purchases were also reflected in consumption through the first half of this year. In 2023 Q1, overall consumption fell by 5.4 per cent, depressed by car purchases in particular as a consequence of the adaptation to taxes of these purchases. As car purchases reverted to more normal levels in Q2, overall consumption increased by 0.6 per cent in the same period. Overall consumption excluding car purchases remained roughly unchanged in Q1 and dipped about 0.5 per cent in Q2, with large contributions from food and beverages and electricity. The goods consumption index for July shows a seasonally adjusted increase of a modest 0.2 per cent on the previous month.

Figure 8. Income and consumption in households

Seasonally adjusted, billion 2020 NOK, quarter



Source: Statistics Norway

Developments in consumption of services, on the other hand, have been relatively flat so far this year.

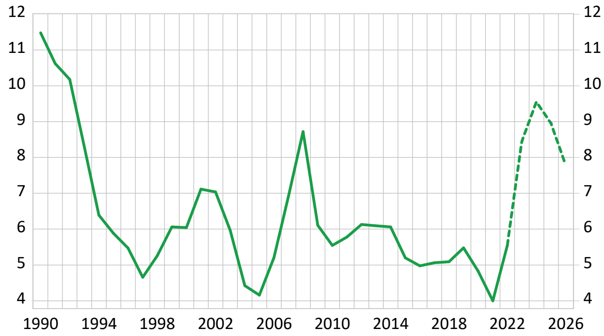
In the second half of 2022, consumption in current prices was higher than disposable income. Consequently, the saving ratio, measured as saving as a share of disposable income, fell from 12.5 per cent in 2021 to 4.1 per cent in 2022. The saving ratio excluding share dividends fell from around 4.5 per cent to close to zero in the same period. Non-financial sector accounts figures show that the saving ratio fell by around 7 percentage points from 2021 Q4 to 2022 Q1, while the ratio excluding dividend payments increased by around 8.5 percentage points in the same period. These large changes in the saving ratio over two quarters must be viewed in conjunction with major changes in disbursements of share dividend that are due to adaptation to the increased tax on dividends. The saving ratio both including and excluding share dividends fell for the next three quarters of 2022 before picking up through the first half of this year.

We forecast that real disposable income, both including and excluding share dividends, will be a little lower in 2023 than the previous year. Given our assumptions, average annual growth in real disposable income in the years 2024–2026 will be around 3 per cent. Both wage income and public transfers will pick up in real terms in pace with substantially lower inflation in the last three years of the projection period. A fall in net interest expenses will also contribute to income growth as mortgage rates are reduced due to cuts in the policy rate. The level of the household interest burden, measured as interest expenses after tax as a share of disposable

[2] Only share dividends, and not the tax expenses associated with them, are deducted from real disposable income excluding share dividends in the non-financial sector accounts. This means that some of the growth in real disposable income excluding share dividends is also due to reduced taxes on dividends in 2022.

Figure 9. Household interest burden

Interest expenses after tax as a share of disposable income in percent, year



Source: Statistics Norway

income, is forecast to be round 8–9.5 per cent in the projection period. By way of comparison, the average interest burden was 5.5 per cent in the 10-year period 2010–2019, and an interest burden as high as that assumed for 2024 has not been seen since the early 1990s.

We now envisage that consumption will fall by just over 0.5 per cent in 2023, whereas in our last report it was forecast to increase by somewhat more than that amount. Underlying the revised growth estimate of around 1.5 percentage points is a more pronounced observed fall in national accounts figures through the first half of the year, and developments through the second half of the year are expected to be flatter than assumed previously. In the period 2024–2026, consumption growth will gradually increase to almost 4 per cent, and the annualised average will be around 2.5 per cent, roughly as published in our last report. Developments in overall consumption during this period will be driven by increasing growth in real disposable income, but constrained by weak developments in real house prices and higher after-tax real interest rates.

Given our projections for income and consumption, coupled with forecasts for saving in collective pension funds, the saving ratio will be around 5.5–6.5 per cent in the years 2023–2026. The saving ratio excluding share dividends will be about 3.5–4 percentage points lower in the projection period. Our projections imply that the saving ratio both including and excluding share dividends will be a little lower than its average annual level in the ten-year period 2010–2019.

Prospects of a sluggish autumn housing market

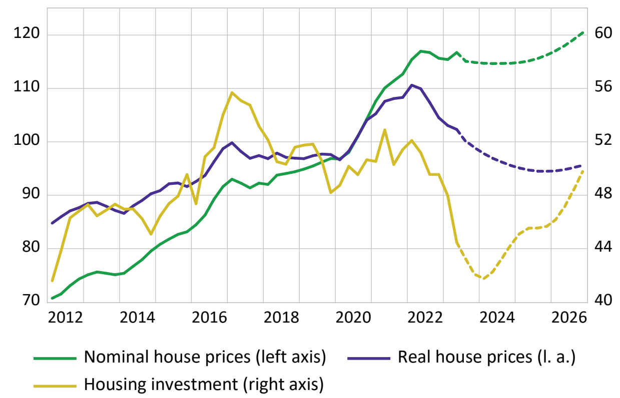
According to Statistics Norway's price index for existing dwellings, house prices rose by 1.1 per cent from Q1 to Q2. Following a strong first half year, there is much to indicate that the negative price movements forecast in our previous report for the housing market for the second half of the year will be realised. The effect of the relaxation of the lending regulations coupled with the normal seasonal variations through the year will begin to wane just as increased mortgage rates finally begin to bite. We have seen an increase in the number of petitions for enforced sale of dwellings during the year, but so far see no signs that this has had any particular effect on the market situation.

Real Estate Norway's monthly house price index shows a turning point for house price movements in April this year. Following a strong rise in prices after the New Year that took prices up to the same level as the previous year, house prices fell by 1.2 per cent from April to August. Price movements are not distributed equally throughout Norway. So far this year, it is Stavanger and Kristiansand in particular that have kept the rise in prices at a high level.

The number of resale homes on the market has risen considerably, and to levels observed prior to the pandemic. Turnover time for dwellings that are sold is still short, and on a par with that observed in 2021 and 2022. However, the number sold has not risen as much as the number for sale, and the time on the market for unsold dwellings has increased since 2021 and 2022.

Developments in the housing construction sector so far this year have been far weaker than previously anticipated. According to monthly national accounts figures up to and including June this year, housing investment has fallen by 11.6 per cent so far. This is well below what we assumed for the whole of 2023 in our previous report. Statistics from the Norwegian Homebuilders' Association also indicate that this trend will continue in the time ahead. Housing starts in the first half of this year were 43 per cent lower than in the same period last year, while sales of new dwellings were 39 per cent lower. Uncertainty concerning future house prices and higher lending and financing costs are contributing to this situation. At the same

Figure 10. Housing market
Seasonally adjusted. Left axis: index, 2020 = 100
Right axis: billion 2020 NOK, quarter



Source: Statistics Norway

time, the rise in prices for new dwellings is substantially higher than for resale homes. According to Statistics Norway's price index for new dwellings, the annual rise in Q2 was a whole 5.7 per cent, compared to –0.1 per cent for resale homes. The sector has been subject to a high rise in prices for construction materials in recent years, but prices now appear to be on the way down. Statistics Norway's construction cost index for residential buildings shows that the annual rise in building material costs was 3.8 per cent in July, down from around 10 per cent at the beginning of the year. We are accordingly revising our housing investment projection down by a further 5.7 percentage points, to a fall of 13.1 per cent for 2023. Increased attention to housing shortages is likely to influence investment in the longer term. We therefore forecast a more moderate decline in investment next year, followed by an increase in 2025 and 2026.

Our projections for resale home prices take several economic variables into account; the interest rate level and household real disposable income are of particular importance. Mortgage rates are expected to increase sharply, while we foresee roughly zero growth in household real disposable income this year. This points to falling house prices going forward. However, the sluggish activity in the new homes market and record-low housing construction will exert upward pressure on resale home prices in the longer term, particularly in the large cities where the housing shortage is most acute. The Consumer Confidence Indicator published by Finance Norway measures Norwegians' expectations concerning the future. In the last survey conducted for the third quarter, Norwegians are still very pessimistic concerning the outlook for the Norwegian economy, but more optimistic about their own financial situation, both this year and in 2024. Both these factors prompt us to raise our projection for this year by 1.1 percentage points, to a 0.3 per cent fall in house prices. We foresee the decline continuing in 2024, before the rise in prices becomes positive and gathers pace towards the end of the projection period. If we take into account inflation measured by the national accounts consumption deflator, real house prices will fall by just under 7 and 4 per cent in 2023 and 2024, respectively, and then level off towards the end of the projection period. This fall in real house prices is equivalent to about half of that observed during the banking crisis in the late 1980s.

Clear growth in petroleum investment this year and next

Following a fall of 6.3 per cent in Q1 this year, seasonally adjusted national accounts figures show 8.2 per cent growth in petroleum investment in Q2. This growth was driven by higher activity in the investment areas production wells and platforms, drilling rigs and modules. In the first half of this year, petroleum investment was 2.2 per cent higher than in the same period last year. Whereas investment prices rose by only 6.4 per cent in 2022, the price rise in the first half of 2023 was a whole 10.4 per cent more than in the same period last year. The higher rise in prices this year is attributable to the depreciation of the Norwegian krone against the US dollar. As the oil companies pay for a significant share of their capital goods in USD, prices measured in NOK rise when the krone depreciates against the dollar.

The Storting package of tax measures that was adopted in June 2020 to support the industry in connection with the sharp fall in the oil price early in the Covid pandemic, coupled with high oil and gas prices, has triggered a very large number of new developments on the Norwegian continental shelf. We therefore expect the flagging investment of recent years to reverse into clear growth this year and next. Less new developments than normal are expected in the next few years. As some of the ongoing developments reach completion, we assume that growth will slow in 2025, and that investment will then fall slightly in 2026.

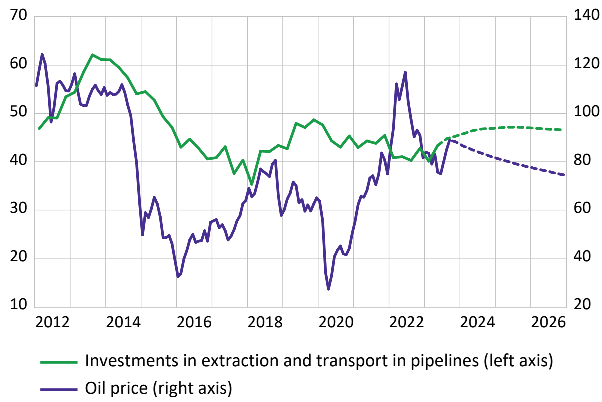
The petroleum companies' investment plans for the current year and next year are reviewed in Statistics Norway's quarterly investment survey (KIS). In the last survey from August, the nominal projection for 2023 is approximately NOK 213 billion, which is an increase of 7.8 per cent compared with the projection published in the previous survey in May. The projection for 2024 is about NOK 207 billion, some 14 per cent higher than the May projection.

