TALL SOM FORTELLER

Statistisk sentralbyrå
Statistics Norway

Economic Survey

2022 / 3

Economic developments in Norway

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Editing was finalised on Wednesday 7 September 2022
Published 9 September 2022

Explanation of symbols	Symbol
Data not available	..
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Zero	0

Economic developments in Norway

In November 2021, the decline in economic activity during the pandemic had been recouped. In December and in January 2022 mainland GDP slumped again as a consequence of new infection control measures in connection with the omicron variety. Activity picked up strongly again in February and March, and in March 2022 was roughly cyclically neutral. Mainland economic activity adjusted for normal seasonal variations and in constant prices faltered again in April and May. Despite growth in activity, the level in June was lower than in March.

In the near term, we forecast that growth in the Norwegian economy will be approximately in line with estimated trend growth but at a slightly lower

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

	2020	2021	Seasonally adjusted			
			21:3	21:4	22:1	22:2
Demand and output						
Consumption in households etc.	-6.6	4.9	6.1	3.4	-2.3	3.2
General government consumption	1.8	3.8	1.4	0.1	-1.5	0.2
Gross fixed investment	-5.6	-0.9	-1.5	3.3	-0.4	-1.1
Extraction and transport via pipelines	-4.1	-2.7	-6.4	-0.6	-6.1	7.7
Mainland Norway	-3.6	0.0	-0.4	4.1	1.0	-2.9
Final domestic demand from Mainland Norway[1]	-3.6	3.4	3.2	2.6	-1.3	1.0
Exports	-1.2	4.7	8.2	-4.1	-2.2	0.9
Traditional goods	-2.5	6.7	0.3	-2.4	-3.0	-2.5
Crude oil and natural gas	11.9	2.8	10.8	-7.6	-3.3	-1.6
Imports	-11.9	2.3	6.8	2.3	0.9	4.3
Traditional goods	-2.5	5.4	3.4	-2.5	-0.6	2.4
Gross domestic product	-0.7	3.9	4.0	0.1	-0.9	0.7
Mainland Norway	-2.3	4.1	2.9	1.5	-0.4	0.7
Labour market						
Total hours worked. Mainland Norway	-2.1	2.5	2.4	1.4	0.4	1.3
Employed persons	-1.5	1.2	2.3	1.5	0.8	0.6
Labour force[2]	0.4	2.2	0.5	0.3	0.5	0.3
Unemployment rate. level[2]	4.6	4.4	4.2	3.6	3.3	3.2
Prices and wages						
Annual earnings	3.1	3.5	..	..	..	..
Consumer price index (CPI)[3]	1.3	3.5	1.2	1.3	1.3	2.0
CPI adjusted for tax changes and excluding energy products (CPI-ATE)[3]	3.0	1.7	0.2	0.6	1.0	1.3
Export prices. traditional goods	-3.4	13.1	7.7	8.9	13.2	4.8
Import prices. traditional goods	4.2	5.5	5.5	1.9	6.3	5.4
Balance of payment						
Current balance. bill. NOK[4]	38	620	153	257	335	277
Memorandum items (unadjusted level)						
Money market rate (3 month NIBOR)	0.4	0.1	0.0	0.3	0.5	0.8
Lending rate. credit loans[5]	0.6	0.5	2.0	2.1	2.3	2.5
Crude oil price NOK[6]	407	609	641	695	864	1 052
Importweighted krone exchange rate. 44 countries. 1995=100	114.9	108.8	110.6	107.7	107.1	109.8
NOK per euro	10.72	10.16	10.33	9.97	9.92	10.04

[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.

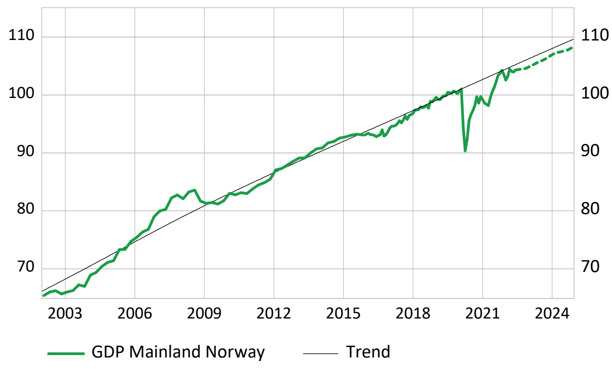
[5] Period averages.

[6] Average spot price. Brent Blend.

Source: Statistics Norway and Norges Bank.

Figure 1. GDP Mainland Norway and estimated trend

Seasonally adjusted, index 2019 = 100

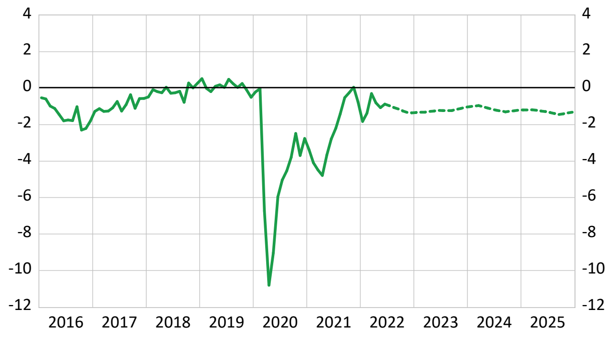


* Quarterly figures before 2016, monthly after. The trend is estimated by an HP-filter (lambda = 40 000 quarterly), but such that the trend is not directly affected by the developement of economic activity in 2020 and 2021

Source: Statistics Norway

Figure 2. Output gap, Mainland Norway

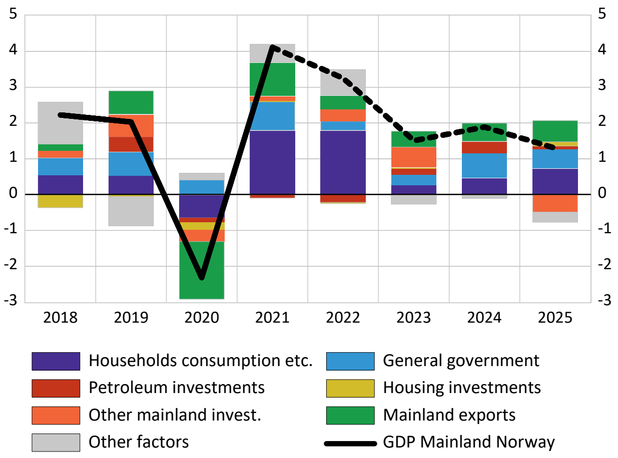
Deviation form estimated trend GDP in percent, monthly frequency



Source: Statistics Norway

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.

level. The economy will therefore be in a moderate downturn throughout the projection period, which extends through 2025. We have thus revised down the projections in our previous report, which pointed to the Norwegian economy entering a moderate upturn in the course of 2022.

The 12-month rise in the consumer price index (CPI) has picked up through the year. We have therefore revised CPI inflation upwards several times. A year ago we forecast that the CPI would rise to just under the inflation target in 2022. Prior to this summer we revised our projection for annual CPI inflation up to 4.7 per cent, and we are now revising it up to 5.7 per cent. The surge in electricity prices is contributing strongly to the increase in the projection, both directly and through pass-through of costs, which causes other prices to increase. Food prices have also increased substantially as a result of both international circumstances and higher domestic energy costs. We have based our projections on futures rates for electricity as observed in the market in recent days. Futures prices at the beginning of September indicate that electricity prices in the price areas of Southern Norway will remain at the current high levels through the winter before falling back from 2023 Q2. The fall will persist through the projection period such that the inflation target is reached towards the end of the period. As a result of electricity support for households, electricity prices in the CPI have not risen as much as spot prices. We have assumed in our calculations that electricity support for households will continue throughout the projection period.

The authorities are also considering introducing electricity support for the business sector. We have not incorporated such support in our projections. Choosing a model in which business sector energy costs are subsidised would result in higher electricity consumption for specific spot prices. In market situations with a given supply of electricity this would push up the spot price. This would impact other electricity customers. The overall effect on the economy is therefore uncertain.

The EU is considering intervening in the energy market with various measures. Amongst other things, the European Commission is proposing a price cap on Russian gas and on electricity produced by low-cost companies. It is unclear whether these measures will be adopted.

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

	QNA				Projection			
	2018	2019	2020	2021	2022	2023	2024	2025
GDP Mainland Norway	2.2	2.0	-2.3	4.1	3.2	1.5	1.9	1.3
with contributions from:								
Consumption by households and non-profit organisations	0.5	0.5	-0.6	1.8	1.8	0.3	0.5	0.7
General government consumption and investment	0.5	0.7	0.4	0.8	0.3	0.3	0.7	0.5
Petroleum investment	0.0	0.4	-0.1	-0.1	-0.2	0.2	0.3	0.1
Housing investment	-0.4	-0.1	-0.2	0.0	0.0	0.0	0.0	0.1
Other mainland investment	0.2	0.6	-0.3	0.1	0.3	0.6	0.0	-0.5
Exports from mainland Norway	0.2	0.7	-1.6	0.9	0.4	0.4	0.5	0.6
Other factors etc.	1.2	-0.8	0.2	0.5	0.7	-0.3	-0.1	-0.3

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

There were major shifts in household consumption during the pandemic, largely due to a record fall in consumption abroad. Household consumption in Norway increased in both 2020 and 2021 in parallel with a shift from service consumption to goods consumption. Since the lifting of the majority of the infection control measures in winter 2022, the composition of consumption has reverted to close to what it was prior to the pandemic. Consumption abroad has surged, and households have shifted from goods consumption back to services consumption. Household consumption abroad nonetheless makes up a smaller share of total consumption than prior to the pandemic. Given the weak growth in real household disposable income going forward, we assume that this share of consumption will not be fully recouped in relation to the pre-pandemic situation. Nor has foreigners' consumption in Norway rebounded to the pre-pandemic level, and we assume that it will not do so in the course of the projection period either. In isolation, this will contribute to reduced exports.

Near-term growth in household consumption has been revised sharply down relative to the previous economic report. We now forecast consumption growth of 6.7 per cent in 2022. Much of this growth has already taken place in the form of normalisation of consumption through 2021 and into 2022. Our projections therefore imply weak consumption growth in the second half of this year. Consumption growth will continue to be weak in 2023 and 2024 as a consequence of weak growth in household real disposable income. We have revised down growth in household real disposable income, including share dividends, by more than 2 percentage points this year and about 3 percentage points in 2023. This means that the level in 2023 is now more than 5 per cent lower than foreseen in the previous economic report. The weak rise in real income is largely due to increased prices, but also to higher interest rates. We have also revised down transfers. The fact that the projection for consumption is not being revised down as much as real disposable income means that saving is falling. In the latter half of this year and the whole of 2023, we forecast that households will use their entire disposable income for consumption. The saving ratio will be positive nonetheless, as this also includes saving in group pension schemes.

The rise in house prices has slowed in recent months after being high for the past 2 years. Statistics Norway's house price index shows that in Q2 this year house prices were 19.5 per cent higher than in the same quarter two years ago. Real Estate Norway's monthly house price index shows that house prices rose weakly through the summer, but that they rose in August at the same rate as in 2021. Lower real household income may explain the levelling off of house prices. A continued weak increase in real income, combined with continued high interest rates is likely to result in weak house price developments for the next few years. We forecast that house prices will fall in 2023 and 2024. The weak movements in house prices will also give rise to weak developments in household wealth, which we expect will contribute to keeping consumption growth low. Housing investment will also be moderate going forward and appreciably lower than envisaged in the last economic report.

When imports from subcontractors are taken into account, almost half of the petroleum industry's capital goods are supplied from abroad, (see Box 3 in *Economic Survey* 1/2022). Nonetheless, deliveries of capital goods add significant value in mainland Norway. Petroleum investment has fallen in the

Table 3. Main economic indicators 2021-2025. Accounts and forecasts. Percentage change from previous year unless otherwise noted

	Accounts	Forecasts										
		2022			2023			2024			2025	
	2021	SN	NB	MoF	SN	NB	MoF	SN	NB	MoF	SN	NB
Demand and output												
Consumption in households etc.	4.9	6.7	6.5	9.1	1.0	1.3	4.2	1.3	0.8	..	2.4	1.5
General government consumption	3.8	0.8	0.8	0.7	1.1	-1.2	..	2.1	1.3	..	1.6	1.3
Gross fixed investment	-0.9	0.6	..	1.7	4.7	..	1.3	2.8	..	..	-1.2	..
Extraction and transport via pipelines	-2.7	-7.0	-8.0	-7.2	6.0	8.0	0.1	11.0	15.0	..	3.0	4.0
Industries	2.2	5.3	7.8	6.2	8.9	3.6	2.1	0.0	4.3	..	-7.2	4.3
Housing	0.6	-0.7	1.8	2.1	0.7	2.4	2.7	0.2	1.5	..	2.6	2.0
General government	-4.0	0.9	..	1.1	0.4	..	..	3.8	..	..	2.8	..
Demand from Mainland Norway[1]	3.4	4.1	4.4	5.5	1.8	0.8	2.7	1.5	1.4	..	1.1	1.7
Exports	4.7	3.4	..	4.9	2.9	..	5.0	1.6	..	..	0.6	..
Traditional goods[2]	6.7	-3.5	4.6	6.7	1.8	5.6	4.9	2.9	3.1	..	3.2	2.2
Crude oil and natural gas	2.8	2.6	..	1.8	4.5	..	6.5	1.9	..	..	-1.9	..
Imports	2.3	8.8	7.2	9.3	3.3	4.0	4.3	1.8	4.4	..	1.6	1.1
Gross domestic product	3.9	3.2	2.5	3.5	2.0	1.6	2.8	1.8	1.1	..	0.8	0.2
Mainland Norway	4.1	3.2	3.5	3.6	1.5	1.1	2.3	1.9	0.9	..	1.3	1.0
Labour market												
Employed persons	1.2	3.3	3.3	3.0	0.1	0.5	0.8	0.3	0.2	..	-0.5	0.2
Unemployment rate (level)	4.4	3.3	3.6	3.3	3.6	..	3.2	3.7	..	..	4.2	..
Prices and wages												
Annual earnings	3.5	3.8	3.9	3.7	4.4	4.5	..	3.9	4.4	..	3.7	4.2
Consumer price index (CPI)	3.5	5.7	4.6	3.4	3.5	3.6	..	1.0	2.5	..	1.8	2.7
CPI-ATE[3]	1.7	3.9	3.2	2.5	3.3	3.3	..	1.6	3.0	..	1.9	2.8
Housing prices[4]	10.5	5.7	5.5	..	-2.5	-1.0	..	-2.5	2.0	..	2.0	4.3
Balance of payment												
Current balance (bill. NOK)[5]	620	1270	..	1086	942	..	..	762	..	..	681	..
Current account (per cent of GDP)	15.0	24.5	..	22.1	18.5	..	..	15.1	..	..	13.4	..
Memorandum items:												
Money market rate (level)	1.9	1.9	..	1.6	3.1	..	2.9	2.4	..	..	2.2	..
Crude oil price NOK (level)[6]	609	958	..	885	865	..	..	795	..	..	748	..
Import weighted krone exchange rate (44 countries)[7]	-5.3	0.3	1.6	7.6	0.2	-1.1	..	0.0	-1.3	..	0.0	-0.6

[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. Ministry of Finance forecasts trade-weighted exchange rate.

Source: Statistics Norway (SN). Ministry of Finance. Meld.St.2. (2021–2022) (MoF). Norges Bank. Monetary Policy Report 2/2022 (NB).

past two years, largely as a consequence of lower investment in field development. We estimate from the oil companies' reports that petroleum investment will fall by a further 7 per cent this year before rising again over the next few years. Our projections are approximately unchanged since the previous economic report. In isolation, the fall in petroleum investment this year will push down growth in mainland GDP by 0.2 percentage point. The interim tax rules adopted by the Storting in June 2020 also provide for favourable taxation of all developments for which plans for development and operation (PDOs) are delivered to the authorities before the end of 2022. PDOs for a very large number of projects are therefore expected to be submitted towards the end of the year. As the great majority of scheduled projects will launch towards the end of 2022, the contributions from these projects will be larger in the years ahead.

Following strong growth in business investment in 2021 Q4 and 2022 Q1, investment fell markedly in Q2. Despite this fall, investment is now in line with the pre-pandemic level. Manufacturing companies forecast a clear rise in investment both this year and next, with growth largely contributed by big, individual manufacturing projects. Power supply companies report a clear decline in investment this year, partly because several windpower projects were concluded in 2021 without the advent of new ones. In 2023 it is mainly the distribution network that will contribute to an upturn in investment in power, alongside investment in electricity production, district heating and other power supply. We forecast that business investment will grow by about 5 per cent this year, which is a halving of the growth projection in the previous report.

