TALL SOM FORTELLER

Statistisk sentralbyrå
Statistics Norway

Economic Survey

2023 / 1

Economic developments in Norway

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Editing was finalised on Wednesday 8 March 2023
Published 30 March 2023

Explanation of symbols	Symbol
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Economic developments in Norway

The year 2022 was characterised by high inflation and a rebound in economic activity following the COVID-19 (coronavirus) pandemic. At the end of 2021, the omicron variant and new infection control measures resulted in a renewed fall in economic activity. However, with the lifting of the last infection control measures, mainland GDP picked up strongly with effect from March 2022. The upturn has subsequently continued at a more moderate pace, and in December last year mainland GDP was 4.9 per cent higher than in February 2020, and roughly in line with what we regard as a trend level; see Figure 2.1. At the same time, as a consequence of high external inflationary impulses, inflation measured by the consumer price index (CPI) rose to levels not observed since the 1980s,

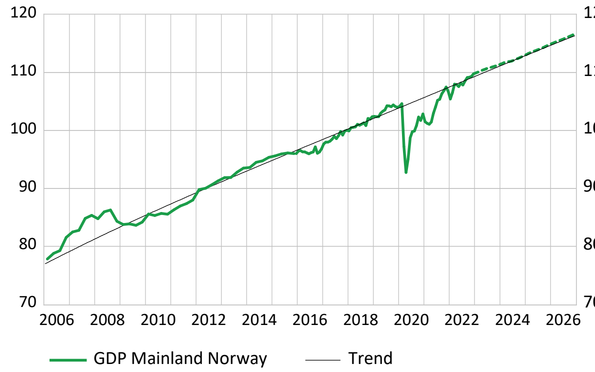
Table 1. Main macroeconomic aggregates. Accounts figures. Change from previous period. Per cent

	2021	2022	Seasonally adjusted			
			22:1	22:2	22:3	22:4
Demand and output						
Consumption in households etc.	4.4	6.8	-3.9	3.2	0.6	5.6
General government consumption	5.0	0.1	-1.7	0.5	0.0	0.9
Gross fixed investment	-0.8	4.4	0.7	0.3	0.5	2.1
Extraction and transport via pipelines	-2.1	-5.5	-11.1	3.4	-2.1	8.8
Mainland Norway	1.7	6.6	2.1	0.5	1.1	1.1
Final domestic demand from Mainland Norway[1]	4.0	4.8	-1.9	1.8	0.5	3.2
Exports	5.8	5.9	-2.9	2.5	4.7	-0.8
Traditional goods	4.6	-0.3	-2.4	0.9	5.9	-0.7
Crude oil and natural gas	2.9	0.3	-3.1	0.9	3.4	-1.6
Imports	1.7	9.3	-4.5	5.7	3.4	2.6
Traditional goods	5.7	2.5	-2.7	4.1	3.5	2.6
Gross domestic product	3.9	3.3	-0.8	1.1	1.3	0.2
Mainland Norway	4.2	3.8	-0.4	1.2	0.6	0.8
Labour market						
Total hours worked. Mainland Norway	2.5	3.8	0.5	0.8	0.4	0.4
Employed persons	1.2	3.9	0.9	0.6	0.5	0.4
Labour force[2]	1.2	1.4	0.6	0.2	-0.1	-0.1
Unemployment rate. level[2]	4.4	3.2	3.3	3.2	3.2	3.2
Prices and wages						
Annual earnings	3.5	4.4	..	..	..	..
Consumer price index (CPI)[3]	3.5	5.8	1.2	2.0	1.9	1.3
CPI adjusted for tax changes and excluding energy products (CPI-ATE)[3]	1.7	3.9	1.0	1.4	1.7	1.5
Export prices. traditional goods	13.2	29.1	12.4	4.2	1.2	0.7
Import prices. traditional goods	5.3	18.0	7.7	4.5	3.4	-0.2
Balance of payment						
Current balance. bill. NOK[4]	574	1691	393	345	592	361
Memorandum items (unadjusted level)						
Money market rate (3 month NIBOR)	0.1	1.3	0.5	0.8	1.5	2.4
Lending rate. credit loans[5]	0.5	0.7	2.3	2.5	2.9	3.8
Crude oil price NOK[6]	609	951	864	1 052	973	903
Importweighted krone exchange rate. 44 countries. 1995=100	108.8	110.0	107.1	109.8	110.8	112.3
NOK per euro	10.16	10.10	9.92	10.04	10.06	10.39

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

Figure 1. GDP Mainland Norway and estimated trend

Seasonally adjusted, index 2020 = 100

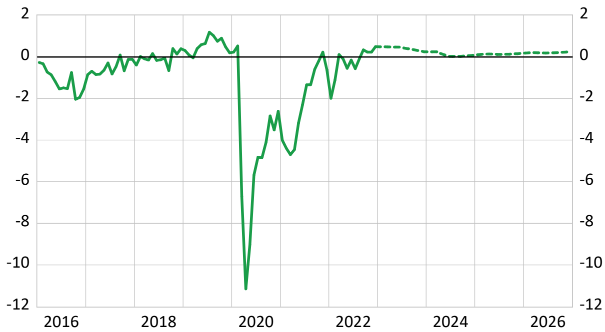


* Quarterly figures before 2016, monthly after. The trend is estimated by an HP-filter (lambda = 40 000 quarterly), but such that the trend is not directly affected by the developement of economic activity in 2020 and 2021

Source: Statistics Norway

Figure 2. Output gap, Mainland Norway

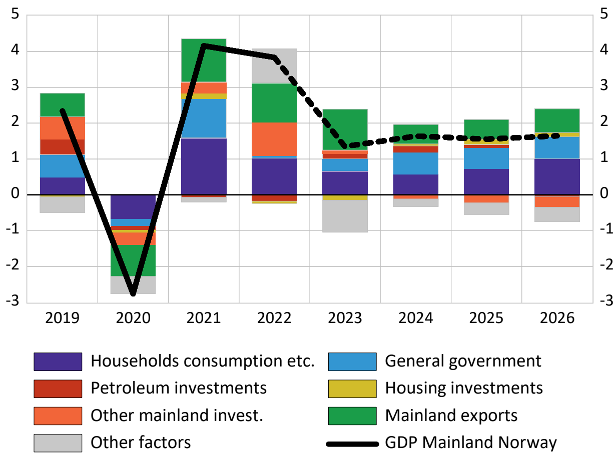
Deviation form estimated trend GDP in percent, monthly frequency



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.

even as unemployment fell to levels normally associated with expansions. The Norwegian economy may now be at a turning point. Our projections show that growth in economic activity will be lower, unemployment will increase slightly and inflation will abate through 2023. Given this picture, activity in the Norwegian economy will remain close to trend up to 2026.

Inflation has remained at a high level in early 2023 after increasing to a surprising extent through last year; see Box 6. The rise in prices in recent months, measured by the rise in the consumer price index adjusted for tax changes and excluding energy products (CPI-ATE), is the highest ever recorded for this measure of inflation since it was introduced in the early 2000s. As a result of high energy prices, the rise in overall inflation (the CPI) has remained appreciably higher than CPI-ATE inflation in recent months. The inflation peak appears to have been reached. The rise in prices for a number of intermediate goods and services has already come to a halt, and some prices have fallen recently. Global inflation appears to be declining, and the price of natural gas in Europe has fallen sharply since the peak in September. This influences external inflationary impulses here in Norway, and the forward market for both oil and electricity indicates slightly lower prices in the years ahead. Higher interest rates will also apply downward pressure on prices. In 2023 we expect the annual rise in the CPI-ATE to increase further, to 5.4 per cent, while an anticipated moderate fall in household energy prices will push CPI inflation down to close to 5 per cent. Both will exhibit a clear falling tendency through the year, however. Towards the end of the year, the 12-month rise in the CPI-ATE is expected to decrease to under 4.5 per cent. A weak exchange rate has raised the level of underlying inflation. CPI-ATE inflation is expected to fall further through 2024 and come close to the inflation target of 2 per cent in the first half of 2025.

The key policy rate, which was 0 per cent during the pandemic, is currently 2.75 per cent, after being raised several times since September last year. The main reason given by Norges Bank for the most recent interest rate hikes is that is important for reducing inflation. According to its mandate, however, the central bank also has to take into account that a higher interest rate will curb activity in the Norwegian economy, leading

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

	QNA					Projection		
	2019	2020	2021	2022	2023	2024	2025	2026
GDP Mainland Norway	2.3	-2.8	4.2	3.8	1.3	1.6	1.5	1.6
with contributions from:								
Consumption by households and non-profit organisations	0.5	-0.7	1.6	1.0	0.7	0.6	0.7	1.0
General government consumption and investment	0.6	-0.2	1.1	0.1	0.3	0.6	0.6	0.6
Petroleum investment	0.4	-0.1	-0.1	-0.2	0.1	0.2	0.1	0.0
Housing investment	-0.1	-0.1	0.2	-0.1	-0.2	0.1	0.2	0.1
Other mainland investment	0.6	-0.3	0.3	0.9	0.1	-0.1	-0.2	-0.3
Exports from mainland Norway[1]	0.7	-0.9	1.2	1.1	1.1	0.5	0.5	0.7
Other factors etc.[1]	-0.4	-0.5	-0.1	0.9	-0.9	-0.2	-0.3	-0.4

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

to more unemployment in the short and medium term. Striking a balance is particularly difficult in a time with increased global inflation (see Box 1). In its weighing up of these considerations, Norges Bank has signalled that the key policy rate will be increased by 0.25 percentage point in March 2023. The interest rate is very likely to be raised further through the monetary policy decision in June, and if inflation falls through Q2, as our projections indicate, 3.25 is likely to be the interest rate peak. In the longer term the interest rate will probably be reduced due to increasing unemployment and lower inflation, and in the course of 2024 could end up down near 2 per cent.

The National Budget for 2023 was intended to be nearly neutral. This meant that growth in public consumption and investment would be somewhat lower than trend growth this year. It was assumed in the budget that inflation measured by the rise in the CPI would be 2.8 per cent in 2023, but when the budget was submitted it was already clear that this projection was very likely too low. As a result of rising inflation through the autumn, the Government announced on 3 February this year that the Revised National Budget would be adjusted for inflation such that public services will be roughly as intended when the Storting approved the budget. The changes are incorporated in our projections for public consumption and investment in 2023. Higher gas prices associated with the war in Ukraine are increasing fiscal scope for manoeuvre. The overall growth in public consumption and investment is thus likely to increase more than trend economic growth up to 2026, while spending of petroleum revenue will remain well within 3 per cent of the value of the Government Pension Fund Global (the petroleum fund).

Household consumption, which accounts for about half of mainland GDP, rose by as much as 6.8 per cent last year, despite a high rise in prices for a number of goods and services. While the level of consumption of services was very low during the pandemic, goods consumption was at a record high level. Towards the end of 2022, the ratio between goods and services consumption, excluding the extraordinarily high number of car purchases in December due to the introduction of taxes on electric vehicles, had almost reverted to the pre-pandemic level. Norwegians' consumption abroad which, like consumption of services, plummeted during the pandemic, also picked up in the course of 2022, and towards the end of the year was somewhat higher than in 2019. This year household consumption is being curbed by higher interest rates, high inflation and falling real house prices, and is only expected to increase by around 1 per cent. According to our projections, growth in real disposable income will rise from 2024 in pace with falling inflation. This will result in consumption growth increasing gradually from around 1 per cent this year to around 3 per cent in 2026. The saving ratio will pick up through the projection period from a low level in 2023.

Business investment accounts for about 13 per cent of mainland GDP, but normally contributes more to economic developments than this share would suggest. In the past two years, business investment has increased significantly, particularly in services. However a number of large individual manufacturing projects have also been launched. Manufacturing businesses report continued growth in 2023. Large investment projects are reported in basic metals and in rubber, plastics and minerals in particular. An upswing in investment in power supply is also expected this year, but in the service

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

	Accounts 2022	Forecasts										
		2023			2024			2025			2026	
		SN	NB	MoF	SN	NB	MoF	SN	NB	MoF	SN	NB
Demand and output												
Consumption in households etc.	6.8	1.2	-1.5	1.4	1.5	0.5	2.3	2.2	2.8	..	3.0	..
General government consumption	0.1	1.2	0.4	1.3	1.7	2.0	..	1.7	1.1	..	2.0	..
Gross fixed investment	4.4	1.8	..	0.3	1.9	..	3.5	0.6	..	..	-1.1	..
Extraction and transport via pipelines	-5.5	5.0	4.0	-2.2	6.0	12.0	7.8	3.0	2.0	..	-1.5	..
Industries	14.5	1.4	-0.9	0.3	-1.7	-0.2	4.1	-3.3	3.0	..	-4.6	..
Housing	-1.4	-3.2	-4.8	1.6	1.2	1.6	0.3	3.3	3.6	..	2.5	..
General government	0.9	1.1	..	0.8	4.3	..	..	3.3	..	..	2.2	..
Demand from Mainland Norway[1]	4.8	0.9	-1.0	1.3	1.4	1.0	2.1	1.6	2.3	..	1.8	..
Exports	5.9	4.8	..	5.6	2.3	..	2.3	1.8	..	..	1.2	..
Traditional goods[2]	-0.3	5.3	4.5	4.1	3.1	2.1	3.5	3.3	3.0	..	3.6	..
Crude oil and natural gas	0.3	4.3	..	8.3	4.4	..	2.0	1.3	..	..	-3.0	..
Imports	9.3	3.5	1.2	1.1	1.9	3.0	3.2	2.1	1.0	..	2.4	..
Gross domestic product	3.3	1.6	0.6	2.8	1.8	0.6	1.9	1.5	0.3	..	1.2	..
Mainland Norway	3.8	1.3	-0.2	1.7	1.6	0.2	2.0	1.5	1.4	..	1.6	..
Labour market												
Employed persons	3.9	0.6	-0.4	0.8	0.1	-0.4	0.3	0.2	0.7	..	0.4	..
Unemployment rate (level)	3.2	3.6	..	3.2	3.8	..	3.4	4.0	..	..	4.0	..
Prices and wages												
Annual earnings	4.4	5.0	4.7	4.2	4.5	4.3	..	4.5	4.0	..	4.3	..
Consumer price index (CPI)	5.8	5.0	4.8	2.8	2.3	2.8	2.4	1.7	2.6	..	2.0	..
CPI-ATE[3]	3.9	5.4	5.2	3.1	2.8	3.6	2.8	2.1	2.7	..	2.2	..
Housing prices[4]	5.2	-2.8	-4.3	..	-1.3	2.1	..	0.5	3.7	..	2.6	..
Balance of payment												
Current balance (bill. NOK)[5]	1691	829	..	1690	876	..	..	790	..	..	554	..
Current account (per cent of GDP)	30.4	16.6	..	29.6	16.8	..	..	15.0	..	..	10.4	..
Memorandum items:												
Money market rate (level)	8.3	3.5	..	3.7	2.9	..	3.6	2.4	..	..	2.4	..
Crude oil price NOK (level)[6]	951	858	..	912	813	..	845	769	..	..	734	..
Import weighted krone exchange rate (44 countries)[7]	1.2	7.5	0.5	1.7	0.5	-2.0	0.0	0.0	-0.8	..	0.0	..

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

[2] Norges Bank forecasts exports of traditional goods and services from Mainland Norway. Ministry of Finance forecasts exports of goods exclusive of oil and natural gas.

[3] CPI adjusted for tax changes and excluding energy products (CPI-ATE).

[4] Norges Bank forecasts the housing price index published by Eiendom Norge.

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

[6] Average spot price. Brent Blend.

[7] Increasing index implies depreciation.

Source: Statistics Norway (SN). Ministry of Finance. Meld.St.1. (2022-2023) (MoF). Norges Bank. Pengepolitisk rapport 4/2022 (NB).

industries it seems unlikely that new investment projects will compensate for the completion of existing projects. Higher interest rates and lower global growth will place a damper on investment. Although a slight overall decline in business investment is expected in the next few years, the investment level is still very likely to be slightly higher in 2026 than it was in 2019 before the pandemic struck.

The autumn was characterised by falling prices for resale homes throughout Norway. Although the fall has not been as pronounced in recent months, a higher cost of living and higher interest rates will probably result in house prices continuing to fall through much of the year. The relaxation of the mortgage lending regulations is likely to moderate the fall. In the longer term, the slowing sales of new dwellings and lower housing investment will also have a counteracting effect. There is great uncertainty as to when house prices will bottom out, and how large the fall it will be. According to our calculations, the fall will still leave the price level in 2026 more than 10 per cent higher than at the start of the pandemic, just before the rise in house prices accelerated.

For the past three years, petroleum investment has fallen consistently. Although investment picked up in Q4 last year, the level was still about 9 per cent lower than in 2019 Q4. In the longer term, the Norwegian economy faces a scaling back of the petroleum industry, but up to 2025 investment activity is likely to be higher. In 2023 and 2024 petroleum companies report increased investment, which must be viewed in light of the submission of a number of new plans for development and operation of new projects towards the end of last year. Although almost half the capital goods deliveries in the petroleum industry are imported from abroad (see Box 3), these deliveries also mean substantial demand directed at mainland Norway. Some field developments are likely to be completed in 2025 and 2026, and we expect the investment level to fall a little in 2026, but to still remain slightly higher than the level in 2019.

The economy is currently characterised by high prices, for oil and gas among other products. In 2021 and 2022, gas export prices rose enormously, and more than the oil price. The price rise caused the value of oil and gas exports to more than double last year, to almost NOK 2 000 billion. The forward market indicates considerably lower oil and gas prices in the years ahead compared with the record levels in 2022. A record high trade surplus last year might thus be almost halved this year, and reduced further in the projection period, but nonetheless end up near the peak pre-pandemic level, which was in 2008.

Wage growth last year was 4.4 per cent, a whole 1.4 percentage points lower than consumer price inflation. Scope for wage growth going forward depends on manufacturing profitability. Profitability in some manufacturing segments was good in 2022, which meant that the labour share, a measure of the share of wealth creation that accrues to workers, has shrunk considerably. This applies in particular to capital-intensive manufacturing segments. According to our calculations, the labour share will remain relatively stable in the near term, meaning that wage growth this year will be around 5.0 per cent, roughly the same as inflation. In the event, real wages will scarcely have increased since 2015. Wage developments as weak as this over such a long period have not been seen since the 1980s. Nominal wage growth is expected to remain firm as inflation declines, so that real wage growth will rise to about 2.5 per cent.