The upward revisions for both 2023 and 2024 are largely driven by higher forecasts in the categories fields in operation and field development, and are mainly attributable to the fact that investments shown in earlier surveys as planned for later have now been brought forward to the current year and 2024. This applies to both construction of infrastructure for new fields and production drilling. It is reported that the distribution of the investment across the different years is still uncertain, and that there may be changes in later surveys.

In light of the pronounced depreciation of the krone so far in 2023, we assume that some of the increase in the projection is due to the petroleum companies pricing higher investment prices into their budgets for 2023. We forecast nominal investment growth of 18 per cent this year. Given an assumed rise in investment prices of 10 per cent, this will result in an 8 per cent growth in volume. We are increasing the growth in volume by 2 percentage points compared with our last report, largely because of accelerated investment plans.

We assume that there will be relatively moderate investment in 2024 in developments for which plans for development and operation (PDOs) have not yet been delivered, and which are therefore not included in the survey. Investment in 2024 in some of the other categories, particularly fields in operation, is assumed to be somewhat higher than the figures in the last survey. Experience of previous developments indicates that there is also a risk of some of the ongoing developments incurring higher costs than those in the initial investment plans. These may be due both to higher than expected investment prices and to the raising of the real capital requiring more investment activity than previously envisaged. Changes in field investment budgets are usually published in connection with the submission of the government budget at the beginning of October each year. We forecast 5 per cent growth in volume for 2024, up 0.5 percentage point on the figure in our previous report. As we have increased growth by 2 percentage points this year, the investment level forecast for 2024 is about 2.4 per cent higher than in the previous report. The investment level is increasing largely as a result of accelerated investment plans.

Figure 11. Petroleum investments and oil price
Seasonally adjusted. Left axis: billion 2020 NOK, quarter
Right axis: USD per barrel



Source: Statistics Norway

The smallest of the ongoing field developments added last year are expected to be completed in 2025 or early 2026. We assume that the associated investments will not be fully compensated for by upcoming developments, which will mean more moderate investment growth of 1 per cent in 2025 and a fall of 1 per cent in 2026. This will result in a somewhat higher investment level in both 2025 and 2026 than forecast in our previous report, despite the fact that investments previously planned for these years have now been brought forward to this year and 2024. This is attributable to the upward revision of our projections for the investment categories exploration and fields in operation, which is a result of our now forecasting higher oil prices than in our previous report. We have also pushed up somewhat our projections for shutdowns and abandonment for these years. We are additionally assuming that the aforementioned accelerated investment will be partially offset by higher overall investment in ongoing investment projects than that in the operators' initial budgets. Several recent finds close to existing fields also increase the possibility of more new developments being triggered and that there will be larger investment volumes than previously planned in ongoing or previously planned developments. Given this scenario, the investment level in 2026 will be slightly higher than in 2019.

In the first half of 2022, oil and gas extraction was 1.9 per cent higher than in the same period last year. Liquid production increased by 9.0 per cent, while gas production fell by 4.4 per cent compared with the first half of 2022. This past winter the Norwegian Petroleum Directorate forecast extraction growth of 3 per cent this year and 2.4 per cent next year. Gas production so far this year has been somewhat lower than forecast as a result of planned maintenance shutdowns. We are therefore assuming growth in petroleum production of 1.3 and 4.4 per cent in 2023 and 2024, respectively. Production is expected to increase by a further 1.5 per cent in 2025 before falling by 2.5 per cent in 2026.

Reduced business investment in the years ahead

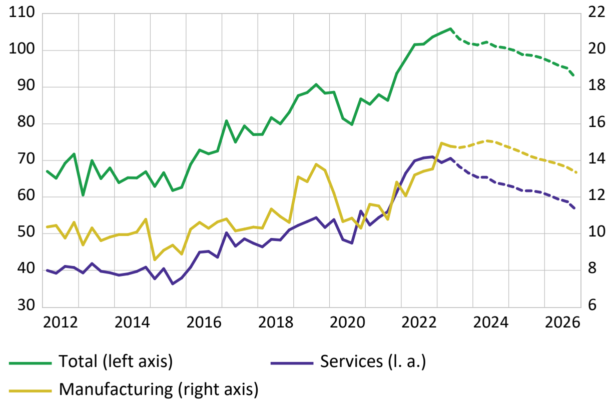
Preliminary quarterly national accounts figures show that overall business investment rose by 1.1 per cent in both Q1 and Q2 this year. Investment in manufacturing and mining increased by 10.4 per cent in Q1 and fell by 1.1 per cent in Q2. Investment in services including wholesale and retail trade, which in 2022 accounted for about 68 per cent of all business investment, was roughly unchanged in the first half of this year.

According to Statistics Norway's investment intentions survey for 2023 Q3, manufacturing investment is expected to increase sharply through 2023. This investment is being driven by large individual projects in basic metals, computer and electrical equipment and building of ships and oil platforms. The upswing in 2023 will be dampened by a decline in investment in petroleum refinement and in chemical and pharmaceutical products. A reduction in manufacturing investment is signalled for 2024 due to the winding up of several large individual projects in 2023. The decline will be curbed by investment in petroleum refinement and chemical and pharmaceutical products, which is expected to pick up again in 2024. Mining businesses also report expectations of growth in 2023 and a decline in 2024.

Power supply businesses forecast a rise in investment in 2024, largely in connection with a sharp upturn in electricity distribution. On the other

Figure 12. Investments Mainland Norway

Seasonally adjusted, billion 2020 NOK, quarter



Source: Statistics Norway

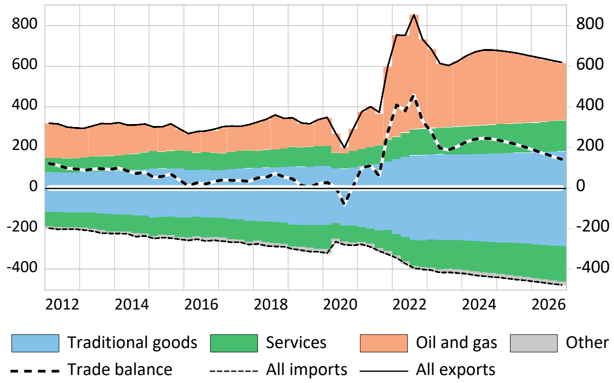
hand, investment in electricity production is expected to be lower this year than in 2022 as a result of the completion of several windpower projects in recent years and few new ones. Investment in power supply is expected to also increase in 2024, primarily in electricity transmission and distribution. Investment in electricity production and in distance heating and other power supply will also make positive contributions. Owing to higher cost estimates, however, there is great uncertainty associated with the projection for a large distance heating and other power supply project.

The business tendency survey reviews manufacturing leaders' assessments of businesses' financial developments and situation. Manufacturers of capital goods have noted growing stocks of orders for both the domestic and the export market, and both production volume and new orders are expected to be higher in Q3. The positive prospects may be attributable to the fact that in late 2022 Q4 a number of new field developments were decided on for the Norwegian continental shelf. This has resulted in many new contracts for the Norwegian supplier industry in the segments shipping and oil platforms and machinery and equipment. With regard to the businesses' own investment plans, the leaders report that plans are being revised down somewhat. Prices for capital goods and funding costs are indicated as constraints.

In Norges Bank's survey of businesses, Regional Network (norges-bank.no) for Q2, businesses signalled a slight increase in expected investment in 2023 compared with 2022. A backlog of deliveries from previous years, along with investment in

Figure 13. Foreign trade

Exports (positive axis), imports (negative axis) and balance of trade
Value (current prices), seasonally adjusted, billion NOK, quarter



Source: Statistics Norway

environmental measures and energy transitions, is expected to increase manufacturing investment this year. Wholesale and retail trade businesses and service providers expect a reduction in investment in 2023, and for the latter the main reason is reduced erection of new commercial buildings. All in all, businesses reported that they were delaying the start of new investment because of higher investment costs due to a weak krone exchange rate, but that growth would pick up in 2024.

For business investment as whole, only a small increase is likely this year, and this can be largely ascribed to higher investment in manufacturing. The global downturn, coupled with higher interest rates in Norway, will place a damper on investment in the years ahead. The investment level will nevertheless remain higher during the projection period than it was prior to the pandemic.

Reduced, but still large trade surplus

After ensuring a record-high trade surplus in 2022 Q3, falling oil and gas prices more than halved the value of oil and gas exports through the following three quarters. In combination with a slightly reduced value for mainland exports and a somewhat higher value for total imports, lower energy prices caused the trade surplus to fall by 75 per cent, from NOK 554 billion in 2022 Q3 to NOK 134 billion in Q2 this year. The surplus is still high in a historical perspective, nonetheless, partly thanks to a record low krone exchange rate.

Mainland Norway's foreign trade has delivered a loss every year since 1970. The trend has been negative and increasing, and the deficit was about NOK 400 billion last year. The NOK 124 billion deficit in Q2 this year was record high, largely due to the depreciation of the krone.

Traditional goods exports increased through 2022 and the first half of this year, measured in constant prices and adjusted for seasonal variations. Growth in Q2 this year was as much as 2.5 per cent. Aquaculture made a strongly positive contribution, while basic metals detracted most. Service exports increased through 2021 and 2022 and into 2023, but fell in Q2 this year. The decline was broad-based. The growth in foreigners' consumption in Norway following the pandemic came to a halt in Q1, and fell in Q2 this year. Whereas oil exports have increased for the last four quarters, gas exports have fallen for the last three.

The export price index for traditional goods rose much more than the index for services through 2021 and 2022. This year the rise in prices appears to have slowed for both export groups. The pronounced depreciation of the krone may have helped to prevent a clear decline. After peaking in 2022 Q3, the gas price has fallen much more than the oil price. Despite a fall in both volume and price, the value of gas exports in Q2 this year was still around a third higher than the value of oil exports.