Employment has increased strongly through 2021 and into 2022. According to the Labour Force Survey (LFS), employment increased by 1.4 per cent in 2022 Q2 and is thus 5.3 per cent higher than in the same quarter in 2019, the year before the pandemic struck. In 2022 Q2, 70.7 per cent of the adult population was employed, which is the highest share since 2009. The employment rate among persons aged 15–24 years has grown very high. According to the LFS, seasonally adjusted unemployment has remained at a low level so far this year, and in the period May–July was 3.2 per cent. The figures from the Norwegian Labour and Welfare Organisation (NAV) also show very low unemployment. In our projections, LFS unemployment will be 3.3 per cent as an annual average in 2022. The low level of activity going forward will cause unemployment to rise in the years ahead, and we forecast that LFS unemployment will reach 4.2 per cent in 2025. This implies an upward revision of unemployment in 2025 of almost 1 percentage point compared with the previous projection.

Our projection for annual wage growth in 2022 is being revised down to 3.8 per cent, from 4.0 per cent in the previous economic report. Given CPI inflation of 5.7 per cent, this implies a clear decline in real wages this year. Next year we forecast annual wage growth of 4.4 per cent, and given CPI inflation of 3.5 percent, real wage growth will be less than 1 per cent. In 2024 and 2025 we expect annual wage growth of just under 4 per cent. Low CPI inflation in 2024 will then result in sharp growth in real wages that year. Real wage growth in 2025 is projected to be about 2 per cent.

In its setting of interest rates, Norges Bank now has to strike a balance between two different considerations. On the one hand, there is high inflation, which the central bank fears will continue going forward. On the other, a clear slowing of economic growth both in Norway and among our trading partners has created a risk of overly low economic growth, also in the years immediately ahead. We assume that Norges Bank will initially place most emphasis on the fact that high inflation may prompt increased inflationary expectations going forward. Consequently, the interest hikes will probably continue this autumn. At its September monetary policy meeting, Norges Bank is expected to raise the key policy rate by 0.5 percentage point. In the event this will mean a 2.25 percentage point rise in the policy rate in the course of a single year. Two further increases may come at the end of 2022, bringing the policy rate up to 2.75 per cent. The money market rate will then be over 3 per cent. As the 12-month rise in the CPI slows, Norges Bank can place more emphasis on activity development. We therefore believe that there will be cuts in the policy rate at the end of next year and at the beginning of 2024. We forecast 4 interest rate cuts in all, bringing the policy rate down to 1.75 per cent and the money market rate down to just under 2.5 per cent. Mortgage rates will then be just over 4 per cent in 2023 and 2024 before edging down a little in 2025.

Since the previous report, we have revised down growth in public consumption and investment, both of which are projected to grow by just under 1 per cent this year. Transfers have also been revised sharply downwards this year, from around zero growth in the previous report to a real decline of 2 per cent. Much of the downward revision is attributable to prices rising more than was assumed when the national budget was adopted. On balance, we therefore expect fiscal policy this year to be contractionary, with a fall in the real value of public consumption, investment and transfers combined compared with 2021. The fall must also be viewed against the background of the high public expenses last year arising from the pandemic.

Measured in relation to 2019, the overall growth in these expense components this year was just under 5 per cent, which is equivalent to underlying growth roughly in line with trend growth in the economy.

Next year fiscal policy will also be tight. We forecast that all three expenditure components – public consumption, public investment and transfers – will increase at a rate lower than what we estimate to be trend growth in the Norwegian economy. Public consumption and investment will therefore contribute little to activity growth this year and next. We forecast that growth in public consumption and investment will add 0.3 percentage point to mainland GDP both this year and next.

We foresee that the low growth in activity next year and higher unemployment will lead to fiscal policy being more expansionary in 2024 and therefore contributing more to economic growth. We forecast that much of the growth in mainland GDP in 2024 will be attributable to higher public consumption and investment. In 2025 we also forecast that public consumption and investment will increase more than trend growth, and make by far the biggest contribution to growth in activity, which will be less than 1.5 per cent nevertheless.

For the past two years Norway has benefited from growing terms of trade gains because prices for Norwegian export goods have risen more than prices for import goods. This applies mainly to export prices for energy products such as natural gas, crude oil, refined petroleum products and electricity. In 2022 this will result in a record high trade surplus of over NOK 1 100 billion. Given the addition of a persistent, high income and current transfers surplus, the total – the current account balance – is expected to reach 24 per cent of GDP this year. The current account balance is then expected to fall, but nonetheless to remain at about 13 per cent of GDP in 2025.

Mainland GDP is forecast to increase by 3.2 per cent in 2022. This is weaker than in our previous projection, when we forecast a rise of 3.7 per cent, and is attributable to weaker than expected developments through Q2. The high annual wage growth in mainland GDP this year is a consequence of the post-pandemic recovery through 2021 and into 2022. Underlying mainland GDP growth is projected to be around an annualised 1.5 per cent for the remainder of 2022. Growth in 2023 and 2024 is expected to be close to this rate before falling further in 2025. We forecast that mainland GDP will increase by 1.5 per cent next year. Growth next year will be reduced by about 0.3 percentage point because there are 2 fewer working days. We have therefore revised down the whole growth scenario compared with our previous report. The level of mainland GDP in 2025 is now projected to be almost 2 per cent lower than we foresaw 3 months ago. This means that the Norwegian economy will be in a downturn through the entire projection period.

There is great uncertainty associated with projections going forward. Energy shortages may lead to business closures and hence reduced activity, both among our trading partners and here in Norway, whether it be a result of rationing or higher energy prices. At the same time, these developments may mean higher revenue for Norway from oil, gas and electricity exports. An overly contractionary fiscal and monetary policy could also dampen activity in Norway. Economic growth among our trading partners will depend on how rapidly and forcefully their central banks proceed in their setting of interest rates in order to reduce inflation. If the central banks take stronger steps than we are assuming, activity among our trading partners may shrink more and remain sluggish for longer. This would depress Norwegian exports and might also lead to a fall in prices on world stock exchanges. Such a price fall could inflict heavy losses on the Norwegian state by reducing the value of the Norwegian Pension Fund Global (the petroleum fund). This would reduce fiscal scope for manoeuvre. Nor is the COVID-19 pandemic necessarily over: new variants of the virus could emerge and apply the brakes to activities in the future.

Fiscal policy affected by energy crisis

In 2022 Q2 developments in general government featured increased activity in state-owned health trusts. Central government consumption rose by 1.1 per cent in Q2, after falling 3.2 per cent the previous quarter. The rise was mainly due to growth in health services, social benefits and welfare. Local government consumption dipped by 0.6 per cent in 2022 Q2 after edging up 0.2 per cent in Q1. General government investment rose by 0.1 per cent in Q2 this year after falling 7.4 per cent in Q1. Central government investment fell by 5.8 per cent in 2022 Q2, largely due to a reduction in defence investment as a consequence of donations of military equipment to Ukraine. Local government investment pushed up general government investment.

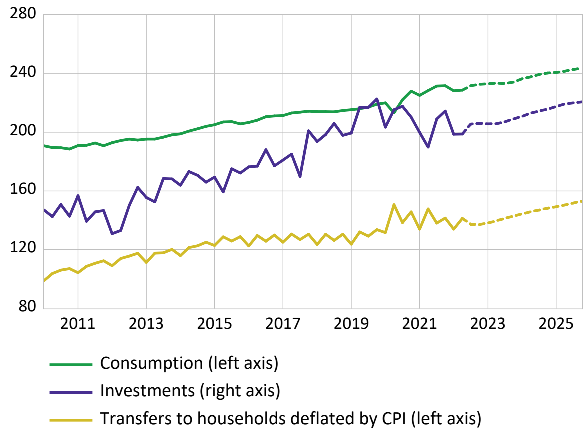
Since the Final Budget Bill 2022, extraordinary measures for approximately NOK 60 billion have been adopted according to the Revised National Budget. Of this, NOK 24.7 billion goes to temporary COVID-related measures, NOK 20.5 billion to electricity support and NOK 14.4 billion to boosting civil and military preparedness. At the same time, the government has tightened up some other budget items in order to reduce pressures in the economy. According to the Revised National Budget, the overall effect will be a structural non-oil deficit for 2022 of NOK 352.2 billion.

Higher electricity prices have clear similarities with higher taxes on electricity. Customers pay more for the electricity, and almost all revenue is channelled into government budgets. The bulk of the increased after-tax surplus accrues to the public sector, as about 80 per cent of power production in Norway is owned by this sector; see Box 2. The power companies also pay corporation tax, tax on economic rent, natural resources tax and property tax. The average electricity price for households excluding taxes and grid charges and excluding deductions for electricity support, was 124.2 øre/kWh in 2022 Q2. This is almost 1 krone higher than the average for the past 10 years. With a price increase of NOK 1 per KWh for households, service industries and other manufacturing, and total annual consumption of slightly over 80 TWh, this amounts to NOK 80 billion per year when direct and indirect taxes and support are excluded. Electricity customers with fixed price agreements, which are widely used in power-intensive manufacturing, are not affected by short-term price increases.

The purpose of electricity support for households is to return some of the revenue to the electricity customers by reducing the electricity price. The Revised National Budget also forecast that expenditure for electricity support would amount to NOK 20.5 billion in 2022. However, new projections from the Ministry of Finance indicate that the state will spend NOK 40.7 billion on measures to tackle high energy prices in 2022. The increase is due to substantially higher than expected electricity prices,

Figure 4. General government

Seasonally adjusted, billion 2019 NOK, quarter



Source: Statistics Norway

and to the increase in electricity support for households from September. The central government will cover 90 per cent of the electricity expenses covered by the electricity support scheme from September to December 2022. The government has also signalled that the scheme will be retained through the whole of 2023, and that electricity support may be introduced for businesses.

If the supply of power is limited, however, the electricity support, as it is now designed, will prompt an increase in the market price of electricity because of increased demand. How much the market price will increase as a result of electricity support is uncertain. Therefore it is also unclear how much the electricity support will stimulate economic activity.

It is forecast in the Revised National Budget that the deficit in 2022 will be equivalent to 2.9 per cent of the petroleum fund, which is within the limit defined by the fiscal rule. However, recent years' growth in the fund's value have resulted in increased spending of petroleum revenue, measured in NOK. The Government has signalled that the use of petroleum revenue will be substantially less than the limit defined by the fiscal rule in 2023, and that the fiscal impulse is to be negative. In our projections for 2024–2025 we assume that spending of petroleum revenue, measured as the structural non-oil budget deficit as a percentage of the value of the petroleum fund, will remain at slightly below 3 per cent, given normal developments in the value of the fund, despite the fact that the Norwegian economy is assumed to be in a downturn. Major changes in stock exchange prices, the krone

Box 1. To what extent might increased use of petroleum revenue next year be reflected in higher interest rates?

In connection with work on the national budget this autumn, the Norwegian Government has signalled that spending of petroleum revenue in 2023 will be substantially lower than the limit stipulated by the fiscal rule. We have therefore assumed a fairly tight fiscal policy next year, with an overall increase in the volume of public spending of just over 1 per cent. This is well under estimated trend growth in the Norwegian economy. At the same time, we have assumed that the money market rate will rise to over 3 per cent on an annual basis next year, in pace with Norges Bank's highly probable continuation of interest rate hikes this autumn. In this box we consider in more detail how different forms of increased use of petroleum revenue in 2023, and only in 2023, could be reflected in higher money market rates.

We quantify the effects on the Norwegian economy, and hence on money market rates, of increased use of petroleum revenue next year equivalent to a nominal weakening of the general government budget balance of NOK 10 billion in excess of the fiscal stance forming the basis for our projections. The analyses can be viewed as alternative scenarios for the Norwegian economy where the increased spending goes to increased municipal employment, increased non-military public investment, or personal tax relief, respectively. The effects on the Norwegian economy for the period 2023- 2025 are quantified with the aid of the KVARTS model and measured as percentage deviations (unless otherwise indicated) of the alternative scenarios from the projection scenario. Norges Bank's response pattern is incorporated in KVARTS as an interest rate rule which weighs deviations in the money market rate, annual wage, inflation, mainland GDP and real exchange rate that are generated by the model with increased spending of petroleum revenue in 2023.

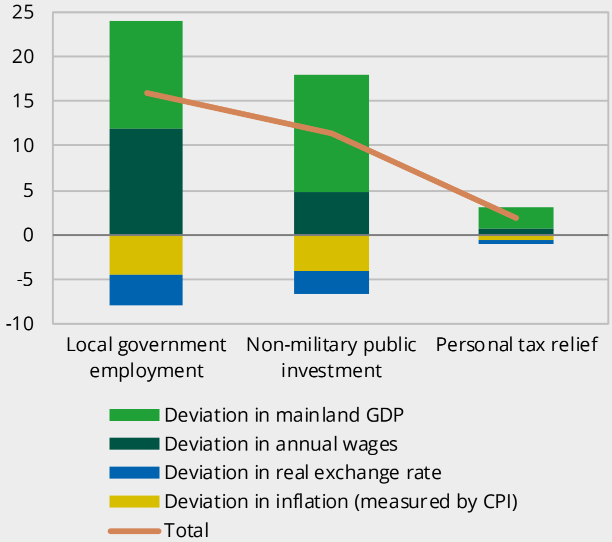
In the scenario with increased municipal employment, there will be over 11 000 more wage-earners than in the projection scenario. The model-based calculations then yield an increase in the money market rate averaging 16 basis points in 2023. Increased local government employment will be reflected in an increase in annual wages of around 0.1 per cent, and this alone accounts for 12 basis points of the overall effect on the money market rate. The increase in mainland GDP of about 0.2 per cent will also contribute 12 basis points. However, 0.1 per cent lower inflation and a 0.8 per cent stronger real exchange rate will reduce the increase in the money market rate, albeit only by 4 basis points each.

KVARTS shows that increased local government employment will result in lower unemployment one year ahead. A tighter labour market will push up annual wages, which in turn will prompt an increase in the labour force, but not as much as the increase in employment. Much of the increase in mainland GDP is due to increased household consumption as a consequence of increased wage income. In addition comes increased local government production. However, mainland GDP growth will be restrained by the fact that business investment will fall as a result of a higher interest rate level. The interest rate increase will also affect mainland GDP through a strengthening of the krone against the euro. The appreciation of the krone, together with increased annual wages, will result in a weakening of manufacturing competitiveness and will push down the level of exports. At the same time, the appreciation of the krone will make imported goods cheaper, and thus inflation measured by the CPI lower, with the result that the real exchange rate will also strengthen quite considerably.

In the scenario with increased non-military public investment in construction, the level of this investment will increase by around 17 per cent in relation to the projection scenario. With this fiscal instrument, the level of the money market rate will rise by 11 basis points next year. On the whole, the changes in the macroeconomic variables that influence the setting of interest rates will contribute fewer basis points to the overall effect on the money market rate in 2023 than the increased local government employment option. The increase in mainland GDP of about 0.2 per cent will admittedly contribute 13 basis points.

According to KVARTS, increased non-military public investment will lead in a year's time to increased activity in the industries that carry out the investment, and to higher imports. The majority of the increase in mainland GDP and in employment next year will thus take place in market-oriented activities. Some of the increased output can be brought about through increased labour productivity. Here too, however, a somewhat higher interest rate level than in the projection scenario will curb the increase in mainland GDP through a fall in net exports as a result of the appreciation of the krone. The real exchange rate will also strengthen for the same reason, while inflation will fall. The labour market, for its part, will become somewhat less tight than in the case of increased local government employment, as annual wages will not be pushed

Contributions to change in money market rate in 2023. Basis points



Source: Statistics Norway

up to any particular extent, and employment and the labour force will increase roughly equally.

In the scenario with personal tax relief we see tax relief that will benefit a broad population category. In contrast to increased local government employment and increased non-military public investment, personal tax relief will not have any effect on the macroeconomic variables of significance for the setting of interest rates next year. With this fiscal instrument, the money market rate will thus for all practical purposes remain at the same level as in the projection scenario.

According to KVARTS, there are several reasons why personal tax relief will not affect the interest rate level to any appreciable extent next year. Even though household real disposable income will initially increase quite substantially, given general personal tax relief, consumption will only increase by around 40 per cent of the increase in real income in 2023. At the same time, a fair portion of the increase in consumption will come from imports. Consequently saving and import leakage associated with the increase in real income will both contribute to the level of mainland GDP being approximately as in the projection scenario. Nor will the labour market be particularly affected by personal tax relief next year, as economic activity is virtually unchanged. The levels of annual wages, inflation and the real exchange rate will accordingly also be roughly the same as in the projection scenario.

Thus our calculations show that increased spending of petroleum revenue equivalent to a fiscal weakening of NOK 10 billion next year may be reflected in a higher money market rate. But such an increase will probably not exceed 0.25 percentage point, and the effect on the interest rate will depend on how the petroleum revenue is used. Increased use could have the strongest effect on the setting of interest rates next year if it is spent on local government employment, while increased spending on general personal tax relief could have the least effect.

