

Economic Survey

Statistics Norway



Statistisk sentralbyrå

- Economic developments in Norway
- Forecasts 2018-2021

4/2018

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Economic developments in Norway

The Norwegian economy is in a moderate cyclical upturn. According to preliminary seasonally adjusted figures from the quarterly national accounts (QNA), average quarterly mainland GDP growth for the past eight quarters has been just over 0.6 per cent. This is equivalent to annualised growth of 2.6 per cent, which is somewhat higher than estimated trend growth of around 2 per cent. An expansionary fiscal policy, a weak krone, low wage growth and low interest rates have contributed to the upturn. These factors are

expected to become more neutral, or even contractionary, in the years ahead. Given positive impulses from petroleum investment and a modest global economic upturn, a moderate upturn in the Norwegian economy is likely in the next few years as well.

We assume that fiscal policy will be cyclically neutral in the near term, in contrast to the last few years. Up until 2017, an expansionary fiscal policy was conducted to offset the negative impulses in the wake of the fall in

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

	2016	2017*	Seasonally adjusted			
			17:4	18:1	18:2	18:3
Demand and output						
Consumption in households etc.	1.3	2.2	0.7	0.1	1.0	-0.2
General government consumption	2.1	2.5	1.4	0.0	0.3	0.3
Gross fixed investment	5.2	3.6	1.9	-6.3	6.7	0.5
Extraction and transport via pipelines	-16.0	-3.8	13.0	-13.2	13.2	1.7
Mainland Norway	10.7	7.0	0.5	-5.0	5.5	0.7
Final domestic demand from Mainland Norway ¹	3.5	3.3	0.8	-1.1	1.8	0.2
Exports	1.1	-0.2	-2.1	0.5	1.7	0.9
Traditional goods	-8.6	1.7	0.1	-1.0	1.4	-0.5
Crude oil and natural gas	4.9	1.5	-5.1	-1.1	0.8	2.2
Imports	3.3	1.6	1.8	-2.5	3.5	-0.5
Traditional goods	-0.1	2.7	2.1	-0.6	1.3	0.0
Gross domestic product	1.2	2.0	0.2	0.3	0.4	0.6
Mainland Norway	1.1	2.0	0.9	0.5	0.7	0.3
Labour market						
Man-hours worked	0.4	0.3	0.6	0.7	0.2	0.5
Employed persons	0.2	1.1	0.4	0.5	0.2	0.4
Labour force ²	0.2	-0.2	0.2	0.7	0.3	0.8
Unemployment rate. level ²	4.7	4.2	4.0	3.9	3.8	4.0
Prices and wages						
Annual earnings	1.7	2.3				
Consumer price index (CPI) ³	3.6	1.8	1.3	2.0	2.4	3.3
CPI adjusted for tax changes and excluding energy products (CPI-ATE) ³	3.1	1.4	1.1	1.2	1.2	1.7
Export prices. traditional goods	4.0	5.4	2.3	2.2	1.8	-0.1
Import prices. traditional goods	1.8	3.7	2.3	1.0	1.0	1.7
Balance of payment						
Current balance. bill. NOK ⁴	124.6	186.2	33.8	70.1	79.1	91.8
Memorandum items (unadjusted level)						
Money market rate (3 month NIBOR)	1.1	0.9	0.8	0.9	1.1	1.1
Lending rate. credit loans ⁵	2.6	2.6	2.6	2.6	2.6	2.6
Crude oil price NOK ⁶	378	453	433	415	501	527
Importweighted krone exchange rate. 44 countries. 1995=100	105.4	104.6	106.0	103.6	106.0	105.5
NOK per euro	9.29	9.33	9.38	9.35	9.60	9.63

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.

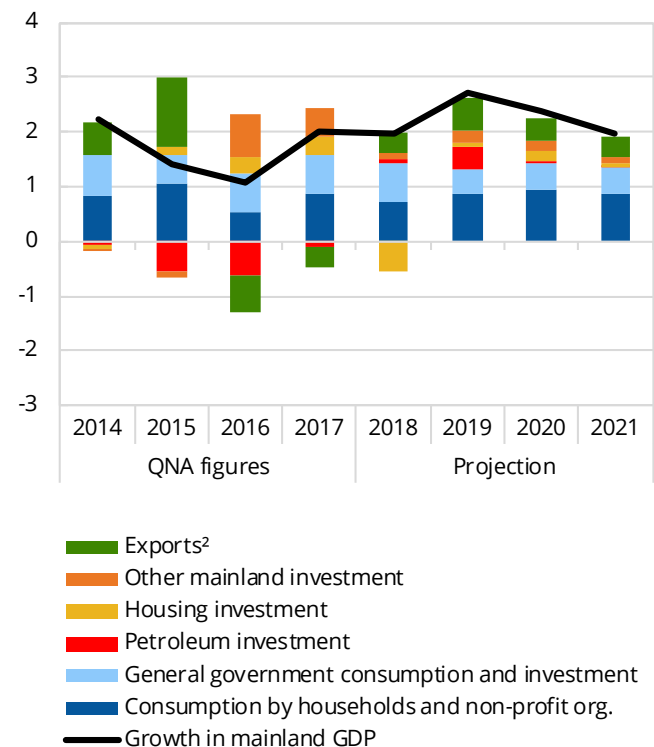
oil prices in 2014. The tax rate on ordinary income was reduced by a total of four percentage points in the period 2014–2017. During the same period, public consumption and investment combined increased by an average of around 2.5 per cent annually, thereby bringing about pronounced growth in public demand. By way of comparison, we expect average growth in public investment and consumption to be below trend growth for mainland Norway in the projection period extending to 2021. Because the ageing population and increasing growth in real wages mean higher expenditure on old-age pensions and other transfers, fiscal policy as a whole will nonetheless be approximately cyclically neutral in the years ahead. We envisage small changes in the tax level in the near term, in keeping with the budget settlement for 2019. The fiscal stimulus, measured as the change in the structural non-oil budget deficit (SNOBD) as a share of trend mainland GDP, is expected to remain almost constant through the projection period. Spending of petroleum revenue will thus be in line with the fiscal rule.