There are still high pressures in the labour market. Unemployment measured by the labour force survey (LFS) has remained close to 3.4 per cent in recent months. Unemployment has thus remained at a stable low level since April last year, after falling from a peak of 5.5 per cent in August 2020. Unemployment figures as low as in 2022 have not been recorded since the boom preceding the financial crisis in 2008. Given weaker global growth prospects and lower demand in many industries, labour market pressures will ease. Employment is thus not expected to increase as much as growth in the working age population, and the employment rate will therefore fall slightly. According to our projections, unemployment will increase gradually in the years ahead, to around 4 per cent in 2025.

The Norwegian economy is probably facing a turning point. In the course of last year, unemployment fell to a low level, and inflation has been high. Going forward, it appears likely that labour market pressures will abate, unemployment will begin to rise, and inflation will decrease rapidly. Higher interest rates and lower demand from our trading partners will result in a slight dampening of growth in economic activity in 2023. However, the Norwegian economy will remain in a cyclically neutral state up to 2026.

Fiscal policy adapted to current crises

General government consumption rose 0.1 per cent from 2021 to 2022, consistent with our previous projection. Consumption rose by 0.9 per cent in 2022 Q4, the result of upward pressure from central government consumption and downward from local government. The decline in local government consumption should be viewed against the backdrop of a relatively high level of consumption in early 2022 as a result of municipal infection control work. General government gross investment rose 0.9 per cent from 2021 to 2022, whereas we forecast growth of 1.5 per cent in our previous projection. In 2022 Q4, general government

Box 1. How should the central bank handle imported inflation?

In 2022, inflation as an annual average, measured by the consumer price index, rose to 5.8 per cent. Such high inflation has not been seen in Norway since the late 1980s. Much of it was attributable to increased global prices for energy and other intermediate goods as a consequence of the war in Ukraine, amongst other things. Norges Bank, like many other central banks, has reacted to the high inflation by raising the key policy rate quite strongly. As the policy rate does not influence international prices, economists have discussed how the central bank should handle external inflationary impulses.

In adhering to its mandate as laid down by the Storting, the central bank makes certain trade-offs when facing disruptions that affect the Norwegian economy. The primary objective of its mandate is to maintain monetary stability and promote stability in the financial system, while also placing emphasis on the objectives of high and stable output and employment.[1] In this box we use the KVARTS macroeconomic model[2] to illustrate how different interest rate settings by the central bank when faced with increased global inflation will affect the Norwegian economy.

We quantify the effects on the Norwegian economy of a temporary and broad-based increase in global prices of almost 4 per cent in combination with an around 2.5 percentage points higher euro area money market rate that then gradually reverts to the starting point after two years.[3] After four years, inflation abroad is around 2 per cent, which is the inflation target of the European Central Bank. At the same time, we assume that fiscal policy and developments in international activity are as indicated in the baseline scenario in this economic report.

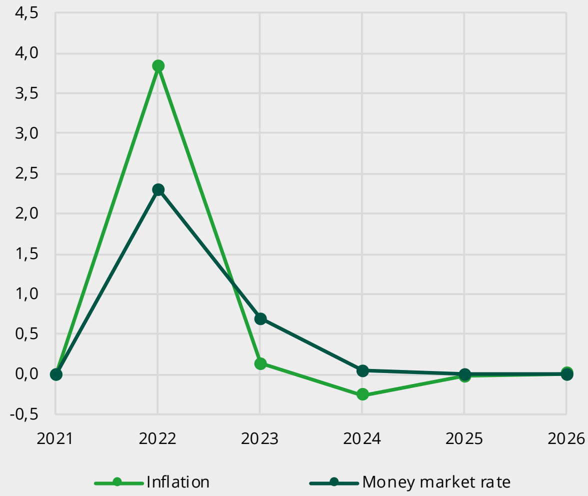
We consider three different interest rate settings by the central bank in the form of money market rates in Norway being kept constant, corresponding one-to-one with the euro area money market rate, or being determined by an interest rate rule that takes into account deviations in the money market rate, the annual wage, inflation, mainland GDP and the real exchange rate generated by KVARTS.[4] The effects on the Norwegian economy are measured as percentage deviations (unless otherwise specified) between alternative scenarios and the baseline scenario resulting from the different interest rate settings. It is assumed that the prices for paid and estimated rent will not change in the alternative scenarios.

Unchanged money market rate in Norway

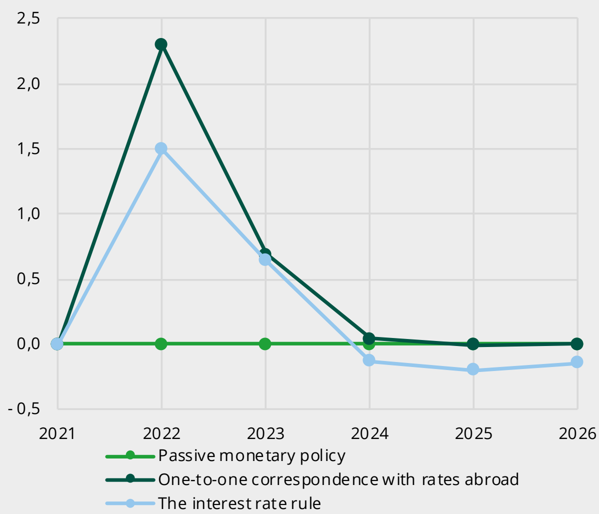
In the alternative scenario with an unchanged money market rate in Norway, the inflation level will be just over 2 percentage points higher in the first year compared with the baseline scenario, while the level of mainland GDP will be around 0.5 per cent higher. The levels of these two variables will be, respectively, around 0.5 percentage point lower and almost 1 per cent higher in the second year. After 4–5 years both deviations will be virtually zero.

An unchanged domestic interest rate level will affect the Norwegian economy through several channels. According to our model, the overall effect of interest rate and inflation differentials in relation to other countries will be that the NOK/EUR exchange rate will weaken in nominal terms by as much as 9 per cent in the first year. Higher global prices and a weaker krone will boost the competitiveness of manufacturing and push up traditional goods exports and annual wages. At the same time, the depreciation of the krone will make imported goods more expensive and depress imports. The effects on net exports, and hence also on mainland GDP, will gradually reverse in the next years, when interest and inflation rate differentials in relation to other countries will strengthen the krone on balance.

Inflation and interest rates abroad
Deviation from the baseline scenario in percentage points



Money market rate. Deviation from the baseline scenario in percentage points



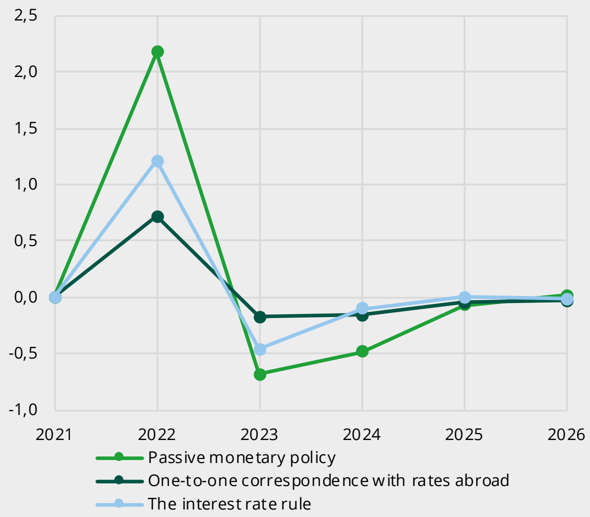
[1] In the comments to the legal provisions in the proposed new Norges Bank Act, Prop. 97 L (2018–2019, page 142 - in Norwegian) it is specified that the first paragraph of the purpose of central banking activities expresses the primary objectives.
[2] See Boug et al. (2022) for documentation of the model.
[3] The international interest rate response to higher global inflation follows the interest rate rule for the euro area described by Aursland et al. (2020, page 335).
[4] This interest rate rule is based on Norges Bank's interest rate rule, and means that the deviation in the money market rate in the previous period has a weight of 67 per cent, while deviations in the annual wage, inflation (measured as actual inflation based on the CPI), mainland GDP and the real exchange rate in the current period have weights of 29 per cent, 10 per cent, 8 per cent and 1 per cent, respectively. The weights add up to over 100 per cent, in line with Norges Bank's policy rate rule; see Kravik and Mimir (2019, page 34).

As a result of increased economic activity, an unchanged domestic interest rate level will push up business investment by about 2.5 per cent in a couple of years time. As real interest rates will fall during the first year in pace with increased inflation, the house price level will rise and make residential construction more profitable. There will be a pronounced rise in housing investment only in the second year, as a consequence of the time lag prior to housing starts.

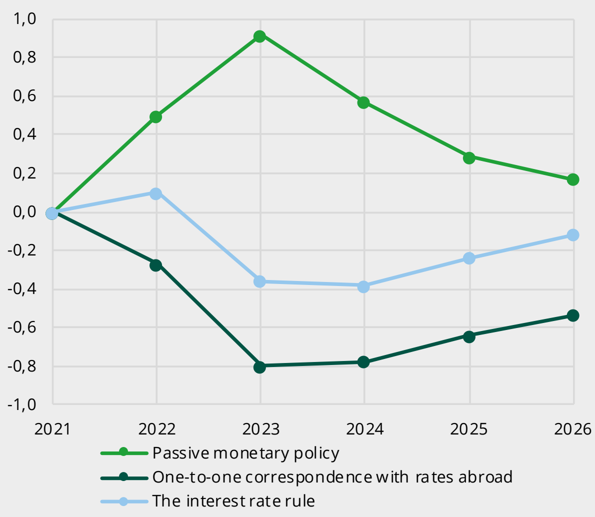
An unchanged domestic interest rate level will, according to our model, dampen household demand.[5] Although disposable real income in the third year is pulled up by lower inflation and higher wage income nominally, a higher real interest rate level and a weak development in real house prices will lead to a small fall in consumption.

[5] Household demand is largely determined by the three channels disposable real income, real wealth and real interest rate, see Boug et al. (2021).

Inflation measured by the CPI.
Deviation from the baseline scenario in percentage points



Mainland GDP.
Deviation from the baseline scenario in per cent



Money market rates in Norway shadow the money market rate in the euro area

In this alternative scenario, the effects on inflation will be far less than in the alternative scenario with an unchanged domestic interest rate level. The inflation level will be around 0.5 percentage point higher in relation to the baseline scenario in the first year and almost unchanged in subsequent years. Conversely, the impact on mainland GDP will be fairly similar to the effects of an unchanged interest rate level in Norway for the first two years, but with the opposite sign. At the same time, it will take longer for the level of mainland GDP to revert to the level in the baseline scenario.

According to KVARTS, a domestic interest rate level that shadows the level in the euro area implies an unchanged interest rate differential in relation to other countries, so that the exchange rate will mainly be affected by the inflation differential over time. Thus the exchange rate will strengthen by about 1 per cent in nominal terms the first year, and by around 3 per cent in the second and third years. As the krone will strengthen a little less than global inflation, exports will nonetheless rise as a consequence of terms of trade gains.

A marked fall in household consumption as a consequence of a higher interest rate level and lower real disposable income will cause imports to be curbed more than exports increase. At the same time, the higher interest rate level will reduce mainland investment demand. A markedly lower house price level in the second and third years will curb housing investment in the same period. The decline in economic activity will lead to business investment also falling by 2–4 per cent.

Money market rates in Norway follow Norges Bank's interest rate rule

In this alternative scenario, the impact on inflation in the first year will lie approximately midway between the effects in the other two alternative scenarios. The inflation level will then be about 0.5 percentage point lower in the second year before stabilising at the level in the baseline scenario from the third year. The impacts on mainland GDP over time are relatively small in this alternative scenario.

Our calculations show that the krone exchange rate plays a central part in developments in the Norwegian economy in the three alternative scenarios. However, there is uncertainty as to what determines the exchange rate. In KVARTS, developments in the nominal krone exchange rate are determined by the interest rate differential against other countries and by the difference in domestic and foreign price levels, measured in a common currency.[6] Our calculations show that changes in international prices have a strong impact on real interest rates abroad. The impact on real interest rates here in Norway will be even greater if the central bank does not react by raising the policy rate. In addition, a fairly sluggish exchange rate pass-through to domestic prices will mean that international prices increase more than domestic prices. Even if the krone

[6] The framework for the exchange rate equation is described in Benedictow and Hammersland (2022). Whereas in the short term it is the nominal interest rate differential in relation to other countries that determines the exchange rate, it is the real interest rate differential that determines the exchange rate in the long term. In the exchange rate equation, the half-life of deviations from relative purchasing power parity is about 4 years. This is close to the middle of the fairly broad interval which the international economics literature has estimated for such half-lives; see for example Burstein and Gopinath (2014).

depreciates in the short term, slightly greater pressure will eventually build up on the krone if monetary policy is passive than if the central bank follows an interest rate rule.

In KVARTS, the real interest rate has a strong bearing on household consumption and business investment, while the krone exchange rate is important for domestic prices and export-oriented business. Thus a monetary policy that creates fluctuations in the real interest rate and the krone exchange rate also creates fluctuations in the real economy. Wide fluctuations in the real interest rate, in particular, will strongly impact the housing market. Nor will these fluctuations be exhausted after a few years.

Although the central bank cannot influence global prices in foreign currencies through its setting of interest rates, it can influence the exchange rate. Exchange rate fluctuations in encounters with increased external inflationary impulses will be less pronounced if the central bank temporarily raises the policy rate a little than if the rate is kept constant. The floating exchange rate gives flexibility in that domestic interest rates do not have to correspond one-to-one with international exchange rates in the short term. Too large a domestic interest rate hike will strongly impact the housing market and give rise to financial instability. Large fluctuations in the Norwegian economy may thus arise both if the interest rate is kept constant and if it is raised too much. In adhering to its mandate, the central bank is thus in a demanding situation when faced with increased imported inflation.

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Main macroeconomic aggregates 2022– 2024. Percentage deviation from the baseline scenario unless otherwise indicated

	2022			2023			2024		
	Passive monetary policy	One-to-one correspondence with rates abroad	The interest rate rule	Passive monetary policy	One-to-one correspondence with rates abroad	The interest rate rule	Passive monetary policy	One-to-one correspondence with rates abroad	The interest rate rule
Mainland GDP	0.5	-0.3	0.1	0.9	-0.8	-0.4	0.6	-0.8	-0.4
Consumption by households etc.	-0.3	-0.9	-0.5	0.0	-2.3	-1.7	-0.3	-2.1	-1.6
Mainland gross investment	0.4	-0.9	-0.3	1.9	-2.3	-1.1	2.1	-2.0	-0.8
Business investment	0.5	-1.8	-0.6	2.5	-4.3	-2.5	2.6	-2.3	-1.0
Housing investment	0.4	0.0	0.2	2.6	-0.6	0.6	3.6	-3.5	-1.2
Exports	1.4	0.3	0.7	1.6	0.3	0.6	0.8	0.2	0.4
Imports	-0.2	-0.8	-0.4	0.4	-2.0	-1.3	0.3	-1.7	-1.1
Unemployment rate[1]	-0.3	0.0	-0.1	-0.2	0.1	0.0	-0.2	0.1	0.0
Number employed	0.3	-0.1	0.1	0.6	-0.2	0.0	0.6	-0.3	0.0
Labour force	0.1	0.0	0.0	0.4	-0.1	0.0	0.4	-0.2	0.0
Annual wages	0.4	0.1	0.2	1.0	0.1	0.4	1.3	0.0	0.4
Consumer price index (CPI)	2.1	0.7	1.1	1.4	0.5	0.7	0.9	0.4	0.6
Inflation[1]	2.2	0.7	1.2	-0.7	-0.2	-0.5	-0.5	-0.2	-0.1
House prices	4.5	-0.3	1.8	4.0	-4.8	-2.4	0.8	-6.9	-4.5
Household real disposable income	-0.8	-4.4	-2.8	-0.4	-0.9	-1.0	0.4	-1.0	-0.6
Exchange rate, NOK per euro[2]	9.1	-1.2	2.1	0.1	-2.8	-2.4	-3.1	-3.1	-2.5
Real exchange rate, NOK per euro[2]	10.6	1.6	4.4	2.3	0.3	0.5	-0.8	-0.2	0.2
Money market rate[1]	0.0	2.3	1.5	0.0	0.7	0.6	0.0	0.0	-0.1
Real interest rate[1,3]	-2.2	1.6	0.3	0.7	0.9	1.1	0.5	0.2	0.0
Assumptions									
Money market rate, euro [1]	2.3	2.3	2.3	0.7	0.7	0.7	0.0	0.0	0.0
Consumer price index (HCPI), euro	3.5	3.5	3.5	3.7	3.7	3.7	3.4	3.4	3.4
Inflation, euro[1]	3.8	3.8	3.8	0.1	0.1	0.1	-0.3	-0.3	-0.3

[1] The deviation is given in percentage points.
[2] A negative sign means appreciation.
[3] The real interest rate is constructed as the money market rate less inflation.
Source: Statistics Norway

gross investment dipped 0.1 per cent, following growth of 5.5 per cent in Q3. Municipal investment in transport and in water supply, wastewater and sanitation pushed up growth, while central government investment pushed growth down. An important reason for the lower investment is that the December delivery of three F-35 fighter aircraft was postponed. Deliveries of military material to Ukraine also reduced investment in 2022.

The National Budget 2023 (NB 23) is based on underlying growth in spending in the 2023 fiscal budget. The spending growth will occur in areas such as national insurance, the household energy support scheme, reception and integration of Ukrainian refugees, defence expenses and ongoing construction projects. High electricity prices and wage and price inflation are also resulting in higher state revenue, but spending growth is expected to be higher. The Government proposes increased taxation of revenue based on shared natural resources, higher taxation of high wage income and disbursed dividends, and a number of minor adjustments.

The existing energy support scheme provides compensation for 90 per cent of electricity prices exceeding 70 øre in the winter half year and 80 per cent in the summer half year. The support has been based on average monthly prices. The Government recently proposed that energy support should be based on the individual hourly spot price rather than the average monthly price, that the support should be increased to 90 per cent on prices exceeding 70 øre all year round, and that the scheme should be extended for the whole of 2024. The increase to 90 per cent and extension through 2024 will also apply to the energy support schemes for agriculture and voluntary organisations. More flexibility is also to be introduced into fixed-price contracts for the business sector. The changes will probably only take effect on 1 September. Other schemes include housing subsidies, support for students and a limited electricity subsidy scheme for the business sector. NB 23 forecast that expenditure for electricity subsidies will amount to about NOK 50 billion in 2023. Energy support based on hourly rather than monthly prices will mean higher disbursements when the electricity price varies around the threshold.