The fiscal rule for use of petroleum revenue has to take several considerations into account. It is intended to ensure the distribution of petroleum revenue over several generations, good capacity utilisation and low unemployment by smoothing fluctuations in the economy. Our calculations show that if the use of petroleum revenue increases somewhat, from a tight starting point in the projection scenario, next year, it will not necessarily have a major effect on the interest rate level. If spending should increase to a greater extent than considered here, the probability of the interest rate rising will also increase. The consideration of long-term fiscal sustainability will be equally important, regardless, for determining the use of petroleum revenue going forward.

References

Boug, P., T. von Brasch, Å. Cappelen, H. Hungnes, R. Hammersland, D. Kolsrud, J. Skretting, B. Strøm and T.C. Vigtel (2022): Fiscal policy, macroeconomic performance and industry structure in a small open economy, Discussion Papers nr. 984, Statistics Norway.

Kravik, E.M. og Y. Mimir (2019): Navigating with NEMO, Staff Memo nr. 5, Norges Bank.

Main macroeconomic aggregates 2023–2025. Percentage deviation from the projection scenario unless otherwise indicated

	2023			2024			2025		
	Local government employment	Non-military public investment	Personal tax relief	Local government employment	Non-military public investment	Personal tax relief	Local government employment	Non-military public investment	Personal tax relief
Mainland GDP	0.2	0.2	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
Consumption by households etc.	0.1	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.1
Mainland gross investment	0.0	1.2	0.0	-0.2	-0.1	0.0	-0.1	-0.1	0.1
Business investment	-0.1	0.2	0.0	-0.4	-0.3	0.0	-0.1	0.0	0.0
Housing investment	0.0	0.0	0.0	-0.1	-0.1	0.1	-0.1	-0.1	0.3
Exports	-0.1	-0.1	0.0	-0.1	-0.1	0.0	-0.1	-0.1	0.0
Imports	0.0	0.2	0.1	-0.1	0.0	0.1	0.0	0.0	0.1
Unemployment rate[1]	-0.2	-0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Number employed	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Labour force	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Labour productivity	0.0	0.1	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
Annual wages	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Consumer price index (CPI)	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
House prices	-0.1	-0.1	0.1	-0.1	-0.2	0.4	-0.1	-0.1	0.3
Household real disposable income	0.3	0.2	0.5	-0.1	0.0	0.0	0.0	0.0	0.0
Exchange rate, NOK per euro[2]	-0.7	-0.5	-0.1	0.0	0.0	-0.1	-0.1	0.0	-0.1
Real exchange rate, NOK per euro[2]	-0.8	-0.6	-0.1	0.0	-0.1	-0.1	-0.1	0.0	-0.1
Money market rate (3-month NIBOR.)[1]	0.16	0.11	0.02	0.00	0.02	0.01	0.04	0.02	0.02
Memo:									
General government budget balance (NOK bn)	-10.0	-10.0	-10.0	-3.8	-3.9	-0.4	-2.3	-1.2	-0.7

[1] The deviation is given in percentage points.

[2] A negative sign means appreciation.

Source: Statistics Norway

Box 2. Where does the revenue from the high electricity prices end up?

Households and other electricity customers are impacted by high electricity prices, which give power producers higher income. Who benefits from the high income? This box answers the question by describing where the revenue flows go.

The majority of the power companies' surplus accrues to the Norwegian state by way of taxes. Surpluses in the power sector are taxed as ordinary income at a rate of 22 per cent. In addition 37 per cent tax on economic rent is levied on hydropower plants of a certain size. The effective marginal tax rate is thus 59 per cent for hydropower companies that pay tax on economic rents. In 2021, 83.5 per cent of all power production was produced by hydropower companies that pay this tax. Windpower companies and micropower plants do not pay tax on economic rents. The average marginal tax for all types of power production based on these taxes was thus 52.9 per cent in 2021.

Power companies are also required to pay municipal direct and indirect taxes. The companies pay property tax and natural resources tax, which mainly accrue to the municipalities, and licence fees to municipalities, county authorities and the state. According to NoU 2019: 16 there is unequal distribution among municipalities, some of which receive very high income. Some power plants also surrender power to municipalities and counties under the terms of their licence. This power can be sold at a profit in the market, and therefore also represents a transfer of income. Although most of the tax revenue accrues to the state, some also accrues to a few power-producing municipalities.

The public sector also has further income as a consequence of high electricity prices. Bottlenecks in the transmission network lead to price differences between power regions, and income that arises in connection with inter-regional transmission is called bottleneck income. Bottleneck income associated with transmission across Norwegian regions accrues to Statnett, while that associated with transmission between Norway and other countries is distributed equally between Statnett and the foreign distribution company. Statnett's income finances investment in the distribution network and reductions in grid charges. Statnett is owned by the state, so other revenue accrues to the state.

After-tax surpluses may be retained in the power company or distributed as dividend. Retained earnings accrue to the owners in the form of an increase in the value of the company, while dividend goes directly to the owners. In both cases owners of the power plant are the beneficiaries. The table below provides an overview of how ownership of Norwegian power production was distributed in 2021, and this illustrates how the surplus is distributed.

Produced electricity distributed according to ownership

	2021 (TWh)	Percentage
Total	**157.1**	**100**
State	54.4	34.6
County/municipality	72.9	46.4
Private	29.8	19.0

The table shows that the after-tax surplus largely accrues to the public sector. It shows that the Norwegian state owns power companies that account for 34.6 per cent of total power production in Norway, and that counties and municipalities similarly account for 46.4 per cent. The remaining 19 per cent is produced by privately owned companies, and a share of these are foreign. In other words, 81 per cent of electricity produced in 2021 was produced by the state, counties or municipalities.

As mentioned, dividend, surplus and tax revenue from power plants that accrue to municipalities are unevenly distributed amongst them. However, this revenue can be redistributed by adjusting transfers of revenue to municipalities or by increasing the tax on economic rent for hydropower plants. In the Revised National Budget 2022, the Government proposed withdrawing NOK 11.5 billion by reducing the framework grants to the municipalities: "Dividends are unequally distributed among the municipalities. The General Purpose Grant Scheme helps to ensure that all municipalities are able to share in the tax revenues. To ensure the most equitable distribution possible of the extra income after drawdown of the framework grant, the government proposes that the reduction in the framework grant be distributed such that those municipalities with highest tax revenue from dividends etc. after income equalisation also have the largest drawdown". The Government has also signalled that high municipal income as a consequence of high electricity prices is to be distributed among municipalities.

In summary, the answer to the question asked in this box is then: Heavy taxation combined with public ownership means that most of the increase in revenue as a consequence of high electricity prices accrues to the public sector. Some of the revenue accrues to wealthy power-producing municipalities. However the Government has signalled that such income is to be distributed among municipalities. The public sector revenues go to financing the Norwegian welfare state. Most of the revenue from the high electricity prices thus accrues to people in general

References

NoU 2019:16 Skattlegging av vannkraftverk.(Taxation of hydropower plants)

exchange rate and invested capital may affect the percentage used, however.

The value of the petroleum fund, which was NOK 12 340 billion at the beginning of 2022, fell to NOK 11 657 billion in the first half of 2022. During the first half of the year, NOK 356 billion was added to the petroleum fund according to Norges Bank Investment Management (NBIM). A weakened krone increased the Fund's value by NOK 642 billion during the same period. According to NBIM, the return was a negative NOK 1 680 billion. The value of the Fund had risen to about NOK 12 000 billion by the beginning of September 2022. The Revised National Budget forecast that net cash flow from petroleum activities, which is placed in the petroleum fund, will be approximately NOK 930 billion in 2022 as a consequence of persistently high oil and gas prices.

We forecast percentage increases in 2022 in general government consumption and gross investment of 0.8 and 0.9 per cent, respectively. The growth estimate for gross investment is somewhat lower than in our previous report, partly as a result of donations of military material to Ukraine. Unexpectedly strong inflation in 2022 also implies a tightening of public transfers, which grow in pace with wages. The increases in consumption and gross investment are projected in the Revised National Budget to be approximately 0.7 and 1.1 per cent, respectively. Signals of a relatively tight fiscal policy imply that the growth forecasts for general government consumption and gross investment in 2023 are 1.1 and 0.4 per cent, respectively. The effects on the Norwegian economy of increased spending of petroleum revenue are described in Box 1. The growth forecasts for the period 2024–2025 are extrapolations of previous projections, with assumptions about stable deliveries of fighter aircraft. Transfers, which in our previous report we assumed would increase by 0.3 per cent in real terms in 2022, are now expected to fall by 2.0 per cent as a result of higher projected inflation.

We assume in our projections that prices for oil and electricity will evolve in pace with futures prices for these products. A long-term war in Ukraine combined with extensive sanctions against Russia could result in persistently high global market prices for oil, metals, wheat and some other agricultural products. Prices for gas and electricity in Europe will probably also remain high in such a scenario. On the other hand, a prolonged war increases the probability of a sharp fall in prices on the world's stock exchanges. Such a price fall would inflict heavy losses on the Norwegian state by reducing the value of the petroleum fund.

More interest rate hikes this year before the policy rate is cut again

Just under a year ago, Norges Bank began to raise the key policy rate from a historically low level of 0 per cent. Following the monetary policy meeting in August, the policy rate is 1.75 per cent. It was increased by 0.5 percentage point at each of the last two monetary policy meetings in June and August.

Money market rates shadow the policy rate. The 3-month money market rate was down to 0.2 per cent in summer 2021, but by the end of August this year had risen to 2.6 per cent. The high premium in relation to the policy rate indicates that an interest rate increase of 0.5 percentage point by Norges Bank in September, too, has been priced in.

Deposit and lending rates have also increased from record low levels in Q2 and Q3 last year. At the end of 2022 Q2, the average interest rate on loans secured on dwellings was 2.65 per cent, which represents an increase of just over 0.6 percentage point compared with the end of 2021 Q2 and Q3. The average deposit rate was 0.3 per cent at the end of 2021 Q2, and has risen by 0.4 percentage point over the past year. The last two hikes in the policy rate will gradually feed through into both lending and deposit rates, which will probably rise sharply during the current quarter. Figures for interest rates on new mortgages show that these rose in July.

Norges Bank now faces a veritable balancing act in its setting of interest rates. On the one hand, there are fears that high inflation will persist, which in isolation points to higher policy rates going forward. On the other, a pronounced dampening of economic growth, both in Norway and among our trading partners, may result in low economic growth for the next few years. This, in isolation, implies lower policy rates going forward.

The Monetary Policy Regulation states that " Inflation targeting shall be forward-looking and flexible so that it can contribute to high and stable output and employment and to counteracting the build-up of financial imbalances." At the same time, it stipulates that "The operational target of monetary policy shall be annual consumer price inflation of close to 2 per cent over time." We believe that in striking a balance between these objectives Norges Bank will initially place greatest emphasis on curbing inflation. Norges Bank and other central banks fear that the high inflation we have seen will lead to higher inflation expectations going forward, which may be self-fulfilling, in that agents base themselves on these expectations when adjusting their prices. Norges Bank wishes to reduce the likelihood of higher inflation expectations and will therefore probably continue to raise the interest rate this year. According to our projections, there will be a further 0.5 percentage point interest rate hike in September, while at each of the last two monetary policy meetings this year the rate will be increased by 0.25 percentage point. The key policy rate will then be up at 2.75 per cent and money market rates will be over 3 per cent.

Next year we forecast that inflation, measured as the 12-month rise in the CPI, will abate somewhat and that the risk of high inflation taking hold will be smaller. This will reduce the need for new interest rate hikes. At the same time, growth in the economy will probably be low, partly as a result of the increased interest rate level. A less restrictive monetary policy may therefore soon be needed again. We believe that Norges Bank will therefore cut the interest rate at the end of 2023 and in 2024. We have based our projections on four such assumed rate cuts. This would result in a money market rate of 2.2 per cent in 2025. The average interest on loans secured on dwellings will then rise to just over 4 per cent in 2023 and 2024 before falling back a little in 2025.

Saving ratio back to a normal level

Growth in real disposable income for households and non-profit organisations combined is estimated in the non-financial sector accounts to be 5.4 per cent in 2021. If we disregard disbursements of share dividend, which were record high at around NOK 100 billion towards the end of last year, probably because of higher dividend tax with effect from 2022, growth in real disposable income was only 0.7 per cent last year.[1] In 2020, growth in real disposable income, both including and excluding share dividend disbursements, was about 2 per cent.

Wage income, which is the most important source of household income, picked up appreciably in 2021 due to increased employment. Net interest expenses also boosted household disposable income last year because of persistently low lending rates. The household interest burden, measured as interest expenses after tax as a share of disposable income, fell further, from 4.6 per cent in 2020 to 3.8 per cent last year. However, growth in public transfers was modest last year because some of the workers who were furloughed or unemployed during the COVID pandemic in 2020 returned to work. Preliminary non-financial sector accounts figures show a seasonally adjusted fall in real disposable income from 2021 Q4 to 2022 Q2 of around 9.5 per cent, while real disposable income adjusted for share dividend disbursements grew by around 3 per cent in the same period. These growth projections are largely based on higher wage income as a result of employment growth, increased net interest expenses as a consequence of higher lending rates as well as normalisation of share dividend payments and large price increases for energy and a number of other goods.

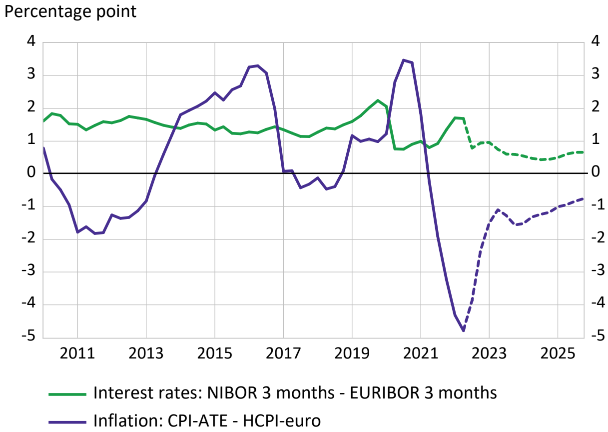
According to the quarterly national accounts, total consumption by households and non-profit organisations increased by 4.9 per cent in 2021 after a record fall of 6.6 per cent the previous year, measured in constant prices. The household consumption pattern changed substantially during the pandemic. Infection control measures limited opportunities to consume services, and households adapted by increasing their goods consumption. Consumption abroad was also sharply reduced as a result of closed international borders. With the reopening of society following the lifting of the infection control measures this winter, overall consumption has picked up. According to the QNA, overall consumption increased by 3.2 per cent in Q2 this year after falling 2.3 per cent in Q1. The

[1] The non-financial sector accounts do not correct for higher taxes associated with dividend disbursements last year. This is because the figures for tax on wage income and share dividends disbursed to households are combined in a single tax item from the Norwegian Tax Administration, and are therefore difficult to distinguish from one another in the non-financial sector accounts.

second quarter growth was driven by consumption of services and consumption abroad in particular. Whereas service consumption increased by 3.3 per cent, with a large contribution from accommodation and food service activities, foreign consumption increased by a good 40 per cent. Although foreign consumption has increased strongly since February this year, the level is still lower than prior to the COVID pandemic. Goods consumption, on the other hand displayed near zero growth in Q2. Sales of food and alcoholic beverages fell as a consequence of increased cross-border trading and visits to restaurants, while consumption of clothing increased sharply in Q2. According to the monthly national accounts figures, the large change in the ratio between goods and service consumption during the pandemic is being normalised as a result of the reopening of society. This is substantiated by a broad-based seasonally adjusted fall of 2.7 per cent in the goods consumption index for July, which is probably due mainly to the erosion of household purchasing power as a result of the high rise in prices for a number of products.

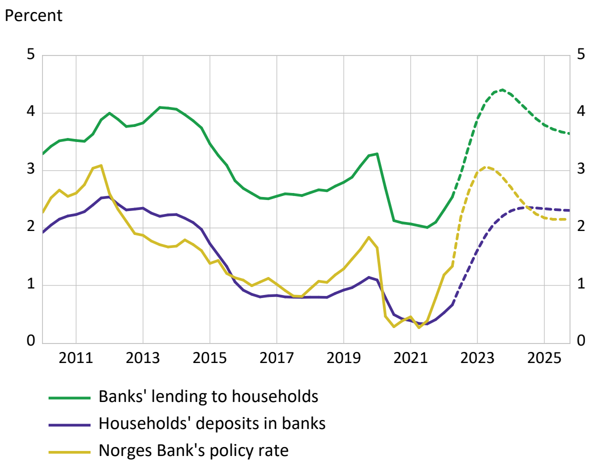
As overall income increased more than consumption last year, the saving ratio, measured as saving as a share of disposable income, rose from an already high level of just over 14 per cent in 2020 to almost 15 per cent in 2021. Such a high annual saving ratio has not previously been recorded in the non-financial sector accounts. The saving ratio excluding share dividend payments fell from around 10 per cent in 2020 to around 7 per cent in 2021. By way of comparison, the average annual saving ratios including and excluding dividend payments were 6.7 per cent and 2.9 per cent, respectively, in the 10-year period 2010–2019. According to preliminary figures from the non-financial sector accounts, the seasonally adjusted saving ratio fell from around 18 per cent in 2021 Q4 to around 11 per cent in 2022 Q1, while the saving ratio excluding share dividend payments edged up from about -0.5 per cent to 5 per cent in the same period. However, these large changes in the saving ratio through two quarters must be viewed in light of the extraordinary changes in share dividend payments, which are probably due to the higher tax on dividend introduced this year. The saving ratios including and excluding share dividend payments were around 9 per cent and 1 per cent, respectively, in Q2 this year.