Exchange rate developments going forward are shrouded in uncertainty. The Norwegian krone has been weak for the past two years, measured by the import-weighted krone exchange rate. In view of its current weak level and expectations that the oil price will remain higher than USD 60 per barrel, we assume that the krone will strengthen somewhat in the next few years. We also expect a somewhat faster rise in interest rates than market expectations imply. At the time of writing, a euro costs NOK 9.6. We expect a euro to cost around NOK 9.2 in 2021. Even though such an appreciation of the krone will contribute to moderating the upturn by weakening the competitiveness of exposed sectors, the krone will still be about 10 per cent cheaper in 2021 than the average EUR/NOK exchange rate since the introduction of the euro in 1999. The real exchange rate will also be weaker, by about 5 per cent, than the average from 1999.

The negative impulses from the housing market appear to be tapering off. Housing investment has fallen consistently for a year, but the fall has slowed recently. According to our projections, housing investment will reverse into an upswing in the first half of

2019. The upswing is a consequence of house prices rising through the current year, albeit at a somewhat slower rate in recent months. There are also prospects of a further rise in house prices in the years ahead and more housing projects will then be profitable. The rise in house prices is driven by higher income, but is checked by higher interest rates and somewhat slower population growth. As a result, the rise in house prices is expected to be so moderate that in reality house prices will remain virtually unchanged up to 2021. By comparison with the last five years, which were

Figure 1. Growth in mainland GDP and contributions from demand components.¹ Percentage points, annual rate



¹ 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 Economic Survey 1/2018, Box 3. All figures are seasonally adjusted and in constant prices.

² The export variable is defined as total exports excluding exports of crude oil, gas and shipping.

Source: Statistics Norway.

Table 2. Growth in mainland GDP and contributions from demand components.¹ Percentage points, annual rate

	QNA				Projection			
	2014	2015	2016	2017	2018	2019	2020	2021
Consumption by households and non-profit organisations	0.8	1.0	0.5	0.9	0.7	0.9	1.0	0.9
General government consumption and investment	0.7	0.5	0.7	0.7	0.7	0.5	0.5	0.5
Petroleum investment	-0.1	-0.5	-0.6	-0.1	0.1	0.4	0.0	0.0
Housing investment	-0.1	0.1	0.3	0.3	-0.5	0.1	0.2	0.1
Other mainland investment	0.0	-0.1	0.8	0.5	0.1	0.2	0.2	0.1
Exports	0.6	1.3	-0.7	-0.3	0.4	0.6	0.4	0.4
Growth in mainland GDP	2.2	1.4	1.1	2.0	2.0	2.7	2.4	2.0

¹ See footnotes to Figure 1.

Source: Statistics Norway.

characterised by wide fluctuations in both house prices and housing investment, the housing market now appears to be more in balance.

Petroleum investment is expected to increase markedly in 2019. The fall in petroleum investment has gradually levelled off since 2016, and investment has increased slightly through the last few quarters. Operators on the Norwegian continental shelf expect a further rise in investment in the near term. Although the oil price has fallen quite substantially since the beginning of October, lower costs and expectations of an oil price of over USD 60 per barrel will make many petroleum investments profitable in the years ahead. We believe petroleum investment will increase substantially from 2018 to 2019, largely owing to the Johan Sverdrup Phase 2 and Johan Castberg development projects. The investment level in 2020 and 2021 is expected to remain close to the level in 2019, which is almost 19 per cent lower than the record level in 2013.

After two years of high growth in business investment, near-term developments are expected to be more moderate. In 2018 there was strong growth in investment in both distribution and production of power. Further growth in production is expected in 2019 as a result of the development of more wind farms, but as the installation of the new AMS Smart meters is expected to be completed by the end of 2018, investment growth in this industry will be moderate in 2019. In manufacturing, on the other hand, the high investment growth this year is expected to continue in 2019 as a result of large individual projects in refined petroleum products and in chemical and pharmaceutical products. Norges Bank's regional network reports moderate growth for service industries as a whole. As a result of higher interest rates and moderate global developments, growth in aggregate business investment will be modest in the near term.

Wage growth is picking up, rising through 2017 and 2018 from record low growth in average annual wages of 1.7 per cent in 2016. Although nominal annual wage growth is expected to be 2.8 per cent this year, higher energy prices mean that there will barely be any growth in real wages in 2018. In the near term, an improved economic situation with lower unemployment and lower energy prices will provide a basis for higher wage growth, both nominal and real. By 2021, nominal annual wage growth is expected to have increased to around 4 per cent. In the event, the wage share in manufacturing will then be close to the average for the last 20 years.

The fall in unemployment appears to be largely over. After peaking at slightly more than 5 per cent in early 2016, unemployment is now 4.0 per cent according to Statistics Norway's Labour Force Survey (LFS). The decline in unemployment is broad-based across the whole of Norway. We expect unemployment as an annual average to be 3.9 per cent in 2018, and then to

edge down gradually to 3.7 per cent in 2021. Owing to an increased supply of labour, unemployment will not fall more. The participation rate is expected to increase from just under 70 per cent last year to around 71 per cent in 2021. Inward labour migration is expected to undergo little change in the next few years, and will thus be far lower than it was five years ago.