Following the great "pandemic collapse" in 2020 Q2, when overall import volumes fell far more than overall export volumes, the two variables have moved in a fairly similar manner. Imports of traditional goods have shown weak developments this year, and barely grew in Q2 following a decline in Q1. Imports of cars and basic metals contributed to growth in Q2. A delivery of F35 fighter aircraft in Q2 ensured that overall goods imports more than doubled compared with the previous quarter. Growth in overall service imports was broad-based in Q2 this year, but Norwegians' consumption abroad dipped after growing through 2022 and Q1 this year, probably as a result of the weak krone exchange rate. The depreciation of the krone through 2022 and the first half of this year has caused import prices to rise. Price inflation was higher for goods than for services last year, but the reverse in the first half of this year. Norwegians' consumption abroad has been subject to a strong rise in prices for five consecutive quarters. Whereas export prices for refined petroleum products have been falling for the past four quarters, import prices for these products first fell in Q2 this year.

The uncertainty concerning global economic developments over the next few years persists. We have once again revised down the growth forecasts for demand from our trading partners. We have also revised down the growth forecasts for demand from mainland Norway this year and next because of high interest rates, a weak krone and high inflation. In 2025 and 2026 we expect demand to pick up markedly in pace with improved household finances. Following our revisions, we still forecast that growth in demand from abroad will remain higher than growth in mainland demand through the projection period. Import prices are expected to rise, while export prices are forecast to move at a slower, and in some cases negative pace. Thus we expect mainland Norway to incur a terms of trade loss for the remainder of the projection period.

Oil and gas exports have provided a trade surplus for several decades. After peaking in 2022 Q3, energy prices fell, and the forward market indicates a further decline for the next years. The value of oil and gas exports will be mainly determined by oil and gas prices, as export volumes will not change much in the next few years. This year there will be a sharp fall in the value of oil and gas exports as a consequence of the pronounced fall in prices since last year. Next year we expect an increase in value as a consequence of higher gas prices and higher export volumes, but lower prices are subsequently expected to reduce the value of oil and gas exports.

Last year's record-high trade surplus of NOK 1 579 billion is likely to be halved this year, and to fall further through the projection period. The trade surplus is nonetheless expected to end up close to the peak level of NOK 635 billion in 2008. When a growing income and current transfers surplus is added, the total – the current account balance – as a share of GDP is forecast to fall from 30 per cent in 2022 to about 18 per cent this year, and then to 16 per cent in 2026.

Weak developments in the Norwegian economy this year

Following the re-opening in the wake of the pandemic, there was moderate growth in the mainland economy in 2022, but since the turn of the year economic activity has shown signs of levelling off. The high inflation and higher interest rates have curbed demand, and this affected developments in a number of industries in 2023 Q2.

Developments in mainland industries followed different paths through Q2. There was a decline in construction, the industry making the largest negative contribution to mainland GDP in Q2. Construction accounts for more than 6 per cent of the mainland economy, and is thus an important industry. The manufacturing segment that supplies the offshore industry recorded growth. This is mainly attributable to higher investment in the petroleum industry as a consequence of the favourable conditions for plans for development and operation (PDOs) delivered before the end of 2022. For manufacturing as a whole, however, there was a 0.2 per cent decline in value added, partly due to a strike in April. Manufacturing development through the first half of 2023 was more or less flat.

There was weak growth in the service industries, including housing services, through Q2. Banking and insurance contributed to pushing up growth. The tightening of the rules for hire of labour from staffing enterprises, which took effect on 1 April, depressed activity in administrative and support services.

There was a weak decline in the primary industries, but an upswing in aquaculture. More fish ready for harvest than the previous quarter contributed to the growth. Value added in electricity production increased. Reservoir levels were somewhat higher than at the same time last year, as was power production, measured in terawatt hours.

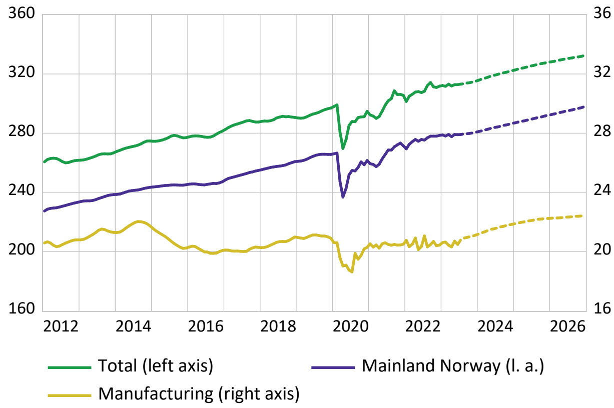
There was moderate growth in general government production. State education, i.e. universities and regional colleges, accounted for the largest contribution to growth. The health trusts also had a somewhat higher level of activity than at the same time last year, and there was increased activity in the municipal health service.

Manufacturing leaders report a moderate decline in activity in Q3, according to the business tendency survey for manufacturing, mining and quarrying. Negative developments are expected among manufacturers of intermediate and consumer goods, while the prospects for manufacturers of capital goods are more positive. The expected upswing in production of capital goods is due to new contracts awarded to the Norwegian supplier industry, for the production of oil platforms and ships, among other things.

Enterprises in Norges Bank's Regional Network report that they believe activity will pick up in Q3. Here, too there are positive signals from the offshore supplier industry and from service industries. Tourism-oriented and export businesses believe activity will increase because of the weak krone. However, the construction industry reports a decline.

Figure 14. Gross domestic product

Seasonally adjusted, billion 2020 NOK, month



Source: Statistics Norway

The projections for mainland GDP have been revised down somewhat from our previous report for 2023. Preliminary Q2 figures show that growth so far in 2023 has been weaker than previously assumed, and annual growth is now forecast to be around 1 per cent this year. In view of markedly falling real house prices, the fall in housing investment is expected to continue, which is likely to reduce construction activity. We expect mainland GDP growth to pick up in 2024 and increase further in 2025 and 2026, as a consequence not only of lower interest rates and higher income growth in Norway, but also of increased international demand. This last is expected to provide a further boost to manufacturing segments. The forecast increase in housing investment from 2025 is likely to provide impetus to construction activity again. Despite fluctuations in individual industries, overall activity in the Norwegian economy is expected to remain close to trend in the years ahead.

Unemployment will rise slightly

There are few signs yet of any weakening of the labour market. The Labour Force Survey (LFS) and figures from the Norwegian Labour and Welfare Organisation (NAV) show a fall in unemployment from 2023 Q1 to Q2, while the national accounts show a slight increase in employment and hours worked. Although there was a decline in the number of vacancies, according to Statistics Norway, they are still at a high level.

According to the LFS, seasonally adjusted unemployment shrank from 3.7 per cent in 2023 Q1 to 3.3 per cent in Q2, after lying at between 3.2 and 3.3 per cent through the whole of 2022. This is appreciably lower than the average unemployment rate of 3.9 per cent in the 2000s. Monthly figures for July show a continued stable level of unemployment. According to trend LFS figures, unemployment has been stable at around 3.4 per cent since the beginning of the year, while the seasonally adjusted 3-month moving average for June showed a fall to 3.3 per cent from 3.7 per cent in the previous 3-month period. The trend figures represent the long-term tendency of the monthly figures.

LFS unemployment among persons aged 15–24 fell to 9.6 per cent in 2023 Q2 after increasing the previous two quarters. Unemployment in this age group is now the lowest observed since the financial crisis, while the employment rate is historically high.

Seasonally adjusted registered unemployment published by NAV bottomed out at 1.6 per cent in the period July–September 2022. It has since risen steadily to 1.9 per cent in August 2023. The number of fully unemployed laid off persons is still low, and in March 2023 accounted for only 0.1 per cent of the labour force.

According to the LFS, seasonally adjusted employment increased by 0.8 per cent from 2023 Q1 to Q2, and also increased by 0.8 per cent in relation to the same quarter the previous year. In 2023 Q2, 70.6 per cent of the adult population was employed, up from 69.4 per cent in Q1, but roughly the same level as a year previously. This is markedly higher than the average of 68.8 per cent in the 10-year period 2010–2019, and a higher employment rate has not been recorded since before the financial crisis. In 2008 Q1, for example, it was 71.3 per cent (adjusted for breaks).

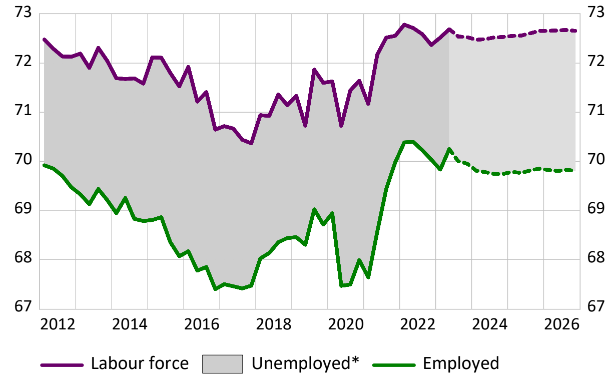
The employment rate among persons aged 15–24 peaked in March 2023 at 59.2 per cent, measured as a 3-month moving average. By way of comparison, the average was 52.3 per cent in the period 2010–2019.

Another group in which employment has increased in recent years consists of immigrants, i.e. residents born abroad with foreign parents and grandparents. In 2023 Q2, the number of wage-earners classified as immigrants was higher than ever, with growth of 2.4 per cent on Q1 and of 4.9 per cent compared with the same quarter the previous year. In 2022, 32 500 Ukrainian citizens immigrated to Norway, and we expect roughly the same number in 2023.[3] From 2022 and up to 8 August 2023, a total of 56 300 persons from Ukraine had applied for asylum. According to a report from the Ministry of Labour and Inclusion[4], 3 400 Ukrainian citizens who have immigrated since 2021 have been registered as being employed. This is a relatively low employment rate compared with other European countries.

The national accounts show subdued growth in both employment and hours worked. Employment rose by 0.1 per cent from 2023 Q1 to Q2, while hours worked increased by 0.2 per cent. Employment growth is the weakest since the end of 2021. Employment in 2023 Q2 was 1.6 per cent higher than in 2022 Q2, and hours worked were 1.3 per cent higher. It is estimated that the strike this spring resulted in the loss of 0.05 per cent of hours worked in Q2.

This past year the national accounts have shown somewhat stronger employment developments than the LFS. According to the LFS, employment in 2023 Q2 was 0.8 per cent higher than one year previously, whereas the national accounts report growth of 1.6 per cent. The populations covered by the two statistics differ somewhat. The LFS only

Figure 15. Labour market status
Percent of population in working age, LFS



* Unemployment is measured as share of population in working age
Source: Statistics Norway

looks at residents, while the national accounts cover persons who work in mainland activities, irrespective of whether they are resident in Norway or not. This means in practice that the national accounts differ from the LFS in including non-residents who work in activities located in Norway.