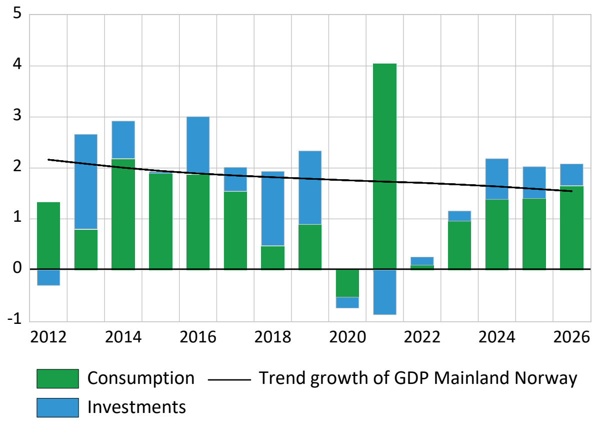
According to NB 23 figures, defence spending will account for about 1.3 per cent of GDP in both 2022 and 2023. This is substantially less than the NATO target of 2 per cent. One important reason is extraordinarily high forecast GDP as a consequence of high oil and gas revenues. The Government has signalled increased defence investment in the time ahead in order to meet the NATO target. Increased gross investment is expected in 2023 as a result of the postponed delivery of three F-35 fighter aircraft that should have been delivered in 2022. At the same time, sale of 32 F-16 aircraft to Romania, with delivery in 2023 and 2024, will mean reduced investment. Deliveries of military vehicles to Ukraine will also reduce investment. NATO's secretary general has indicated that the NATO target will be raised from 2025. Plans to meet the NATO target entail extensive investment throughout the projection period. A broad Storting majority is also agreed on a 5-year programme of support for Ukraine. An overall financial budget of NOK 75 billion is to be distributed equally from 2023 up to and including 2027. In 2023 there will be an additional appropriation of NOK 5 billion for developing countries affected by the war.

From 2011 to 2021, the old-age pension in the Norwegian National Insurance Scheme was regulated such that disbursements increased by wage growth less 0.75 per cent. In 2021, the Storting (see Recommendation 194 L (2021–2022) and Statutory Decision 50 (2021–2022) decided that current pensions are to be regulated by the average of price and wage inflation. The forecast annual rise in the consumer price index and forecast wage growth in the Revised National Budget are used in the practical implementation of the annual regulation. In the subsequent settlement, corrections are made for any discrepancies between actual and projected price and wage inflation. In 2022, the projection for price inflation at the start of the wage settlement was substantially lower than actual inflation at the end of the year, so that there will be a significant carry-over in the regulation of old-age pensions in the National Insurance Scheme in the settlement for 2023.

NB 2023 forecasts consumption of petroleum revenue, measured in terms of the structural, non-oil budget deficit, at NOK 316.8 billion in 2023. In the Final Budget Bill 2022, see Prop. 33 S (2022–2023), the structural, non-oil budget deficit for 2022 is

Figure 4. General government

Change from previous year in percent



Source: Statistics Norway

estimated to be NOK 337.2 billion. Higher taxation of economic rent in the power industry and a high-price contribution on hydropower and windpower imply that a substantial portion of power sector income will be collected by the state. However, these extra tax revenues will be largely offset by reductions in the power companies' after-tax surplus. Reductions in after-tax surplus mean loss of revenue for the government because about 80 per cent of power production in Norway is state-owned; see Box 2 in Economic Survey 3/2022. Taxation of economic rent and high-price tax therefore does not have as contractionary an effect as the increased tax revenues might suggest.

The Government Pension Fund Global (GPFG) had a value of NOK 12 429 billion at the beginning of 2023. In the Government's budget bill for 2023, withdrawals are forecast to be slightly over 2.5 per cent of the value of the fund at the beginning of 2023. Spending of the fund's capital, measured in kroner and as a share of the mainland economy, has increased substantially in recent years. The 2023 projection of about NOK 66 billion 2023-kroner is higher than in the period 2016–2019. Turbulence in financial markets led to a loss of NOK 1 637 billion in 2022. The weakening of the krone exchange rate increased the value of the fund by NOK 642 billion, while addition of capital increased its value by NOK 1 085 billion. Net cash flow from petroleum activities is projected in NB 23 to be a record high NOK 1 384 billion in 2023. However, falling gas prices will result in lower net cash flow. We assume that the real return on the fund will be 3 per cent, and that oil and gas prices will reflect forward prices. This will result in substantial growth in the fund in the course of the projection period, and fiscal scope for manoeuvre will increase accordingly. However, we have assumed that spending of petroleum revenue will be kept well under the 3 per cent target because of a growing need to cover costs in the slightly longer term.

In our previous report we forecast increases in general government consumption and gross investment in 2023 of 1.3 and 0.8 per cent, respectively. These forecasts were identical to those in NB 23. However, there were two significant differences between our forecasts and those in NB 23. Ours assumed a slight downturn in 2023, while NB 23 forecast an upturn. We therefore based our projections on a larger element of countercyclical policy than NB 23, which implied a higher growth projection for general government consumption and gross investment. Our forecasts, which came somewhat later, were also based on higher inflation than NB 23's. We forecast that the higher inflation would reduce the real value of public consumption and investment. However, in February 2023 the Government announced that they, too, are expecting higher inflation in 2023 than the figure in NB 23, and that increased appropriations will compensate for the higher inflation. This points to higher projections for government transfers, consumption and investment.

On the basis of this information we forecast an increase in general government consumption and gross investment of just over 1 per cent in 2023. In 2024 we forecast increases of 1.7 and 4.3 per cent, respectively. The growth projections for the period 2025–2026 are a continuation of previous projections. Transfers are expected to increase by 3.1 per cent in 2023. This projection has been revised up by 1.1 percentage points since our last forecast, partly because of the previously mentioned carry-over in old-age pensions and extra appropriations as a consequence of unforeseen inflation.

Interest rate increases to prevent the krone depreciating

Since September 2021, Norges Bank has raised the key policy rate from 0 per cent to 2.75 per cent. The key rate increased especially fast this summer, by 0.5 percentage point at each of the three monetary policy meetings from June to September. Both the

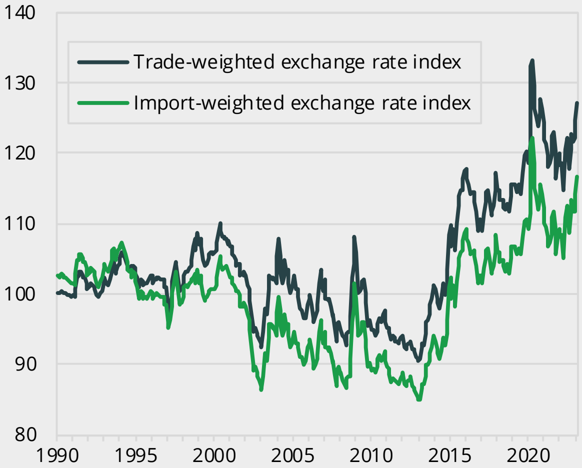
Box 2. The import-weighted krone exchange rate and the trade-weighted exchange rate index

Approximately two-thirds of Norway's foreign trade in traditional goods takes place with countries that are not in the EU monetary union. Traditional goods consist of goods excluding oil, gas, ships, platforms and aircraft. It is therefore important to supplement the krone/euro exchange rate with alternative exchange rate indicators that provide a more accurate expression of the breadth of Norway's trading pattern. Examples of these are the trade-weighted exchange rate index (TWI) and the import-weighted krone exchange rate (I44).

The trade-weighted exchange rate index is calculated from the exchange rates of the Norwegian krone against the currencies of Norway's 25 most important trading partners, and is a geometrical average based on current OECD trade weights. The weights in the import-weighted krone exchange rate are calculated from the composition of imports of traditional goods from Norway's 44 most important trading partners. Both indices are structured in such a way that high values mean a weak krone and low values a strong krone.

In the figure, both indices show that the krone was consistently weaker in the 1990s than from the early 2000s and up to 2013. The krone was record-strong in early 2013, then depreciated markedly, partly as a result of the decline in the petroleum industry. However, the paths of the two indices do not coincide completely. For example, in January 2013 the krone measured by the import-weighted exchange rate was around 20 per cent stronger than the average for the 1990s, whereas according to the trade-weighted index it was only 13 per cent stronger. This reflects the fact that the two indices are constructed for somewhat different purposes. The weights in the trade-weighted exchange rate index are intended to reflect the competitiveness of Norwegian manufacturing in both the export and the domestic market, and not merely to have relevance for the domestic market and Norwegian prices. The different paths are due to the fact that the krone strengthened considerably more in relation to countries from which

Exchange rates



Source: Statistics Norway

Norway has substantial imports than in relation to countries to which it has substantial exports. The international purchasing power of the krone was accordingly strengthened more than the extent to which the international competitiveness of Norwegian manufacturing, viewed in isolation, was weakened by the exchange rates. This trend was particularly pronounced from 1993 to 2004.

In recent years the two indices have nonetheless provided a somewhat similar picture of the krone's movements. From January 2013 to February 2023, currencies in the import-weighted exchange rate index strengthened by 37 per cent, which corresponds to the krone depreciating by 27 per cent. Measured by the trade-weighted exchange rate index, the krone weakened a little more in the same period, by almost 29 per cent.

interest rate hike in November and the most recent increase in December were 0.25 percentage point.

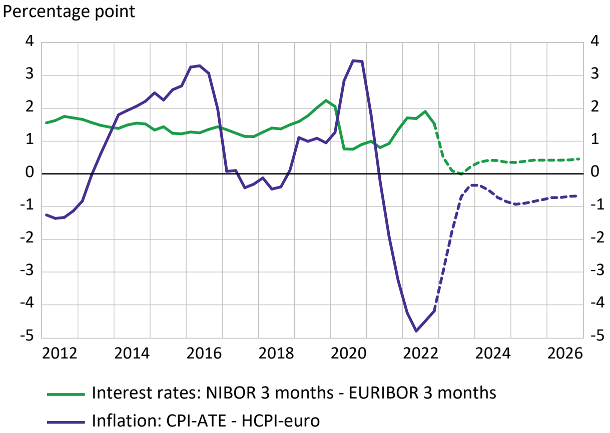
The money market rate shadows the policy rate with an added premium. The 3-month money market rate was down to 0.2 per cent in summer 2021, and was close to 3.3 per cent in January and February this year. Expectations of a further policy rate hike in March have presumably been priced in.

Deposit and lending rates have also increased from record low levels in 2021 Q2 and Q3. The average interest rate on loans secured on dwellings was 4.3 per cent at the end of 2022, which means an increase of 2.3 percentage points in the second half of the year. About half of this increase took place in the last quarter of 2022. The average deposit rate had risen to 1.8 per cent by the end of 2022, an increase of 1.5 percentage points since 2021 Q2.

External inflationary impulses appear to be important for explaining the high inflation; see also Box 3.3 in *Økonomiske analyser 1/2023* (Norwegian text). In Box 5 it is estimated that increased electricity prices pushed up consumer price inflation measured by the CPI by 1.3 percentage points from 2021 to 2022.

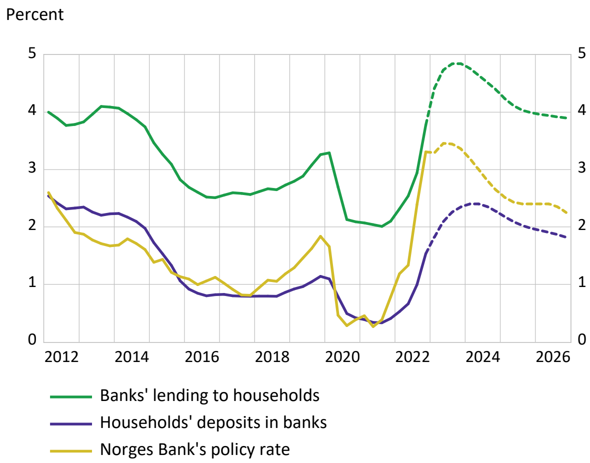
Foreign central banks have raised their policy rates sharply to rein in the high inflation. We have assumed in our projections that money market rates will reach almost 4 per cent in the euro area in 2023. If money market rates are far lower in Norway than abroad, this may lead to a further weakening of the krone. This in turn will make imported goods more expensive, and thereby fuel higher inflation in Norway. To avoid this, we expect that also Norges Bank will continue to raise the key rate. We expect two further interest rate hikes in 2023, one in March and one in June, when Norges

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



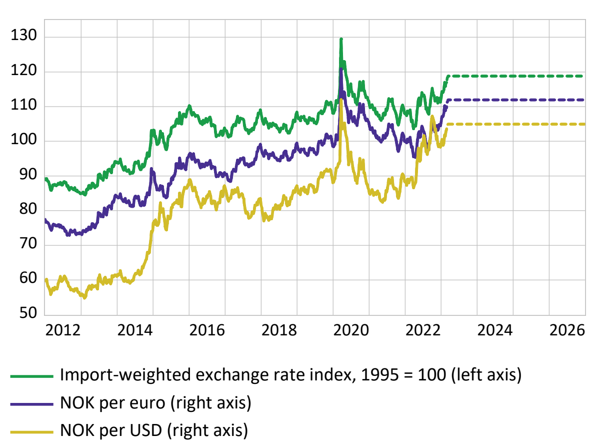
Source: Norges Bank and Statistics Norway

Figure 6. Norwegian interest rates



Source: Norges Bank and Statistics Norway

Figure 7. Exchange rates



Source: Norges Bank

Bank submits its projections for the Norwegian economy in the Monetary Policy Report. Each of these interest rate hikes is expected to be 0.25 percentage point, bringing the key policy rate up to 3.25 per cent. The 3-month money market rate in Norway may then reach 3.6 per cent in Q3 this year, implying a 0.3 percentage point increase on the current level. Lending rates will then probably approach 5 per cent in the course of 2023.

The krone has depreciated since November last year. In 2022 one euro cost between NOK 9.50 and 10.50 on the whole, with an annual average of NOK 10.10. In early March, one euro cost NOK 11.20. The price of a US dollar has now reached NOK 10.50. We assume that exchange rates will remain unchanged in the near term. With the current weak exchange rate, this means an annualised 7.5 per cent depreciation of the krone this year, measured by the import-weighted krone exchange rate. The weak krone means that imported goods become more expensive, thereby pushing up CPI-ATE inflation this year.

The saving ratio is picking up

Preliminary non-financial sector accounts figures show that the real disposable income of households and non-profit organisations fell by 2.5 per cent in 2022 after growing 3.6 per cent in 2021. Real disposable income includes share dividend disbursements, however. In 2021 dividends amounted to a record-high NOK 160 billion, partly because of the increase in tax on dividends from 2022. Growth in real disposable income excluding dividends was 2.6 per cent last year, while it fell by 1 per cent in 2021.[1] Growth in real disposable income excluding dividends increased sharply in Q1 last year, but then fell for the next three quarters. Developments through 2022 are largely attributable to increased wage income as a consequence of employment growth, increased net interest expenses as a result of higher lending rates, and large increases in prices for energy and a number of other goods.

Whereas wage income contributed substantially to real disposable income in both 2021 and 2022,

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

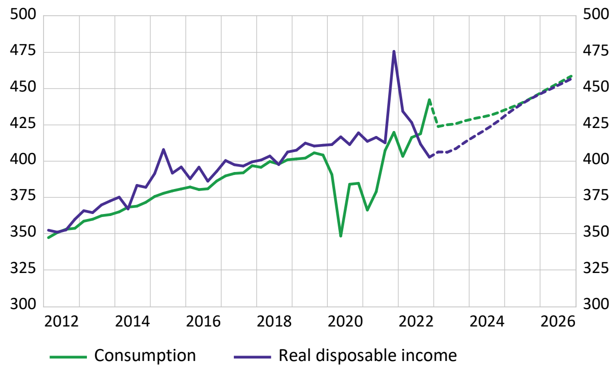
the contribution of public transfers was negative. Developments in public transfers must be viewed against the backdrop of a historically large contributions to growth during the pandemic in 2020 as a consequence of record-high payments to a large number of furloughed and unemployed workers. Net interest expenses also made a clear negative contribution to growth in real disposable income last year following a positive contribution in 2021 due to low lending rates. The level of the household interest burden, measured as interest burden after tax as a share of disposable income, increased from around 4 per cent in 2021 to around 5.5 per cent in 2022, roughly the same as the annual average for the 10-year period 2010–2019.

According to the quarterly national accounts, total consumption by households and non-profit organisations increased by as much as 6.8 per cent in 2022, following growth of 4.4 per cent in 2021. The level of overall consumption was thus just over 4 per cent higher in 2022 than in 2019. After the reopening of society last winter, consumption picked up appreciably. Following a fall of almost 4 per cent in Q1 last year, overall consumption grew 3.2 per cent in Q2, 0.6 per cent in Q3 and 5.6 per cent in Q4. Consumption of services, in particular, with large contributions from hotel and leisure services and passenger transport, dominated the strong growth in consumption through 2022. Goods consumption did increase sharply in Q4 last year as a consequence of record high car purchases prior to the introduction of taxes on electric cars from the new year. Apart from these car purchases, goods consumption fell through much of last year. On an annual basis, services consumption grew 10.7 per cent, while goods consumption fell 3.7 per cent.

While the level of consumption of services was very low during the pandemic, goods consumption was at a record high level. According to monthly national accounts figures, the ratio between consumption of goods and services, excluding car purchases, reverted towards the end of 2022 almost to the level prior to the pandemic. The goods consumption index for January this year shows a seasonally adjusted fall of a full 22.5 per cent compared with the previous month. The large fall in January must be seen bearing in mind the adjustment to taxes of the car purchases in December. Norwegians' consumption abroad which, like consumption of services, plummeted during the pandemic, also

Figure 8. Income and consumption in households

Seasonally adjusted, billion 2020 NOK, quarter



Source: Statistics Norway

picked up in the course of 2022, and towards the end of the year was somewhat higher than in 2019.

According to the quarterly national accounts (QNA), household consumption in the second half of the year was higher than disposable income. The saving ratio, measured as saving as a share of disposable income, fell from a record level of 12.7 per cent in 2021 to 3.6 per cent in 2022. In our previous economic report we assumed that the saving ratio would fall to 5.5 per cent. The forecast error of 2 percentage points is due to abnormally low saving in collective pension funds in Q4 last year. The saving ratio excluding dividend payments fell from around 4.5 per cent to around -0.5 per cent in the same period. 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. Non-financial sector accounts figures show that the seasonally adjusted saving ratio fell from around 16.5 per cent in 2021 Q4 to around 11 per cent in 2022 Q1, while the ratio excluding dividend payments rose from around -3.5 per cent to around 7 per cent in the same period. These major changes in the saving ratio over two quarters must be viewed in light of extraordinary changes in disbursements of share dividend, which are probably due to the increased tax on dividends introduced last year. The saving ratio both including and excluding dividends then fell for the next three quarters of 2022.