By the end of 2021, the key policy rate will probably have increased by over one percentage point from the current level. Norges Bank's operational target is an annual rise in consumer prices of close to 2 per cent over time. Monetary policy shall also contribute to output and employment stabilising around the highest possible level that is consistent with price stability over time. There are prospects that the upturn in the Norwegian economy will continue, albeit at a moderate rate. Given a somewhat tighter labour market, it is reasonable to assume that wage growth, and accordingly also domestic cost inflation, will pick up. Underlying inflation is expected to rise towards the inflation target in the years ahead. In light of this economic scenario, Norges Bank is also expected to continue raising the key rate. We have assumed five interest rate hikes, each of 0.25 percentage point, by the end of 2021. The interest rate on home equity lines of credit will accordingly rise to around 4 per cent in 2021. Even in this scenario, real interest rates will remain at a historically low level.

Household consumption will pick up somewhat in the years ahead, but growth will remain moderate. Consumption is driven by household income, wealth and interest rates. Wage income, the most important source of household income, is expected to increase in the years ahead. The ageing population and increased real wages also mean that public transfers will grow more. Conversely, net capital income will curb real income growth, as some of the interest facing households will continue to increase over the next few years. The weak developments in real house prices also have the effect of checking consumption growth. On balance, this will result in consumption growth in the years ahead that is considerably lower than in previous cyclical upturns, but nonetheless slightly higher than mainland trend growth.

The cyclical upturn has now entered a new phase. It was initially characterised by expansionary fiscal policy, lower interest rates, wage moderation and a weak exchange rate. Going forward, we expect fiscal policy to become neutral, interest rates to rise, wage growth to pick up and the krone to strengthen somewhat. Many of the forces that previously generated positive impulses are thus expected to generate neutral or contractionary impulses in the years ahead. The picture for petroleum investment is the opposite, and growth is expected here, particularly in 2019. This, coupled with a further moderate global cyclical upturn, offers promise that the Norwegian upturn will continue, albeit at a moderate pace. We forecast that the Norwegian economy will be in a roughly cyclical neutral situation in 2020.

Table 3. Main economic indicators 2017-2021. Accounts and forecasts. Percentage change from previous year unless otherwise noted

	Account 2017*	Forecasts										
		2018			2019			2020			2021	
		SN	NB	MoF	SN	NB	MoF	SN	NB	MoF	SN	NB
Demand and output												
Consumption in households etc.	2.2	2.0	2.2	2.6	2.4	2.1	2.9	2.6	2.0	2.9	2.4	1.9
General government consumption	2.5	1.8	2.2	1.6	1.8	1.5	1.5	1.8	1.4	..	1.7	1.3
Gross fixed investment	3.6	-0.2	..	1.1	4.5	..	3.0	2.2	..	3.2	1.1	..
Extraction and transport via pipelines	-3.8	3.1	2.5	4.8	13.2	10.8	8.3	0.5	4.1	6.9	0.2	1.1
Mainland Norway	7.0	-0.8	..	..	1.9	..	..	2.7	..	..	1.4	..
Industries	9.2	1.8	0.0	6.0	3.4	4.2	5.3	3.0	1.0	3.3	1.6	-0.3
Housing	7.0	-9.9	-9.9	-10.1	1.3	-1.5	-4.3	4.2	0.7	1.7	1.4	1.0
General government	3.6	5.2	..	3.6	0.0	..	1.2	0.6	..	..	1.0	..
Demand from Mainland Norway ¹	3.3	1.3	1.2	1.9	2.1	1.9	2.3	2.4	1.6	2.3	2.0	1.4
Stockbuilding ²	0.1	0.5	..	..	0.1	..	..	0.0	..	..	0.0	..
Exports	-0.2	0.2	..	1.7	2.4	..	2.2	3.7	..	5.5	3.0	..
Traditional goods ³	1.7	2.2	3.5	4.6	3.3	5.2	5.6	3.0	4.3	5.4	2.8	3.0
Crude oil and natural gas	1.5	-4.0	..	-4.9	-0.2	..	-1.3	5.8	..	8.4	4.1	..
Imports	1.6	1.5	2.9	4.7	3.6	3.9	3.0	2.3	2.9	3.1	2.1	2.8
Traditional goods	2.7	2.8	..	..	3.2	..	..	2.9	..	..	2.4	..
Gross domestic product	2.0	1.4	1.8	1.7	2.4	2.2	2.3	2.7	2.2	3.3	2.1	1.6
Mainland Norway	2.0	2.0	2.5	2.3	2.7	2.5	2.7	2.4	1.8	2.8	2.0	1.2
Labour market												
Employed persons	1.1	1.5	1.6	1.6	1.1	1.2	1.3	0.7	0.8	0.9	0.8	0.3
Unemployment rate (level)	4.2	3.9	3.8	3.8	3.8	3.4	3.7	3.8	3.2	3.7	3.7	3.2
Prices and wages												
Annual earnings	2.3	2.8	2.8	2.8	3.2	3.2	3¼	3.6	3.8	..	4.1	3.9
Consumer price index (CPI)	1.8	2.7	2.7	2.5	1.8	1.3	1.5	1.6	1.4	1.7	1.9	1.8
CPI-ATE ⁴	1.4	1.5	1.4	1.3	1.9	1.7	1.8	1.7	1.6	2.1	1.8	1.7
Export prices. traditional goods	5.4	5.7	..	..	1.2	..	..	1.3	..	..	1.7	..
Import prices. traditional goods	3.7	5.0	..	..	2.3	..	..	0.9	..	..	1.3	..
Housing prices ⁵	5.0	1.6	0.9	..	1.4	2.4	..	1.2	2.5	..	0.6	2.8
			
			
Balance of payment												
Current balance (bill. NOK)	186	324	..	293	310	..	266	343	..	..	370	..
Current account (per cent of GDP)	5.7	9.2	..	8.3	8.4	..	7.3	8.9	..	..	9.2	..
			