There was a decline in hours worked in construction, accommodation and food services, and administrative and support services. The activity level in construction is still appreciably higher than in 2019. Administrative and support services include recruitment of labour for other industries, such as construction. The rules for recruitment of labour were tightened in April this year, but it is unclear how much effect this has had. However, there are indications that it has affected recruitment of labour in clerical and blue collar occupations.

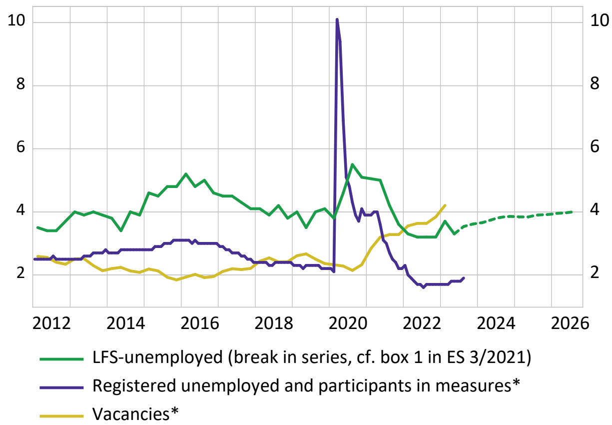
The number of foreign commuters (non-resident wage-earners) underwent little change from Q1, and was 84 700 in Q2, which is somewhat higher than the average for Q2 in the period 2016–2019 and roughly the same level as in 2020 Q1, immediately before the pandemic.

The labour force continued to grow and was at the highest level ever measured in 2023 Q2, 1.1 per cent higher than in the same quarter the previous year. The participation rate, i.e. the labour force as a share of the population, was 72.7 per cent in June 2023, calculated as a seasonally adjusted 3-month moving average. This is approximately the same level as in March and April 2022, when it was 72.9 per cent, the highest level observed since 2010.

[3] Tre ulike scenarioer for antall flyktninger fra Ukraina [Three different scenarios for the number of employees from Ukraine] (udi.no)
[4] Hurtigarbeidende gruppe om tiltak for økt arbeidsmarkeds-integrering [Expert committee on measures to increase integration of displaced Ukrainians into the labour market] (regjeringen.no).

Figure 16. Unemployed and number of vacancies

Percent of labour force and of the sum of occupied and vacant positions, seasonally adjusted and smoothed



*Breaks in the statistics make the numbers incomparable before and after January 2013

Source: The Norwegian Labour and Welfare Administration and Statistics Norway

Demand for labour was at a high level in 2021 and 2022. According to NAV, 71 100 new jobs were added in March 2022, the highest level observed in the past 5 years. However, the supply of new jobs has fallen through 2023. The average number of new jobs in the 3-month period June to August was 13 per cent lower in 2023 than in the same period in 2022.

Statistics Norway provides figures for the ratio between the stock of vacancies and the total number of jobs, based on a questionnaire circulated among businesses. This survey includes more types of announcements of vacancies than are covered by NAV's figures. According to Statistics Norway, the number of vacancies in 2023 Q1 was at the highest level recorded since the start of the survey in 2010. The share of vacancies was then 4.3 per cent. In 2023 Q2 the share fell slightly to 4.0 per cent, which is still high.

The labour market has been tight through 2022 and so far in 2023. Going forward, we expect 1.4 per cent employment growth in 2023 and then low growth for the remainder of the projection period. Employment will not keep up with the increase in the working age population, with the result that the employment rate will dip somewhat and unemployment will increase. We foresee 3.5 per cent unemployment in 2023, and then a gradual rise through the projection period to 4 per cent in 2026, roughly as published in our last report. By way of comparison, average unemployment in the period from 2000 up to the present has been 3.9 per cent.

The labour force will increase by 0.9 per cent in 2023, and then by around 0.5 per cent annually for the remainder of the projection period.

Slightly rising wage growth

Average monthly basic earnings figures for 2023 Q2 show growth of 5.2 per cent compared with the same quarter last year, which was considerably higher than growth in 2023 Q1, at 4.4 per cent. Administrative and support services and accommodation and food service activities pushed up wage growth, reporting Q2 growth of 5.4 and 5.3 per cent, respectively. Wholesale and retail trade and construction, which employ about 357 000 and 248 000 wage-earners, respectively, detracted from average Q2 wage growth, with figures of 5.0 and 4.9 per cent, respectively.

The growth in average monthly basic earnings in teaching was 5.6 per cent in Q2, up from 2.6 per cent in Q1. The strong growth in Q2 can be partly attributed to the disbursement of last year's income settlement for many teachers, with the result that growth in average monthly basic earnings for teachers in local government was as much as 6.3 per cent in Q2.

Despite some differences across industries and sectors, there was broad-based growth in average monthly basic earnings in 2023 Q2. Seasonally adjusted preliminary figures for average remuneration in cash showed growth from June to July of 0.3 per cent, pushed up by teaching and public administration but down by construction and health and social services.

The labour market remains tight, with seasonally adjusted unemployment (measured as a trend figure) of 3.4 per cent in July according to the LFS. In isolation, this factor could exert upward pressure on pay. At the same time, there was a 10 per cent fall in vacancies from Q1 to Q2, which may point towards a reduction in demand for labour.[5] There was great variation across industries, with a 17.1 per cent decline from Q1 to Q2 in the number of vacancies in wholesale and retail trade and a 15.6 increase in construction. The total vacancies level remained high in Q2, nonetheless. This indicates that although demand for labour fell somewhat

[5] See Rothe, J. S. and Gading, R. (2023): Færre ledige stillinger i 2. kvartal [Fewer vacancies in Q2].

from Q1 to Q2, it is still high, which may contribute to pushing up wages.

The projection for annual wage growth in 2023 has been revised up from 5.3 per cent in our previous report to 5.5 per cent. The projection is shrouded in uncertainty that is partly attributable to the tightness of the labour market going forward. Although the annual wage growth projection has been revised up, the projected rise in the consumer price index (CPI) of 5.8 for the current year implies a slight decline in real wages. We expect CPI inflation to fall as we approach 2026, and that growth in real wages will pick up somewhat.

Prospects of lower inflation

The annual rise in the consumer price index adjusted for tax changes and excluding energy products (CPI-ATE) has been very high in recent months. The year-on-year rise increased from 6.3 per cent in April to 6.7 per cent in May and 7.0 per cent in June before falling back to 6.4 per cent in July. From the introduction of the inflation target in 2002 to the beginning of 2023, annual inflation of over 6.0 per cent had never been measured. A weak exchange rate contributed to the most recent peaks in May and June, where even the regular pattern of the rise in prices for food and non-alcoholic beverages may be broken. The norm has been for food prices to show a particularly marked rise in two months of the year, February and July, after the supermarket chains have negotiated with their suppliers on purchase prices. During the rest of the year there has normally been a moderate rise or even fall in prices for food and non-alcoholic beverages. The food chains now appear to have dropped the arrangement that causes food prices to increase particularly strongly twice a year, and they want to negotiate with their suppliers throughout the year. This may have led to an unusually sharp rise in prices for food and non-alcoholic beverages from April to June, when the sub-index for this consumption group in the CPI-ATE was 13.6 per cent higher than the previous year. Prices increased by 3.2 per cent from June to July, far less than last year, when they rose by 7.5 per cent in the same period. The 12-month rise in prices for food and non-alcoholic beverages fell from 13.6 per cent to 9.1 per cent from June to July, and contributed to the marked decline in annual CPI-ATE inflation last month. There is considerable uncertainty regarding further price developments as to whether the supermarkets have passed all their cost increases through into consumer prices. The annual rise in prices for imported and domestically produced food was in excess of 20 per cent in Q1 according to the price index for initial sales of goods, and the rise in the producer price index for food products for the domestic market was about equally high. The inflation rate for both these indices has fallen substantially in the last three months, and was 9.1 per cent in July. This was in line with the annual rise in prices for food and non-alcoholic beverages in the CPI-ATE. A stronger krone could result in lower inflation in the short term, as could cost savings on electricity, for both manufacturing and wholesale and retail trade. At the end of August, Nortura, the market regulator for meat and eggs, reported falling sales and an increase in regulatory meat stockpiles. The wholesale price for beef and pork is being reduced in September and until the end of the year as a means of increasing demand.

In May the Government reached agreement with the Norwegian Farmers' Union on a new agricultural agreement for the coming year. The draft agreement was adopted by the Storting without amendments in June. The agricultural agreement means a NOK 4.15 billion increase in farmers' potential earnings in 2023 and 2024, most of which is assumed to be covered through increased transfers from the central government budget. The Ministry of Agriculture and Food estimated in May that the increase in prices for raw materials alone would increase the sub-index for food and non-alcoholic beverages in the consumer price index (CPI) by 1 per cent, which would raise annual CPI inflation by about 0.1 percentage point. Naturally occurring factors, such as drought in Europe and heavy precipitation in Norway, may affect the supply of agricultural products in the short term. There is also great uncertainty associated with further developments in the conflict in Ukraine, and whether this will have consequences for global food prices. In the medium term, we assume that lower energy and fertiliser costs will contribute to slowing the rise in food prices, both domestic and global.

Prices measured by both the CPI-ATE and the CPI rose by an average of 6.4 per cent compared with the period January–July last year. However, the rates at which the measures of inflation have risen followed different paths through the first seven months of 2023. The rise in prices for energy products and in tax increases contributed in Q1 to the 12-month rise in the CPI-ATE being somewhat higher than that in the CPI. In the summer months, in particular, fuel price movements led to CPI inflation being substantially lower than CPI-ATE inflation. The difference between CPI-ATE and CPI inflation was 0.7 percentage point in June and 1.0 percentage point in July. In July, annualised CPI and CPI-ATE inflation figures were 5.4 and 6.4 per cent, respectively.