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



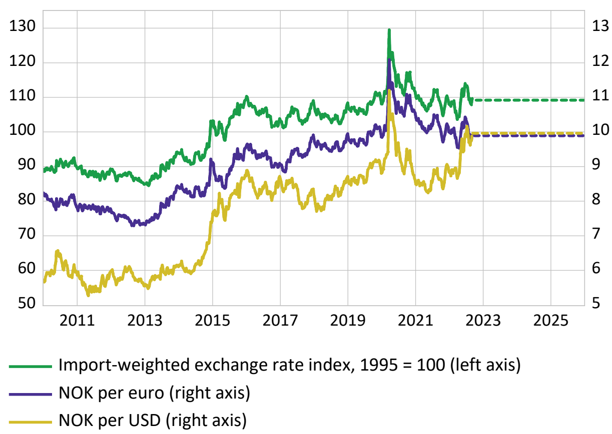
Source: Norges Bank and Statistics Norway

Figure 6. Norwegian interest rates



Source: Norges Bank and Statistics Norway

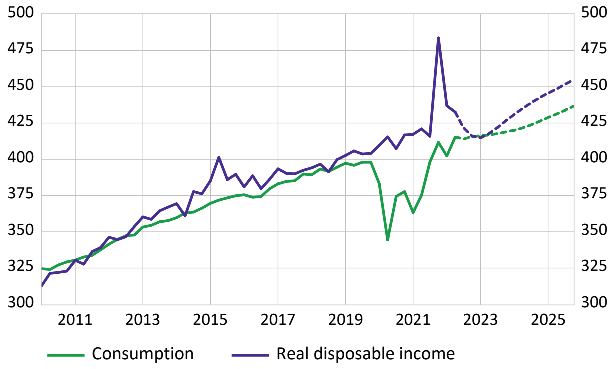
Figure 7. Exchange rates



Source: Norges Bank

Figure 8. Income and consumption in households

Seasonally adjusted, billion 2019 NOK, quarter



Source: Statistics Norway

We now forecast that growth in real disposable income adjusted for share dividend payments will be around 1.5 per cent this year. This is a downward revision of the growth projection of just over 2 percentage point compared with that published in the last economic report and is mainly attributable to weaker developments in public transfers and considerably higher inflation than foreseen previously. Growth in real disposable income in 2023 has similarly been revised down by over 2 percentage points, to negative growth of around -0.5 per cent. Underlying this growth projection for next year are weaker developments in wage income due to a weaker labour market, higher net interest expenses as a result of higher interest rates and higher inflation than at the time of the last publication. Given our assumptions, average annual growth in real disposable income in the years 2024 and 2025 will be close to 4 per cent. This is just over 0.5 percentage point higher than last time. Both wage income and public transfers will pick up in real terms in pace with substantially lower inflation in the last two years of the projection period. Net interest expenses will also contribute to growth in real income in 2024 and 2025, when interest on loans falls in pace with cuts in the policy rate. In the projection period, the annualised average level of the household interest burden will rise to around 6.5 per cent, about 0.5 percentage point higher than the average in the 10-year period 2010–2019.

As a result of weaker growth in real income and a sharper fall in real house prices than assumed in our previous publication, we have revised down the growth projections for overall consumption by about 3.5 percentage points for the years 2022–2025 combined. Growth will probably be just under 7 per cent this year, as opposed to 7.5 per cent previously, and presupposes fairly flat developments through the second half of 2022. The total consumption level in 2022 could thus be about 4.5 per cent higher than the level in 2019. We forecast that overall consumption will increase further by an annualised average of around 1.5 per cent in the last three years of the projection period as opposed to around 2.5 per cent as published in our last report. This projection is consistent with average annual consumption growth during the moderate downturn in the Norwegian economy in the years 2016–2018.

According to our projections for developments in income and consumption, the saving ratio will fall to 7.5 per cent this year and to 6.5 per cent in 2023, and then rise gradually to 8.5 per cent in 2025. Higher real after-tax interest rates will contribute to increasing the saving ratio in the last two years of the projection period. The saving ratio excluding share dividend disbursements will fall to 2 per cent this year and rise to just over 4 per cent in 2025. These last figures mean that in the course of the projection period the annualised average saving ratio will revert to a normal level close to the annual average for the 10-year period 2010–2019.

Weak house price movements ahead

Statistics Norway's house price index shows a continued rise in house prices. The seasonally adjusted rise in house prices was 1.7 per cent in Q2, following a rise of as much as 2.5 per cent in Q1. The rise in prices was strong even though the effects of the limited supply, attributable to more stringent requirements regarding survey reports that entered into force at New Year, appear to be reduced.

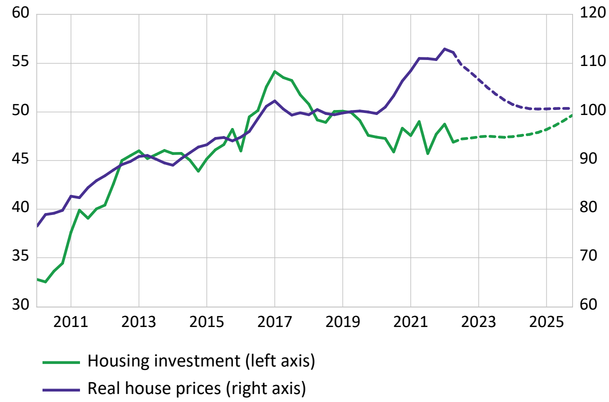
Monthly figures showing movements in prices for sold dwellings are published by Real Estate Norway. According to their monthly house price index, the rise in prices levelled off through the summer. Seasonally adjusted figures for July show that house prices for the country as a whole fell by 0.2 per cent compared with the previous month, making it the weakest July since 2008. This despite the fact that the supply side remains tight, viewed in a historical perspective. The number of dwellings put up for sale was well under the level in 2021, which was also an extraordinary year. However, dwellings that are put up for sale sell far faster than usual. The turnaround time in July this year was 20 days shorter on average than in July 2019. The monthly price movements for June and July of 0.2 and -0.2 per cent, respectively, stand in contrast to the strong monthly rise in house prices in winter and spring this year, which was between 0.4 and 0.7 per cent. The weak July figure is probably attributable to somewhat dampened demand due to prospects of a continued rise in interest rates following the double hike in June. The August figures show a seasonally adjusted price rise equivalent to 0.6 per cent, the same as the rise observed for August 2021. The tightness in the market has been somewhat lessened by a sharp rebound in the number of dwellings for sale in the course of the month to the level observed for August 2021. The turnover time continues to be short, despite the increased supply of resale homes.

According to the QNA, housing investment fell by 3.8 per cent in Q2 this year following solid growth of 4.4 and 2.2 per cent in 2021 Q4 and 2022 Q1, respectively. This is consistent with the Norwegian Homebuilder Association's statistics, which show very weak figures for both sales of new dwellings and housing starts. In the first half of this year, sales of new dwellings were 18 per cent below the level in the same period last year. So far this year, housing starts are at approximately the same level as last year, after rebounding sharply in May. However the figures for June are very weak, with an index value 31 per cent lower than in June 2021. This may be attributable to an accelerating rise in prices for building products and a more pessimistic view among households of their own financial situation. The figures in Finance Norway's consumer confidence indicator, published in August, show that Norwegian households expect a severe exacerbation of their own financial situation this coming year. Such weak expectations have not been recorded since measurements started in 1992. We are revising down our projection for housing investment in 2022 by 3 percentage points compared to our previous report, to a dip of 0.7 per cent. However, we expect a weaker rise in prices for building products further down the projection path, and that investment will pick up again in the longer term. For 2023 we forecast growth in housing investment of 0.7 per cent, compared with 3.6 per cent in our previous projection.

Our projections, based on the KVARTS macroeconometric model, indicate a weaker rise in house prices going forward. In the model, house prices are determined by factors such as housing investment, household borrowing and the interest rate level. In the longer term, lower housing investment will result in weaker growth in the supply of dwellings, which in isolation will lead to higher house prices. On the other hand, the costs associated with servicing a mortgage will increase as the interest rate level is raised. In our projections, we expect real interest rates to become positive towards the middle of 2023 and then to remain positive through the projection period. We therefore expect weaker growth in household credit, from 5 per cent in 2022 to 2.23 per cent in 2025, which points to a slower rise in house prices.

Figure 9. Housing market

Seasonally adjusted. Left axis: billion 2019 NOK, quarter
Right axis: index, 2019 = 100



Source: Statistics Norway

The war in Ukraine, higher energy prices and global turbulence create uncertainty which may have a bearing on developments in the housing market going forward. Preliminary figures from the non-financial sector accounts show a fall in household real disposable income of 9.5 per cent from 2021 Q4 to 2022 Q2. We have accordingly revised down our projections for real disposable income by 2.2 percentage points for 2022 and 2.3 percentage points for 2023 compared to our previous report. Lower real disposable income may reduce the desire to invest, thereby contributing to weaker movements in house prices. On the supply side there is still uncertainty concerning future building costs and the supply of raw materials. According to the Norwegian Homebuilder Association, not enough dwellings are being produced to meet future needs. This points to upward pressure on prices in the longer term.

We forecast that the rise in house prices will be 5.7 per cent in 2022, which is roughly the same as our previous forecast, and implies fairly flat house price movements through the second half of this year. However, our projections for 2023 and 2024 have been revised down by about 9 percentage points overall, which translates into a fall in house prices of 2.5 per cent in 2023 and 2024. Given these nominal growth projections, we envisage that real house prices will fall by 6 and 4 per cent in 2023 and 2024, respectively. Such a slump in real house prices has not been seen since the financial crisis of 2008.

Solid growth in petroleum investment in 2023 and 2024

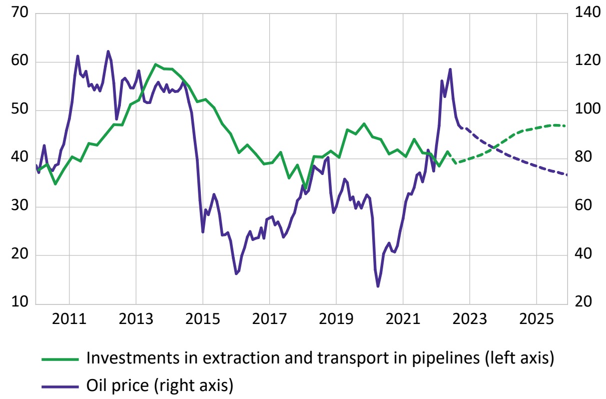
After petroleum investment fell by of 6.1 per cent in Q1 this year, seasonally adjusted figures showed growth of 7.7 per cent in Q2. The Q2 growth was driven by higher activity in the investment areas exploration and fields in operation, as well as shutdown and removal. In the first half of this year, petroleum investment was 5.8 per cent lower than in the same period last year. Whereas investment prices rose by only 1.3 per cent in 2021, the rise in the first half of 2022 was 4.6 per cent more than in the same period last year. The higher rise in prices this year is attributable to the appreciably higher global prices for key capital goods and a weaker Norwegian krone in relation to the US dollar. As the oil companies pay for much of their capital goods in USD, prices measured in NOK rise when the krone depreciates against USD.

Statistics Norway compiles quarterly overviews of investment costs and reviews the oil companies' investment plans in the investment intentions survey (KIS), with projections for the current year and the following year. The nominal projection for 2022 in the last survey is approximately NOK 173 billion. This is 3.3 per cent higher than the projection published in the previous survey, mainly due to the inclusion of two new development projects in the last survey. The projection is nonetheless 4.8 per cent lower than that published for 2021 at the same time last year.

Development projects are not included in the investment survey until a plan for development and operation (PDO) is submitted to the authorities. The interim tax rules adopted by the Storting in June 2020 also provide for favourable taxation of all developments for which PDOs are delivered

Figure 10. Petroleum investments and oil price

Seasonally adjusted. Left axis: billion 2019 NOK, quarter
Right axis: USD per barrel



Source: Statistics Norway

to the authorities before the end of 2022. PDOs for a very large number of projects are therefore expected to be submitted towards the end of the year. Overall, we expect these projects to invest some NOK 4 billion this year, which in isolation will increase investment by about 2.5 per cent. On the other hand, figures for the last 20 years show that the annualised projection published in Q3 of the investment year has been 4 per cent higher, on average, than the final investment. The main source of the overestimation is that companies are overoptimistic in their assessments of what they will achieve before the end of the year. Realisation of the projections in the survey is also contingent on investment in the second half of the year being 5 per cent higher than final investment in the first half of the year. Figures from the last 20 years show that, on average, investment has been about 10 per cent higher in the second half of the year than in the first. This may indicate that the oil companies are in a better position to realise a larger share of their investment plans for the second half of the year than in a normal year.

Our projections for petroleum investment are linked to our projections for movements in the oil price, which are based on futures rates. The energy crisis in Europe and the ongoing war in Ukraine have resulted in a pronounced increase in both oil and gas prices. We assume that this will prompt the operators to achieve a high degree of realisation of their production drilling plans.

We accordingly forecast, as in our previous report, that the volume of petroleum investment will fall by 7 per cent this year.

In the intention survey's projection for 2023, investment is now forecast to be about NOK 135 billion, which is 3.5 per cent higher than in the previous survey. The projection indicates a nominal fall of about 4.7 per cent in 2023 compared with the corresponding projection published for 2022. It is the categories fields in operation, exploration and concept studies that will push down investment compared with 2022. The field development projections point the opposite way, to an upturn in investment in 2023. The many developments that will be launched this year will entail significant investment in 2023, which will substantially raise development investment compared with that now included in the survey. Since the previous report, one medium-sized project has been postponed, but a small development project has been added. We have increased our projections for the other developments, with the result that our development projections for 2023 are unchanged. Because of the survey's low exploration forecasts for next year, we have reduced our projection for this category. We therefore forecast that real investment will increase by 6 per cent in 2023, which is slightly lower than forecast in our previous economic report.

The many developments coming later this year are likely to generate very high investment in field development in both 2024 and 2025. Small development projects tend to have highest investment in the second year of development, while the highest investment in larger projects typically occurs in the third year or later. As the great majority of scheduled projects are coming towards the end of 2022, 2023 can be regarded as their first development year. According to our calculations, investment in field development will therefore be appreciably higher in 2024 than in 2023. Most of the upcoming developments are small or medium-sized, and investment in these will probably peak in 2024. Some projects are large, and investment will probably be higher in 2025. This means that development investment is likely to level off more in 2025. We accordingly forecast volume growth of 11 per cent in 2024 and 3 per cent in 2025. The growth projection for 2024 is slightly higher than in our previous report, but nonetheless implies roughly the same investment level as in the previous report for 2024, because we have lowered our growth projection correspondingly for 2023. Given this scenario, investment in 2025 will be approximately 5 per cent higher than in 2019.

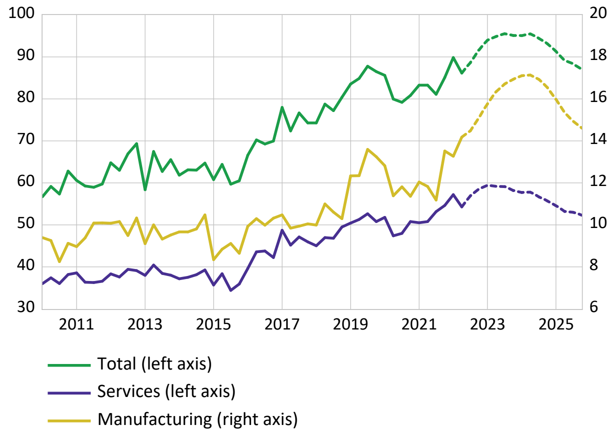
In the first half of 2022, oil and gas extraction was 1.3 per cent higher than in the same period last year. Gas production increased by as much as 10.3 per cent, while production of liquids was 7.4 per cent lower than in the same period in 2021. In May 2022 the Norwegian Petroleum Directorate (NPD) forecast that overall production would increase by 3.9 per cent this year. Between February and May, NPD revised up its growth projection for this year's gas production from 1.7 per cent to as much as 7.8 per cent. The increase is attributable to the Norwegian Ministry of Petroleum and Energy authorising companies to increase their gas production in order to be able to export more Norwegian gas to Europe. Conversely, NPD revised down it's projection for liquid production from forecast growth of 3.5 per cent in February to only 0.1 per cent in May. Gas production through the summer was in line with NPD's projection, while liquid production was markedly lower. Petroleum production in 2023 and 2024 is expected to increase by 3.4 per cent and 2 per cent, respectively before gradually falling in the second half of this decade.