Memorandum items:												
Household real disposable income	1.7	1.7	..	..	2.5	..	..	3.1	..	..	2.5	..
Household savings ratio (level)	6.9	6.5	..	..	6.7	..	..	7.6	..	..	8.2	..
Money market rate (level)	0.9	1.1	1.1	1.1	1.3	1.5	1.4	1.8	1.9	1.8	2.3	..
Lending rate. credit loans (level) ⁶	2.6	2.6	..	..	2.9	..	..	3.2	..	..	3.7	..
Crude oil price NOK (level) ⁷	453	592	..	578	544	..	583	532	..	562	528	..
Export markets indicator	4.7	3.4	..	..	4.4	..	..	4.3	..	..	4.2	..
Importweighted krone exchange rate (44 countries) ⁸	-0.8	0.0	-0.4	-0.2	-0.6	-3.5	-0.7	-2.1	-2.0	0.0	-0.8	-0.8

¹ Consumption in households and non-profit organizations + general government consumption + gross fixed capital formation in Mainland Norway.² Change in stockbuilding. Per cent of GDP.³ 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.⁴ CPI adjusted for tax changes and excluding energy products (CPI-ATE).⁵ Norges Bank forecasts the housing price index published by Eiendom Norge.⁶ Current account not adjusted for saving in pension funds.⁷ Yearly average.⁸ Average spot price. Brent Blend.⁹ Increasing index implies depreciation. Ministry of Finance forecasts trade-weighted exchange rate.

Source: Statistics Norway (SN). Ministry of Finance. Meld.St.1. (2018-2019) (MoF). Norges Bank. Pengepolitisk rapport 3/2018 (NB).

Contractionary fiscal policy in 2018 – neutral going forward

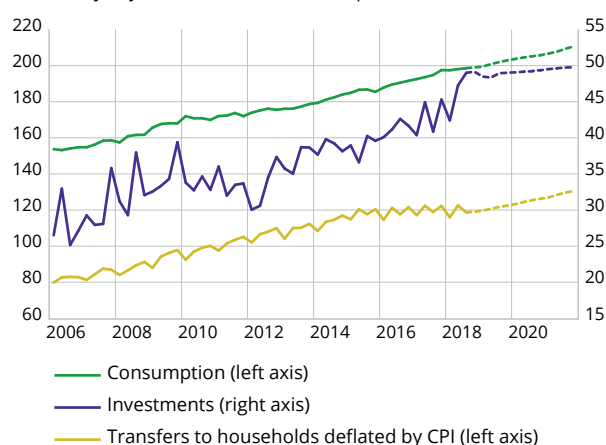
Up to and including 2016, an expansionary fiscal policy contributed to maintaining growth in the Norwegian economy at a high level at a time when reduced petroleum investment was generating negative impulses to the economy. The expansionary impulses in 2017 were small, and in 2018 they are weakly contractionary measured in terms of the structural, non-oil budget deficit (SNOBD) as a share of trend mainland GDP. Growth in general government consumption appears to be appreciably lower in 2018 than the previous year, while gross investment may increase somewhat more than last year. QNA figures up to and including Q3 of this year indicate that growth in general government purchases of goods and services may be a little higher than projected in the National Budget 2019 (NB2019). Household transfers are forecast to increase nominally by less than three per cent in 2018. The real value of the transfers in 2018 will thus be approximately unchanged compared with the previous year. Real growth in consumption, gross investment and transfers combined was about 2 per cent in both 2016 and 2017, close to estimated trend growth in the mainland economy. In 2018, the sum of these fiscal components will increase by 1.6 per cent, such that the most central expenses in public budgets generate less impetus to the Norwegian economy than in the previous two years.

The tax rate on ordinary income for companies (excluding the financial sector) and personal taxpayers was reduced from 24 to 23 per cent in 2018. The petroleum tax and power supply taxation systems were revised so that these two industries are not appreciably affected by the tax change. Bracket tax on personal income has been increased, so that most of the revenue loss due to reduced tax on ordinary income will be recouped through an increase in other income taxes. Tax increases are projected to increase CPI inflation by 0.2 percentage point in 2018. On balance, fiscal policy is thus weakly contractionary in 2018.

Fiscal policy in 2019 is based on projections published in NB2019 and changes due to the budget agreement between the Government and the Christian Democratic Party. Growth in general government consumption is assumed to be in line with growth in the current year, while investment growth will be lower. Aggregate growth is estimated to be 1.5 per cent next year, which is the same as the projection in NB2019. Transfers are expected to increase more in real terms next year because real wage growth will increase somewhat. This means that the overall real growth in spending on purchases of goods and services and household transfers will increase more next year than this year, but the increase will still be less than estimated trend economic growth. However, some stimuli will be provided through lower indirect taxes (electricity and sugar taxes). Tax on ordinary income is also being reduced from 23 to 22 per cent, but bracket tax on personal income will be regulated so that there will be little