In the near term, movements in household electricity prices including grid charges will bring down inflation. In the second half of last year, inflation reflected very high spot price levels. High levels of precipitation and extensive production of unregulated power brought spot prices down further from July to August, when only the Kristiansand price area, which is well connected by cables to the Continent and the UK, barely exceeded the threshold of 70 øre/kWh which triggers electricity support. For the rest of the country, spot prices in August averaged about 20 øre/kWh. We assume that the level of unregulated electricity production will remain high for a while to come. How long depends on the volume of autumn precipitation. Low spot prices are not directly passed through to household electricity prices. Grid charges, consumer taxes and electricity support are all stabilising factors in the equation, but grid charges are expected to rise somewhat in the course of the autumn. Prices at the pump in August were higher than in July. Higher oil prices and higher demand in connection with holiday travel have pushed up prices for refined products on the global market. We assume that some aspects of this price increase are transitory. The rate for most special taxes has been adjusted by 2.8 per cent for inflation for 2023. In isolation, this moderate adjustment dampens the rise in prices for many groups of goods and services in the CPI. A higher inflation rate than previously assumed, plus the fact that the reintroduction of air passenger tax from 1 July 2022 is already phased into the 12-month rise in the CPI, mean that net adjustments in taxes on goods other than energy products now contribute little to CPI inflation. The annual rise in the consumer price index excluding energy products (CPI-AE) and the CPI-ATE were the same in July and expected to remain so until the end of the year.

Annual projections for household energy prices have undergone little revision since the previous report, but net tax changes are expected to contribute a little less to inflation in the second half of the year than in previous projections. The difference between CPI-ATE and CPI inflation is forecast to be 0.5 percentage point as an annual average. We now forecast that CPI and CPI-ATE inflation will be 5.8 and 6.3 per cent, respectively, for 2023. This implies an upward revision of inflation projections from our previous economic report in June, when CPI and CPI-ATE inflation were forecast to be 5.6 and 6.0 per cent, respectively. This time, too, the new projections imply a substantial upward revision of the projections for consumer price developments published earlier this year.

Volume taxes, which are independent of underlying producer prices, make up a large portion of prices in the food and beverage group alcoholic beverages and tobacco products. These taxes were raised moderately from 2022 to 2023, and this is helping to curb the rise in prices for this consumption group. According to the CPI, the 12-month rise in prices for alcoholic beverages and tobacco products has been 4–6 per cent so far this year, and in July ended at 5.4 per cent. The State Wine and Liquor Monopoly (Vinmonopolet) regulates its selling prices three times a year, on 1 January, 1 May and 1 September. According to Vinmonopolet, prices for wine and liquor are being raised by an average of 5 per cent from 1 September, but the rise in prices for the basis selection in the shop is lower, and given as 2.5 per cent

According to the CPI-ATE by supplier sector, the inflation rate for imported goods excluding agricultural goods has stabilised. The annual rise for this product group was 6.5 per cent in July, the same growth rate as in January. The average rise in the period January–July was 6.4 per cent compared with 2022. Price inflation in the consumer group furniture, household equipment and routine maintenance remains high. The weak krone has led to product groups such as clothing and footwear, along with audiovisual, photographic and IT equipment experiencing a higher rise in prices this year than is usually observed for these product groups. However, the price level for purchases of new cars has fallen since January. Competition in the vehicle market has increased, with falling sales of new

Box 2. What is the surprisingly high inflation due to?

Although the monthly figures for the consumer price index (CPI) show that inflation has fallen since October last year, inflation is still high. Inflation accelerated a surprising amount from the beginning of 2022 in particular. The bottlenecks in supply chains that arose during the pandemic and the war in Ukraine have led to a sharp rise in global market prices for energy and some other products. In addition, the Norwegian krone exchange rate has depreciated substantially. This has made forecasting work extra challenging, and the forecast error for the CPI in 2022 was the largest since 1990; see Box 6 in Economic Survey 1/2023.

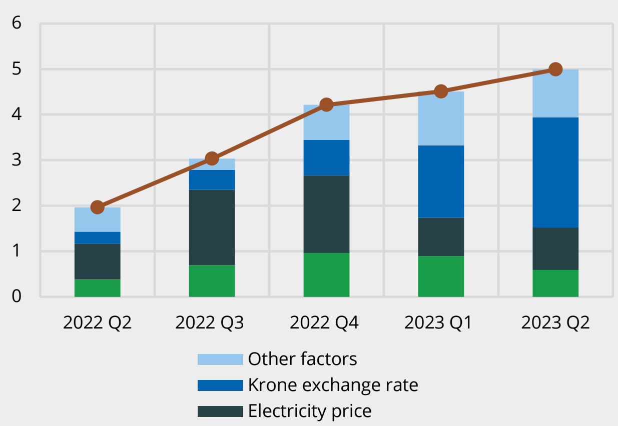
The analysis of the forecast error in Economic Survey 1/2023 compared the projections in ØA 1/2022 with actual developments in the CPI as a whole and variables that have proved in the past to be particularly important for inflation developments. In this box, we conduct a similar analysis of the forecast error, but extend the time horizon up to 2023 Q2. We also look at other unforeseen factors that have contributed to inflation developments. The analysis was performed with the aid of the KVARTS macroeconomic model.[1]

Figure 1 shows the forecast error for inflation and how this can be decomposed into contributions from three main factors: electricity price, global prices and the krone exchange rate. The group global prices includes consumer prices in the euro area, prices for processed export goods, and prices for crude oil and gas. The contributions from these three main factors explain the great majority of the forecast error, but their significance has varied through the past five quarters. The contribution from global prices has varied between 0.4 and 1 percentage point, while the contribution from the electricity price fell from 1.7 percentage points in 2022 Q3 and Q4 to 0.8 and 0.9 percentage point in the first two quarters of this year. The contribution from the krone exchange rate has increased considerably, however, and in Q2 this year the depreciation of the krone since 2022 Q1 had contributed a full 2.4 percentage points to the 4-quarter rise in the CPI.

The contribution from factors other than the three main factors has increased over time, and in Q2 this year pushed up unforeseen price inflation by 1.1 percentage points. In the more detailed analysis, we consider what significance import prices and businesses' pricing in the domestic market have for this difference.

Figure 1. Decomposition of forecast error for the consumer price index

Difference in percentage points between actual outturn and projections in ØA 1/2022 for 4-quarter CPI inflation



Source: Statistics Norway

[1] See Boug et al. (2023) for a more detailed description of KVARTS.

Import prices are largely determined by developments in the krone exchange rate and foreign price movements. This is taken into account in the calculations above. However, import prices for raw materials and many other goods targeting households and businesses increased appreciably more in Norwegian kroner than the contributions from the krone exchange rate and foreign price movements would imply; see Box 6 in Economic Survey 1/2023. The unexpectedly high rise in import prices can be attributed to factors such as the change in the pass-through of the weaker krone exchange rate and high foreign inflation. Another possible explanation is that foreign exporters may have increased their mark-up in the Norwegian market.[2] This last is consistent with a growing literature that points to increased emphasis on profit considerations in price formation since the pandemic broke out. For example, Arce et al. (2023), Capolongo et al. (2023), the European Commission (2023) and Haskel (2023) show that the mark-up increased significantly in 2022.

Although some of Norway's imports consist of finished goods for direct sale, we also import a substantial quantity of intermediate goods. Import prices therefore also affect production costs for Norwegian producers who sell on the domestic market. In the model, pricing on the domestic market is based on monopolistic competition, which provides scope for businesses to add a margin to their unit costs; see Boug et al (2017, 2023). We call the prices that businesses operate with on the domestic market domestic market prices. If domestic businesses increase their prices more than the margins would indicate on the basis of production costs, this leads to further inflation.[3] A study by Hansen et al. (2023) shows that between 2022 Q1 and 2023 Q1, increased import prices account for on average 40 per cent of the changes in the consumption deflator for the euro area, while increased business margins account for 45 per cent of inflation.

Figure 2 decomposes the component "Other factors" in Figure 1 and shows the contributions to inflation resulting from "extra mark-ups" over and above the calculated cost components in KVARTS for import prices and domestic market prices. Extra mark-ups have pushed up inflation of both import and domestic market prices. The contribution from the mark-up on import prices increased through 2022, but was reduced through the first two quarters of this year. However, the contribution from businesses' price mark-up in the domestic market has increased in 2023 compared with last year. Without the extra mark-ups on import and domestic market prices, inflation would have remained under 5 per cent throughout last year and in the first quarter of this year.

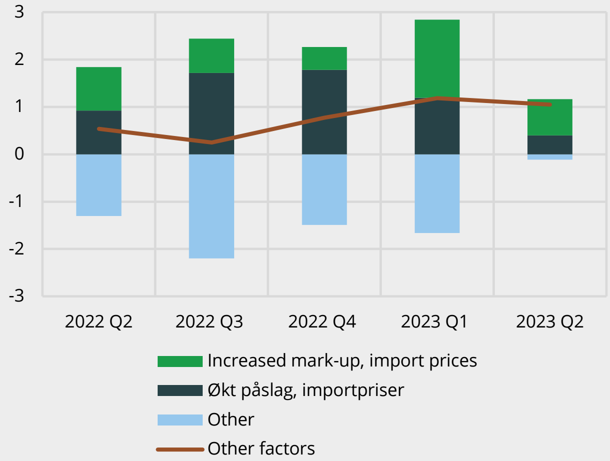
Figure 2 also shows that from 2022 Q2 to 2023 Q1 there is a relatively large portion of the forecast error that cannot be explained by the above factors. This negative contribution must be viewed in light of the increase in the money market rate by a full 3 percentage points since the beginning of 2022, differences in weightings between the national accounts and the consumer price index, and the interactive effects of the various factors.[4]

[2] According to the hypothesis of pricing-to-market, businesses apply different prices to the same product in different markets after adjusting for exchange rate changes and other costs; see Boug et al. (2013).

[3] This can be represented by a relationship y = f (•) + e, where y is a variable in the model, f (•) represents the model and e represents an economic shock (an extra effect) that the model cannot explain by means of the underlying theory and historical patterns. We consider the significance of these extra effects for import prices and businesses' pricing in the domestic market from 2022 Q2 to 2023 Q2.

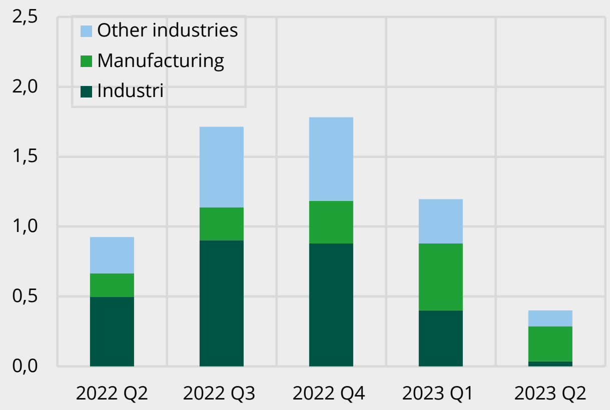
[4] See Box 3.2 in Økonomiske analyser 1/2023 (Norwegian text) for further details of the difference between the consumer price deflator in the national accounts and the consumer price index.