We forecast that real disposable income excluding dividends will fall by around 2 per cent in 2023. This is about half a percentage point higher than the projection in our last report, and is largely attributable to a stronger rise in net interest expenses and the private consumption deflator than was assumed in our previous publication. Given our assumptions, average annual growth in real disposable income in the years 2024 to 2026 will be close to 4 per cent. Both wage income and public transfers will pick up in real terms in pace with substantially lower inflation in the last three years of the projection period. Net interest expenses will also contribute to growth in real income through 2024 and 2025, as mortgage rates fall in pace with cuts in the policy rate. In the projection period, the annualised average level of the household interest burden will be around 7.5 per cent, about 2 percentage points higher than the average in the 10-year period 2010–2019.

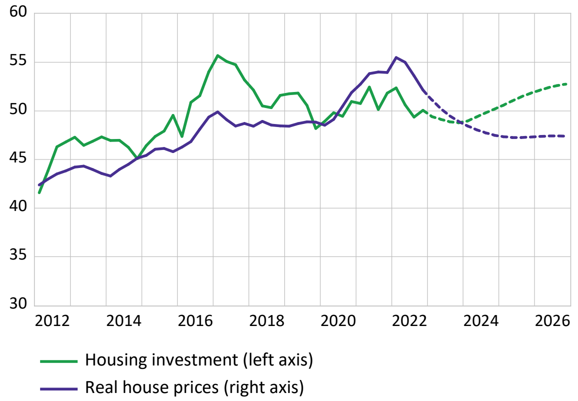
We envisage consumption growth of around 1 per cent in 2022, slightly higher than forecast in our last report. This growth projection is based on an assumed sharp seasonally adjusted fall in Q1 this year from a high level in 2022 Q4 and moderate growth through the following three quarters. Consumption growth as an annual average will then be around 2 per cent in the years 2024 to 2026. Developments in overall consumption in the projection period will be driven by growth in real disposable income, but constrained by weak developments in real house prices and increased after-tax real interest rates, particularly in the years 2023 and 2024.

According to our projections for income and consumption, consumption will outweigh income throughout the year and in much of 2024. The saving ratio will nonetheless be positive at an annualised average of around 2 per cent for 2023 and 2024, as this ratio also includes saving in collective pension schemes. In 2025 and 2026 disposable income will again be higher than overall consumption, and the saving ratio will rise to around 4.5 per cent when saving in collective pension schemes is included. Higher real after-tax interest rates will boost the ratio. The saving ratio excluding dividend payments will be around 2.5–3.5 per cent lower throughout the projection period, as given our assumptions, dividends will account for around 2.5–3.5 per cent of disposable income.

Moderate fall in house prices and sluggish new homes market

The autumn was characterised by falling prices for resale homes throughout Norway. The rise in Statistics Norway's house price index from 2022 Q3 to Q4 ended at -0.9 per cent. The last time the QNA were published, the figures for housing investment from 2022 Q2 onwards were revised upwards. As a result, housing investment in 2022 was somewhat higher than forecast in our previous report. The preliminary figures show investment growth of 1.4 per cent from 2022 Q3 to Q4.

Figure 9. Housing market
Seasonally adjusted. Left axis: billion 2020 NOK, quarter
Right axis: index, 2020 = 100



Source: Statistics Norway

Since our previous report, the Ministry of Finance has relaxed the mortgage lending regulations, with effect from 1 January this year. The most important changes in the regulations concern the requirements regarding borrowers' ability to pay in the event of interest rate increases, and the maximum loan-to-asset ratio for secondary dwellings in Oslo. Borrowers must be able to tolerate an interest rate increase of 3 percentage points, compared with 5 percentage points previously, and the equity requirement for secondary dwellings in Oslo is reduced from 40 per cent to the general requirement of 15 per cent applying elsewhere in Norway. This has made it easier for new groups of home buyers to enter the market, and is likely to moderate the negative developments in house prices in 2023.

In our previous report we expected continued negative house price movements going forward. However, Real Estate Norway's monthly house price index revealed unexpectedly strong developments, with a rise in house prices of 0.2 per cent in December 2022. Positive monthly price movements have not been observed since August. January is a month that typically features a high level of housing market activity. This is reflected in the seasonally adjusted and unadjusted increases in house prices of 0 and 3 per cent, respectively. The

February figures show a continuation of the relatively flat developments so far this year, with a rise of 0.3 per cent.

The number of resale homes for sale rose from a historically low level in January 2022 to end up in December at approximately the same level as prior to the pandemic. At the same time, the average turnover time has increased, and time on the market for unsold dwellings increased from January to February and is now at a normal level. This suggests that demand pressures are not as strong now as in the same period in 2022. Some of the explanation lies in reduced access to bridging finance, so that it is more necessary for households to sell their own dwelling before they can purchase another.

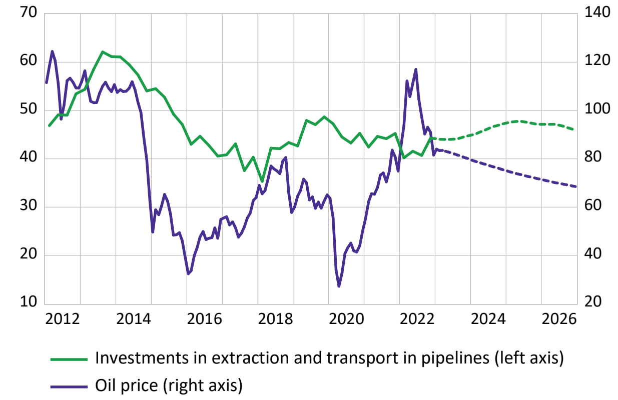
Statistics from the Norwegian Homebuilder Association paint a sombre picture of housing investment for 2023. Activity in the sector has been weak compared with previous years. There were 9 per cent fewer housing starts in 2022 than in 2021. Similar figures have not been recorded since the years prior to the financial crisis. This development is attributable to the very poor sales of new homes, which ended up 26 per cent lower in 2022 than in 2021. The 12-month increase in December in the number of unsold, completed dwellings was 21 per cent. The statistics for January 2023 show signs that this situation is continuing in the new year, with sales of new dwellings 57 per cent lower than in the same month in 2022. This must be viewed against the backdrop of the considerable increase in building and materials costs in the past two years, even as household borrowing costs have increased. This has affected our projections for both housing investment and house prices. We forecast a fall in housing investment of 3.2 per cent in 2023. We assume that the effect of the rise in building costs will abate through the year, and that housing investment will pick up again from 2024. In the short term, higher building costs will reduce the margins of housing producers. Given a turbulent resale home market, a number of households will probably not want the price risk associated with buying a new dwelling with takeover a long time in the future. This will push buyers over into the resale home market, and this factor in isolation will push up resale home prices. In the longer term, the current weak investment situation will also place upward pressure on house prices.

The KVARTS macroeconometric model is used as the basis for our projections. In addition to housing investment, the house prices in the model are determined by the interest rate level and by real household disposable income. A higher cost of living and higher household interest burden still give reason to expect a negative change in house prices in the near term. The projection scenario assumes a 2.9 per cent fall in household income. This is a downward revision of 2.3 percentage points compared with the previous projection. Real interest rates are also expected to become positive in the course of 2023 and to remain so for the remainder of the projection period. Both factors in isolation will contribute to pushing down house prices. There is great uncertainty regarding the final effects of the changes to the mortgage lending regulations and the situation in the new homes market. Each of these factors individually is likely to exert upward pressure on house prices. We are therefore raising the projection path for house prices compared with the previous report. Our projection for 2023 has been revised up by 2.2 percentage points to a decline of 2.8 per cent. We expect house price movements to be weak in 2024 as well, before becoming positive again in 2025 and 2026. On the basis of these nominal price projections, real house prices will fall by 7.9 per cent and 3.5 per cent in 2023 and 2024 respectively, and not be positive before the end of the projection period.

New field developments mean growth in petroleum investment for the next few years

Following growth of 14.3 per cent in 2019, petroleum investment fell by 3.3 and 2.1 per cent in 2020 and 2021, respectively. According to preliminary national accounts figures, investment fell by a further 5.5 per cent in 2022. The fall was driven by lower investment in production wells and petroleum extraction platforms, rigs and modules. There was markedly higher investment in 2022 than in 2021 in concept studies, which are included in the category “Oil and gas exploration”, and this helped to ease the fall in overall petroleum investment in 2022. The course of investment through the year was relatively uneven. A seasonally adjusted fall of 11.1 per cent in Q1 was reversed into growth of 3.4 per cent in Q2. Petroleum investment dipped 2.1 per cent in Q3, and then grew 8.8 per cent in Q4. As a result of the strong fourth quarter figures, the decline in investment in 2022 was lower than expected in our previous economic report.

Figure 10. Petroleum investments and oil price
Seasonally adjusted. Left axis: billion 2020 NOK, quarter
Right axis: USD per barrel



Source: Statistics Norway

Statistics Norway surveys the petroleum companies' investment plans for the current year and the following year through the quarterly survey of intended investment in oil and gas, manufacturing, mining and power supply (KIS). The nominal projection for 2023 in the last investment intentions survey for February is about NOK 188 billion. This is a pronounced increase of 26 per cent on the figure in the November survey. The initial projection for 2024 estimates total investment in oil and gas activities at NOK 178.5 billion, which in current money is a full 36 per cent higher than the same projection for 2023 made a year ago. The sharp increase in the 2023 projection and the high initial projection for 2024 clearly reflect the fact that plans for development and operation (PDOs) have been delivered for a number of new development projects since the previous survey in November. The projection for 2023 is also increased as a result of higher forecasts for some of the field developments that were already included in the previous survey.

Development projects are not included in the investment survey until a PDO is submitted to the authorities. The Storting package of tax measures adopted in June 2020 to assist the industry in tackling the sharp fall in oil prices early in the COVID pandemic offered favourable taxation for all developments for which PDOs were submitted before the end of 2022. This led to the submission of very many PDOs in 2022, most of them right at the end of the year. The far higher initial projection for 2024 now than the corresponding projection for 2023 a year ago is largely a result of these PDOs not being included in the investment intentions survey a year ago, but now being included in the survey for both these years. The indicated growth for 2024 in this survey is therefore artificially high. Because so many PDOs were submitted last year, very few new developments are expected to be added to those that are already in the survey, and that will have accrued investment this year. It is therefore unlikely that accrued investment this year will be substantially higher than that already in the survey. PDOs for some expected development projects were not submitted in December last year. Some of these may be submitted later, and in time for investment to be made in them in 2024. Development investment for 2024 may therefore potentially increase somewhat over and above what is already reported. The same applies to fields in operation. The initial projection for this category is not particularly high, and usually increases through the projection cycle. The still high oil and gas prices forming the basis for this report are expected to provide petroleum companies with incentives to maintain high investment in operations, including production drilling, through the projection period.

We forecast that the volume of petroleum investment will increase by 5 per cent this year. This is a slightly higher growth rate than forecast in our last report, and the level is a good deal higher because the investment level in 2022 ended up higher than we forecast last time. The upward revision of the projection for the investment level in 2023 is attributable to the higher investment forecasts for field developments that were already included in the previous survey and an upwardly revised exploration forecast.

We now forecast 6 per cent growth in volume for 2024, which is down from 10 per cent in the previous report. As investment in 2022 grew more than assumed in our previous report, this downward revision nonetheless means that the level of investment in 2024 has only been revised down by less than 1 per cent. The projection for 2025 is now 3 per cent, which is consistent with a marginally higher investment level than the projection published in our previous economic report. The somewhat lower level in 2024 and somewhat higher level in 2025 are partly due to fewer PDOs than expected being submitted late last year. In addition, the investment profiles of the new developments as a whole are more tail-heavy than we had expected in our previous report, suggesting slightly lower investment in the developments as a whole in 2024 and slightly higher in 2025 than previously forecast.

We expect real investment to fall by 1.5 per cent in 2026. The smallest field developments will be completed in 2025 or early 2026. Investment in these will not be fully compensated for by upcoming developments. Under these circumstances, the investment level in 2026 will be 1 per cent higher than in 2019.

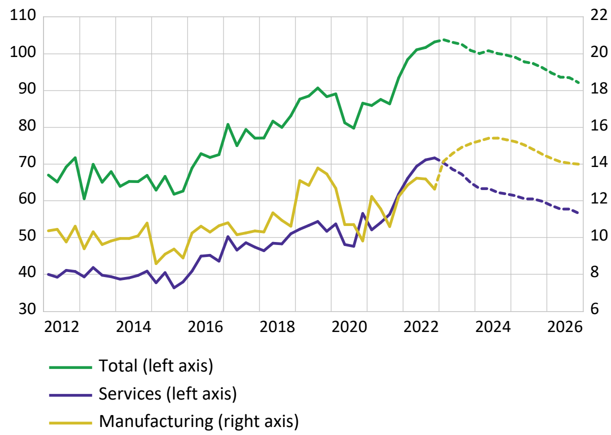
In 2022 petroleum extraction ended up 0.6 per cent higher than in 2021. Gas production increased by 8.3 per cent, while liquid production fell by 6.8 per cent. The growth of gas production was driven by extraordinarily high gas prices as a result of severely reduced gas deliveries from Russia to Europe in connection with the war in Ukraine. The Norwegian Petroleum Directorate forecasts that growth in extraction will be 3 per cent this year and 2.4 per cent next year. Petroleum production going forward is expected to increase by 1.5 per cent in 2025 before gradually falling through the remainder of this decade.

Business investment maintained at a high level by manufacturing and power supply

Preliminary QNA figures show that business investment ended the year with a weak rise of 1.5 per cent in Q4 last year. Investment in manufacturing and mining declined by 4.2 per cent in Q4, while other services and other goods production showed weak growth of 0.8 and 0.3 per cent, respectively. Annual growth in business investment for 2022 as a whole was 14.5 per cent, exceeding that in the strong year of 2019, when annual growth was 10.3 per cent. Growth as high as this in a single year has not been seen since the 2007 boom, when 22.7 per cent was recorded. According to Statistics Norway's investment intensions survey in 2023 Q1 growth in manufacturing investment was strong in 2022, while investment in power supply fell considerably. In 2023 businesses expect a strong increase in investment in both manufacturing and power supply. Large investment projects in basic metals and rubber, plastic and mineral products, and the computer and electrical equipment industry are contributing to the upturn in manufacturing. Several of the projects are concerned with emission cuts and energy effectivisation, and receive government investment incentives. Mining expects to fall 25 per cent in 2023 following an 8.6 per cent decline in 2022.

Figure 11. Investments Mainland Norway

Seasonally adjusted, billion 2020 NOK, quarter



Source: Statistics Norway

Power supply companies report a rise in 2023 as opposed to a decline in 2022. The upswing will occur in transmission and distribution of electricity in particular, but also in remote heating and other power supply. However production will decline in 2023 again, according to the companies' reporting.

Business investment has increased substantially in the last three years, after a fall at the start of the Covid pandemic. Investment has surged in service industries in particular, exceeding the pre-pandemic level. Even given solid growth in manufacturing investment through 2022, the level for this sector does not surpass the level prior to the pandemic. According to Science & Technology Indicators for Norway 2021 (the Norwegian Research Council), it is primarily service industries that reported that they started new R&D projects as a result of the Covid pandemic, and they also halted initiated or planned projects to the least extent for the same reason. In manufacturing, large individual projects are maintaining investment activity at a high level, and several of these projects will be of relatively long duration.

We forecast that growth in manufacturing and mining will be about 13 per cent in 2023, driven by strong growth in manufacturing, and tempered somewhat by mining. Power supply is forecast to grow strongly in 2023, thereby pushing up business investment. We foresee nonetheless that overall business investment will show little change in 2023, with growth of around 1 per cent. This is largely because service investment is expected to fall back a little in 2023 after reaching a historically high level in 2022. Enterprises that report to Norges Bank's Regional Network note that high price and cost inflation, higher interest rates and fewer new public sector assignments will depress activity for the next twelve months. Service industries expect the investment level to be approximately unchanged from last year's level. Prospects of a higher interest rate peak than assumed in the previous economic report indicate that business investment for the years 2024–2026 may fall somewhat, but that the level in 2026 will nonetheless be higher than in 2019, prior to the coronavirus pandemic.

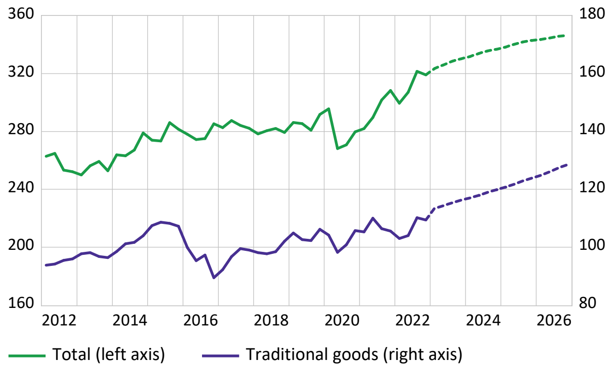
From a gigantic to a large trade surplus

The value of overall exports exhibited weak developments in 2022 Q4, with a slight reduction in volume and a large reduction in price. Following a pronounced fall at the end of 2021, exports of traditional goods, which are mainland goods exports excluding ships, platforms and aircraft, grew through 2022 and rebounded to the 2021 level. Exports of large product groups such as basic metals and metal products, chemicals, chemical and mineral products and engineering products increased in 2022 compared with 2021. Total exports of traditional goods were somewhat reduced nonetheless. Following a sharp fall in service exports in 2020 Q1, export volumes have grown to exceed the pre-pandemic level. There was high growth in the second half of 2021 which slowed into 2022. Growth was subsequently solid through last year, and was broad-based. Foreigners' consumption in Norway, which is counted as a service export, has shown the greatest percentage growth for the past six quarters, but this growth has been abating. Through 2022, exports of oil and gas fluctuated around the 2021 level.