Figure 2. General government

Seasonally adjusted, billion 2016 NOK, quarter



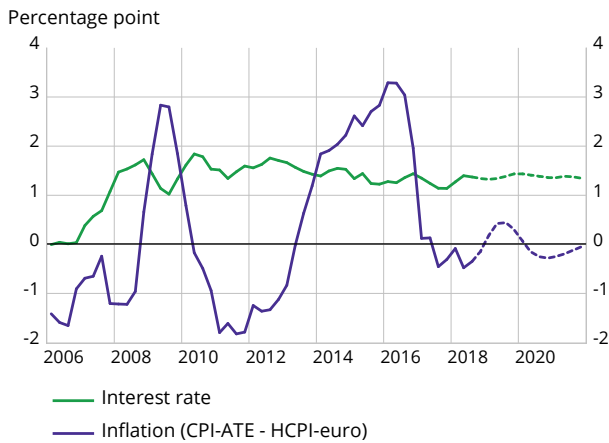
Source: Statistics Norway

change in the household taxation level. However, some industries will be affected by several taxation changes. On balance, we project that fiscal policy will be roughly cyclically neutral in 2019. In NB2019, the Government forecasts that SNOBD as a share of mainland trend GDP will be approximately unchanged from 2017 to 2019.

No fiscal policy has been adopted for 2020 and 2021. Our growth projections for general government consumption and investment are somewhat lower than mainland trend growth. Transfers, on the other hand, are increasing slightly more than trend growth, largely as a consequence of higher real wage growth, while growth in the number of old-age pensioners will only increase slightly more in the near term than in previous years. As a result of higher real wage growth, the overall demand impulses generated by general government purchases of goods and services and real transfers will result in slightly expansionary impulses in 2020. We assume higher indirect taxes in the form of increased environmental taxes equivalent to a revenue increase of NOK 1.5 billion in 2020 and 2021. Overall, the projections imply an approximately neutral impetus from fiscal policy in the projection scenario, in line with the fiscal rule.

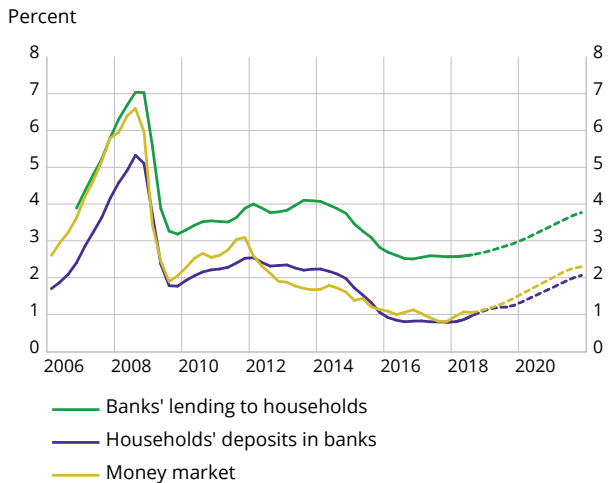
The value of the Government Pension Fund Global (GPF) is now about NOK 8 500 billion, while it is projected in NB2019 to be worth NOK 8 700 billion at the beginning of 2019. The krone is still weak, and on balance is expected to appreciate a little in the near term. In isolation, this will have a negative impact on the Fund measured in Norwegian kroner. The crude oil price has fluctuated widely so far in 2018, and fell in November. There is great uncertainty as to how the price will move going forward. Even if the oil price should remain at approximately the level in early December, increased oil production these next few years will increase the cash flow to the government from petroleum activities, and accordingly augment the fund. Movements in global equity prices in keeping with what we have seen this autumn show that the

**Figure 3. Interest rate and inflation differential
NOK and the euro**



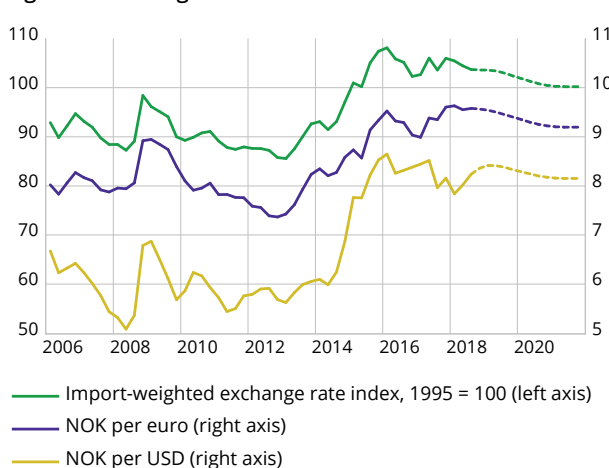
Source: Norges Bank and Statistics Norway

Figure 4. Norwegian interest rates



Source: Norges Bank and Statistics Norway

Figure 5. Exchange rates



Source: Norges Bank

value of the GPFG can change rapidly and substantially. How fiscal policy should be oriented, and how the return on the GPFG should be spent in light of this uncertainty, has been and continues to be the subject of discussion among economists, without any consensus being reached that points to any revision of the fiscal rule.

The interest rate will be raised further

After two and a half years at a record-low level, the key rate was raised to 0.75 per cent in September. The money market rate, which was 0.8 per cent at the beginning of the year, has risen to 1.2 per cent at the beginning of December. After strengthening through the first half of the year, the krone has on two occasions depreciated pronouncedly this autumn, and at the end of November was approximately as weak as at the beginning of the year.

Interest rates on forward rate agreements, FRA rates, indicate that financial markets are expecting the money market rate to reach 1.4 per cent in September 2019. A roughly unchanged spread between the key rate and the money market rate implies one interest rate hike. In its September Monetary Policy Report, Norges Bank forecasts two rate hikes in the same period.

Norwegian government bond yields fell a little in November, and are now at roughly the same level as three months ago. At the end of November, the yield on government bonds with a 3-year residual maturity was 1.2 per cent, while the yields on government bonds with 5 and 10 years' residual maturity were 1.4 and 1.8 per cent, respectively.