Supply problems and increased costs result in postponed manufacturing investment

Our previous business investment projection was optimistic because Statistics Norway's investment intentions survey revealed high annual forecasts, particularly in manufacturing and mining. Whereas the seasonally adjusted change in the volume of mainland gross investment was 1.0 per cent for 2022 Q1, the corresponding figure for Q2 revealed a decline of 2.9 per cent. The figures for business investment separately were 5.6 per cent for Q1 and -4.1 per cent for Q2. The decline is probably due to several major investment projects experiencing shortages of raw materials and factor inputs, a situation we expect to persist in Q3 as well. This is attributable to the extensive logistical challenges in the global market. There is also reason to believe that the high energy prices combined with a steadily rising interest rate level may have dampened the desire to invest.

Mainland investment consists of three main groups. The first is business investment, including services associated with extraction, manufactur-

Figure 11. Investments Mainland Norway
Seasonally adjusted, billion 2019 NOK, quarter



Source: Statistics Norway

ing and mining, other goods production and other services. The other two are housing investment and general government investment. Of these, the change in volume in manufacturing and mining is by far the largest growth factor in 2022. According to the QNA, seasonally adjusted growth in this industry in Q2 was 6.9 per cent, as against a decline of 1.9 per cent in Q1. We forecast that annual growth for manufacturing and mining will be about 17 per cent in both 2022 and 2023. The projection for 2022 has been revised down from 27 per cent in our previous report. Growth in mainland investment was curbed by seasonally adjusted declines of 8 per cent in the category 'Other goods production' and 5.1 per cent in the category 'Other services' in Q2.

The most recent projection for manufacturing investment in 2022 in Statistics Norway's investment intentions survey is NOK 36.2 billion, or growth of 34 per cent compared with 2021 measured in current prices. It is mainly large individual projects that contribute to growth in business investment, particularly in manufacturing. Among the main contributors to investment growth are the computer and electrical equipment industries, basic metals, rubber, plastic and minerals, but also refined petroleum products and chemicals and pharmaceuticals manufacturing. Machinery and equipment is a subgroup that is slowing growth somewhat. Some new projects are expected next year, and power supply in particular is expected to boost investment growth in 2023. Investment in power supply is falling in 2022, largely because several windpower projects were concluded in 2021. Growth in 2023 will be broad-based, but with strongest growth in distribution.

Statistics Norway's business tendency survey of industrial leaders' assessment of the outlook ahead reveals less optimism for Q3 than for 2022 Q2. The industrial leaders also report that already adopted investment plans are being revised up for manufacturing as a whole, but that the growth rate is slower than at the end of Q1. Falling manufacturing profitability is also reported for Q2. Conversely, the industrial leaders report that expectations regarding demand are more optimistic than in previous surveys. This factor has gone from being by far the greatest obstacle to investment in 2021 to being by far the smallest obstacle in 2022.

Concrete signals from the authorities about investment in renewable energy offer prospects of steady growth in basic metals, and the state has recently bought into the ownership of a number of battery factory start-ups. Substantial private-sector investment is expected in this industry in the years ahead. The authorities are also signalling a focus on development and investment in carbon capture and sequestration, with government support for large projects that have already been reported to Statistics Norway's investment survey. Ambitious projects on the Norwegian continental shelf are receiving international attention and referred to as "pathfinder projects", where both technology and methods that can be used in other carbon sequestration projects are being developed.

We are revising down our projection for annual mainland investment growth for the current year from 5.7 per cent in our last report to about 2.5 per cent. We are also revising down our growth forecast for business investment from 9.9 to 5.3 per cent. The downward revisions are largely due to lower annual forecasts for investment in manufacturing, housing and general government.

We expect a substantial part of the business investment growth to take place in Q4. This expectation is based on companies' own reporting. The start of several investment projects has been postponed until the end of the year, which may lead to some investment growth only coming in 2023. We forecast that growth in business investment in 2023 will be about 8.9 per cent, a slight upward revision from 8.4 per cent in our previous report, as a consequence of projects that were expected to start up this year probably being postponed until next year. We also forecast that growth in mainland investment as a whole will pick up in 2023 to about 4.5 per cent, which is a little lower than our previous projection of 5.2 per cent.

High energy prices result in a large trade surplus

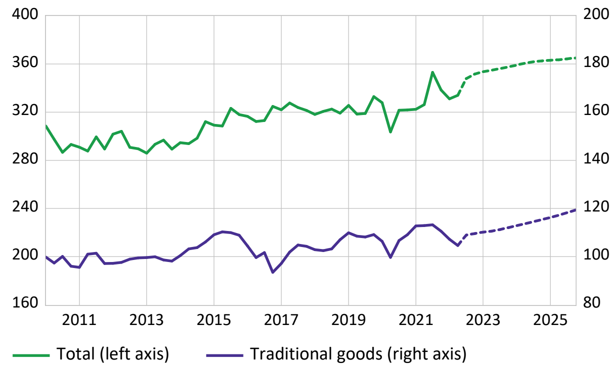
Since the pandemic shock in 2020 Q1 and Q2, Norway's foreign trade has featured an increasing terms of trade gain. This is because prices for important Norwegian export goods have risen considerably more than prices for import goods. This applies mainly to export prices for energy products such as natural gas, crude oil, refined petroleum products and electricity. In 2022 this has resulted in a record high trade surplus. The trade surplus has developed very moderately measured in constant prices, however, and has fallen in recent quarters. The balance excluding crude oil and natural gas has been increasingly negative since 1990, measured both in constant and in current prices. The trade surplus, which will be record high this year, is expected to decline in the years ahead in pace with an anticipated reduction in energy prices and weak economic developments among our trading partners.

Reduced exports of refined petroleum products, as well as basic chemicals and chemical and mineral products, contributed substantially to the fall in the past three quarters of traditional goods exports adjusted for normal seasonal variations and measured in constant prices. Oil and gas exports have also fallen in the past three quarters. Exports of services, on the other hand, have increased for the past four quarters, with substantial contributions to growth from shipping and foreigners' consumption in Norway. A pronounced increase in imports of textiles, clothing and footwear contributed to an increase in goods imports in Q2 this year following a fall in the two previous quarters. Service imports displayed high growth for the fourth consecutive quarter. Norwegians' consumption abroad, which is regarded as imports, continues to grow substantially.

There has been a clear rise in prices for commodity-based exports in recent quarters. A 12 per cent reduction in the price of natural gas in Q2 this year is an exception, and prevented the setting of yet another new quarterly trade surplus record. Prices for total goods imports have risen far more than prices for total service exports these past four quarters.

Figure 12. Exports

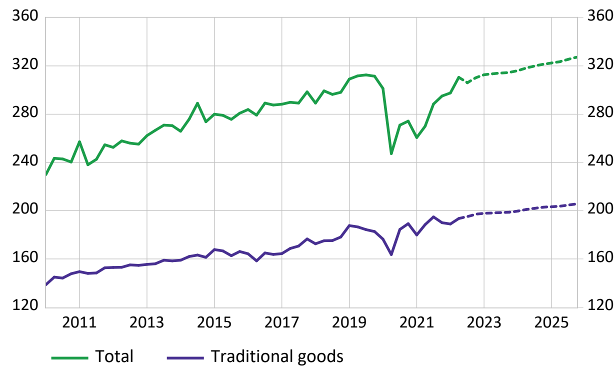
Seasonally adjusted, billion 2019 NOK, quarter



Source: Statistics Norway

Figure 13. Imports

Seasonally adjusted, billion 2019 NOK, quarter



Source: Statistics Norway

We have once again revised down forecasts for expected international market growth, and with them our projections for exports. At the same time, forecasts for imports have also been revised down as a result of the downward revision of domestic demand. In consequence there is little change to our projection for the trade balance compared with the June economic report. The trade balance is expected to attain a surplus of over NOK 1 100 billion this year and then gradually fall to well under half of this in 2025. With the added factor of a persistent high income and current transfers surplus, the current account balance is projected to reach 24 per cent of GDP this year. It is then expected to fall back, probably down to 13 per cent, in 2025.

Weak output growth

At the start of the year the economy was characterised by the COVID pandemic, associated infection control measures and a high level of absenteeism as a consequence of the omicron variant. Activity increased in pace with the reopening, and reached a preliminary peak in March. Mainland GDP fell in April and May, but activity picked up again to some extent in June. The activity level was lower in June than in March, and a little lower than the estimated trend level. Nonetheless, the mainland economy ended up with growth of 0.7 per cent from Q1 to Q2. This must be viewed against the background of the low level of activity in January and February, which created a positive carryover into Q2. Monthly national accounts figures for July show that activity fell back somewhat again.

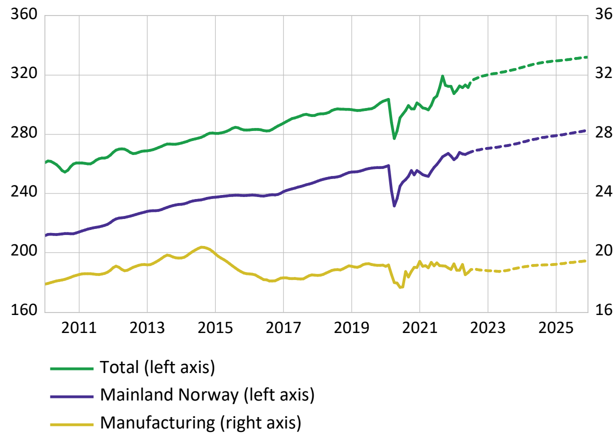
The Q2 upturn was largely driven by an upturn in the service industries that were hit hardest by the pandemic, particularly accommodation and food service activities. Numbers of foreign tourists have still not rebounded to the pre-pandemic level, which served to moderate the upturn in several service industries. The health services also made a significant contribution as a consequence of increased activity in the health trusts. 'The low level at the beginning of the year is due to high absenteeism in the health trusts, which has been falling through the year, however. Retail trade activity fell as a consequence of households shifting their consumption back to services, and of increased cross-border trade. The surge in prices and higher interest rates will probably also continue to constrain demand and further depress retail trade activity. The decline in retail trade led to lower receipts of indirect taxes, which also pushed down GDP measured in terms of both market value and constant prices. Mainland GDP measured at market value was 0.2 per cent lower in June than in March, while in constant prices it was 0.1 per cent higher. The decline in retail trade also contributed to the decline in mainland GDP in July.

The labour market has been tight in 2022, and presented the business sector with challenges in meeting the large quantity of assignments following the reopening of society. Thus capacity utilisation in the economy is high.

Since 2021 the global economy has been characterised by bottlenecks which were exacerbated by Russia's invasion of Ukraine. This has led to higher prices and a shortage of intermediate goods, which raises production costs. Inflation has been associated in particular with energy products and commodities that are imported from abroad, but has gradually spread to a number of other goods and services. Higher energy prices have affected the manufacturing industry in particular, where output has fallen for the third consecutive quarter to an activity level that is lower than before the pandemic. A number of manufacturing businesses have experienced maintenance shutdowns during the quarter, which contributed to depressing growth. Activity in the construction industry fell in Q2 due to challenges associated with high prices and commodity shortages. According to Norges Bank's regional network, a number of construction businesses report brakes on the number of new projects, and postponements.

Figure 14. Gross domestic product

Seasonally adjusted, billion 2019 NOK, month

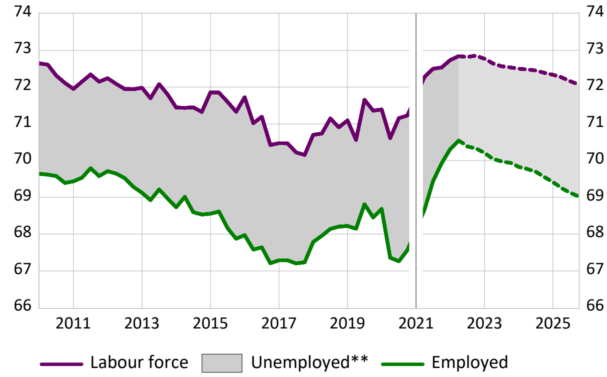


Source: Statistics Norway

Prices are now rising rapidly, particularly for energy products that are of great importance to the Norwegian economy. The petroleum sector and electricity industry contributed most to the rise in overall GDP, measured in current prices. Total GDP measured in current prices rose by 2 per cent from Q1 to Q2, and activity in the mainland economy by 2.1 per cent.

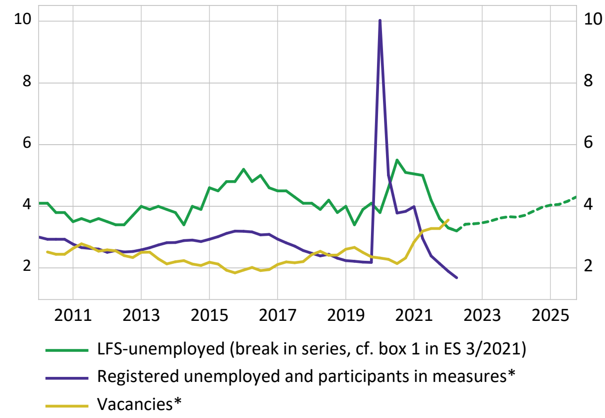
We forecast that mainland GDP will increase by 3.2 per cent in 2022, measured in constant prices. This is somewhat weaker than in our previous report, when we forecast a rise of 3.7 per cent, and is attributable to weaker than expected developments through Q2. At the same time, the higher prices are eroding household purchasing power, and we expect household demand to be moderated. Our forecasts for investment in the mainland economy have been revised considerably downward, which also leads to a downward revision of the projections for output growth. Investment forecasts have been revised down for most industries, with the exception of petroleum investment, which is virtually unchanged from the previous report. Output growth is expected to fall back somewhat in the next few years. This means that the Norwegian economy will be in a moderate downturn through the entire projection period.

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



* Break in LFS data series from 1. quarter 2021
** Unemployment is measured as share of population in working age
Source: Statistics Norway

Figure 16. Unemployed and number of vacancies
Percent of labour force and of the sum of occupied and vacant positions, seasonally adjusted and smoothed



Normalisation of the labour market

The measures implemented to manage the COVID pandemic in early 2020 led to a marked fall in employment and a strong increase in both unemployment and numbers furloughed. Since then, the measures have been eased and the labour market has gradually picked up and now appears to be normalised, with high employment and low unemployment. The ongoing sharp increase in the cost of living now appears to be fuelling higher interest rates and a tightening of fiscal policy in many countries, including Norway. This may have a negative impact on the labour market developments going forward.

According to the Labour Force Survey (LFS), employment increased by 1.4 per cent from 2022 Q1 to Q2. Employment has now been rising for five consecutive quarters, and in 2022 Q2 was 3.3 per cent higher than one year ago and 5.3 per cent higher than in 2019 Q2, the year before the pandemic. Seasonally adjusted employment[2] has increased steadily since the beginning of 2021, but has been levelling off for the last four months, with a slight decline from March to June 2022. In 2022 Q2, 70.7 per cent of the adult population was employed, which is the highest level since 2009. The employment rate among persons aged 15–24 years has been particularly high, with a seasonally adjusted level of 58.4 per cent in June 2022. Even in 2009, the highest seasonally adjusted level observed for this group was 56.4 per cent. The number laid off has fallen back to the low levels we saw prior to the pandemic.

In 2022 Q2, the labour force was at the highest level ever measured, 5.3 per cent higher than in 2020 Q2. As with employment, there has been a levelling off in the past 4 months. The seasonally adjusted participation rate, i.e. the labour force as a share of the population, was 71.8 per cent in June 2022. This is roughly the same level as in March 2022, when it was 71.9 per cent, the highest level observed since 2010.

According to the LFS, seasonally adjusted unemployment has fallen in recent months to a level not observed since the end of 2008. However there has been a levelling off, and seasonally adjusted unemployment has been lying at between 3.1 and 3.3 per cent since the beginning of the year. In June 2022 it was 3.2 per cent. In 2022 Q2 the non-adjusted unemployment level was 3.3 per cent, 1.8 percentage points lower than in 2021 Q2.

[2] The seasonal adjustment is based on the 3-month moving average, so that the figure for June includes the three months May, June and July. The seasonal adjustment takes account of the break due to the revision of the Labour Force Survey with effect from 2021 Q1. Figures adjusted for breaks and seasonal variation have now been calculated back to 2006.

The seasonally adjusted registered unemployment figure published by NAV also fell to a historically low level and then levelled off in recent months. It was 1.7 per cent in May and June and fell slightly to 1.6 per cent in both July and August 2022, which is the lowest level observed since 2008, immediately before the financial crisis.