The reduction in the value of total exports in 2022 Q4 was due to a sharp fall in gas prices and a more moderate fall in the oil price. Prices for mainland exports increased, however, possibly fuelled by the weaker krone exchange rate. Prices for traditional goods exports increased by 50 per cent in the course of 2021 and 2022, while prices for service exports increased by almost 20 per cent. Prices for traditional goods almost levelled off last year, while service prices continued to rise. In 2021 and

Figure 12. Exports

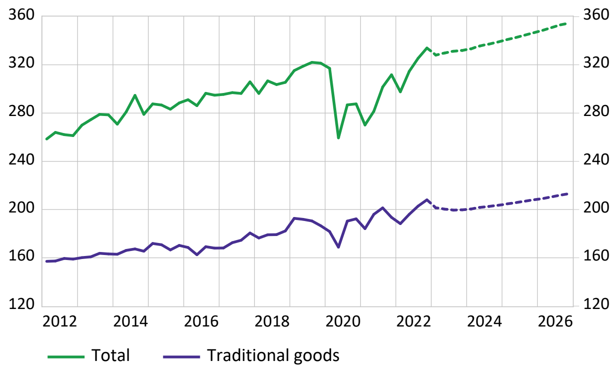
Seasonally adjusted, billion 2020 NOK, quarter



Source: Statistics Norway

Figure 13. Imports

Seasonally adjusted, billion 2020 NOK, quarter



Source: Statistics Norway

2022 the export price of gas rose enormously, and more than the oil price. The rise in prices brought the value of overall oil and gas exports to almost double that in 2021 and reached almost NOK 2 000 billion. This meant that the trade surplus tripled from 2021 to 2022, to almost NOK 1 600 billion.

Overall imports increased more, and also more evenly, than exports through 2022. A large increase in imports of cars contributed by far the most to growth in goods imports in Q4, while Norwegians' consumption abroad, which is counted as imports, contributed most to growth in service imports for the third consecutive quarter. Whereas there was strong annualised growth in service imports, growth in goods imports was virtually zero as a result of a negative carry-over (see footnote 1 in Chapter 3 of *Økonomiske analyser* (Norwegian text). The high rise in import prices must be viewed in light of the depreciation of the krone through 2022.

Box 3. Import shares

Consumption of goods and services can be decomposed into final deliveries – i.e. for consumption, investment and exports – and intermediate inputs, which constitute a production factor. Some of the final deliveries consist purely of imports. The remainder are delivered by Norwegian manufacturers, who use imported intermediate inputs to varying degrees.

We used a static input-output model based on 2020 figures, the latest year with final national accounting figures, to calculate import shares for the Norwegian economy. For purposes of comparison we also show import shares for the previous year. The analysis takes account of imported intermediate inputs, also from subcontractors, in addition to direct imports of final deliveries. However, the static input-output model does not take account of changes in relative prices, the knock-on effects of changes in earnings, any need for changes in production capacity (investment) and changes in interest and exchange rates.

Of the main groups of final delivery categories, investment has the highest share of imports. We decompose total new investments by both type and industry. The import share in construction investment is relatively modest, while it is high for aircraft and ships. Other types of investment also have a considerable share of imports. Shipping is the industry with by far the highest share of imports, while the import share in petroleum activities is also higher than the average.

Consumption accounts for a little more than half of total final deliveries, with roughly the same import share as the Norwegian economy as a whole. There is wide variation among the various consumption subgroups. Norwegians' consumption abroad is regarded in its entirety as imports. Vehicles account for a substantial share of imports, as very few cars are manufactured in Norway. The reason their import share is not even higher than 51.7 per cent is that mark-ups and taxes account for a large share of the costs of vehicle purchases. The subgroup 'Miscellaneous goods', which consists of goods such as clothing and footwear, furnishings and electronics, also has a relatively high import share of 46.3 per cent. Energy products are largely produced in Norway, but despite the country's high oil production, a substantial amount of petrol and diesel fuel is imported. In periods of low electricity production, power is also imported from neighbouring countries. On aggregate, energy products consumed by households account for an import share of 4.7 per cent. Alongside energy products and dwellings, public sector consumption, which consists largely of labour costs, is the consumption component with the lowest import share.

There are also substantial variations among the different export subgroups. Exports of shipping services and traditional goods have a high import content because a large proportion of the intermediate inputs are purchased outside Norway. Exports of oil and gas are distinguished by the low share of imports involved, because most of the production value originates from the Norwegian continental shelf, and thus consists of petroleum rent.

Import shares. Basis year 2020

	Share[1]	Import share	
		2019	2020
Consumption	**52.3**	**23.8**	**22.0**
Consumption by households and non-profit organisations	32.6	30.8	28.2
Consumption by non-profit organisations	1.8	17.3	16.6
Goods consumption	15.7	37.8	39.2
Food and beverages	5.5	30.3	30.2
Energy products etc.	0.9	5.9	4.7
Own vehicles	2.6	47.9	51.7
Miscellaneous goods	6.8	45.2	46.3
Consumption of services	14.4	13.9	14.0
Housing	6.1	7.4	8.1
Other services	8.3	17.8	18.5
Norwegians' consumption abroad	0.7	100.0	100.0
Public sector consumption	19.6	11.0	11.6
New investments	**20.6**	**36.9**	**36.8**
By type:			
Buildings and infrastructure	9.4	22.3	22.0
Aircraft and ships	1.0	72.5	68.0
Other types	10.3	46.7	47.5
By industry:			
Mainland Norway	16.4	34.4	34.6
General government	4.7	31.6	32.1
Manufacturing	1.0	46.4	47.7
Other goods-producing industries	1.7	45.9	46.1
Housing	4.3	22.3	22.0
Other service industries	4.6	41.2	42.1
Extraction and pipeline transport	3.9	43.1	42.8
Shipping	0.4	71.6	70.4
Exports	**24.2**	**20.5**	**21.5**
Mainland Norway	14.2	23.6	23.9
Goods	8.9	28.8	26.8
Services	5.3	17.0	19.0
Foreigners' consumption in Norway	0.4	24.2	24.8
Other services	4.9	15.7	18.5
Oil and gas	8.0	3.9	4.7
Shipping etc.	2.0	68.5	71.1
Total use of goods and services	**100.0**	**26.5**	**24.9**

[1] Goods and service consumption does not include share of foreigners' consumption.

Source: Statistics Norway

Global economic developments over the next few years are shrouded in uncertainty. We have assumed weak, but increasing growth in demand from our trading partners through the projection period. Domestic demand may be considerably dampened by higher interest rates than we have been used to for the past ten years. We assume an unchanged krone exchange rate in the near term. All this points to growth in mainland exports being higher than growth in imports, and to mainland Norway experiencing a terms of trade loss when it comes to movements in export as opposed to import prices.

Oil and gas exports have provided a trade surplus since 1978, but it is uncertain how long the high energy prices will persist. There has already been a substantial fall in prices, and the forward market forecasts a further decline in the next few years. Given relatively small changes in oil and gas export volumes, the value of oil and gas exports will be determined by their respective prices. We therefore expect the value of oil and gas exports to fall substantially this year, and then to fall less for the next three years. A record high trade surplus last year could thus be almost halved this year and reduced further in the projection period, but nonetheless end up near the previous peak level in 2008. Given a persistent high income and current transfers surplus, the total – the current account balance – is expected to fall from 30 per cent of GDP in 2022 to 10 per cent in 2026.

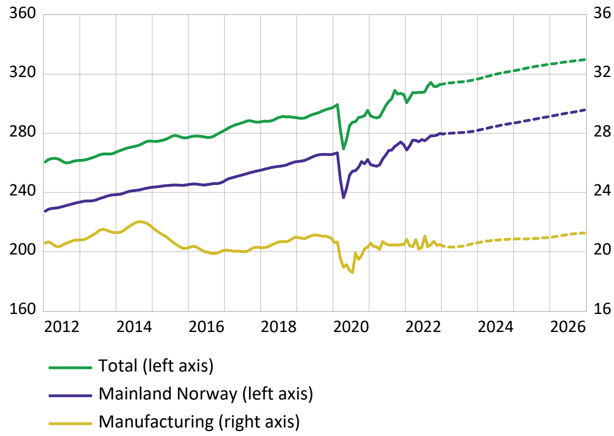
Cyclically neutral economic situation going forward

The Norwegian economy appears to have put the coronavirus pandemic behind it in 2022. The reopening of society in early 2022 paved the way for increased household demand and normalisation of production in the industries whose activities were restricted by the pandemic. Annual mainland GDP growth was 3.8 per cent last year, the same as the projection in our last report. Mainland GDP has grown steadily since Q2 last year, and at year-end was higher than the estimated trend path, despite the fact that inflation in the same period made production and consumption more expensive. The high annualised growth in the mainland economy is partly due to growth in the course of 2022 and partly to a significant positive carry-over from 2021. In 2022 Q4 mainland GDP was 2.2 per cent higher than in the same period the previous year. However, productivity growth in 2022 was fairly modest; see Box 3.1 in *Økonomiske analyser* 1/2023 (in Norwegian).

Price inflation led to a substantial increase in the value of Norwegian production last year. The increase in gas prices had most impact. Volumes in the extraction industry fell in 2022, but the increase in the selling price of natural gas meant that value added increased by 120 per cent measured in current prices. The increase in value of overall GDP ended up at 32.2 per cent, or NOK 1 358 billion. Towards the end of last year the current value of petroleum production was admittedly reduced, because the gas price has fallen sharply since the peak in August 2022.

Figure 14. Gross domestic product

Seasonally adjusted, billion 2020 NOK, month



Source: Statistics Norway

Most of the increase in volume last year is attributable to private and public sector service industries, particularly those that were hit hardest by the pandemic in 2020 and 2021. Accommodation and food services, the transport industries, administrative and support service activities and cultural activities accounted for almost half of annual mainland GDP growth. The growth rate in the service industries did decline considerably in the course of 2022, as the fall during the pandemic has been more or less recouped.

Value added in wholesale and retail trade was record high during the pandemic, but activity slowed in 2022. Households gradually shifted their consumption away from purchase of goods and back to services and purchases abroad last year. In the second half of the year, value added in wholesale and retail trade grew nonetheless because of high wholesale trade with other countries in Q3 and strong growth in car purchases in Q4. These made major contributions to growth in mainland GDP in late 2022. The accumulation of car deliveries towards the end of last year was due to many people wanting to avoid the introduction of taxes on electric cars with effect from 1 January this year. So far in 2023, the volume of car purchases has been very low.

Goods production in Norway was generally less affected by the pandemic than production of services. Thus there was also less lost activity to be recouped in the former, which contributed to lower annual growth rates in 2022. Several goods-producing industries, including some manufacturing segments, agriculture and construction have also been challenged by shortages and high prices for intermediate goods, as well as recruitment problems. However, in the most recent publication (in Norwegian) of Statistics Norway's Business tendency survey for manufacturing, mining and quarrying and in Norges Bank's Regional network a broad range of businesses report that access to labour and intermediate goods improved in the course of 2022.

With growth in all quarters of last year, suppliers to the petroleum industry pushed up activity in manufacturing. Developments in the food industry were mixed, with value added ending up with zero growth in 2022 and a fourth quarter decline. In the business tendency survey for manufacturing, mining and quarrying, leading manufacturers report an expected decline in 2023 Q1.

Construction experienced fairly strong annual growth last year, but this was due largely to the fact that pandemic-based restrictions impacted the industry in 2021. Developments in the industry through 2022 were weak. The cost of materials for residential construction have been high, and increases in interest rates have dampened housing demand. Value added in construction was roughly the same at the beginning and end of 2022. Statistics Norway's Production index for construction exhibited a decline in January 2023.

Limited precipitation and low reservoir levels led to a fall in power production last year, but activity picked up modestly towards the end of the year. According to Statistics Norway's electricity statistics (Norwegian text) both business sector and household consumption of electricity fell in 2022. The reduction in consumption is partly attributable to mild weather, but the high electricity prices may also have played a part.

Although some goods production segments had high costs and weak developments in volume in 2022, earnings were fairly good in many goods-producing industries. The extraction and power production industries reported particularly high value added, measured in current prices. Sales prices were also high for many manufacturing products, including food, basic metals and refined petroleum products. The same applied to primary industry products, particularly farmed salmon and other fish products. However prices for several of these products appear to have peaked, and earnings are becoming weaker. Measured in current prices, value added in basic metals and the fisheries industries fell from the first to the second half of 2022, and the value in the extraction and power production industries fell sharply in Q4.

With the pandemic behind us, it is clear that the economy has rapidly rebounded from the downswing caused by the virus and the infection control measures. The financial support received by households during the pandemic and the high saving level in preceding years probably contributed to buoying up demand even after consumer prices began to rise.

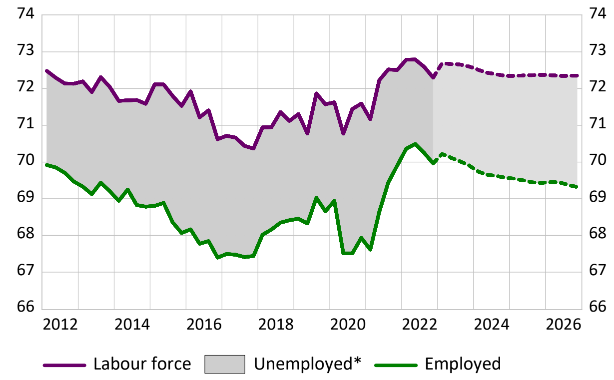
However, the high prices and monetary policy tightening will probably curb production and demand in the Norwegian economy going forward. In the course of 2022, household saving and real disposable income excluding share dividends have fallen. This is likely to prompt households to tighten up on consumption in 2023. In the Business Tendency Survey and Regional Network report, enterprises report rising costs, falling profitability and reduced incoming orders towards the end of 2022, and lower expected demand and activities going forward.

In our projections, annual growth in mainland GDP is forecast to be 1.4 per cent this year. This reflects the fact that economic growth has slowed in comparison to the strong developments we saw in the wake of the pandemic. In the coming years, economic activity is forecast to gradually approach trend, so that the situation in the Norwegian economy will be close to cyclically neutral through the projection period.

Small changes in a tight labour market

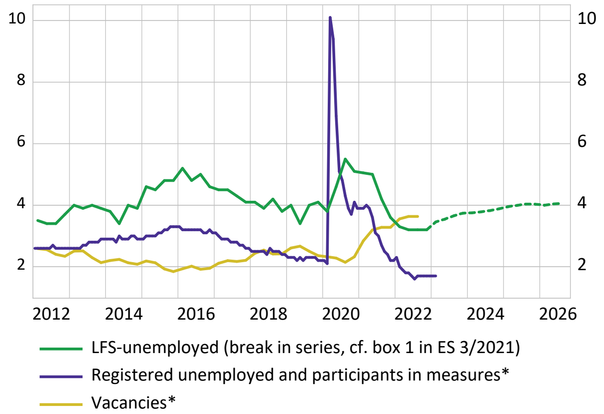
Despite higher interest rates, there was solid economic growth in 2022 and small changes in the main labour market indicators. Labour force participation and employment have remained high and unemployment low. The measures implemented during the pandemic had major consequences for the labour market, with many workers furloughed and reduced employment in several industries, but

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



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

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



the labour market appears to have normalised in the course of 2022. Employment in service industries and the number of non-resident wage-earners are back at pre-pandemic levels. Going forward to 2026, we expect weak employment developments and a slight rise in unemployment.

According to the Labour Force Survey (LFS), seasonally adjusted unemployment was 3.3 per cent in 2022 Q1 and then 3.2 per cent in the following three quarters. This is the lowest level since the end of 2008. The seasonally adjusted 3-month moving average was also low through 2022, and was 3.4 per cent in December, based on the months November–January. This is approximately the same level as the previous 3-month period. Monthly trend figures are also published in addition to the 3-month moving average. The trend figures represent the long-term tendency of the monthly figures.[2] In January 2023, unemployment was also 3.4 per cent according to the trend figures.

At the beginning of 2022, the seasonally adjusted registered unemployment rate published by the Norwegian Labour and Welfare Organisation (NAV) fell to a historically low level before remaining low through the second half of 2022. It has lain at 1.7 per cent from August 2022 to February this year. This is the lowest level since the financial crisis in 2008. The number laid off has moreover fallen back to the low levels seen prior to the pandemic. At the end of January 2023 there was nonetheless an increase of 1800 in the number of fully unemployed laid-off workers compared with December. Laid-off workers now account for 0.2 per cent of the labour force. Almost half of them have occupational backgrounds in construction or manufacturing work.

According to the LFS, there was weak growth in seasonally adjusted employment through 2022, with growth of 0.9 per cent from 2021 Q4 to 2022 Q4. Employment reached its highest ever level in 2022 Q2, but then fell up to 2022 Q4. In 2022 Q4, 69.9 per cent of the adult population was employed, which is a decline from the historically high level of 70.7 per cent in Q2 the same year.

The high employment rate is partly attributable to the employment rate among persons aged 15–24 being at a historically high level since March 2022. In December 2022, the employment rate in this age group was 58.1 per cent measured as a 3-month moving average, while it averaged 52.3 per cent in the period 2010–2019. Another group in which employment has increased consists of immigrants, i.e. residents born abroad with foreign parents and grandparents. In 2022 Q4, the number of wage-earners classified as immigrants increased by 14.4 per cent compared with 2019 Q4, immediately before the pandemic struck, while the total number of wage-earners only increased by 4.3 per cent in the same period. In 2022, 32 500 Ukrainian citizens immigrated to Norway, and we expect about the same immigration in 2023. Over time, this will increase the labour force more than previously assumed.

[2] Statistics Norway also publishes seasonally adjusted and non-adjusted monthly figures. These figures have high volatility and should be interpreted with care.

The number of foreign commuters (non-resident wage-earners) was 92 000 in 2022 Q4, which is somewhat higher than the Q4 average in the period 2016–2019. It is nonetheless lower than the level of 95 400 persons observed in 2019 Q4.

In 2022 Q2, the labour force was at the highest level ever measured. It was almost as high in Q4, down 0.2 per cent, and was then 0.5 per cent higher than in 2021 Q4. The participation rate, i.e. the labour force as a share of the population, was 72.2 per cent in December 2022, calculated as a seasonally adjusted 3-month moving average. This is somewhat lower than the level in March and April 2022, when it was 72.9 per cent, the highest level observed since 2010.

Demand for labour has remained at a high level since the beginning of 2021. According to NAV, the supply of new jobs was 71 100 in March, the highest level observed in the last 5 years, and there were 64 600 positions vacant in May. The increase in the supply of new jobs through the remainder of 2022 was somewhat lower, averaging 37 000 a month. In January 2023, 61 800 new jobs were added.

According to Statistics Norway, the vacancy level was high in 2022. The vacancy share increased by 0.4 percentage point to 3.4 per cent from 2022 Q3 to Q4. The Q2 level of 3.8 per cent was the highest recorded since 2010.

The national accounts show growth in both employment and hours worked. Both are higher than the pre-pandemic level, and for the past two quarters the distribution of employment by industry has been approximately the same as before the outbreak of the virus. Both employment and hours worked increased by 0.4 per cent from 2022 Q3 to Q4. Employment was 2.4 per cent higher than a year earlier, and hours worked were 2.2 per cent higher.