In our projections we have assumed two interest rate hikes in both 2019 and 2020, and one in 2021. This is in line with Norges Bank's projections of September this year. The rate increases are attributable to the facts that the Norwegian economy is in a cyclical upturn and that money market rates abroad will rise in the near term. The interest rate differential between Norway and the euro area will thus remain unchanged for the next few years. Given the interest rate increases factored into our projections, inflation will also remain just under the new inflation target of 2 per cent.

We forecast that the krone will strengthen somewhat in the next few years. We assume that the annualised value of the krone, measured by the import-weighted krone exchange rate, will remain unchanged from 2017 to 2018. In the years ahead we expect the krone to appreciate moderately, but only to the extent that the EUR/NOK exchange rate will be around 9.2 in 2021. Today's weak krone and moderate inflation from next year point to an appreciation of the krone, but the oil price fall and increased global economic uncertainty may imply a continued weak krone. The interest rate path that we have entered in our projections is at a higher level than the developments in money market rates that the market has priced in. If our projections

prove correct, and interest rates are higher than envisaged by the market, this could also boost the krone.

Moderate consumption growth and a higher saving ratio

Consumption in households and non-profit organisations increased by 2.2 per cent in 2017 compared with only 1.3 per cent in 2016. Seasonally adjusted QNA figures show that consumption fell in Q3 of this year for the first time since 2016 Q1. The decline was 0.2 per cent, following growth of a full 1.0 per cent in Q2 and almost zero growth in Q1. This development is largely attributable to developments in goods consumption, which first fell by 0.7 per cent in Q1, increased by 1.4 per cent in Q2 and then fell back 1.4 per cent in Q3. It is largely purchases of food and vehicles, two important groups of consumer goods, that explain the unstable developments in goods consumption so far this year. The fall in the last quarter is also attributable to weak developments in purchases of clothing and footwear, and of alcoholic beverages. However, electricity consumption, which fell by over 10 per cent in Q2 because of a warm spring and early summer, eased Q3 decline in goods consumption.

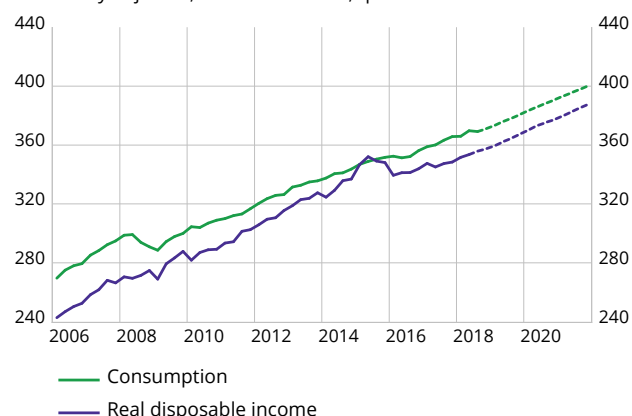
The goods consumption index for October shows a seasonally adjusted fall of 0.2 per cent, which is largely due to a decline in purchases of clothing and footwear and in fuel and electricity consumption. The weak Q3 growth in goods consumption has thus continued into the Q4.

Growth in consumption of services has been stable, however, remaining for the most part between 0.5 and 1.0 per cent each quarter for the past two years. Service consumption increased by 0.6 per cent in Q3 compared with 0.8 per cent the previous quarter, bolstered particularly by purchases of both leisure services and hotel and restaurant services. Sales of child daycare services and other personal services, which fell by 1.1 per cent, dampened the upswing in consumption of services in Q3.

In our model, developments in consumption are largely determined by changes in household income, wealth and interest rates. If we exclude disbursements of share dividend – which probably contribute little to consumption – real disposable income increased by 1.7 per cent in 2017, against virtually zero growth the previous year. Wage income, which is the primary source of

Figure 6. Income and consumption in households

Seasonally adjusted, billion 2016 NOK, quarter



Source: Statistics Norway

household income, contributed most to growth in real disposable income last year. This was a result of real wage growth of 0.4 per cent, which admittedly is very low growth viewed in a historical perspective, and employment growth of just over 1 per cent. Public transfers also made an appreciable contribution to growth in real income last year, while net capital income did not make any significant contribution.

Now, as previously, we forecast approximately unchanged wages in real terms in 2018. In the years 2019 to 2021, positive and somewhat increasing growth in real wages, coupled with annual employment growth of just over 1 per cent or slightly lower, will push up growth in real disposable income. Public transfers will also contribute positively to growth in real disposable income through the projection period, following weak growth in 2018. The growth in transfers in the years ahead is partly due to increased old-age pensions. Conversely, net capital income will curb real income growth, as the interest rates facing households will continue to increase over the next few years. We expect average annual growth in real disposable income excluding share dividends of just under 2.5 per cent in the projection period, which will have the effect of stimulating consumption growth. However, weak developments in real house prices will dampen consumption growth in the near term. On balance, we foresee consumption growth of about 2 per cent this year and around 2.5 per cent for the next three years. By way of comparison, consumption increased by around 5 per cent annually during the cyclical upturn prior to the financial crisis.

Table 4. Real disposable income by households and non-profit organisations. Percentage growth compared with previous year

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017*	Forecasts				
												2018	2019	2020	2021	
Total	6.0	3.4	3.2	2.3	4.1	4.4	3.9	2.9	5.5	-1.7	1.7	1.7	2.5	3.1	2.5	
Excl. share dividends	4.8	2.7	3.4	1.8	4.1	4.3	3.8	2.4	2.4	0.0	1.7	1.5	2.6	2.8	2.3	

Source: Statistics Norway.