Demand for labour has remained at a high level since the beginning of 2021, but has now fallen somewhat. According to NAV, the supply of new jobs in May was the highest observed for the past 5 years, while the supply of jobs in June and July remained roughly at the level observed in previous years. However the supply was lower than in the same months in 2021. According to Statistics Norway, the share of vacancies increased by 0.1 per cent from 2022 Q1 to Q2, to 3.4 per cent, the highest level recorded since 2010.

The national accounts also show an increase in employment to a level that is higher than prior to the COVID outbreak. In 2022 Q2, seasonally adjusted employment increased by 5.3 per cent on the same quarter the previous year, and was 2.8 per cent higher than in 2019 Q4. The seasonally adjusted number of hours worked grew even more strongly in Q2, by 5.6 per cent compared with the previous year, to a level 2.4 per cent higher than in 2019 Q4. Developments in employment and hours worked have been weak in recent years in a number of industries that were particularly hard hit by the infection control measures, but these industries now appear to have recovered. The number of hours worked in accommodation and food services increased by 7.5 per cent from 2022 Q1 to Q2, to 4.3 per cent higher than in 2019 Q4. Developments in hours worked in culture, entertainment and other services was also strong, with growth of 5.5 per cent from 2022 Q1 to Q2, to a level 2.7 per cent higher than in 2019 Q4. Employment broken down by industry thus appears to have normalised, with the possible exception of business services, which include employment services, where the number of hours worked in 2022 Q2 was 3.8 per cent lower than in 2019 Q4. Employment in this industry is back at the pre-pandemic level, however.

In June 2022 the number of foreign commuters (non-resident wage-earners) was 87 800, which is lower than the pre-pandemic level, with an average of 93 100 foreign commuters in the period 2019 Q2 to2020 Q1. The number of immigrant workers (residents born abroad with foreign parents and grandparents) increased to 486 000 persons in June 2022, which is 10.6 per cent higher than the same month in 2021 and 14.2 per cent higher than in June 2019. This tendency strengthens the impression that the labour market is undergoing normalisation.

The labour market is very tight at the moment, but we anticipate that a deterioration of the economy abroad could spread to Norway and result in somewhat weaker developments through the remainder of 2022 and the projection period. Nonetheless, we foresee unemployment of 3.3 per cent in 2022. High inflation and an exacerbation of the global situation will then cause an increase in unemployment to 3.6 per cent in 2023, 3.7 per cent in 2024 and 4.2 per cent in 2025.

From 2021 to 2022 we forecast growth in hours worked in mainland Norway of 4.0 per cent and employment growth of 3.3 per cent. This is appreciably stronger than envisaged in our last economic report and is due to stronger than anticipated developments from Q1 to Q2. Because of international developments and higher interest rates, we expect a weaker tendency in 2023, with virtually no growth in hours worked or employment. Some of the weak growth in hours worked is admittedly due to there being 2 fewer working days in 2023. Flat developments in both employment and hours worked are expected in 2024 and 2025. The labour force will grow strongly in 2022, by1.6 per cent, followed by 0.4 per cent in 2023. After that there will be almost no growth for the remainder of the projection period.

Decline in real wages this year

Figures for the average basic monthly wage for 2022 Q2 show growth of 3.3 per cent compared with the same quarter last year, and the same as growth in 2022 Q1. Growth in the private sector and publicly-owned enterprises was 2.8 per cent, while growth figures for central and local government were 3.9 per cent and 4.2 per cent, respectively.

Four-quarter growth for manufacturing in 2022 Q2 was 2.9 per cent, unchanged from the previous quarter, while growth in retail trade and repair of motor vehicles rose, from 3.2 per cent in Q1 to

3.6 per cent in Q2. Growth slowed somewhat for the construction industry, from 3.3 per cent in Q1 to 3.0 per cent in Q2. The number of jobs in these three industries combined accounted for about 28.5 per cent of all jobs in the economy in 2022 Q2. Moderate wage growth in these industries therefore contributed to the moderate wage growth in the private sector in Q2.

The high level of labour market activity in Q2, measured by the record number of vacancies, and the low unemployment, measured by the LFS, are thus not yet reflected in rising wage growth in the private sector.[3] In our previous economic report we indicated that further growth in the share of wage-earners in low-paid industries, such as accommodation and food services, could contribute to moderating wage growth. This now appears to be the case. Statistics on the number of jobs in the economy in Q2 show growth of 6.9 per cent compared with the same quarter last year, of which growth in the number of jobs in accommodation and food services accounts for approximately 27.6 per cent. Wage-earners under the age of 25 filled roughly 36.5 per cent of the jobs in this industry.[4] As young wage-earners generally have a lower wage level than others, growth in the number of jobs in accommodation and food services probably contributed to depressing growth in average monthly basic earnings in Q2.

The number of foreign commuters increased by 38.6 per cent in 2022 Q2 compared with the same quarter the previous year. However, the number of foreign commuters is still somewhat lower than the level prior to the outbreak of the COVID pandemic. As in 2022 Q1, construction and business services accounted for the majority of the growth, with 27.9 per cent and 31.1 per cent, respectively. This undoubtedly contributed further to curbing growth in monthly basic earnings in Q2.

The preliminary monthly figures for July 2022 show growth of 3.9 per cent in the number of jobs compared to July 2021, which is lower than for months earlier in the year.[5] For wage-earners under the age of 25, growth in the number of jobs in July abated somewhat compared with previous months, while growth for foreign commuters did not seem to fall appreciably.[6]

Our projection for annual wage growth for 2022 has been revised down to 3.8 per cent, from 4.0 per cent in the previous economic report. There is uncertainty associated with the projection in terms of whether an apparently tight labour market will be reflected in further wage drift or not. Given the downward revision of the annual wage growth projection, the upwardly revised projection of 5.7 per cent for the consumer price index this year indicates that real wages will fall substantially in 2022. We forecast an approximately 1 per cent increase in real wages in 2023, followed by 3 per cent and 2 per cent in 2024 and 2025, respectively.

Inflation projections for 2022 revised further upward

In our June economic report, the annual rise in the consumer price index (CPI) was forecast to be 4.7 per cent and the consumer price index adjusted for tax changes and excluding energy products (CPI-ATE) to be 3.1 per cent for 2022. We now forecast that CPI and CPI-ATE inflation will be 5.7 and 3.9 per cent, respectively, for 2022, thereby revising up the difference between the two measures of inflation from 1.6 to 1.8 percentage points. This is attributable to a further rise in electricity prices. High prices for energy products push up CPI inflation by an annualised 1.7 percentage points in the updated calculations, while the net effect of tax increases on goods other than energy products is forecast to raise the CPI by 0.1 percentage point, i.e. the same as in our previous report.

As regards the key factors that determine inflation developments in the KVARTS model, the picture is somewhat mixed in relation to the previous report. Prices for metals, building products and shipping

3 See Lien, H. and Sæternes, S. (2022): "Høyeste sysselsettingsvekst siden 1998" [Highest employment growth since 1998], https://www.ssb.no/arbeid-og-lonn/sysselsetting/statistikk/arbeidskraftundersokelsen/artikler/ hoyeste-sysselsettingsvekst-siden-1998 and Gading, R. (2022): "Rekordhøge tal på ledige stillingar" [Record high vacancy figures], https://www.ssb.no/arbeid-og-lonn/sysselsetting/statistikk/ledige-stillingar/artikler/rekordhoge-tal-pa-ledige-stillingar.

4 For more details, see Røv, V. (2022): "195 000 flere jobber på ett år" [195 000 more jobs in one year], https://www.ssb.no/arbeid-og-lonn/sysselsetting/statistikk/antall-arbeidsforhold-og-lonn/artikler/195-000-flere-jobber-pa-ett-ar.

5 Preliminary seasonally adjusted figures also show a 0.2 per cent fall in the number of jobs in July 2022.

6 For details, see Aamodt, I. and Johnsen, M. B. (2022): "Veksten i arbeidsstyrken har flatet ut" [Growth in the labour force has levelled off], https://www.ssb.no/arbeid-og-lonn/sysselsetting/statistikk/arbeidskraftundersokelsen/ artikler/veksten-i-arbeidsstyrken-har-flatet-ut.

Box 3 Developments in international commodity prices

Geopolitical unrest in Europe associated with the war in Ukraine, and the decline in Chinese energy production and demand continue to affect international commodity prices. Since the end of May 2022, the Baltic Dry index, a composite index that measures price levels for shipping of dry goods (iron ore, coal, grain etc.), has fallen by over 65 per cent. This decline should be viewed against the background of both restrictions on grain exports from Ukraine and continued lockdowns in China as a consequence of a stringent infection control regime. A higher interest rate level in large parts of the Western world – intended to dampen global economic activity – also influences prices.

The markets expect the price level for key global commodities to remain higher than the average prices for the last six years, but futures prices point to a fall in prices for most key commodities over the next 24 months. Consequently no further positive inflationary impulses are expected in the Norwegian economy as a result of international commodity prices.

Gas

In 2020 the EU imported 41 per cent of its total consumption of natural gas from Russia. Natural gas accounts for the bulk of household energy consumption in the EU, which is primarily associated with heating. EU import restrictions against Russia have led to the price of natural gas traded on the TTF exchange in the Netherlands increasing tenfold compared with the average price for the past six years. In addition, bottlenecks for cross-Atlantic import of liquid natural gas (LNG) and reduced American export capacity have led to large differences between European and American natural gas prices.

The increase in the price of natural gas in the EU primarily affects the Norwegian economy through historically high earnings from natural gas exports. The value of Norwegian natural gas exports in July 2022 was 765 per cent higher than the average monthly value in 2019. In isolation, increased natural gas prices will also lead to higher import prices for products of which natural gas is a major price component, such as fertilizer. The futures prices indicate that the market is expecting a reduction in the price of natural gas in the EU in the course of 2023 and 2024. The price in 2024 is nonetheless expected to be more than double the average price from 2016–2021.

Base metals

In December 2021, following a relatively stable period from May to November, prices for base metals began to rise from an already high level attributable to the outbreak of the COVID pandemic. The rise at the beginning of 2022 was driven by high energy prices, considerable iron ore production problems, run down stocks, and sanctions against trade with Russia. Russia accounts for 6 per cent of the world's production of both aluminium and nickel.

In March this year prices peaked, and the World Bank's Metals and Minerals Index shows a decline of 30 per cent from March to July. The decline has mainly been demand-driven, as China closed one of its most important ports, Shanghai, as a result of an outbreak of COVID in April. Expected lower global GDP growth in the time ahead may also have contributed to the decline.

Since Shanghai reopened in June, prices have levelled off and Chinese demand can be expected to pick up again as China attempts to attain its growth targets in the course of the year. Nickel, copper and zinc have shown indications of a price rise since the beginning of August, and the World Bank's longer-term forecasts are that the high energy prices might cause a further substantial increase in prices for base metals, particularly aluminium, copper and nickel (World Bank Group, 2022). Following a small increase, futures prices for copper and steel are expected to remain stable, while aluminium, nickel and cobalt are expected to increase from the current level.

Food

Since February the global food price level has been considerably higher than last year as a consequence of limited exports from Ukraine, trade sanctions against Russia , poor harvests and high energy prices. The UN Food and Agriculture Organization's 2022 food index shows that prices fell appreciably in May, driven by a decline in prices for grain and vegetable oils. Prices for sugar, meat and dairy products have fallen, but as these categories have not been affected by the war to the same extent, they have not adjusted anywhere near as much either. Despite the fall, July prices ended at a level 13.1 per cent higher than July last year.

The decline in grain prices started with a fall in prices for wheat and maize. This was partly a result of Russian and Ukraine reaching agreement on exports from Ukraine's ports via the Black Sea, and partly to an increased supply of wheat from harvests in season in the northern hemisphere, and accelerated maize harvests from Argentina and Brazil. FAO's forecast for the remainder of the year shows that grain production and consumption appear set to end up at roughly the same level as last year. Assuming that the volume forecast holds true, and as fertilizer production, agriculture and distribution are energy-intensive, any price changes will probably vary in pace with energy prices (Food and Agriculture Organization of the United Nations, 2022).

Prices for vegetable oil peaked in February as a consequence of poor rape and soya harvests and reduced exports of sunflower seed and palm oil from Ukraine and Indonesia, respectively. Prices have fallen since

March/April, and according to FAO this is because of increased exports of palm oil from Indonesia, weak demand for and abundant harvests of rape and soya oil, and reduced demand for sunflower oil..

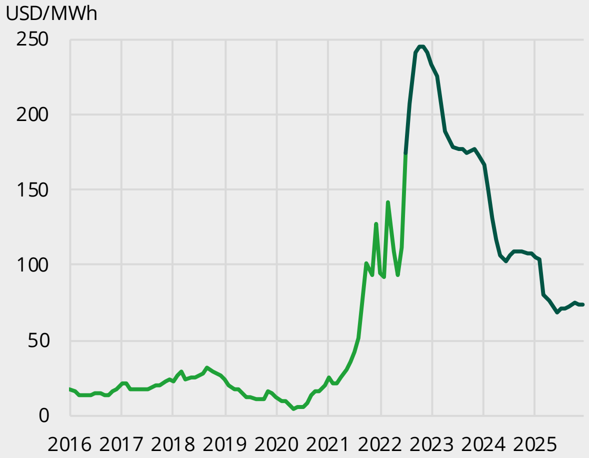
References

Food and Agriculture Organization of the United Nations (2022, 7. september). *FAO Cereal Supply and Demand Brief.* https://www.fao.org/worldfoodsituation/csdb/en/

Food and Agriculture Organization of the United Nations (2022, 7. september). *FAO Food Price Index.* https://www.fao.org/worldfoodsituation/foodpricesindex/en/

World Bank Group. 2022. Commodity Markets Outlook: The Impact of the War in Ukraine on Commodity Markets, April 2022. World Bank, Washington. https://openknowledge.worldbank.org/bitstream/handle/10986/37223/CMO-April-2022.pdf

Natural Gas Futures Curve



Historical spot price: IMF, Netherlands TTF Natural Gas Forward Day Ahead
Futures price curve

Source: Intercontinental Exchange (CE), International Monetary Fund (IMF)

Historic spot prices and futures prices for commodities

Commodity	Source (Historical price / Futures price)	Average spot 2016–2021	Dec.22	Dec.23	Dec.24
Gas. USD/MWh	IMF / Intercontinental Exchange (ICE) Dutch TTF	24	241	174	107
	Henry Hub / NYMEX Henry Hub	9.7	32	22	19
Coal. USD/Ton	Hamburg Institute of International Economics (HWWI) / ICE[1]	79	390	329	314
Iron ore. USD/Ton	World Bank Singapore Exchange (SGX)[2]	94	91	86	82
Steel (Rebar). USD/Ton	London Metal Exchange (LME)3	528	630	620	NA
Steel (scrap). USD/Ton	LME[3]	349	373	370	NA
Aluminium. USD/Ton	LME	1 952	2 362	2 411	2 468
Zinc. USD/Ton	LME	2 654	3 442	3 075	2 785
Nickel. USD/Ton	LME	13 289	21 437	21 802	22 083
Copper. USD/Ton	LME	7 331	7 710	7 675	7 675
Lead. USD/Ton	LME	2 092	1 895	1 875	1 865
Cobalt4. USD/Ton	LME	45 495	52 045	53 695	NA
Wheat. USD/Ton	HWWI / Euronext, CME Group[5]	182	314	315	272
Maize. USD/Ton	US Department of Agriculture / CME Group	161	262	242	220

[1] Futures prices are set as the average of: Richards Bay Coal, Rotterdam Coal, and Newcastle Coal.
[2] Futures prices are set as the average of: SGX MB China Iron Ore (58% FE Fines) Index and SGX TSI China Iron Ore (62% Fe Fines) Index.
[3] Historical figures for the period November 2018 – December 2021.
[4] The longest futures contract is for November 2023.
[5] Futures prices are set as the average of: Euronext Paris Milling Wheat no.2, CBOT No. 2 Soft Red, and KCBT No. 2 Hard Winter..
Source: All data obtained from Macrobond.

rose substantially through 2021, peaking after the outbreak of war in Ukraine. Given prospects of lower economic growth internationally, further inflationary impulses from these goods and services are not expected in the near term; see Box 3. Because of the time lag in setting consumer prices, where the pass-through of cost increases by businesses is important, inflationary impulses from these factors will have an effect next year before gradually abating. Despite a tight labour market, wage growth has been somewhat weaker than assumed in the last report, and projections for annual wage growth remain relatively unchanged later in the projection period. The krone has appreciated somewhat, while international inflation has been stronger than previously assumed. We still assume in our calculations that the rise in import prices will gradually revert to more normal levels of around 2 per cent in 2024. Higher interest rates, coupled with higher unemployment, push down inflation. In the short term, high inflation and low growth in household real disposable income are likely to constrain companies' possibility of increasing their prices fully in pace with cost increases. Fuel prices fell back in August from the sky-high prices at the pump that were observed in June and July. One important reason for this is probably that the high prices have moderated global demand. In addition, summer, a time when demand is usually high, is over. Fuel prices are now more consistent with what one might expect from developments in the oil price, and we assume that prices at the pump will shadow the oil price through the projection period. With prospects of lower economic growth and lower capacity utilisation, productivity growth will be somewhat lower than in our earlier projections. A downward revision of business investment means a lower accumulation of real capital stock, and this will also contribute to moderating productivity growth in the years ahead. In isolation, higher productivity growth leads to lower prices. The above factors, excluding lower productivity growth, point to lower inflation in the longer term.