Figure 2. Decomposition of the contribution from "Other factors" in Figure 1
Difference in percentage points between actual outturn and projections in ØA 1/2022 for 4-quarter CPI inflation



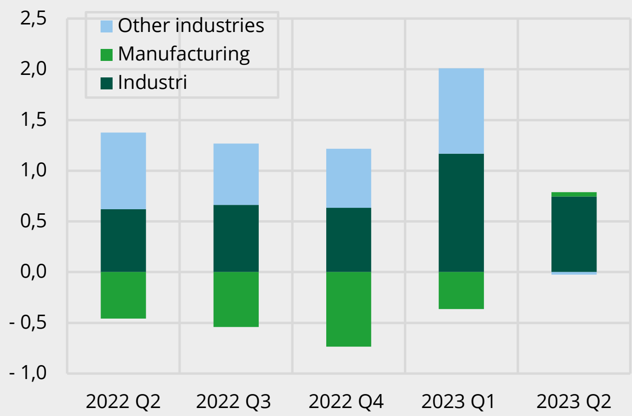
Source: Statistics Norway

Figure 3a. Decomposition of forecast error for the consumer price index
Contribution in percentage points from increased mark-ups on import prices



Source: Statistics Norway

Figur 3b. Decomposition of forecast error for the consumer price index
Contribution in percentage points from increased mark-ups on domestic market prices



Source: Statistics Norway

Figures 3a and 3b show how the contributions from higher mark-ups on import and domestic market prices, presented in Figure 2, are distributed among different industries. The increase in import prices for manufactured goods makes the largest contribution to the forecast error. It is also manufacturing that has the largest increase in mark-ups on domestic market prices. This is consistent with the analysis of Hansen et al. (2023) which shows that profit margins among European businesses have grown most in sectors that are hardest hit by increases in global commodity prices. For non-traded industries, which include wholesale and retail trade, private services and letting of commercial buildings, the pattern is different. The mark-up on import prices is less than for manufacturing, and despite strong domestic market demand, businesses in non-traded industries do not appear to have raised prices as much as the cost increase indicates. Thus the price mark-up is negative. On balance, this pushed down average inflation in the second half of 2022 by around 0.5 percentage point.

In this box we have taken a closer look at the factors contributing to the surprisingly high inflation since the beginning of 2022. Higher global prices, higher electricity prices and a weaker krone are important drivers. The analysis also reveals significant contributions from increased mark-ups on both import and domestic market prices. There is uncertainty associated with the results. The model calculations are based on preliminary national accounts figures and represent a simplified description of the economy's mechanism.

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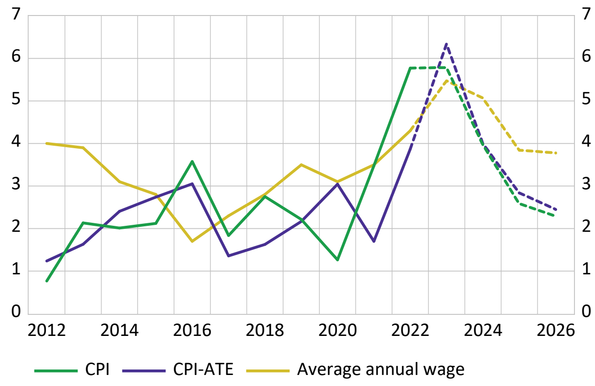
Figure 17. Consumer price indices and annual wage

Change from previous year in percent



Source: Statistics Norway

cars since the New Year and price reductions for market-leading makes. The decline in prices looks set to continue into August, when a number of car makes held sales campaigns. Given its weighting of 6 per cent in the CPI, we assume that new car sales will push down inflation somewhat in the short term.

The rent index in the CPI consists of actual rent and imputed rent, the latter intended to express the value of the service that their dwelling provides for owner-occupiers and unit owners in housing cooperatives. Prices for imputed rent shadow movements in prices for equivalent dwellings in the rental market. According to the CPI-ATE by supplier sector, the 12-month rise in rent as a whole increased gradually from 2.9 per cent in January to 4.2 per cent in July. Existing rents are largely regulated by means of the CPI. Given higher interest rates, a large population increase and strong demand for rental homes, we assume that the rise in rental prices will continue to increase somewhat this year and remain relatively high in 2024 as well.

The rise in prices for services other than rent is relatively high, but it remains stable for important service groups such as hotel and restaurant services and transport services. The exception to this is air passenger transport and charter trips, where the price level and rise in prices are very high. Less competition in the market and an increasing desire to travel are contributing to this development. Prices for air travel rose by over 40 per cent on average in the period January–July compared with last year. Although the air passenger tax that was introduced on 1 July 2022 is fully phased into the 12-month rise in the CPI, the price inflation appears unlikely to slow going forward, given the low prices for air travel in the second half of last year. We assume that prices for charter trips and air travel will continue to maintain the rise in prices at a high level in the coming months.

We have based our energy price projections on forward prices for electricity and crude oil. The system of household electricity support will be retained as it is from 1 September 2023, when it is altered to shadow spot prices on an hourly basis. In the forward market, electricity prices fall somewhat towards 2026 and cause a moderate fall in household electricity prices, including grid charges, in the years ahead. In our model, fuel prices largely shadow crude oil prices in NOK with a premium consisting of special taxes. On balance, we assume that the rise in energy prices will be slightly lower than inflation measured by the CPI-ATE in the years up to 2026.

We have adjusted the special tax rates for inflation for the years 2024– 2026 and expect them to have a neutral effect on CPI inflation, while the scheme with a reduced consumption tax on electricity in Q1 is maintained as it is in 2023. As usual, the exchange rates in our calculations are maintained at their levels at the time of making forecasts. Since our last report, the other leading indicators that determine inflationary developments have also been revised. This applies to global consumer prices, prices for processed goods imports, the crude oil price, electricity prices and wage projections. The krone has appreciated since June, but is still weak. In isolation, an expected decline in global inflation is expected to contribute to lower consumer price inflation in the coming years. In the medium term to 2026, we still assume that the rise in import prices will gradually fall to more normal levels of around 2 per cent when the exchange rate effects of a weakened krone are exhausted. The decline in electricity prices results in lower production costs for the business sector and contributes to curbing inflation. The upswing in production in the mainland economy is leading to greater capacity utilisation and higher productivity growth. This dampens the effects of higher wage growth and also contributes to lower import prices, while lower energy costs will lead to consumer prices rising less than wages in the years ahead.

CPI-ATE inflation is forecast to be 4.0 per cent from 2023 to 2024, significantly down from this year's forecast of 6.3 per cent. It will then slow gradually to 2.4 per cent in 2026. An expected moderate overall fall in household energy will result in CPI inflation being slightly lower than CPI-ATE inflation in the years 2025–2026.

Table 4. National accounts: Final expenditure and gross domestic product. At constant 2020 prices. NOK million

	Unadjusted		Seasonally adjusted							
	2021	2022	21:3	21:4	22:1	22:2	22:3	22:4	23:1	23:2
Final consumption expenditure of households and NPISHs	1 570 547	1 678 656	407 539	417 848	403 552	418 547	419 514	438 080	414 426	416 780
Household final consumption expenditure	1 484 909	1 582 492	384 226	393 870	380 607	394 623	395 231	413 750	390 347	392 649
Goods	773 703	745 782	199 644	197 285	184 937	184 510	182 910	199 567	175 310	178 034
Services	696 978	772 249	179 756	187 265	186 249	193 366	194 128	195 892	195 930	195 326
Direct purchases abroad by resident households	30 449	111 118	9 341	17 872	19 161	28 428	30 345	30 640	31 443	30 660
Direct purchases by non-residents	-16 220	-46 657	-4 515	-8 552	-9 741	-11 680	-12 152	-12 349	-12 336	-11 371
Final consumption expenditure of NPISHs	85 638	96 164	23 313	23 978	22 946	23 923	24 283	24 330	24 078	24 131
Final consumption expenditure of general government	950 044	950 897	241 519	240 868	235 535	237 142	237 657	240 607	242 504	244 040
Final consumption expenditure of central government	473 666	477 149	120 529	121 349	116 630	118 970	119 754	121 858	122 219	122 228
Central government, civilian	418 699	420 633	106 729	107 449	102 566	104 877	105 673	107 581	107 899	107 788
Central government, defence	54 967	56 515	13 801	13 900	14 064	14 093	14 081	14 277	14 320	14 440
Final consumption expenditure of local government	476 378	473 749	120 990	119 519	118 905	118 172	117 903	118 749	120 285	121 812
Gross fixed capital formation	941 857	982 511	232 949	241 486	242 938	245 571	245 507	248 598	245 873	246 326
Extraction and transport via pipelines	176 326	164 840	43 821	45 426	40 848	41 041	40 278	42 782	40 094	43 385
Ocean transport	-460	738	-823	-1 039	1 458	-31	-17	-670	1 110	722
Mainland Norway	765 991	816 932	189 950	197 099	200 632	204 561	205 247	206 486	204 669	202 219
Industries	353 301	404 585	86 416	93 755	97 664	101 599	101 731	103 707	104 840	105 944
Service activities incidential to extraction	6 010	8 061	1 516	2 049	1 619	2 043	1 602	2 796	2 212	2 093
Other services	224 072	278 060	55 993	61 321	66 518	69 891	70 685	70 968	69 388	70 558
Manufacturing and mining	46 680	52 177	10 783	12 813	12 066	13 204	13 410	13 530	14 937	14 766
Production of other goods	76 539	66 288	18 124	17 571	17 461	16 460	16 034	16 412	18 303	18 527
Dwellings (households)	205 137	202 367	50 298	51 420	52 089	51 185	49 545	49 546	47 961	44 474
General government	207 554	209 980	53 237	51 924	50 879	51 777	53 971	53 233	51 868	51 801
Acquisitions less disposals of valuables	161	292	64	63	66	78	76	72	83	79
Changes in stocks and statistical discrepancies	121 157	127 747	30 818	16 688	32 865	30 985	35 482	14 148	36 388	33 561
Gross capital formation	1 063 176	1 110 550	263 831	258 237	275 869	276 633	281 065	262 818	282 344	279 966
Final domestic use of goods and services	3 583 766	3 740 103	912 889	916 954	914 957	932 322	938 236	941 505	939 274	940 786
Final demand from Mainland Norway	3 286 582	3 446 486	839 008	855 815	839 720	860 250	862 417	885 173	861 599	863 039
Final demand from general government	1 157 598	1 160 877	294 756	292 792	286 414	288 919	291 628	293 840	294 372	295 841
Total exports	1 179 719	1 249 187	301 481	307 969	300 246	306 893	321 114	318 255	322 517	326 957
Traditional goods	429 579	428 417	105 956	105 123	103 375	104 559	109 566	108 952	110 107	112 906
Crude oil and natural gas	379 606	380 616	99 125	96 367	94 305	93 231	97 232	95 885	96 271	100 841
Ships, oil platforms and planes	20 368	3 386	8 716	6 409	1 642	615	696	433	698	991
Services	350 165	436 767	87 683	100 070	100 924	108 487	113 620	112 984	115 441	112 219
Total use of goods and services	4 763 485	4 989 289	1 214 370	1 224 923	1 215 203	1 239 215	1 259 350	1 259 760	1 261 791	1 267 744
Total imports	1 166 965	1 274 898	300 534	306 998	302 537	315 909	324 592	325 801	324 697	330 314
Traditional goods	779 268	798 509	200 027	190 146	193 364	196 408	201 254	203 941	197 387	197 944
Crude oil and natural gas	15 218	10 329	2 500	3 093	2 314	2 785	2 540	2 873	3 727	2 697
Ships, oil platforms and planes	36 807	21 386	11 257	11 494	8 122	4 859	5 046	3 360	3 661	7 878
Services	335 672	444 674	86 749	102 264	98 738	111 857	115 752	115 628	119 922	121 794
Gross domestic product (market prices)	3 596 520	3 714 392	913 836	917 925	912 666	923 306	934 758	933 959	937 094	937 430
Gross domestic product Mainland Norway (market prices)	3 194 851	3 317 147	807 960	816 851	816 240	826 106	829 960	834 364	836 028	835 677
Petroleum activities and ocean transport	401 670	397 245	105 876	101 073	96 426	97 200	104 798	99 594	101 066	101 753
Mainland Norway (basic prices)	2 775 849	2 894 246	701 101	709 952	711 696	719 911	724 905	728 394	730 005	730 480
Mainland Norway excluding general government	2 047 305	2 149 781	516 579	524 137	527 719	534 192	538 047	540 558	541 709	541 567
Manufacturing and mining	243 407	245 151	61 379	61 361	61 576	61 373	61 833	61 496	61 644	61 496
Production of other goods	342 760	351 872	85 023	86 389	88 100	87 449	87 493	86 893	87 353	86 969
Services incl. dwellings (households)	1 461 138	1 552 758	370 177	376 387	378 043	385 370	388 720	392 169	392 711	393 102
General government	728 544	744 465	184 522	185 815	183 977	185 719	186 858	187 836	188 296	188 914
Taxes and subsidies products	419 002	422 901	106 859	106 899	104 544	106 194	105 055	105 970	106 022	105 197