The household saving ratio including and excluding share dividends increased by 7 and 3.5 percentage points, respectively in the period 2008–2015, probably as a result of precautionary saving in the wake of the financial crisis and the pension reform that was introduced in 2011. In 2016 the saving ratio, both including and excluding share dividends, fell as a result of weak income developments, to 7 and 3 per cent, respectively. The ratio remained at these levels through 2017 as well. We forecast that the saving ratio will rise again by close to 1.5 percentage point during the projection period as a result of higher income growth, higher real interest rates after tax and weak developments in household wealth.

Modest rise in house prices

According to Statistics Norway's quarterly house price index, house prices as an annual average were 5 per cent higher in 2017 than the previous year. This upswing occurred despite the marked fall in prices through 2017 Q2 and Q3 as a result of a record-high supply of dwellings, lower population growth and the tightening of the Mortgage Regulations with effect from 1 January 2017.

Seasonally adjusted figures show that the fall in prices came to a halt at the end of 2017 and reversed into a renewed upswing through Q2 and Q3. In 2018 Q3, house prices were about 1.5 per cent higher than in 2017 Q1. Just as movements in prices for flats in the Oslo area contributed substantially to the fall in prices for Norway as a whole, so the renewed upturn has been dominated by a strong rise, particularly in 2018 Q2, in prices for the same type of dwelling in the same region.

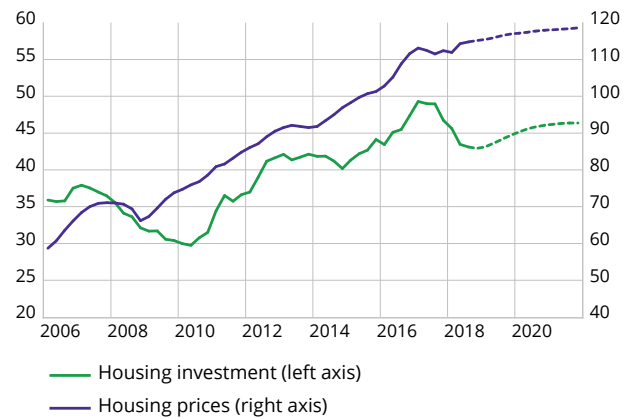
The monthly house prices statistics from Real Estate Norway show a seasonally adjusted fall in house prices of almost 3 per cent from February last year to January this year. From January to May this year the fall was fully reversed, and since then and up to October this year, house prices have edged up cautiously by about 0.3 per cent.

House prices are stimulated by an increase in real disposable income and lower real interest rates, and dampened by an increased supply of dwellings and lower population growth. House prices are also influenced temporarily by changes in households' expectations regarding both their own financial situation and the Norwegian economy. Restrictions that lead to less borrowing will also curb house prices. The new Mortgage Regulations, in force since 1 July this year, are largely a continuation of the borrowing requirements in the Mortgage Regulations of 1 January 2017.

Whereas growth in real disposable income will increase going forward, the lending rates facing households will rise in pace with money market rates. Higher lending rates will constrain borrowing for housing-related purposes, with the result that growth in household

Figure 7. Housing market

Seasonally adjusted. Left axis: billion 2016 NOK, quarter. Right axis: index, 2016 = 100



Source: Statistics Norway

debt will decrease gradually from around 6 per cent in 2017 to around 4.5 per cent in 2021. After several years of increasing optimism about the future, Finance Norway's business sentiment indicator has now fallen for three consecutive quarters. In the last survey for Q4, households are more uncertain than previously about the outlook for their own financial situation over the next few years, probably as a consequence of increased concern about higher interest rates and greater uncertainty about global economic developments.

As before, we envisage a modest rise in house prices in nominal terms through the projection period as a consequence of a continued fairly good balance between demand and supply in the housing market. Population growth, and hence growth in housing demand, will increase less in the near term than in the years prior to the housing market downturn last year. As housing investment has now fallen sharply, the supply of dwellings, i.e. housing capital, will also increase less in the near term than in recent years.

According to the QNA, housing investment rose 7 per cent as an annual average in 2017. However, seasonally adjusted figures show that housing investment growth declined through 2017 in line with a falling trend in housing starts, measured in terms of area, in the period since March last year. Housing investment fell by 4.5 per cent in 2017 Q4, and by a further 2.4 and 4.7 per cent in 2018 Q1 and Q2. In Q3, housing investment decreased by 0.8 per cent. Although the fall in housing starts appears to have come to a halt and reversed into renewed, cautious growth, weak developments in real house prices will have a dampening effect on housing investment going forward. We forecast a fall in housing investment of around 10 per cent as an annual average this year. In the years 2019–2021, housing investment will rise again, albeit at a moderate pace. Our projections indicate that the level of housing investment in 2021 will be 3.5 per cent lower than the peak level in 2017.

Strong impulses from petroleum investment in 2019

After falling for several years, the level of petroleum investment increased by 13 per cent in 2018 Q2, according to seasonally adjusted QNA figures. Growth was also recorded in Q3, but was considerably more moderate.