In the medium term, developments in electricity prices appear to be pushing up prices, and particularly costs for the business sector in Southern Norway. Spot prices in Central and Northern Norway have been extremely low this summer, and were listed at 2 øre/kWh in July. Prices in these areas had risen substantially by the beginning of September, particularly in Central Norway, where spot prices have averaged over 70 øre/kWh so far, which will trigger electricity support if they do not fall. In August 2021, spot prices on the Nord Pool power exchange were about 75 øre/kWh in Southern Norway, which was considered high already then, while in August this year they were 3.4 kr/kWh in the price areas Oslo (NO1) and Bergen (NO5), while Kristiansand (NO2) ended up with a price of 4.3 kr/kWh. At the beginning of September, spot prices in Southern Norway averaged about 4 kr/kWh, whereas they were still a way under 2 kr/kWh as late as in June. According to the Norwegian Water Resources and Energy Directorate (NVE), the power situation in Southern Norway is challenging at present, with South-West Norway in particular having record-low reservoir levels for the time of year. This summer the Norwegian Government informed power producers that they expect reservoir water to be used sparingly to avoid electricity rationing come winter. Lower hydropower production and a new upswing in spot prices for natural gas since the end of June, following a period of falling prices, pushed up prices in Southern Norway in July and August.

Futures prices in the power market are extremely volatile at present. Prices for both gas and electricity collapsed in the last few days of August after notifications that the European Commission would intervene in the market to ensure electricity price stability, and it was additionally reported that German natural gas stocks are filling faster than expected. The following weekend Russian Gazprom reported that gas supplies through the Nord Stream 1 pipeline would not be resumed after three days of maintenance work, and this caused a reversal of the price fall. Going forward, electricity prices in the Norwegian market will depend largely on the level of Russian gas supplies, winter temperatures in Norway and Europe, as well as precipitation and reservoir levels. The European commission plans to submit a number of proposals for tackling the energy crisis. It is unclear as yet whether the measures will have consequences for electricity prices in the Nordic market.

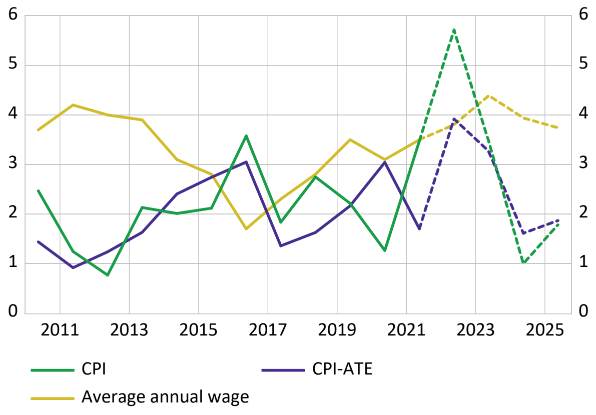
There is also uncertainty concerning further developments in grid charges. The high electricity prices have meant some electricity supply companies have had substantial costs associated with loss of power in the transmission network, as the loss is covered at market prices. To ease the effect of high market prices in the grid charges, Statnett, the system operator of the Norwegian power system, set the energy component of the grid tariff at zero from 1 September this year, extending through 2023. The fixed component for consumption was discontinued from 1 April this year. At the beginning of September, the Government announced that the State will transfer up to NOK 10 billion to the distribution companies in the three southernmost price regions to prevent increases in grid charges for households and businesses this autumn. It is the Norwegian Energy Regulatory Authority that stipulates the final income frameworks for the distribution companies. There is a substantial lag in the earnings of many companies because of the high spot prices. With prospects of continued high spot prices, we have assumed that grid charges will increase a fair amount next year, but the increase will be moderated by a continued reduction in Statnett's rates and through further transfers to the distribution companies by the government.

During the autumn session, the Storting will consider a number of proposals that may affect developments in future prices for both households and businesses. These include the design of continued electricity support to households and measures to lessen the pressure on businesses with increased electricity expenses. The Storting is also to consider the government's previous proposals to change taxation of economic rent on long power agreements, which will eliminate the tax risk for power producers, making it easier for them to offer fixed price agreements to both private customers and the business sector. We naturally cannot speculate on the outcome of the Storting's negotiations, and in these projections have made the technical assumption that households' electricity support in the form of the present 90 per cent deduction on spot prices over 70 øre/kWh with a monthly consumption cap of 5 000 kWh will be extended.

We assume that no subsidising of businesses' electricity costs will be introduced that detracts from their incentives to save electricity. Futures prices at the beginning of September indicate that power prices in price areas in Southern Norway will increase further and remain at very high levels through the winter, before falling from 2023 Q2 and through the projection period. If these assumptions hold true, the business sector will incur substantially increased costs for a while to come.

Figure 17. Consumer price indices and annual wage

Change from previous year in percent



Source: Statistics Norway

Pass-through of these costs to producer prices, along with a considerable carryover, could lead to underlying inflation measured by the annual rise in the CPI-ATE remaining at a high level into next year. Assuming that the rise in import prices gradually falls back to more normal levels of around 2 per cent, our calculations indicate that the rate of underlying inflation could sink rapidly as electricity prices fall. A fall in electricity prices in a labour market with increased unemployment, combined with interest rate hikes and relatively moderate wage growth, will then lead to the CPI-ATE being lower than Norges Bank's inflation target in 2024.

Measures associated with the COVID-19 pandemic, as well as the outbreak of war in Ukraine at the end of February, introduced great uncertainty into our calculations of this year's consumer price inflation. It was expected that higher prices for commodities, metals, shipping and international food prices would fuel consumer price inflation. However prices have increased far more than expected, which may indicate that we have underestimated the indirect effects on producer prices of higher energy costs. Developments in the CPI-ATE were relatively flat through 2021, so that the increase in underlying inflation has had a major impact in the form of high rates of annual increase. The 12-month rise in the CPI-ATE gradually increased from 1.3 per cent in January to 3.6 per cent in June, and was as high as 4.5 per cent in July. The inflation rate in July is the highest recorded since the introduction of the inflation target. An unusually sharp rise in food prices was the chief reason for this last upswing, but the CPI figures show that there has been a broad-based rise in prices for most goods and services. The 12-month rise in the CPI was 6.3 per cent in June and 6.8 per cent in July. Prices for energy products have caused the inflation rate measured by the CPI to be markedly higher than the CPI-ATE throughout the year. High fuel prices made a particularly strong contribution in June and July, but these prices fell significantly in August.

In view of the current subsidising of households, with electricity support for 90 per cent of spot prices over 70 øre/kWh, compared with 55 per cent in December last year when electricity support was introduced, we have assumed in earlier reports that the 12-month rise in the CPI will be somewhat lower than the rise in the CPI-ATE in December 2022. Given the projections for electricity spot prices on which our calculations are based this time, the annual rise in the CPI will be higher than in the CPI-ATE for the rest of the year and into 2023. A few product groups have seen a low rise in prices, including clothing, audiovisual equipment and IT equipment. We have assumed that the rise in prices for these products will remain low. In retail trade, many lines of business are reporting full warehouses. In this situation it may be necessary for some shops to reduce their prices more than in normal seasonal sales in order to dispose of their stocks. This may contribute to lowering prices in some product groups where there has been a high rise in prices.

According to the CPI, the monthly rise in prices from June to July was 7.6 per cent for food and 7.7 per cent for alcoholic beverages. There was a strong rise in prices for agricultural products, both produced in Norway and imported. Supermarket suppliers adjust their prices to the shops at two main times, 1 February and 1 July. The target prices established in the agricultural negotiations increased from 1 July, and this, coupled with other increased costs for businesses, contributed to the last rise. Prices for food products do not normally change much between these two main times, but there is ongoing competition between supermarket chains and special offers activity may affect prices, for example during seasonal sales at the start of school and at Christmas and Easter. We also see that exchange rate changes are rapidly reflected in prices for import goods, particularly fresh products such as fruit and vegetables. According to Statistics Norway, cross-border trade is in full swing again, and this, in isolation, may help to slow the rise in food prices. Since the outbreak of war in Ukraine, there has been a particularly strong focus on movements in international wheat prices. According to the Norwegian Directorate of Agriculture, international wheat prices have fallen significantly following a historical peak in May. At the beginning of September prices were largely back at pre-invasion levels. According to the Directorate, the decline in prices is partly due to the resumption of grain exports from Ukrainian ports. In order to encourage increased domestic production, target prices for grain were adjusted substantially upward at this year's agricultural settlement. The target price for wheat for consumption increased by NOK 100, to NOK 480 per 100 kilos for the 2022/23 season.

We have adjusted the special tax rates for inflation for the years 2023– 2025 and expect them to have a neutral effect on CPI inflation. The exception is VAT on electric vehicles after a basic deduction of NOK 500 000, which adds to VAT on vehicle purchases as a whole, and the reintroduction of air passenger tax from 1 July, which will push up the inflation rate in the first half of 2023. An expected large carryover in the CPI-ATE at the end of 2022 will contribute to relatively high underlying inflation into 2023. Average CPI-ATE inflation is projected to be 3.3 per cent in 2023, and as an annual average is expected to fall to just below Norges Bank's inflation target of 2 per cent in 2024 and 2025. As a result of somewhat higher taxes, CPI inflation will be 0.2 percentage point higher than CPI-ATE inflation in 2023. We estimate that annualised average prices for energy products as a whole will be approximately the same next year as in 2022. An expected fall in energy prices will lead to CPI inflation being somewhat lower than CPI-ATE inflation in 2024 and 2025.

Table 4. National accounts: Final expenditure and gross domestic product. At constant 2019 prices. NOK million

	Unadjusted		Seasonally adjusted							
	2020	2021	20:3	20:4	21:1	21:2	21:3	21:4	22:1	22:2
Final consumption expenditure of households and NPISHs	1 475 350	1 547 250	374 366	377 753	363 193	375 086	398 056	411 580	402 263	415 275
Household final consumption expenditure	1 399 898	1 466 263	355 967	359 168	345 696	356 521	376 200	388 824	380 372	392 373
Goods	724 943	766 948	188 841	192 806	186 699	194 636	195 698	194 927	185 637	185 412
Services	663 908	689 961	166 468	168 380	160 468	162 899	177 617	186 150	187 081	193 293
Direct purchases abroad by resident households	27 918	25 377	3 678	2 264	1 549	1 354	7 497	16 026	16 202	23 038
Direct purchases by non-residents	-16 871	-16 024	-3 020	-4 282	-3 020	-2 367	-4 612	-8 279	-8 547	-9 369
Final consumption expenditure of NPISHs	75 452	80 987	18 399	18 586	17 497	18 565	21 856	22 756	21 891	22 902
Final consumption expenditure of general government	883 555	916 794	222 228	228 060	225 197	228 427	231 577	231 726	228 251	228 781
Final consumption expenditure of central government	437 404	450 669	110 621	113 193	110 204	111 919	113 615	114 982	111 290	112 497
Central government, civilian	384 686	396 673	97 329	99 720	96 833	98 424	100 093	101 369	97 673	98 923
Central government, defence	52 718	53 996	13 292	13 473	13 371	13 495	13 522	13 613	13 617	13 574
Final consumption expenditure of local government	446 151	466 126	111 607	114 867	114 993	116 508	117 962	116 744	116 961	116 284
Gross fixed capital formation	903 710	895 338	222 121	225 164	222 950	223 945	220 479	227 731	226 838	224 431
Extraction and transport via pipelines	171 482	166 781	41 002	41 886	40 462	44 046	41 248	41 000	38 495	41 467
Ocean transport	5 625	2 233	1 618	1 526	1 677	135	147	274	86	196
Mainland Norway	726 603	726 324	179 501	181 752	180 812	179 765	179 084	186 457	188 257	182 768
Industries	325 798	332 867	79 185	80 838	83 268	83 276	81 094	85 126	89 851	86 175
Service activities incidential to extraction	2 708	2 557	628	454	563	638	680	673	736	577
Other services	197 898	209 010	47 952	50 777	50 487	50 754	53 148	54 629	57 211	54 273
Manufacturing and mining	47 435	48 608	11 811	11 359	12 035	11 829	11 184	13 517	13 265	14 179
Production of other goods	77 757	72 692	18 794	18 248	20 182	20 056	16 083	16 307	18 640	17 146
Dwellings (households)	188 904	190 023	45 887	48 314	47 567	49 014	45 714	47 707	48 745	46 879
General government	211 901	203 434	54 429	52 600	49 977	47 475	52 276	53 624	49 661	49 714
Acquisitions less disposals of valuables	158	267	41	24	1	41	104	122	104	122
Changes in stocks and statistical discrepancies	90 245	95 466	19 780	16 935	21 951	16 795	21 917	23 367	39 053	44 481
Gross capital formation	994 113	991 071	241 942	242 123	244 902	240 782	242 500	251 220	265 995	269 034
Final domestic use of goods and services	3 353 017	3 455 115	838 537	847 936	833 292	844 295	872 132	894 526	896 510	913 090
Final demand from Mainland Norway	3 085 508	3 190 368	776 096	787 565	769 201	783 278	808 716	829 763	818 772	826 824
Final demand from general government	1 095 456	1 120 229	276 658	280 659	275 174	275 902	283 853	285 350	277 912	278 495
Total exports	1 276 402	1 336 505	321 545	321 783	322 439	326 251	353 036	338 406	331 061	333 956
Traditional goods	422 840	451 171	106 691	109 037	112 740	112 839	113 208	110 537	107 213	104 576
Crude oil and natural gas	518 501	533 037	133 863	129 953	126 533	130 827	144 896	133 937	129 565	127 492
Ships, oil platforms and planes	8 333	13 335	2 183	1 126	1 573	3 082	7 704	975	912	2 196
Services	326 728	338 963	78 808	81 667	81 591	79 503	87 228	92 957	93 372	99 692
Total use of goods and services	4 629 419	4 791 621	1 160 082	1 169 719	1 155 730	1 170 547	1 225 168	1 232 932	1 227 571	1 247 046
Total imports	1 091 492	1 116 389	270 959	274 223	260 558	270 031	288 388	295 018	297 644	310 514
Traditional goods	717 639	756 633	184 379	189 236	179 816	188 380	194 879	189 958	188 896	193 487
Crude oil and natural gas	22 214	19 194	4 827	5 436	4 661	7 937	3 033	3 478	3 574	3 672
Ships, oil platforms and planes	32 766	29 735	8 581	5 335	6 100	5 616	10 088	7 931	7 271	5 696
Services	318 872	310 828	73 172	74 216	69 982	68 098	80 388	93 652	97 903	107 660
Gross domestic product (market prices)	3 537 927	3 675 232	889 123	895 496	895 172	900 515	936 779	937 914	929 927	936 532
Gross domestic product Mainland Norway (market prices)	2 992 002	3 115 051	748 676	763 583	759 004	764 247	786 450	798 322	794 978	800 411
Petroleum activities and ocean transport	545 925	560 181	140 447	131 913	136 168	136 269	150 329	139 592	134 949	136 121
Mainland Norway (basic prices)	2 601 672	2 704 871	649 763	662 884	659 738	663 610	682 598	692 657	691 845	697 172
Mainland Norway excluding general government	1 929 791	2 006 756	480 377	489 982	488 929	491 439	505 954	514 122	516 188	519 777
Manufacturing and mining	220 897	227 479	54 763	56 741	57 614	57 423	57 539	56 909	56 861	56 351
Production of other goods	361 249	370 815	90 292	91 604	92 577	91 652	93 198	92 214	94 219	93 648
Services incl. dwellings (households)	1 347 645	1 408 463	335 321	341 637	338 738	342 364	355 217	364 999	365 108	369 778
General government	671 881	698 115	169 386	172 902	170 810	172 172	176 644	178 535	175 657	177 395
Taxes and subsidies products	390 330	410 180	98 913	100 699	99 265	100 636	103 852	105 665	103 133	103 239

Source: Statistics Norway.