Source: Statistics Norway.

Table 5. National accounts: Final expenditure and gross domestic product. At constant 2020 prices. Percentage change from previous period

	Unadjusted		Seasonally adjusted							
	2021	2022	21:3	21:4	22:1	22:2	22:3	22:4	23:1	23:2
Final consumption expenditure of households and NPISHs	4.4	6.9	7.6	2.5	-3.4	3.7	0.2	4.4	-5.4	0.6
Household final consumption expenditure	4.7	6.6	7.0	2.5	-3.4	3.7	0.2	4.7	-5.7	0.6
Goods	5.8	-3.6	2.6	-1.2	-6.3	-0.2	-0.9	9.1	-12.2	1.6
Services	3.8	10.8	8.8	4.2	-0.5	3.8	0.4	0.9	0.0	-0.3
Direct purchases abroad by resident households	-8.0	264.9	458.0	91.3	7.2	48.4	6.7	1.0	2.6	-2.5
Direct purchases by non-residents	-5.3	187.6	84.0	89.4	13.9	19.9	4.0	1.6	-0.1	-7.8
Final consumption expenditure of NPISHs	0.6	12.3	18.1	2.9	-4.3	4.3	1.5	0.2	-1.0	0.2
Final consumption expenditure of general government	5.0	0.1	2.1	-0.3	-2.2	0.7	0.2	1.2	0.8	0.6
Final consumption expenditure of central government	5.3	0.7	2.6	0.7	-3.9	2.0	0.7	1.8	0.3	0.0
Central government, civilian	5.6	0.5	2.8	0.7	-4.5	2.3	0.8	1.8	0.3	-0.1
Central government, defence	2.9	2.8	0.9	0.7	1.2	0.2	-0.1	1.4	0.3	0.8
Final consumption expenditure of local government	4.7	-0.6	1.6	-1.2	-0.5	-0.6	-0.2	0.7	1.3	1.3
Gross fixed capital formation	-0.8	4.3	-0.9	3.7	0.6	1.1	0.0	1.3	-1.1	0.2
Extraction and transport via pipelines	-2.1	-6.5	-1.1	3.7	-10.1	0.5	-1.9	6.2	-6.3	8.2
Ocean transport	-102.8	-260.5	395.5	26.3	-240.3	-102.1	-46.1	..	-265.6	-35.0
Mainland Norway	1.7	6.7	-0.6	3.8	1.8	2.0	0.3	0.6	-0.9	-1.2
Industries	5.0	14.5	-1.7	8.5	4.2	4.0	0.1	1.9	1.1	1.1
Service activities incidential to extraction	-5.0	34.1	22.4	35.1	-21.0	26.2	-21.6	74.5	-20.9	-5.4
Other services	8.9	24.1	2.9	9.5	8.5	5.1	1.1	0.4	-2.2	1.7
Manufacturing and mining	6.1	11.8	-6.4	18.8	-5.8	9.4	1.6	0.9	10.4	-1.1
Production of other goods	-5.0	-13.4	-12.8	-3.1	-0.6	-5.7	-2.6	2.4	11.5	1.2
Dwellings (households)	3.0	-1.4	-4.9	2.2	1.3	-1.7	-3.2	0.0	-3.2	-7.3
General government	-4.5	1.2	6.1	-2.5	-2.0	1.8	4.2	-1.4	-2.6	-0.1
Acquisitions less disposals of valuables	-3.0	81.1	124.1	-2.1	4.6	17.6	-1.8	-5.2	14.8	-4.3
Changes in stocks and statistical discrepancies	-10.5	5.4	19.4	-45.8	96.9	-5.7	14.5	-60.1	157.2	-7.8
Gross capital formation	-2.0	4.5	1.1	-2.1	6.8	0.3	1.6	-6.5	7.4	-0.8
Final domestic use of goods and services	2.6	4.4	4.2	0.4	-0.2	1.9	0.6	0.3	-0.2	0.2
Final demand from Mainland Norway	4.0	4.9	4.1	2.0	-1.9	2.4	0.3	2.6	-2.7	0.2
Final demand from general government	3.2	0.3	2.8	-0.7	-2.2	0.9	0.9	0.8	0.2	0.5
Total exports	5.8	5.9	3.9	2.2	-2.5	2.2	4.6	-0.9	1.3	1.4
Traditional goods	4.6	-0.3	-4.4	-0.8	-1.7	1.1	4.8	-0.6	1.1	2.5
Crude oil and natural gas	2.9	0.3	4.6	-2.8	-2.1	-1.1	4.3	-1.4	0.4	4.7
Ships, oil platforms and planes	112.1	-83.4	151.8	-26.5	-74.4	-62.5	13.0	-37.8	61.3	41.9
Services	7.5	24.7	8.0	14.1	0.9	7.5	4.7	-0.6	2.2	-2.8
Total use of goods and services	3.4	4.7	4.1	0.9	-0.8	2.0	1.6	0.0	0.2	0.5
Total imports	1.7	9.2	6.8	2.2	-1.5	4.4	2.7	0.4	-0.3	1.7
Traditional goods	5.7	2.5	2.1	-4.9	1.7	1.6	2.5	1.3	-3.2	0.3
Crude oil and natural gas	-11.5	-32.1	-61.3	23.7	-25.2	20.3	-8.8	13.1	29.7	-27.6
Ships, oil platforms and planes	-16.6	-41.9	55.7	2.1	-29.3	-40.2	3.8	-33.4	9.0	115.2
Services	-3.8	32.5	21.0	17.9	-3.4	13.3	3.5	-0.1	3.7	1.6
Gross domestic product (market prices)	3.9	3.3	3.2	0.4	-0.6	1.2	1.2	-0.1	0.3	0.0
Gross domestic product Mainland Norway (market prices)	4.2	3.8	2.6	1.1	-0.1	1.2	0.5	0.5	0.2	0.0
Petroleum activities and ocean transport	1.9	-1.1	8.3	-4.5	-4.6	0.8	7.8	-5.0	1.5	0.7
Mainland Norway (basic prices)	4.2	4.3	2.5	1.3	0.2	1.2	0.7	0.5	0.2	0.1
Mainland Norway excluding general government	3.9	5.0	2.6	1.5	0.7	1.2	0.7	0.5	0.2	0.0
Manufacturing and mining	3.8	0.7	0.1	0.0	0.3	-0.3	0.7	-0.5	0.2	-0.2
Production of other goods	3.1	2.7	-0.5	1.6	2.0	-0.7	0.1	-0.7	0.5	-0.4
Services incl. dwellings (households)	4.1	6.3	3.8	1.7	0.4	1.9	0.9	0.9	0.1	0.1
General government	5.1	2.2	2.3	0.7	-1.0	0.9	0.6	0.5	0.2	0.3
Taxes and subsidies products	3.7	0.9	3.1	0.0	-2.2	1.6	-1.1	0.9	0.0	-0.8

Source: Statistics Norway.