The hotel and restaurant industry reported particularly strong developments in 2022, with employment increasing by 6.4 per cent from 2021 Q4 to 2022 Q4. Culture, entertainment and other services industries also reported robust growth, with an increase in hours worked of 3.7 per cent from 2021 Q4 to 2022 Q4. Employment in administrative and support service activities, which include employment services, also increased, but in 2022 Q4 were at roughly the same level as in 2019 Q4. However, hours worked in this industry were 1.4 per cent lower in this period.

The labour market was tight through 2022. Going forward, we expect growth to follow the historical trend, which will lead to weak employment developments due to good productivity growth. We expect 0.6 per cent employment growth in 2023 and then low growth for the remainder of the projection period. Given this scenario, employment will not keep pace with the increase in the working age population, with the result that the employment rate will fall and unemployment will rise somewhat, but still be slightly lower than a normal level, viewed in a historical perspective. We foresee unemployment of 3.6 per cent in 2023, approximately as expected in our previous economic report. Weak employment growth will then result in a gradual increase in unemployment, to 4.0 per cent in 2025 and 2026. By way of comparison, average unemployment in the period 2010–2019 was 4.2 per cent. The labour force will grow by 0.8 per cent in 2023, and then grow weakly by between 0.1 and 0.4 per cent annually for the remainder of the projection period.

High wage growth, but no growth in real wages

Preliminary national accounts figures show growth in average annual wages of 4.4 per cent from 2021 to 2022. The rise of 5.8 per cent in the consumer price index (CPI) in the same period means that average real wages were reduced by 1.4 per cent in 2022. With the exception of 2016, when there were major changes in the labour market as a consequence of the fall in oil prices, this is the largest decline in average real wages since 1981, which was also a year with high inflation.

According to preliminary national accounts figures, the labour share, which is a measure of the percentage of wealth creation in the economy that accrues to workers, is estimated to be 78.2 per cent for manufacturing in 2022. This is lower than the average of 83.3 per cent over the 10-year period 2012–2021. The low labour share in 2022 can be largely ascribed to high operating profits in manufacturing. However, preliminary figures show especially high growth in the operating profits of manufacturing segments that account for a rela-

Box 4. Publication of annual wage statistics

In our KVARTS macroeconomic model, growth in the annual wage concept “annual earnings” is forecast from the national accounts figures. With effect from 2023, Statistics Norway will only be publishing the rate of annual growth and developments in the index for the economy as a whole. This means that level figures for “annual earnings” will no longer be published, and nor will statistics by industry.[1] Statistics Norway publishes a closely related concept in this box termed “annual wage”. “Annual wage” is based on almost the same definition and population, and comprises disbursements made in the course of the statistics year.[2] “Annual wage” is published with figures both for the economy as a whole and by industry in Table 11417 in the Statistics Bank and by sector in Table 11536 in the Statistics Bank.

As previously documented in Box 4 in Economic Survey 1/2021, the model variable “full-time equivalent annual wage” is used to forecast growth in “annual earnings”. This means that the change has not affected our projection of this variable, nor will it affect our future projections. The model variable “full-time equivalent annual wage” is defined as the ratio between the statistical concepts “wage” and “full-time equivalent employment, employees”. These quarterly national accounts figures are published in Table 09175 in the Statistics Bank, both for the whole economy and by industry.

One of the differences between “annual earnings” and “full-time equivalent annual wage” is that the former follows the accruals principle while the latter in practice follows the cash principle. The krone supplement from a delayed income settlement from the previous year which is not disbursed until the current year, will be entered in “annual earnings” for the period when the wages were earned (the previous year). For “full-time equivalent annual wage”, on the other hand, the krone supplements will be ascribed to the period in which the wages are disbursed (the current year), as is also the case for “annual wage” described above. This difference may therefore result in differences in growth rates for years in which part of the income settlement is only disbursed the following year.[3]

From 2022 onwards, the growth rate for “annual earnings” is calculated from the growth rate for the concept “annual wage” described above, adjusted for differences in definitions and populations.

[1] This means that only parts of Table 09786 in the Statistics Bank will be updated in the future, and that Table 09785 is now to be found under discontinued time series.

[2] A definition (in Norwegian) of ‘årslønn’/’annual wage’ is provided on the page Earnings under About the statistics – Definitions.

[3] See Box 4 in Economic Survey 1/2021 for further details of the difference between these two annual wage concepts.

tively small share of overall manufacturing employment.

The Technical Reporting Committee on Income Settlements (TBU) calculates annual wage growth for the largest negotiating areas. Preliminary calculations by TBU show annual wage growth for manufacturing workers in businesses under the Confederation of Norwegian Enterprise (NHO) of 3.5 per cent in 2022, while the corresponding growth rate for clerical employees in manufacturing was 5.0 per cent. Annual wage growth for NHO manufacturing businesses overall is estimated to be 4.0 per cent in 2022. This is 0.3 percentage point higher than the norm of 3.7 per cent estimated by NHO, in agreement with the Norwegian Confederation of Trade Unions (LO), for the 2022 wage settlement.

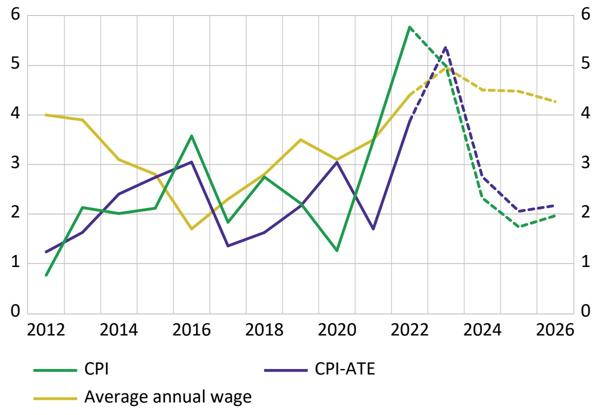
Growth in average annual wages can be decomposed into contributions from carry-over, pay increases and wage drift. The carry-over is the difference between the annual wage level at the end of the previous year and the average annual wage level that year, and provides important information about annual wage growth for the current year. The negotiated pay increase is the wage increase arising from central negotiations. Wage drift is the sum of all factors that affect annual wages other than carry-over and negotiated pay increase.

For manufacturing employees in NHO businesses, the carry-over was 0.9 percentage point, the negotiated pay increase 1.3 percentage points and wage drift 1.3 percentage points in 2022. For clerical employees in manufacturing, wage drift amounted to 3.8 percentage points, which includes a contribution of 1.5 percentage points from bonus payments, considerably higher than the average wage drift of 1.8 percentage points over the period 2018–2022.

The carry-over into 2023 for manufacturing employees in NHO businesses overall is estimated by the TBU to be 1.7 percentage points, with 1.3 percentage points for manufacturing workers and about 2.1 percentage points for clerical employees in manufacturing. The carry-over from 2022 to 2023 is 1.3 percentage points for both central and local government employees, including 1.7 percentage points for municipally employed teachers. A preliminary estimate of the combined carry-over to 2023 is 1.4 percentage points, which is somewhat higher than the average for the period 2018–2022.

Figure 17. Consumer price indices and annual wage

Change from previous year in percent



Source: Statistics Norway

According to our calculations, annual wage growth will be 5.0 per cent in 2023 before falling to just over 4 per cent by 2026. Despite high nominal wage growth, projected CPI inflation for 2023 of 5.0 per cent will nonetheless result in approximately unchanged growth in real wages in the current year. From 2024 and through the projection period, our projections show growth in real wages of about 2.5 per cent. Despite high nominal wage growth going forward to 2026, we forecast that the labour share in manufacturing will be about 78 per cent in 2023 before falling to about 76–77 per cent in 2025–2026. The relatively low labour share going forward will be largely driven by high operating profits, but there are large variations across manufacturing segments.

Prospects of lower inflation

The annual rise in the consumer price index (CPI) ended at 5.8 per cent in 2022 and was thus appreciably higher than in 2021, when it rose 3.5 per cent. Such high consumer price inflation has not been measured since the 1980s. The reason for this is complex. During the pandemic, production capacity fell in many industries worldwide, and when infection control measures were discontinued, the increased demand led to higher prices. In addition, prices for metals, packaging, building products and shipping rose substantially through 2021, peaking after the outbreak of war in Ukraine in spring 2022. An already strained supply situation in the European gas market was exacerbated by the war in Ukraine and fuelled an explosive increase in the price of natural gas. This fed through into higher prices for electricity and other energy carriers, both in Norway and globally. These large increases in costs have been passed through into higher selling prices. All the industries in the economy are woven together through the purchase and sale of products for intermediate inputs. Price hikes for broad-based intermediate inputs and energy products in particular impact the whole economy, and the ripple effects push up prices for both goods and services; see Box 5 here and Box 3.3 in *Økonomiske analyser* 1/2023 (Norwegian text). The Norwegian economy has a high import content in both intermediate inputs and consumption, and much of last year's consumer price inflation can be explained by increased import prices from our trading partners and global factors that led to an increase in energy prices; see Box 6. Because businesses raised their prices as a consequence of cost increases over time, inflation rose through the year.

Underlying inflation measured by the consumer price index adjusted for tax changes and excluding energy products (the CPI-ATE) was 3.9 per cent in 2022, and thus 2.2 percentage points higher than in 2021. The annual rise in the CPI-ATE is the highest measured since Statistics Norway began measuring underlying inflation in the early 2000s. A higher rise in prices for both imported goods and goods and services produced in Norway pushed up the annual rise in the CPI-ATE from 2021 to 2022. Twelve-month CPI-ATE inflation rose almost continuously from 1.3 per cent in January 2022 to 5.8 per cent in December, and on to 6.4 per cent in January 2023. Decomposing the 12-month rise of 6.4 per cent in January into half-yearly contributions, we find that 4.9 per cent of the rise took place from January to July 2022, while the increase from July 2022 to January 2023 accounted for 1.5 percentage points. The higher rates of increase in 12-month inflation through 2022 must be viewed bearing in mind that the CPI-ATE was stable through 2022, with low inflation and a low carry-over at the beginning of 2022. A surprising fall in the CPI-ATE from December 2021 to January 2022 led to 12-month CPI-ATE inflation being as much as 6.4 per cent in January this year. The last national lockdown due to the Covid pandemic was at the beginning of 2022. This may have led to lower travel prices, and January was generally a month with an unusually high level of sales activity.

Table 4. The consumer price index – goods and services by consumption group

	Weight[1]	Change on previous year. per cent				
		2019	2020	2021	2022	Jan. 2023
Total	**1 000.0**	**2.2**	**1.3**	**3.5**	**5.8**	**7.0**
Food and non-alcoholic beverages	118.9	1.0	3.2	-2.0	6.5	12.0
Alcoholic beverages and tobacco	37.2	2.7	2.7	-1.8	3.7	5.1
Clothing and footwear	49.5	1.0	-1.7	-1.3	0.6	2.6
Housing, lighting, fuels	244.8	1.9	-3.5	10.0	6.7	4.7
Of which: Electricity including grid charges	42.7	0.7	-29.4	70.8	19.0	15.4
Furnishings, household equipment	66.5	2.4	6.8	3.7	6.5	8.3
Health	34.0	2.6	2.9	3.0	2.5	3.2
Transport	153.7	3.0	1.6	2.1	8.9	11.7
Of which: Purchase of vehicles	65.6	1.1	1.8	2.0	4.3	11.3
Communications	22.3	3.2	4.8	1.5	1.0	4.5
Recreation and culture	117.8	2.9	3.4	3.1	4.1	8.1
Education	5.0	4.3	3.1	1.9	2.1	2.0
Restaurants and hotels	66.0	2.6	2.1	3.3	7.4	7.7
Miscellaneous goods and services	84.3	1.4	3.6	2.6	2.5	1.8

[1] The weights apply from January 2022 to December 2022.
Source: Statistics Norway.

Table 5. The consumer price index adjusted for tax changes and excluding energy products (CPI-ATE). by supplier sector

	Weight[1]	Change on previous year. per cent				
		2019	2020	2021	2022	Jan. 2023
Total	**1 000.0**	**2.2**	**3.0**	**1.7**	**3.9**	**6.4**
Norwegian products	135.4	2.1	3.0	1.4	6.0	10.7
Imported goods	351.2	1.3	2.9	1.5	4.1	7.0
Rent	215.5	1.7	1.5	1.3	2.0	2.9
Services excluding rent	297.9	3.7	4.1	2.3	4.1	6.3
- with wages as dominant price factor	94.3	2.9	3.0	3.6	3.0	3.8
- with other important price components as well	203.6	4.0	4.6	1.7	4.7	7.5

[1] The weights apply from January 2022 to December 2022.
Source: Statistics Norway.

|With prospects of lower global economic growth, prices for metals, packaging, building products and freight rates have fallen substantially since the peak around the time of the outbreak of war in Ukraine. The price of natural gas in particular fell sharply from early September 2022 into March 2023. The European spot price for natural gas is now back at autumn 2021 levels. These developments must be seen against the backdrop of a surprisingly mild European winter and lower than normal consumption of natural gas for heating. With the fall in gas prices, electricity prices in Europe and the Nordic countries have come down appreciably from the beginning of December. Because of the time lag in the setting of consumer prices, we assume that inflationary impulses from earlier cost increases will continue to affect prices into 2023 before gradually abating.

Global fertilizer prices tripled between the beginning of 2021 and the outbreak of war in Ukraine. At the beginning of March 2023, global fertilizer prices were still high, and together with high prices for silage and energy contribute to high food production costs. According to the CPI-ATE by supplier sector, prices for Norwegian and imported agricultural products rose by 7.3 and 7.5 per cent, respectively, from 2021 to 2022. The rise in prices for agricultural products, coupled with higher energy prices, led in turn to higher costs in the food industry, both domestic and among our trading parties.

Prices for food and non-alcoholic beverages increased by 6.5 per cent from 2021 to 2022, compared with a fall of 2.0 per cent from 2020 to 2021. The price increase for this product group contributed to pushing inflation up by about an annualised 0.8 percentage point in 2022. During the agricultural settlement for 2022 there was a special focus on the supply situation in connection with the ongoing war in Ukraine. In order to encourage increased domestic production, target prices for grain were adjusted substantially upward. Both Ukraine and Russia are major suppliers of wheat on the global

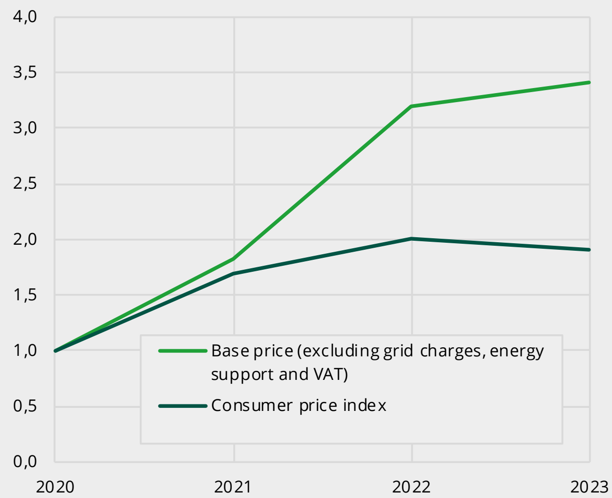
Box 5. The direct and indirect effects of higher electricity prices

From 2020 Q4 to 2022 Q4 the electricity price, as measured in the CPI, increased by 129 per cent. Businesses are not covered by the energy support scheme, and the electricity price excluding taxes and subsidies increased by 234 per cent in the same period. The electricity price influences inflation directly, as households spend about 4 per cent of their budgets on electricity. The electricity price also affects inflation indirectly, because higher electricity costs for the business sector are passed through into other prices for consumers and producers. In addition, higher prices weaken the krone exchange rate, and this in its turn adds to price pressures. In order to shed light on the significance of both the indirect and the direct effects, we performed a simulation using the KVARTS model. The calculation shows the significance for inflation in 2021, 2022 and 2023 of the increase in the electricity price for both businesses and households since 2020 Q4. The calculation for 2023 is based on the baseline scenario.

Central to the KVARTS calculation system is the input-output model. The input-output model describes the relationship between import prices and domestic prices on the one hand, and the relationship between prices for intermediate inputs and final deliveries on the other. Higher electricity expenses mean higher operating costs for businesses, particularly in industries where electricity is an important factor input. However, the use of electricity varies considerably from one industry to the next. Power-consuming manufacturing is the most electricity-intensive, and here spending on electricity amounted to around 6 per cent of total costs in 2019. The share for other industries was barely 2 per cent (see Box 3.1 in Økonomiske analyser 3/2022 (Norwegian text).[1]

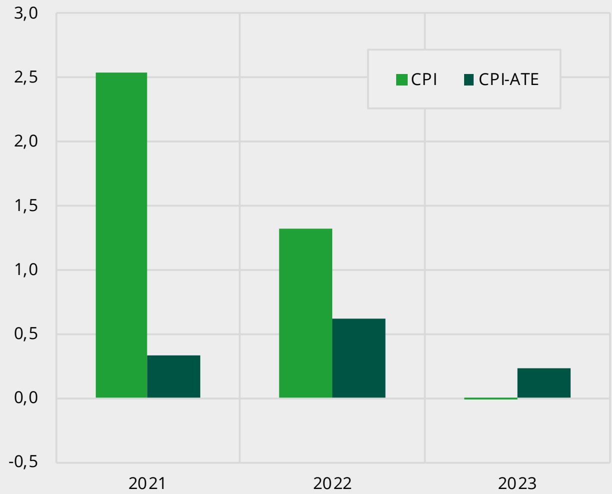
Figure 1 shows the annual average electricity price in both the baseline scenario and the counterfactual scenario in which electricity prices for households and businesses are kept unchanged since 2020 Q4. Most of the price increase in the past two years took place in 2021. Figure 2 shows the effect of the increased electricity prices on inflation measured by both the CPI and the CPI-ATE. The higher electricity prices pushed up inflation measured by the CPI by 2.5 percentage points in 2021 and a further 1.3 per cent in 2022. Higher electricity prices add 1 percentage point to the share of household budgets that goes to electricity. As the CPI uses fixed weights based on the consumption pattern of the previous year to calculate the index, the effect of the altered electricity prices from 2021 will not be reflected in the weights before 2022. The weight change contributes 0.1 percentage point of the 1.5 percentage point increase in inflation this year.[2] In 2023 household electricity prices are falling a little, while the price businesses must pay is rising, and on balance electricity prices will not contribute to changing inflation this year. The contribution to the CPI captures both direct and indirect effects. The extent and the rate at which businesses pass increased costs through into higher selling prices depends in part on whether the actors regard the cost increases as permanent or not. Experience shows that it takes time for such indirect effects to manifest themselves. Our calculations show that the higher electricity prices raise underlying inflation measured by the CPI-ATE by around 0.4 per cent on average from 2021 to 2023. This means that the inflation level is around 1.2 per cent higher in 2023 than in 2020. By way of comparison, electricity prices have pushed the CPI up by 3.8 per cent in the same period. The indirect effects therefore account for around 30 per cent of the total contribution to the CPI and the direct effect to around 70 per cent of the increase in inflation.