Table 5. National accounts: Final expenditure and gross domestic product. At constant 2019 prices. Percentage change from previous period

	Unadjusted		Seasonally adjusted							
	2020	2021	20:3	20:4	21:1	21:2	21:3	21:4	22:1	22:2
Final consumption expenditure of households and NPISHs	-6.6	4.9	8.7	0.9	-3.9	3.3	6.1	3.4	-2.3	3.2
Household final consumption expenditure	-6.3	4.7	8.8	0.9	-3.8	3.1	5.5	3.4	-2.2	3.2
Goods	6.5	5.8	6.1	2.1	-3.2	4.3	0.5	-0.4	-4.8	-0.1
Services	-10.3	3.9	10.9	1.1	-4.7	1.5	9.0	4.8	0.5	3.3
Direct purchases abroad by resident households	-77.6	-9.1	456.3	-38.4	-31.6	-12.6	453.9	113.8	1.1	42.2
Direct purchases by non-residents	-67.5	-5.0	100	41.8	-29.5	-21.6	94.8	79.5	3.2	9.6
Final consumption expenditure of NPISHs	-11.7	7.3	7.5	1.0	-5.9	6.1	17.7	4.1	-3.8	4.6
Final consumption expenditure of general government	1.8	3.8	4.2	2.6	-1.3	1.4	1.4	0.1	-1.5	0.2
Final consumption expenditure of central government	3.2	3.0	5.3	2.3	-2.6	1.6	1.5	1.2	-3.2	1.1
Central government, civilian	3.0	3.1	5.8	2.5	-2.9	1.6	1.7	1.3	-3.6	1.3
Central government, defence	4.6	2.4	1.7	1.4	-0.8	0.9	0.2	0.7	0.0	-0.3
Final consumption expenditure of local government	0.6	4.5	3.1	2.9	0.1	1.3	1.2	-1.0	0.2	-0.6
Gross fixed capital formation	-5.6	-0.9	-1.5	1.4	-1.0	0.4	-1.5	3.3	-0.4	-1.1
Extraction and transport via pipelines	-4.1	-2.7	-6.8	2.2	-3.4	8.9	-6.4	-0.6	-6.1	7.7
Ocean transport	-77.5	-60.3	369.1	-5.7	9.9	-92	9.3	86.4	-68.8	128.6
Mainland Norway	-3.6	0.0	-0.9	1.3	-0.5	-0.6	-0.4	4.1	1.0	-2.9
Industries	-5.0	2.2	-1.0	2.1	3.0	0.0	-2.6	5.0	5.6	-4.1
Service activities incidential to extraction	-35.1	-5.6	-19.1	-27.7	24.1	13.2	6.6	-1.0	9.4	-21.7
Other services	-3.5	5.6	1.2	5.9	-0.6	0.5	4.7	2.8	4.7	-5.1
Manufacturing and mining	-8.0	2.5	3.7	-3.8	5.9	-1.7	-5.5	20.9	-1.9	6.9
Production of other goods	-5.3	-6.5	-8.1	-2.9	10.6	-0.6	-19.8	1.4	14.3	-8.0
Dwellings (households)	-4.0	0.6	-2.9	5.3	-1.5	3.0	-6.7	4.4	2.2	-3.8
General government	-1.1	-4.0	1.1	-3.4	-5.0	-5.0	10.1	2.6	-7.4	0.1
Acquisitions less disposals of valuables	-61	69.3	391.8	-41.9	-96.9	..	154.3	16.7	-14.6	17.2
Changes in stocks and statistical discrepancies	-14.7	5.8	74.7	-14.4	29.6	-23.5	30.5	6.6	67.1	13.9
Gross capital formation	-6.6	-0.3	2.2	0.1	1.1	-1.7	0.7	3.6	5.9	1.1
Final domestic use of goods and services	-4.5	3.0	5.6	1.1	-1.7	1.3	3.3	2.6	0.2	1.8
Final demand from Mainland Norway	-3.6	3.4	5.1	1.5	-2.3	1.8	3.2	2.6	-1.3	1.0
Final demand from general government	1.3	2.3	3.6	1.4	-2.0	0.3	2.9	0.5	-2.6	0.2
Total exports	-1.2	4.7	5.9	0.1	0.2	1.2	8.2	-4.1	-2.2	0.9
Traditional goods	-2.5	6.7	7.0	2.2	3.4	0.1	0.3	-2.4	-3.0	-2.5
Crude oil and natural gas	11.9	2.8	5.5	-2.9	-2.6	3.4	10.8	-7.6	-3.3	-1.6
Ships, oil platforms and planes	-32.8	60	29.1	-48.4	39.7	95.9	149.9	-87.3	-6.5	140.7
Services	-14.7	3.7	4.7	3.6	-0.1	-2.6	9.7	6.6	0.4	6.8
Total use of goods and services	-3.6	3.5	5.7	0.8	-1.2	1.3	4.7	0.6	-0.4	1.6
Total imports	-11.9	2.3	9.6	1.2	-5.0	3.6	6.8	2.3	0.9	4.3
Traditional goods	-2.5	5.4	12.7	2.6	-5.0	4.8	3.4	-2.5	-0.6	2.4
Crude oil and natural gas	-8.9	-13.6	2.7	12.6	-14.3	70.3	-61.8	14.7	2.8	2.7
Ships, oil platforms and planes	-8.4	-9.3	-3.2	-37.8	14.3	-7.9	79.6	-21.4	-8.3	-21.7
Services	-28	-2.5	4.3	1.4	-5.7	-2.7	18	16.5	4.5	10.0
Gross domestic product (market prices)	-0.7	3.9	4.5	0.7	0.0	0.6	4.0	0.1	-0.9	0.7
[Gross domestic product Mainland Norway (market prices)	-2.3	4.1	5.0	2.0	-0.6	0.7	2.9	1.5	-0.4	0.7
Petroleum activities and ocean transport	9.1	2.6	2.0	-6.1	3.2	0.1	10.3	-7.1	-3.3	0.9
Mainland Norway (basic prices)	-2.4	4.0	4.8	2.0	-0.5	0.6	2.9	1.5	-0.1	0.8
Mainland Norway excluding general government	-3.0	4.0	4.6	2.0	-0.2	0.5	3.0	1.6	0.4	0.7
Manufacturing and mining	-2.5	3.0	2.2	3.6	1.5	-0.3	0.2	-1.1	-0.1	-0.9
Production of other goods	0.5	2.6	2.2	1.5	1.1	-1.0	1.7	-1.1	2.2	-0.6
Services incl. dwellings (households)	-4.0	4.5	5.7	1.9	-0.8	1.1	3.8	2.8	0	1.3
General government	-0.5	3.9	5.1	2.1	-1.2	0.8	2.6	1.1	-1.6	1.0
Taxes and subsidies products	-2.1	5.1	6.6	1.8	-1.4	1.4	3.2	1.7	-2.4	0.1

Source: Statistics Norway.

Table 6. National accounts: Final expenditure and gross domestic product. Price indices. 2019=100

	Unadjusted		Seasonally adjusted							
	2020	2021	20:3	20:4	21:1	21:2	21:3	21:4	22:1	22:2
Final consumption expenditure of households and NPISHs	101.7	104.4	101.9	102.1	103.3	103.5	104.8	105.8	106.4	108.8
Final consumption expenditure of general government	102.5	105.6	102.3	101.3	104.9	104.9	104.8	107.7	110.5	111.1
Gross fixed capital formation	103.1	107.3	103.1	103.7	104.9	106.0	108.3	109.9	110.7	113.6
Mainland Norway	102.5	107.3	102.7	102.7	104.7	106.0	108.5	110.0	110.9	114.0
Final domestic use of goods and services	102.6	105.2	102.8	103.0	103.4	105.6	107.6	103.3	106.3	111.8
Final demand from Mainland Norway	102.1	105.4	102.2	102.0	104.1	104.5	105.6	107.3	108.5	110.6
Total exports	86.2	128.8	84.2	88.3	103.2	108.9	129.5	171.1	194.4	189.0
Traditional goods	96.6	109.2	93.5	95.2	101.1	103.5	111.5	121.4	137.4	144.0
Total use of goods and services	98.0	111.8	97.6	99.0	103.3	106.5	113.9	121.9	130.1	132.5
Total imports	103.4	108.8	103.2	103.5	105.7	105.8	110.7	112.4	118.1	122.8
Traditional goods	104.2	109.9	104.7	104.1	107.0	106.3	112.1	114.2	121.4	128.0
Gross domestic product (market prices)	96.4	112.7	95.9	97.6	102.6	106.7	115.0	124.9	133.9	135.7
Gross domestic product Mainland Norway (market prices)	101.7	104.9	101.6	101.5	103.0	104.2	105.0	107.1	109.1	110.6

Source: Statistics Norway.

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

	Unadjusted		Seasonally adjusted							
	2020	2021	20:3	20:4	21:1	21:2	21:3	21:4	22:1	22:2
Final consumption expenditure of households and NPISHs	1.7	2.7	0.7	0.1	1.2	0.2	1.2	1.0	0.5	2.3
Final consumption expenditure of general government	2.5	3.1	-2.1	-1.0	3.6	0.1	-0.1	2.8	2.5	0.6
Gross fixed capital formation	3.1	4.0	-0.5	0.6	1.1	1.1	2.2	1.4	0.8	2.6
Mainland Norway	2.5	4.7	-0.1	0.0	1.9	1.2	2.4	1.3	0.9	2.8
Final domestic use of goods and services	2.6	2.6	0.5	0.3	0.3	2.1	1.9	-4.0	2.9	5.1
Final demand from Mainland Norway	2.1	3.3	-0.3	-0.2	2.1	0.4	1.1	1.6	1.2	1.9
Total exports	-13.8	49.5	7.5	4.9	16.9	5.5	18.9	32.1	13.6	-2.8
Traditional goods	-3.4	13.1	-1.7	1.9	6.2	2.4	7.8	8.8	13.2	4.8
Total use of goods and services	-2.0	14.0	2.1	1.4	4.4	3.1	7.0	7.0	6.7	1.8
Total imports	3.4	5.2	-0.5	0.3	2.1	0.1	4.6	1.5	5.1	4.0
Traditional goods	4.2	5.5	0.0	-0.6	2.8	-0.6	5.4	1.8	6.3	5.4
Gross domestic product (market prices)	-3.6	16.9	2.8	1.7	5.2	4	7.7	8.7	7.2	1.3
Gross domestic product Mainland Norway (market prices)	1.7	3.1	-0.4	-0.1	1.5	1.2	0.7	2.1	1.8	1.4

Source: Statistics Norway.

Table 8. Main economic indicators 2013-2025. Accounts and forecasts. Percentage change from previous year unless otherwise noted

										Forecasts			
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Demand and output													
Consumption in households etc.	2.8	2.1	2.7	1.1	2.2	1.6	1.1	-6.6	4.9	6.7	1.0	1.3	2.4
General government consumption	1.0	2.7	2.4	2.3	1.9	0.5	1.3	1.8	3.8	0.8	1.1	2.1	1.6
Gross fixed investment	6.3	-0.3	-4.0	3.9	2.6	2.2	9.5	-5.6	-0.9	0.6	4.7	2.8	-1.2
Extraction and transport via pipelines	19.0	-1.8	-12.2	-16.0	-5.4	0.7	14.3	-4.1	-2.7	-7.0	6.0	11.0	3.0
Mainland Norway	2.9	0.4	-0.2	9.0	6.8	1.5	6.3	-3.6	0.0	2.5	4.5	1.0	-2.1
Industries	-3.2	-0.7	-2.8	12.6	9.2	3.1	10.3	-5.0	2.2	5.3	8.9	0.0	-7.2
Housing	5.3	-1.4	3.2	6.6	7.3	-6.5	-1.1	-4.0	0.6	-0.7	0.7	0.2	2.6
General government	11.8	4.5	0.2	6.4	2.6	8.1	7.5	-1.1	-4.0	0.9	0.4	3.8	2.8
Demand from Mainland Norway[1]	2.3	1.9	2.0	3.1	3.1	1.3	2.3	-3.6	3.4	4.1	1.8	1.5	1.1
Exports	-1.8	3.4	4.3	1.1	1.7	-1.2	1.1	-1.2	4.7	3.4	2.9	1.6	0.6
Traditional goods	1.3	3.1	6.9	-8.6	1.7	1.5	4.9	-2.5	6.7	-3.5	1.8	2.9	3.2
Crude oil and natural gas	-5.5	2.7	2.1	4.9	5.1	-5.0	-3.7	11.9	2.8	2.6	4.5	1.9	-1.9
Imports	5.0	2.0	1.9	2.7	1.9	1.4	5.1	-11.9	2.3	8.8	3.3	1.8	1.6
Traditional goods	1.8	1.9	2.8	-0.2	3.8	2.9	5.6	-2.5	5.4	2.4	2.4	1.6	1.2
Gross domestic product	1.0	2.0	2.0	1.1	2.3	1.1	0.7	-0.7	3.9	3.2	2.0	1.8	0.8
Mainland Norway	2.3	2.2	1.4	0.9	2.0	2.2	2.0	-2.3	4.1	3.2	1.5	1.9	1.3
Manufacturing	3.3	2.8	-4.6	-4.2	0.0	1.7	2.0	-2.5	3.0	-0.1	-1.1	2.4	0.9
Labour market													
Total hours worked. Mainland Norway	0.4	1.4	0.6	0.6	0.5	1.6	1.5	-2.1	2.5	4.0	-0.4	0.3	-0.3
Employed persons	1.1	1.0	0.4	0.3	1.1	1.6	1.6	-1.5	1.2	3.3	0.1	0.3	-0.5
Labor force	1.2	0.7	1.5	0.2	-0.2	1.4	1.0	0.4	2.2	1.6	0.4	0.3	0.0
Participation rate (level)	72.1	71.7	71.9	71.3	70.6	71.1	71.4	71.3	72.1	72.8	72.6	72.5	72.2
Unemployment rate (level)	3.9	3.8	4.7	4.9	4.4	4.0	3.9	4.7	4.4	3.3	3.6	3.7	4.2
Prices and wages													
Wages per standard man-year	3.9	3.1	2.8	1.7	2.3	2.8	3.5	3.1	3.5	3.8	4.4	3.9	3.7
Consumer price index (CPI)	2.1	2.0	2.1	3.6	1.8	2.7	2.2	1.3	3.5	5.7	3.5	1.0	1.8
CPI-ATE[2]	1.6	2.4	2.7	3.0	1.4	1.6	2.2	3.0	1.7	3.9	3.3	1.6	1.9
Export prices. traditional goods	2.7	3.4	2.0	4.0	5.2	6.2	0.7	-3.4	13.1	31.3	-2.9	-4.6	-0.6
Import prices. traditional goods	1.4	4.3	4.6	1.7	3.5	4.6	2.5	4.2	5.5	14.4	0.8	-0.6	0.3
House prices	4.0	2.7	6.1	7.0	5.0	1.4	2.5	4.3	10.5	5.7	-2.5	-2.5	2.0
Income. interest rates and excange rate													
Household real income	4.0	2.3	5.4	-1.6	2.0	1.0	2.1	2.0	5.4	-2.3	-1.2	4.2	3.0
Household saving ratio (level)	7.2	7.7	9.8	6.9	6.6	5.9	7.0	14.2	15.1	7.4	6.6	8.5	8.7
Money market rate (3 month NIBOR) (level)	1.8	1.7	1.3	1.1	0.9	1.1	1.6	0.7	0.5	1.9	3.1	2.4	2.2
Lending rate. credit loans (level)[3]	4.0	3.9	3.2	2.6	2.6	2.7	3.0	2.6	2.1	2.8	4.2	4.1	3.7
Real after-tax lending rate. banks (level)	0.7	0.8	0.1	-1.6	0.1	-0.7	0.2	0.7	-1.8	-3.3	-0.2	2.2	1.1
Importweighted krone exchange rate (44 countries)[4]	2.2	5.3	10.5	1.8	-0.8	0.1	2.9	6.7	-5.3	0.3	0.2	0.0	0.0
NOK per euro (level)	7.81	8.35	8.95	9.29	9.33	9.60	9.85	10.72	10.16	9.96	9.89	9.89	9.89
Current account													
Current balance (bill. NOK)[5]	317	341	250	138	180	283	103	38	620	1 270	942	762	681
Current account (per cent of GDP)	10.3	10.8	8.0	4.5	5.5	8.0	2.9	1.1	15.0	24.5	18.5	15.1	13.4
International indicators													
Exports markets indicator	1.9	4.8	5.4	3.8	5.6	4.1	3.2	-8.2	9.0	6.2	0.7	4.0	4.4
Consumer price index. euro-area	1.4	0.4	0.2	0.2	1.5	1.8	1.2	0.3	2.6	8.0	3.5	2.0	2.0
Money market rate. euro (level)	0.2	0.2	0.0	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	1.2	2.5	2.0	1.5
Crude oil price US dollar (level)[6]	109	100	53	45	55	72	64	43	71	100	87	80	75
Crude oil price NOK (level)[6]	639	627	431	379	452	583	564	407	609	958	865	795	748

[1] Consumption in households and non-profit organizations + general government consumption + gross fixed capital formation in mainland Norway.

[2] CPI adjusted for tax changes and excluding energy products.

[3] Yearly average. Credit lines, secured on dwellings.

[4] Increasing index implies depreciation.

[5] Current account not adjusted for saving in pension funds.

[6] Average spot price Brent Blend.

Source: Statistics Norway. The cut-off date for information was 7 September 2022.