Table 6. National accounts: Final expenditure and gross domestic product. Price indices. 2020=100

	Unadjusted		Seasonally adjusted							
	2021	2022	21:3	21:4	22:1	22:2	22:3	22:4	23:1	23:2
Final consumption expenditure of households and NPISHs	102.9	107.6	103.0	104.0	104.3	106.4	108.7	110.6	112.0	114.0
Final consumption expenditure of general government	102.3	109.1	100.9	103.7	108.1	108.5	109.6	110.1	110.4	111.5
Gross fixed capital formation	103.8	111.5	104.4	105.9	107.9	110.9	112.4	114.7	115.6	117.7
Mainland Norway	104.5	112.5	105.4	106.9	108.9	111.8	113.5	115.5	115.9	117.7
Final domestic use of goods and services	102.3	106.7	108.7	99.9	103.4	107.1	109.8	105.5	109.7	110.9
Final demand from Mainland Norway	103.1	109.2	102.9	104.6	106.5	108.2	110.1	111.6	112.5	114.2
Total exports	149.0	248.2	123.7	195.3	251.2	245.1	266.0	229.9	212.0	187.7
Traditional goods	113.2	146.1	113.9	125.8	140.0	146.3	148.6	149.9	150.3	149.0
Total use of goods and services	113.9	142.1	112.4	123.9	139.9	141.2	149.6	136.9	135.8	130.7
Total imports	104.0	119.3	103.6	106.7	114.2	117.9	122.0	123.1	124.9	126.5
Traditional goods	105.3	124.2	105.3	109.3	118.0	123.7	127.9	127.4	129.5	130.5
Gross domestic product (market prices)	117.1	150.0	115.3	129.6	148.5	149.2	159.2	141.7	139.6	132.2
Gross domestic product Mainland Norway (market prices)	102.9	107.6	103.0	104.4	105.8	107.2	108.3	109.2	111.0	112.2

Source: Statistics Norway.

Table 7. National accounts: Final expenditure and gross domestic product. Price indices. Percentage change from previous period

	Unadjusted		Seasonally adjusted							
	2021	2022	21:3	21:4	22:1	22:2	22:3	22:4	23:1	23:2
Final consumption expenditure of households and NPISHs	2.9	4.5	0.7	1.0	0.3	2.0	2.2	1.8	1.2	1.9
Final consumption expenditure of general government	2.3	6.6	-1.0	2.7	4.2	0.4	1.0	0.5	0.3	1.0
Gross fixed capital formation	3.8	7.5	1.6	1.4	1.9	2.7	1.3	2.1	0.8	1.9
Mainland Norway	4.5	7.6	1.9	1.4	1.9	2.6	1.5	1.8	0.4	1.5
Final domestic use of goods and services	2.3	4.3	8.1	-8.1	3.6	3.5	2.6	-4.0	4.0	1.1
Final demand from Mainland Norway	3.1	5.8	0.5	1.6	1.8	1.7	1.7	1.4	0.8	1.5
Total exports	49.0	66.6	-10.6	57.9	28.6	-2.4	8.5	-13.5	-7.8	-11.5
Traditional goods	13.2	29.1	5.1	10.5	11.2	4.5	1.6	0.9	0.3	-0.9
Total use of goods and services	13.9	24.8	2.3	10.2	13.0	0.9	5.9	-8.5	-0.8	-3.8
Total imports	4.0	14.8	0.3	3.0	7.0	3.3	3.5	0.9	1.5	1.2
Traditional goods	5.3	18.0	2.1	3.8	7.9	4.8	3.4	-0.4	1.6	0.8
Gross domestic product (market prices)	17.1	28.1	2.9	12.4	14.6	0.5	6.7	-11.0	-1.5	-5.3
Gross domestic product Mainland Norway (market prices)	2.9	4.6	0.6	1.3	1.3	1.4	1.0	0.9	1.6	1.1

Source: Statistics Norway.

Table 8. Main economic indicators 2014-2026. Accounts and forecasts[1, 2]

										Forecasts			
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Demand and output													
Consumption in households etc.	2.1	2.7	1.1	2.2	1.4	1.0	-6.2	4.4	6.9	-0.7	1.2	2.8	3.8
General government consumption	2.7	2.4	2.3	1.9	0.6	1.1	-0.5	5.0	0.1	2.7	1.4	1.8	2.1
Gross fixed investment	-0.3	-4.0	3.9	2.6	2.2	9.5	-4.1	-0.8	4.3	-0.2	1.9	0.9	-0.2
Extraction and transport via pipelines	-1.8	-12.2	-16.0	-5.4	0.7	14.3	-3.3	-2.1	-6.5	8.0	5.0	1.0	-1.0
Mainland Norway	0.4	-0.2	9.0	6.8	1.5	6.3	-3.1	1.7	6.7	-2.1	0.1	0.9	0.0
Industries	-0.7	-2.8	12.6	9.2	3.1	10.3	-5.3	5.0	14.5	1.6	-0.8	-3.0	-3.5
Housing	-1.4	3.2	6.6	7.3	-6.5	-1.1	-1.6	3.0	-1.4	-13.1	-2.9	6.7	4.7
General government	4.5	0.2	6.4	2.6	8.1	7.5	-1.1	-4.5	1.2	1.2	4.5	3.7	2.4
Demand from Mainland Norway[3]	1.9	2.0	3.1	3.1	1.2	2.3	-3.9	4.0	4.9	-0.1	1.0	2.0	2.4
Exports	3.8	3.9	0.4	1.6	-1.5	2.1	-2.3	5.8	5.9	5.2	4.2	1.9	1.0
Traditional goods	4.2	6.5	-11.2	0.9	2.0	5.1	-0.8	4.6	-0.3	4.9	3.2	3.2	3.0
Crude oil and natural gas	3.0	1.3	5.4	5.2	-4.6	-2.9	10.5	2.9	0.3	3.2	5.1	1.2	-2.7
Imports	2.2	1.9	1.9	1.8	1.4	5.3	-9.9	1.7	9.2	3.0	2.4	2.0	2.7
Traditional goods	2.1	2.7	-1.4	3.5	2.8	6.2	-2.7	5.7	2.5	-1.2	1.6	1.8	2.7
Gross domestic product	2.0	1.9	1.2	2.5	0.8	1.1	-1.3	3.9	3.3	1.2	2.0	1.9	1.6
Mainland Norway	2.2	1.4	0.9	2.2	1.9	2.3	-2.8	4.2	3.8	1.0	1.7	2.0	2.0
Manufacturing	2.7	-4.4	-4.1	-0.1	1.6	2.1	-5.7	3.8	0.7	2.3	3.4	2.3	1.0
GDP in current prices (NOK billion)	3 162	3 130	3 116	3 323	3 577	3 597	3 462	4 212	5 571	5 030	5 520	5 647	5 668
Labour market													
Total hours worked. Mainland Norway	1.4	0.6	0.6	0.5	1.6	1.5	-2.1	2.5	3.9	0.6	1.0	0.5	1.0
Employed persons	1.0	0.4	0.3	1.1	1.6	1.6	-1.5	1.2	3.9	1.4	0.5	0.4	0.5
Labor force[4]	0.7	1.5	0.2	-0.2	1.4	1.0	0.4	1.2	1.4	0.9	0.5	0.5	0.5
Participation rate (level)[4]	71.7	71.9	71.3	70.6	71.1	71.4	71.3	72.1	72.6	72.5	72.5	72.6	72.7
Unemployment rate (level)[4]	3.8	4.7	4.9	4.4	4.0	3.9	4.7	4.4	3.2	3.5	3.8	3.9	4.0
Prices and wages													
Wages per standard man-year	3.1	2.8	1.7	2.3	2.8	3.5	3.1	3.5	4.3	5.5	5.1	3.8	3.8
Consumer price index (CPI)	2.0	2.1	3.6	1.8	2.7	2.2	1.3	3.5	5.8	5.8	4.0	2.6	2.3
CPI-ATE[5]	2.4	2.7	3.0	1.4	1.6	2.2	3.0	1.7	3.9	6.3	4.0	2.8	2.4
Export prices, traditional goods	2.7	2.6	4.5	4.7	5.1	0.1	-3.5	13.2	29.1	-0.4	-1.3	0.1	-0.1
Import prices, traditional goods	4.1	5.0	2.5	3.2	4.1	2.5	4.3	5.3	18.0	4.3	1.5	1.5	1.2
House prices	2.7	6.1	7.0	5.0	1.4	2.5	4.3	10.5	5.2	-0.3	-0.6	0.4	2.9
Income, interest rates and excange rate													
Household real disposable income	2.4	5.3	-1.6	2.0	0.9	2.0	1.1	3.6	-2.4	-0.3	1.9	3.1	3.7
Household saving ratio (level)	7.8	9.8	6.9	6.6	5.9	7.1	12.9	12.7	4.2	5.7	6.4	6.2	5.8
Money market rate (3 month NIBOR) (level)	1.7	1.3	1.1	0.9	1.1	1.6	0.7	0.5	2.1	4.2	4.7	3.9	3.3
Lending rate, credit loans (level)[6]	3.9	3.2	2.6	2.6	2.7	3.0	2.6	2.1	2.9	4.9	5.9	5.6	4.9
Real after-tax lending rate, banks (level)	0.8	0.1	-1.6	0.1	-0.7	0.2	0.7	-1.8	-3.3	-2.3	-0.9	-0.3	0.0
Importweighted krone exchange rate (44 countries)[7]	5.3	10.5	1.8	-0.8	0.1	2.9	6.7	-5.3	1.2	8.1	-0.2	0.0	0.0
NOK per euro (level)	8.35	8.95	9.29	9.33	9.60	9.85	10.72	10.16	10.10	11.41	11.54	11.54	11.54
Current account													
Current balance (bill. NOK)[8]	374	282	163	210	320	136	38	574	1680	889	1175	1131	954
Current account (per cent of GDP)	11.8	9.0	5.2	6.3	9.0	3.8	1.1	13.6	30.2	17.7	21.3	20.0	16.8
International indicators													
Exports markets indicator	4.7	5.3	3.8	5.6	4.3	3.3	-7.5	9.7	8.1	0.7	0.5	2.4	3.6
Consumer price index, euro-area	0.4	0.2	0.2	1.5	1.8	1.2	0.3	2.6	8.4	5.6	2.8	2.0	2.0
Money market rate, euro (level)	0.2	0.0	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	0.3	3.6	3.0	2.0	2.0
Crude oil price US dollar (level)[9]	100	53	45	55	72	64	43	71	99	83	84	79	76
Crude oil price NOK (level)[9]	627	431	379	452	583	564	407	609	951	876	896	846	808

[1] Percentage change from previous year unless otherwise noted.
[2] Some time series may have been revised after the publication of the Economic Survey.
[3] Consumption in households and non-profit organizations + general government consumption + gross fixed capital formation in mainland Norway.
[4] Labour force survey: Break adjusted figures.
[5] CPI adjusted for tax changes and excluding energy products.
[6] Yearly average. Credit lines. secured on dwellings.
[7] Increasing index implies depreciation.
[8] Current account not adjusted for saving in pension funds.
[9] Average spot price Brent Blend.
Source: Statistics Norway. The cut-off date for information was 6 September2023.