Figure 1. Electricity prices. 2020=1



Source: Statistics Norway

Figure 2. Contribution to inflation as a consequence of higher electricity prices since 2020 Q4. Percentage points



Source: Statistics Norway

[1] The calculation makes a technical assumption that the price increase does not impact power-consuming manufacturing, as several businesses in this industry have long-term electricity agreements. The effect on the price level measured by the CPI of a change in the electricity price for power-consuming industry is less than 0.1 per cent over this period.

[2] The weights in the CPI for 2023 have been updated on the basis of estimated household consumption in 2022; see the article on changes in the consumer price index (Norwegian text). The weight of electricity in the CPI was 3.2 per cent in 2021, 4.0 percent in 2022 and 4.3 per cent in 2023. If the electricity price had not changed since 2021, the weight would have been 3.0 per cent in 2022 and 2023 (all else being equal).

market. There is great uncertainty regarding the level of future deliveries from these countries. As a result of this uncertainty, added to high agricultural production costs, the global market price for wheat remains at a relatively high level. Movements in food prices in 2023 are closely linked to further developments in the costs of agricultural products, in Norway and abroad. According to the Norwegian Institute of Bioeconomy Research (NIBIO), Norwegian food self-sufficiency is less than 50 per cent. The current weak krone exchange rate will probably lead to a rise in prices for product groups with a large import share, such as fruit and vegetables. Movements in food prices this year also depend on the orientation of this year's agricultural agreement. Through last year's agreement, farmers received cover for extraordinary costs in the agreement year 2022/2023. According to the CPI, the 12-month rise in the consumption group food and beverages increased through the year. There was double-digit inflation from July 2022, peaking at 13.1 per cent in October, before inflation slowed somewhat to 12 per cent in January 2023. Supermarket suppliers normally adjust their prices to the grocery chains on two main dates, 1 February and 1 July. Substantial increases in food prices from 1 February were also announced this year. This time, however, it looks as though competition between supermarket chains has resulted in less upward adjustment of consumer prices than the increase in underlying purchase prices. Higher food prices abroad will be of importance, but the orientation of the agricultural negotiations, developments in the costs of other factor inputs for producers and grocery chains and mark-ups all contribute to great uncertainty regarding the effects on prices facing consumers. Naturally occurring factors affect the size of harvests and also contribute to uncertainty. In this report, we have assumed a strong rise in prices for food and alcoholic beverages also in 2023, measured as an annual average. A large price carry-over at the beginning of this year points in this direction.

Volume taxes, which are independent of underlying producer prices, make up a large portion of prices in the food and beverage group alcoholic beverages and tobacco. These taxes were revised up moderately in 2022 and adjusted 2.8 per cent for inflation in 2023. This is helping to curb the rise in prices for this product group. According to the CPI-ATE, the underlying rise in prices for alcoholic beverages and tobacco products, adjusted for tax changes, was 5.4 per cent in 2022, while according to the CPI, inflation including tax changes was 3.7 per cent. According to the CPI-ATE by supplier sector, the average rise in prices for goods was 4.7 per cent in 2022, while prices for services excluding rent rose by 4.1 per cent. The rise in prices for the product groups clothing and footwear, audiovisual equipment and IT equipment made a negative contribution to inflation as usual. Among the service groups that contributed most to the rise in prices were hotels and restaurants, air travel and charter tours. The rise in hotel and restaurant prices was particularly high in the first half of the year, which must be viewed being in mind the last national lockdown at the beginning of 2022. This product group had a substantial price carry-over at the beginning of 2023. We expect the rise in prices for the service groups air travel and charter tours to continue in 2023. A shortage of air travel capacity after the pandemic and increased fuel costs and a need for the air travel business to increase their earnings will probably keep the rise in prices high when the desire to travel picks up again.

The house rent index in the CPI consists of actual rent and imputed rent, which is intended to express the value of the service that their dwelling provides for owner-occupiers and unit owners in housing cooperatives. Prices for this service are assumed to shadow developments in rent for equivalent dwellings in the rental market. Rents rose by 2.0 per cent from 2021 to 2022, substantially up from an increase of 1.3 per cent in 2021. The 12-month rise in rents increased from 1.6 per cent in January to 2.3 per cent from September and for the remainder of the year, but increased in January 2023 to 2.9 per cent. Existing rents are largely regulated by means of the CPI. Like the higher CPI, increased interest rates and higher municipal charges for water supply and waste water are reflected in higher rents. Demand for rental homes is expected to remain high. We have assumed that the rise in rents will continue to pick up somewhat in 2023. In total, rents account for about 20 per cent of the basis for the CPI.

In 2022, high energy prices and net tax increases led to CPI inflation being 1.9 per cent higher than CPI-ATE inflation. Households' average fuel and electricity prices including grid charges and taking account of energy support increased by 33 and 19 per cent, respectively, from 2021 to 2022, and contributed to increasing CPI inflation by 1.7 percentage points. Net tax increases on products other than energy products accounted for 0.2 percentage point of CPI inflation. With the mild weather in Europe and falling gas prices, electricity prices for Norwegian price areas on the Nord Pool power exchange in January and February were far lower than indicated by the forward market at the beginning of December. A fall in prices for European forward power contracts has contributed to a steep fall in Nordic forward contracts as well. Developments in recent months illustrate the great uncertainty that characterises energy markets at present. Grid charges are an uncertain variable this year. The Norwegian Energy Regulatory Authority (RME) has considerably increased the income limits of distribution companies in 2022 and 2023. The companies' income must cover the costs of investing in the network and associated with transmission losses. In principle, companies are required to cover losses in the transmission network at the spot price applying at any time, and these costs increased substantially through 2022. The new scheme effective from autumn last year which redistributes extraordinary bottleneck income from the system operator of the Norwegian power system, Statnett, to areas with a high electricity price in order to avoid significant increases in grid charges, is being extended through 2023. RME has calculated the amounts the distribution companies can invoice Statnett for redistribution of extraordinary bottleneck income for 2023 Q1. The authority has approved an amount for disbursement per company that will cover the costs of grid losses associated with electricity prices of over 35 øre/kWh. We have assumed that the scheme will apply through 2023, and forecast that annualised average grid charges excluding taxes will increase moderately from 2022 to 2023. In the projections for household electricity prices, the consumption tax on electricity was reduced in 2023 Q1 to 9.16 øre/kWh, while from April and for the remainder of the year it is 15.84 øre/kWh. The Government's proposal for a revised energy support scheme from 1 June 2023 has been incorporated in our calculations. In 2023, household energy support is fixed as a 90 per cent deduction on average spot prices of over 70 øre/kWh, with a monthly consumption cap of 5 000 kWh in the periods January–March and June–August. The rate for April and May is 80 per cent. The energy support scheme has been boosted somewhat compared to the rates in 2022. Our calculations are based on a transition to support based on hourly spot prices from September 2023, with support in the form of a 90 per cent deduction on spot prices of over 70 øre/kWh per clock hour in a price area. The energy support rate of 90 per cent and support based on hourly prices is then continued for the remainder of the projection period. Household electricity prices, including energy support, are forecast to fall by 4 per cent in both 2023 and 2024. The household electricity price in this forecast is an average price for Norway. In the price projection, we assume that area prices in Southern Norway continue to be higher than in Central or Northern Norway. It should also be noted that an expected fall in spot prices in the projection period has a strong cost impact on the business sector. Apart from energy-dependent manufacturing, other manufacturing and service industries mainly have power contracts that shadow the spot prices.

In our model, fuel prices largely shadow oil prices with a premium consisting of special taxes. During some periods in 2022 there was very high demand on the global market for diesel as an alternative to other high-priced energy carriers. The overall margin between the oil price and the selling price was far higher than usual as a consequence of great demand. Now that gas and electricity prices have fallen in Europe, we assume that fuel prices will follow the oil price to a greater extent than last year. Prices at the pump rose especially high in March last year, and the rise in prices up to the summer sent fuel prices to new heights before they fell back later in the autumn. On the basis of the oil price in our projection, we forecast that the fall in fuel prices will be about 4 per cent as an annual average from 2022 to 2023. The high 12-month rise in fuel prices observed at the beginning of the year will be reversed to a decline in Q2.

Overall, the fall in prices for energy products is projected to reduce CPI inflation by 0.6 percentage point in 2023. In order to calculate the overall differential between the CPI and the CPI-ATE, the effect of net tax increases excluding energy products must be added to the contribution from energy products. At the outset, the special taxes for 2023 have been adjusted by 2.8 per cent for inflation, in line with the inflation projection in the National Budget for 2023 and the approved fiscal budget. In addition, a new weight component has

Box 6. Decomposition of the forecast error for the CPI in 2022

In a projection published on 18 March 2022, Statistics Norway forecast a rise of 3.3 per cent in the CPI from 2021 to 2022. CPI inflation was 5.8 per cent in 2022. The projection was thus 2.5 percentage points lower than the actual rise in the CPI. This is Statistics Norway's largest forecast error for the CPI since 1990, as we have regularly published forecasts. The error must be viewed in light of the war in Ukraine and the impact this has had on international prices.

The table shows the forecasts from March last year and actual developments, both for the CPI as a whole and also for five variables that have proved in the past to be particularly important for inflationary developments. These are the krone exchange rate, consumer prices in the euro area, the price of processed export products, the crude oil price and the electricity price. The table also shows the overall contribution associated with the divergence of the forecasts for the five explanatory factors from actual developments. The analysis was performed with the aid of the KVARTS macroeconomics model, which was also used to make the CPI projections last year. The lowest line shows differences resulting from factors other than the five variables mentioned above.

The decomposition in the table shows that with the exception of the oil price, which was approximately as forecast, all the other four important components contributed to inflation being higher than assumed in March last year. Overall, the five explanatory factors pushed up inflation by 2.1 percentage points. Factors other than the five analysed in the table contributed together to pushing up inflation by a further 0.4 percentage point. This residual item includes contributions from errors in projections for other variables, rounding, and differences that arise from the fact that KVARTS represents a simplified description of reality and does not capture all the mechanisms in operation at any time in the Norwegian economy. In the KVARTS model, import prices in NOK are determined among other things by movements in the krone exchange rate and global inflationary developments. The residual item for 2022 must in viewed bearing particularly in mind that import prices for commodities and many other goods targeting households and businesses increased appreciably more in NOK than the contributions from the exchange rate and international inflation might suggest.

Consumer price index. Decomposition of the forecast error for 2022. Percentage growth compared with previous year

	2022	Final figure	Error with contri-bution
CPI	**3.3**	**5.8**	**2.5**
Import-weighted krone exchange rate[1]	-1.9	1.2	0.5
Consumer prices in the euro area	5.2	8.4	0.1
Prices for processed import goods	4.7	9.5	0.5
Crude oil in USD[2]	39.3	39.6	0.0
Electricity price	-0.6	19.0	1.0
All five explanatory factors[3]	-	-	2.1
Other[4]	-	-	0,4

[1] Includes movements for NOK per euro and NOK per USD .

[2] Forecasts based on forward prices in USD.

[3] The sum of the individual explanatory factors differs from the total as a result of composition effects

[4] Includes contributions from rounding, errors in forecasts for other variables etc.

Source: Statistics Norway

been introduced into the one-off tax on private cars which also applies to electric cars. The CO2 component in the one-off tax on fossil fuel-based cars is being increased and the weight deduction in the one-off tax on rechargeable hybrids is being reduced. The reduced rate for re-registration of electric cars has been abolished. VAT has been introduced on electric cars, with a basic deduction of NOK 500 000, and the VAT exemption for electronic news services has been discontinued. The reintroduction of the air passenger tax from 1 July 2022 will only be fully phased into the 12-month rise in prices on 1 July 2023, and will contribute to an increase in taxes this year too. This tax has also been increased more than ordinary adjustment for inflation for travel outside the EU area, with effect from 1 January 2023. On balance, net tax increases on goods other than energy products are forecast to add 0.2 percentage point to CPI inflation in 2023. Given the assumptions concerning developments in prices for energy products and for overall tax increases excluding energy products, the difference between the CPI and the CPI-ATE is -0.4 percentage point in our projections. CPI inflation will thus be lower than CPI-ATE inflation in 2023. We have adjusted the special tax rates for inflation for the years 2024– 2026 and expect them to have a neutral effect on CPI inflation, while the orientation of energy support is retained as it is in 2023 Q4.

There is still great uncertainty associated with the war in Ukraine and its effects on energy prices, the krone exchange rate and global inflation. As usual, the exchange rates in our calculations are set at their levels at the time of making forecasts. The krone has depreciated markedly since our previous economic report, and this is the primary reason that the CPI-ATE projection has been revised substantially upwards since December. The most recent depreciation of the krone raises the inflation path, and given a large carry-over in underlying inflation from 2023 to 2024, we will only be back down at the inflation target in the first half of 2025. On the other hand, the projection for the rise in energy prices has been revised down, so that CPI inflation for 2023 has been revised up to a lesser extent in relation to the previous report. In the longer term, we still assume that the global cost picture will normalise, and that the rise in import prices will gradually fall back to more normal levels of around 2 per cent once the exchange rate effects of a weakened krone are exhausted. Given the forecasts on which import prices, wage and productivity growth in this report are based, CPI inflation is projected to be 5.0 per cent in 2023. The overall difference between the CPI and the CPI-ATE is forecast to be -0.4 percentage point. CPI-ATE inflation will accordingly increase from 3.9 per cent in 2022 to 5.4 per cent in 2023, and subsequently slow to 2.8 per cent in 2024. An expected moderate fall in household energy prices in the years ahead will lead to CPI inflation being somewhat lower than CPI-ATE inflation in the years 2024–2026.

Table 6. National accounts: Final expenditure and gross domestic product. At constant 2020 prices. NOK million

	Unadjusted		Seasonally adjusted							
	2021	2022	21:1	21:2	21:3	21:4	22:1	22:2	22:3	22:4
Final consumption expenditure of households and NPISHs	1 570 547	1 677 835	366 259	378 957	407 236	419 805	403 292	416 279	418 843	442 331
Household final consumption expenditure	1 484 909	1 581 653	347 866	359 241	384 000	396 051	380 160	392 225	394 671	418 148
Goods	773 703	745 188	186 469	195 041	199 320	196 950	184 790	184 874	182 597	198 187
Services	696 978	771 711	162 793	165 093	179 878	187 218	186 392	192 625	193 973	196 119
Direct purchases abroad by resident households	30 449	111 412	1 843	1 558	9 328	20 562	18 610	26 321	30 268	36 456
Direct purchases by non-residents	-16 220	-46 657	-3 239	-2 452	-4 526	-8 679	-9 633	-11 594	-12 167	-12 614
Final consumption expenditure of NPISHs	85 638	96 181	18 394	19 717	23 236	23 753	23 132	24 054	24 172	24 183
Final consumption expenditure of general government	950 044	951 114	231 979	236 437	241 483	240 485	236 308	237 567	237 569	239 798
Final consumption expenditure of central government	473 666	477 500	114 397	117 180	120 671	121 767	116 412	118 637	119 902	122 653
Central government, civilian	418 699	420 951	100 820	103 498	106 853	107 872	102 389	104 564	105 799	108 303
Central government, defence	54 967	56 548	13 577	13 681	13 818	13 895	14 023	14 073	14 103	14 351
Final consumption expenditure of local government	476 378	473 615	117 581	119 258	120 813	118 718	119 896	118 930	117 667	117 145
Gross fixed capital formation	941 857	983 626	232 895	234 196	233 124	241 868	243 453	244 234	245 509	250 593
Extraction and transport via pipelines	176 326	166 632	42 426	44 635	44 184	45 229	40 208	41 569	40 695	44 262
Ocean transport	-460	740	1 577	-162	-825	-1 050	1 467	-26	-20	-681
Mainland Norway	765 991	816 255	188 892	189 722	189 765	197 690	201 778	202 691	204 834	207 013
Industries	353 301	404 514	85 933	87 617	86 379	93 482	98 463	101 121	101 737	103 272
Service activities incidential to extraction	6 010	8 137	1 041	1 184	1 537	2 285	1 413	1 981	1 628	3 136
Other services	224 072	278 205	52 069	54 054	56 313	61 823	66 107	69 421	71 123	71 664
Manufacturing and mining	46 680	51 943	12 238	11 555	10 592	12 223	12 856	13 229	13 188	12 631
Production of other goods	76 539	66 229	20 586	20 824	17 936	17 152	18 088	16 490	15 798	15 841
Dwellings (households)	205 137	202 367	50 764	52 440	50 149	51 834	52 359	50 627	49 360	50 051
General government	207 554	209 373	52 195	49 666	53 237	52 374	50 956	50 943	53 737	53 689
Acquisitions less disposals of valuables	161	292	10	29	63	58	73	78	75	66
Changes in stocks and statistical discrepancies	121 157	127 656	30 024	26 628	31 562	20 868	27 266	31 851	36 290	18 331
Gross capital formation	1 063 176	1 111 575	262 929	260 853	264 750	262 795	270 792	276 163	281 874	268 991
Final domestic use of goods and services	3 583 766	3 740 524	861 167	876 247	913 469	923 084	910 392	930 009	938 286	951 120
Final demand from Mainland Norway	3 286 582	3 445 204	787 130	805 117	838 484	857 979	841 379	856 537	861 246	889 142
Final demand from general government	1 157 598	1 160 488	284 174	286 103	294 720	292 858	287 264	288 510	291 306	293 487
Total exports	1 179 719	1 249 427	282 000	289 633	301 780	308 343	299 506	307 102	321 599	319 081
Traditional goods	429 579	428 417	105 268	110 001	106 365	105 543	103 024	104 001	110 149	109 383
Crude oil and natural gas	379 606	380 616	90 591	95 132	99 307	96 333	93 384	94 267	97 478	95 881
Ships, oil platforms and planes	20 368	3 386	1 783	3 461	8 716	6 409	1 642	615	696	433
Services	350 165	437 008	84 358	81 040	87 392	100 058	101 455	108 219	113 276	113 384
Total use of goods and services	4 763 485	4 989 951	1 143 167	1 165 880	1 215 249	1 231 427	1 209 898	1 237 111	1 259 884	1 270 201
Total imports	1 166 965	1 275 444	270 145	281 470	301 551	311 780	297 641	314 560	325 393	333 888
Traditional goods	779 268	798 509	184 197	196 055	201 374	193 514	188 329	196 052	202 829	208 066
Crude oil and natural gas	15 218	10 329	3 457	6 072	2 463	3 148	2 656	2 477	2 491	2 955
Ships, oil platforms and planes	36 807	21 386	6 825	7 231	11 257	11 494	8 122	4 859	5 046	3 360
Services	335 672	445 221	75 666	72 112	86 456	103 624	98 534	111 172	115 028	119 508
Gross domestic product (market prices)	3 596 520	3 714 507	873 022	884 411	913 699	919 646	912 257	922 551	934 491	936 312
Gross domestic product Mainland Norway (market prices)	3 194 851	3 317 272	774 588	786 507	808 014	818 798	815 643	825 152	829 934	836 954
Petroleum activities and ocean transport	401 670	397 235	98 434	97 903	105 684	100 849	96 615	97 399	104 557	99 359
Mainland Norway (basic prices)	2 775 849	2 894 653	673 148	683 197	701 313	711 823	710 590	719 479	725 156	731 021
Mainland Norway excluding general government	2 047 305	2 150 083	495 569	502 852	516 702	525 859	526 897	533 579	538 177	543 047
Manufacturing and mining	243 407	245 144	61 227	61 344	61 353	61 406	61 534	61 262	61 843	61 581
Production of other goods	342 760	351 910	84 650	85 446	84 941	86 583	87 985	87 389	87 379	87 131
Services incl. dwellings (households)	1 461 138	1 553 030	349 692	356 062	370 408	377 870	377 379	384 929	388 955	394 335
General government	728 544	744 569	177 579	180 345	184 611	185 964	183 693	185 900	186 978	187 974
Taxes and subsidies products	419 002	422 619	101 440	103 310	106 701	106 975	105 052	105 673	104 779	105 933

Source: Statistics Norway.

Table 7. National accounts: Final expenditure and gross domestic product. At constant 2020 prices. Percentage change from previous period

	Unadjusted		Seasonally adjusted							
	2021	2022	21:1	21:2	21:3	21:4	22:1	22:2	22:3	22:4
Final consumption expenditure of households and NPISHs	4.4	6.8	-4.8	3.5	7.5	3.1	-3.9	3.2	0.6	5.6
Household final consumption expenditure	4.7	6.5	-4.2	3.3	6.9	3.1	-4.0	3.2	0.6	5.9
Goods	5.8	-3.7	-4.3	4.6	2.2	-1.2	-6.2	0.0	-1.2	8.5
Services	3.8	10.7	-4.0	1.4	9.0	4.1	-0.4	3.3	0.7	1.1
Direct purchases abroad by resident households	-8.0	265.9	-36.8	-15.5	498.8	120.4	-9.5	41.4	15.0	20.4
Direct purchases by non-residents	-5.3	187.6	-27.3	-24.3	84.6	91.8	11.0	20.4	4.9	3.7
Final consumption expenditure of NPISHs	0.6	12.3	-15.0	7.2	17.8	2.2	-2.6	4.0	0.5	0.0
Final consumption expenditure of general government	5.0	0.1	0.2	1.9	2.1	-0.4	-1.7	0.5	0.0	0.9
Final consumption expenditure of central government	5.3	0.8	-1.1	2.4	3.0	0.9	-4.4	1.9	1.1	2.3
Central government. civilian	5.6	0.5	-1.3	2.7	3.2	1.0	-5.1	2.1	1.2	2.4
Central government. defence	2.9	2.9	0.4	0.8	1.0	0.6	0.9	0.4	0.2	1.8
Final consumption expenditure of local government	4.7	-0.6	1.4	1.4	1.3	-1.7	1.0	-0.8	-1.1	-0.4
Gross fixed capital formation	-0.8	4.4	-3.3	0.6	-0.5	3.8	0.7	0.3	0.5	2.1
Extraction and transport via pipelines	-2.1	-5.5	-6.3	5.2	-1.0	2.4	-11.1	3.4	-2.1	8.8
Ocean transport	..	..	-59.3	..	..	..	..	..	..	
Mainland Norway	1.7	6.6	-1.5	0.4	0.0	4.2	2.1	0.5	1.1	1.1
Industries	5.0	14.5	-0.7	2.0	-1.4	8.2	5.3	2.7	0.6	1.5
Service activities incidential to extraction	-5.0	35.4	-24.5	13.7	29.9	48.6	-38.2	40.2	-17.8	92.7
Other services	8.9	24.2	-7.9	3.8	4.2	9.8	6.9	5.0	2.5	0.8
Manufacturing and mining	6.1	11.3	24.7	-5.6	-8.3	15.4	5.2	2.9	-0.3	-4.2
Production of other goods	-5.0	-13.5	9.1	1.2	-13.9	-4.4	5.5	-8.8	-4.2	0.3
Dwellings (households)	3.0	-1.4	-0.4	3.3	-4.4	3.4	1.0	-3.3	-2.5	1.4
General government	-4.5	0.9	-3.7	-4.8	7.2	-1.6	-2.7	0.0	5.5	-0.1
Acquisitions less disposals of valuables	-3.0	81.3	-60.0	189.6	119.7	-8.7	25.7	6.6	-3.4	-11.5
Changes in stocks and statistical discrepancies	-10.5	5.4	-8.9	-11.3	18.5	-33.9	30.7	16.8	13.9	-49.5
Gross capital formation	-2.0	4.6	-4.0	-0.8	1.5	-0.7	3.0	2.0	2.1	-4.6
Final domestic use of goods and services	2.6	4.4	-3.2	1.8	4.2	1.1	-1.4	2.2	0.9	1.4
Final demand from Mainland Norway	4.0	4.8	-2.6	2.3	4.1	2.3	-1.9	1.8	0.5	3.2
Final demand from general government	3.2	0.2	-0.6	0.7	3.0	-0.6	-1.9	0.4	1.0	0.7
Total exports	5.8	5.9	0.8	2.7	4.2	2.2	-2.9	2.5	4.7	-0.8
Traditional goods	4.6	-0.3	-0.5	4.5	-3.3	-0.8	-2.4	0.9	5.9	-0.7
Crude oil and natural gas	2.9	0.3	-0.6	5.0	4.4	-3.0	-3.1	0.9	3.4	-1.6
Ships. oil platforms and planes	112.1	-83.4	38.0	94.1	151.8	-26.5	-74.4	-62.5	13.0	-37.7
Services	7.5	24.8	3.3	-3.9	7.8	14.5	1.4	6.7	4.7	0.1
Total use of goods and services	3.4	4.8	-2.3	2.0	4.2	1.3	-1.7	2.2	1.8	0.8
Total imports	1.7	9.3	-6.0	4.2	7.1	3.4	-4.5	5.7	3.4	2.6
Traditional goods	5.7	2.5	-4.2	6.4	2.7	-3.9	-2.7	4.1	3.5	2.6
Crude oil and natural gas	-11.5	-32.1	-17.5	75.6	-59.4	27.8	-15.6	-6.7	0.5	18.6
Ships. oil platforms and planes	-16.6	-41.9	-17.8	6.0	55.7	2.1	-29.3	-40.2	3.8	-33.4
Services	-3.8	32.6	-8.5	-4.7	19.9	19.9	-4.9	12.8	3.5	3.9
Gross domestic product (market prices)	3.9	3.3	-0.6	1.3	3.3	0.7	-0.8	1.1	1.3	0.2
[Gross domestic product Mainland Norway (market prices)	4.2	3.8	-1.0	1.5	2.7	1.3	-0.4	1.2	0.6	0.8
Petroleum activities and ocean transport	1.9	-1.1	2.5	-0.5	7.9	-4.6	-4.2	0.8	7.3	-5.0
Mainland Norway (basic prices)	4.2	4.3	-0.8	1.5	2.7	1.5	-0.2	1.3	0.8	0.8
Mainland Norway excluding general government	3.9	5.0	-1.1	1.5	2.8	1.8	0.2	1.3	0.9	0.9
Manufacturing and mining	3.8	0.7	1.7	0.2	0.0	0.1	0.2	-0.4	0.9	-0.4
Production of other goods	3.1	2.7	-0.1	0.9	-0.6	1.9	1.6	-0.7	0.0	-0.3
Services incl. dwellings (households)	4.1	6.3	-1.8	1.8	4.0	2.0	-0.1	2.0	1.0	1.4
General government	5.1	2.2	0.1	1.6	2.4	0.7	-1.2	1.2	0.6	0.5
Taxes and subsidies products	3.7	0.9	-2.4	1.8	3.3	0.3	-1.8	0.6	-0.8	1.1

Source: Statistics Norway.

Table 8. National accounts: Final expenditure and gross domestic product. Price indices. 2020=100

	Unadjusted		Seasonally adjusted							
	2021	2022	21:1	21:2	21:3	21:4	22:1	22:2	22:3	22:4
Final consumption expenditure of households and NPISHs	102.9	107.6	102.0	102.1	103.2	104.4	103.9	106.3	108.9	110.9
Final consumption expenditure of general government	102.3	108.9	102.2	101.9	101.0	103.9	107.5	108.1	109.5	110.6
Gross fixed capital formation	103.8	111.4	102.1	102.8	104.5	105.4	108.4	110.9	112.4	114.0
Mainland Norway	104.5	112.4	101.7	102.4	103.1	104.6	107.7	110.5	112.0	113.0
Final domestic use of goods and services	102.3	106.7	100.4	101.9	107.6	98.4	103.5	107.4	109.1	104.6
Final demand from Mainland Norway	103.1	109.1	102.2	102.4	103.1	104.7	106.2	108.1	110.2	111.7
Total exports	149.0	248.2	124.1	132.6	127.9	207.7	239.6	238.0	270.7	244.7
Traditional goods	113.2	146.1	105.6	108.4	113.9	125.2	140.7	146.6	148.4	149.4
Total use of goods and services	113.9	142.1	106.3	109.5	112.6	125.8	137.2	139.8	150.3	139.8
Total imports	104.0	119.3	101.7	103.0	103.7	107.2	114.2	117.5	122.1	123.4
Traditional goods	105.3	124.2	102.8	103.0	105.2	109.7	118.2	123.5	127.7	127.4
Gross domestic product (market prices)	117.1	149.9	107.7	111.6	115.6	132.1	144.7	147.4	160.2	145.6
Gross domestic product Mainland Norway (market prices)	102.9	107.6	101.8	102.5	103.0	104.2	105.7	107.0	108.2	109.2

Source: Statistics Norway.

Table 9. National accounts: Final expenditure and gross domestic product. Price indices. Percentage change from previous period

	Unadjusted		Seasonally adjusted							
	2021	2022	21:1	21:2	21:3	21:4	22:1	22:2	22:3	22:4
Final consumption expenditure of households and NPISHs	2.9	4.5	1.5	0.1	1.0	1.2	-0.5	2.3	2.4	1.9
Final consumption expenditure of general government	2.3	6.5	3.1	-0.3	-0.8	2.8	3.4	0.6	1.2	1.0
Gross fixed capital formation	3.8	7.4	1.5	0.7	1.6	0.8	2.9	2.3	1.4	1.4
Mainland Norway	4.5	7.5	2.3	0.7	2.0	0.8	2.8	2.3	1.6	1.1
Final domestic use of goods and services	2.3	4.3	4.6	1.4	5.6	-8.5	5.1	3.8	1.5	-4.1
Final demand from Mainland Norway	3.1	5.8	2.1	0.1	0.7	1.6	1.4	1.8	1.9	1.4
Total exports	49.0	66.5	9.0	6.8	-3.6	62.4	15.4	-0.7	13.8	-9.6
Traditional goods	13.2	29.1	9.0	2.7	5.0	9.9	12.4	4.2	1.3	0.6
Total use of goods and services	13.9	24.8	6.0	3.0	2.8	11.7	9.1	1.9	7.5	-7.0
Total imports	4.0	14.8	2.2	1.3	0.6	3.4	6.6	2.9	3.9	1.1
Traditional goods	5.3	18.0	3.6	0.1	2.2	4.2	7.8	4.5	3.4	-0.3
Gross domestic product (market prices)	17.1	28.0	6.7	3.6	3.6	14.3	9.5	1.9	8.6	-9.1
Gross domestic product Mainland Norway (market prices)	2.9	4.5	2.8	0.6	0.5	1.2	1.4	1.3	1.1	1.0

Source: Statistics Norway.

Table 10. Main economic indicators 2014-2026. Accounts and forecasts. Percentage change from previous year unless otherwise noted

										Forecasts			
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Demand and output													
Consumption in households etc.	2.1	2.7	1.1	2.2	1.4	1.0	-6.2	4.4	6.8	1.2	1.5	2.2	3.0
General government consumption	2.7	2.4	2.3	1.9	0.6	1.1	-0.5	5.0	0.1	1.2	1.7	1.7	2.0
Gross fixed investment	-0.3	-4.0	3.9	2.6	2.2	9.5	-4.1	-0.8	4.4	1.8	1.9	0.6	-1.1
Extraction and transport via pipelines	-1.8	-12.2	-16.0	-5.4	0.7	14.3	-3.3	-2.1	-5.5	5.0	6.0	3.0	-1.5
Mainland Norway	0.4	-0.2	9.0	6.8	1.5	6.3	-3.1	1.7	6.6	0.2	0.6	0.1	-1.0
Industries	-0.7	-2.8	12.6	9.2	3.1	10.3	-5.3	5.0	14.5	1.4	-1.7	-3.3	-4.6
Housing	-1.4	3.2	6.6	7.3	-6.5	-1.1	-1.6	3.0	-1.4	-3.2	1.2	3.3	2.5
General government	4.5	0.2	6.4	2.6	8.1	7.5	-1.1	-4.5	0.9	1.1	4.3	3.3	2.2
Demand from Mainland Norway[1]	1.9	2.0	3.1	3.1	1.2	2.3	-3.9	4.0	4.8	0.9	1.4	1.6	1.8
Exports	3.8	3.9	0.4	1.6	-1.5	2.1	-2.3	5.8	5.9	4.8	2.3	1.8	1.2
Traditional goods	4.2	6.5	-11.2	0.9	2.0	5.1	-0.8	4.6	-0.3	5.3	3.1	3.3	3.6
Crude oil and natural gas	3.0	1.3	5.4	5.2	-4.6	-2.9	10.5	2.9	0.3	4.3	4.4	1.3	-3.0
Imports	2.2	1.9	1.9	1.8	1.4	5.3	-9.9	1.7	9.3	3.5	1.9	2.1	2.4
Traditional goods	2.1	2.7	-1.4	3.5	2.8	6.2	-2.7	5.7	2.5	-0.2	1.6	2.0	2.3
Gross domestic product	2.0	1.9	1.2	2.5	0.8	1.1	-1.3	3.9	3.3	1.6	1.8	1.5	1.2
Mainland Norway	2.2	1.4	0.9	2.2	1.9	2.3	-2.8	4.2	3.8	1.3	1.6	1.5	1.6
Manufacturing	2.7	-4.4	-4.1	-0.1	1.6	2.1	-5.7	3.8	0.7	-0.7	2.5	0.3	1.4
Labour market													
Total hours worked. Mainland Norway	1.4	0.6	0.6	0.5	1.6	1.5	-2.1	2.5	3.8	-0.2	0.4	0.5	0.9
Employed persons	1.0	0.4	0.3	1.1	1.6	1.6	-1.5	1.2	3.9	0.6	0.1	0.2	0.4
Labor force	0.7	1.5	0.2	-0.2	1.4	1.0	0.4	1.2	1.4	0.8	0.1	0.3	0.4
Participation rate (level)	71.7	71.9	71.3	70.6	71.1	71.4	71.3	72.1	72.6	72.7	72.4	72.4	72.3
Unemployment rate (level)	3.8	4.7	4.9	4.4	4.0	3.9	4.7	4.4	3.2	3.6	3.8	4.0	4.0
Prices and wages													
Wages per standard man-year	3.1	2.8	1.7	2.3	2.8	3.5	3.1	3.5	4.4	5.0	4.5	4.5	4.3
Consumer price index (CPI)	2.0	2.1	3.6	1.8	2.7	2.2	1.3	3.5	5.8	5.0	2.3	1.7	2.0
CPI-ATE[2]	2.4	2.7	3.0	1.4	1.6	2.2	3.0	1.7	3.9	5.4	2.8	2.1	2.2
Export prices, traditional goods	2.7	2.6	4.5	4.7	5.1	0.1	-3.5	13.2	29.1	-3.8	-1.0	0.3	1.4
Import prices, traditional goods	4.1	5.0	2.5	3.2	4.1	2.5	4.3	5.3	18.0	5.7	-0.4	0.5	1.0
House prices	2.7	6.1	7.0	5.0	1.4	2.5	4.3	10.5	5.2	-2.8	-1.3	0.5	2.6
Income, interest rates and excange rate													
Household real disposable income	2.4	5.3	-1.6	2.0	0.9	2.0	1.1	3.6	-2.5	-2.8	3.9	4.1	2.8
Household saving ratio (level)	7.8	9.8	6.9	6.6	5.9	7.1	12.9	12.7	3.6	0.8	3.0	4.6	4.3
Money market rate (3 month NIBOR) (level)	1.7	1.3	1.1	0.9	1.1	1.6	0.7	0.5	2.1	3.5	2.9	2.4	2.4
Lending rate, credit loans (level)[3]	3.9	3.2	2.6	2.6	2.7	3.0	2.6	2.1	2.9	4.7	4.6	4.1	3.9
Real after-tax lending rate, banks (level)	0.8	0.1	-1.6	0.1	-0.7	0.2	0.7	-1.8	-3.3	-1.3	1.2	1.4	1.1
Importweighted krone exchange rate (44 countries)[4]	5.3	10.5	1.8	-0.8	0.1	2.9	6.7	-5.3	1.2	7.5	0.5	0.0	0.0
NOK per euro (level)	8.35	8.95	9.29	9.33	9.60	9.85	10.72	10.16	10.10	11.14	11.19	11.19	11.19
Current account													
Current balance (bill. NOK)[5]	374	282	163	210	320	136	38	574	1691	829	876	790	554
Current account (per cent of GDP)	11.8	9.0	5.2	6.3	9.0	3.8	1.1	13.6	30.4	16.6	16.8	15.0	10.4
International indicators													
Exports markets indicator	4.7	5.3	3.8	5.6	4.3	3.3	-7.6	9.5	7.8	1.8	1.9	3.6	3.7
Consumer price index. euro-area	0.4	0.2	0.2	1.5	1.8	1.2	0.3	2.6	8.4	5.5	2.5	2.0	2.0
Money market rate, euro (level)	0.2	0.0	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	0.3	3.6	2.5	2.0	2.0
Crude oil price US dollar (level)[6]	100	53	45	55	72	64	43	71	99	82	77	73	70
Crude oil price NOK (level)[6]	627	431	379	452	583	564	407	609	951	858	813	769	734

[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 8 March 2023.