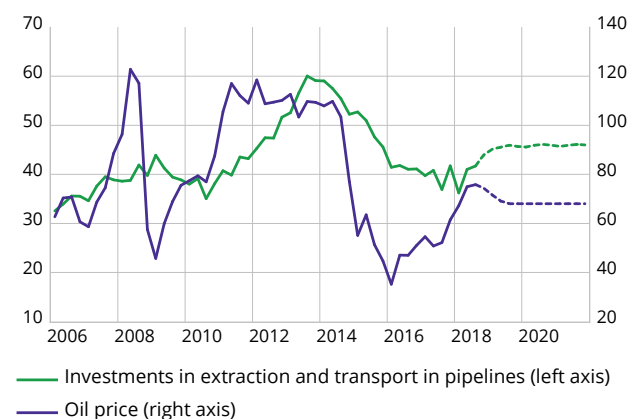
According to Statistics Norway's most recent investment survey of manufacturing companies' projections (KIS survey), investment with a current value of NOK 155.5 billion is projected for 2018. This is marginally lower than the figure arrived at in Q3. The projection is 3.1 per cent higher than the corresponding figure for 2017, published in 2017 Q4. Realisation of the present projection for 2018 presupposes investment of NOK 46.9 billion in Q4, which implies investment growth of a full 20 per cent from Q3 to Q4. However, according to the Norwegian Petroleum Directorate's fact pages, figures for drilling days in October and November indicate somewhat lower drilling activity in Q4 than in Q3. As drilling costs account for over 40 per cent of investment, the weak Q4 drilling figures clearly indicate that some of the investment planned for Q4 is being put back to 2019. We therefore forecast that final figures for investment in 2018 will be lower than the current survey projection, but somewhat higher than investment in 2017.

According to the KIS survey, licensees on the Norwegian continental shelf project investment in 2019 at about NOK 175 billion, which is 6 per cent higher than forecast in the previous quarter. The increase will come about in field development, fields in operation and shut-downs and removals. Phase 2 of the Johan Sverdrup development has been included in the survey for the first time. The increase in 2019 compared with this year appears likely to occur in field development in particular, but also in exploration. The Johan Sverdrup Phase 2 and Johan Castberg development projects, and the further development of the Snorre, Troll, Njord and Valhall fields will contribute to the expected growth in field development. We assume that plans for development and operation (PDOs) for the five projects Luno 2, Fogelberg, Tor II, Cara/P1 and Brasse will be submitted in 2019. These developments are all relatively small. As investment in development projects is also usually lowest in the first development year, we forecast investment of only NOK 3 billion in these projects in 2019. The strong investment growth implicit in these plans for 2019 may result in larger postponements from 2019 to 2020 than those we foresee from this year to next year. We nonetheless assume somewhat higher investment in 2019 than projected in our previous report, but assume that it will be somewhat lower than the current survey figures. We forecast growth in investment volume of as much as 13 per cent next year.

Investment developments in 2020 and 2021 are projected to be somewhat weaker than assumed in our previous report, mainly because we have increased

Figure 8. Petroleum investments and oil price

Seasonally adjusted. Left axis: billion 2016 NOK, quarter. Right axis: USD per barrel



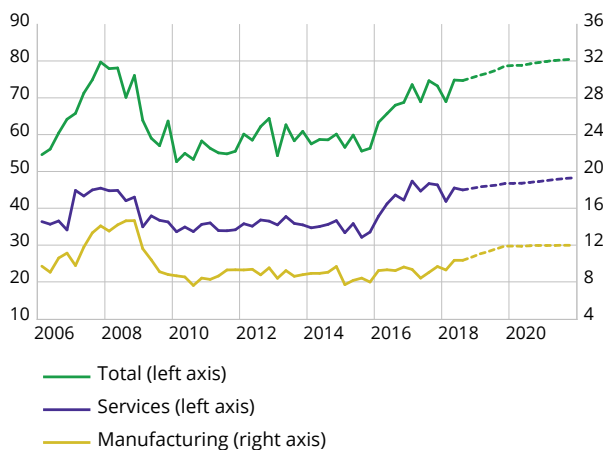
Source: Statistics Norway

our projection for 2019. In light of new information about future development projects and the downward revision of oil price assumptions, we also anticipate somewhat more extensive postponements of forthcoming development projects and somewhat lower growth in investment in exploration and fields in operation. We are therefore revising the investment level somewhat down for 2020 and slightly down for 2021. The result is investment growth that is only just positive in both 2020 and 2021.

The costs of petroleum investment have fallen markedly in recent years. According to the QNA, investment prices fell by as much as 5.2 per cent in 2017. Prices continued to fall in the first two quarters of this year, but at a slower pace than in 2017. According to preliminary QNA figures, the price level in 2018 Q3 was unchanged compared with the same quarter the previous year. A slight price fall nonetheless appears likely as an annual average for this year. We furthermore project that the increased demand for capital goods and services next year will lead to a moderate price increase in 2019. We also expect inflation to pick up somewhat in the course of the projection period.

Oil and gas extraction, measured as energy equivalent, increased somewhat in 2018 Q3 compared with the previous quarter. In the first three quarters of this year, oil and gas extraction was 3.7 per cent lower than in the same period last year. Liquid production fell by 7.1 per cent, while gas production in the first three quarters was at approximately the same level as in the same period in 2017. Owing to higher product prices this year, production measured in current prices was nonetheless about 26 per cent higher in the first three quarters of this year than in the same period last year. According to the Norwegian Petroleum Directorate, oil and gas extraction is expected to decline moderately in 2019. Extraction is expected to increase by 6 and 3.8 per cent in 2020 and 2021, respectively, largely because, according to plan, Johan Sverdrup will then be in operation.

Figure 9. Investments, Mainland Norway
Seasonally adjusted, billion 2016 NOK, quarter



Source: Statistics Norway

Somewhat slowing growth in mainland business investment

Mainland business investment increased by an annualised 16.5 per cent in 2016 and 9.2 per cent in 2017. Following a weak Q1 and strong Q2, seasonally adjusted QNA figures for 2018 Q3 revealed a 0.2 per cent decline in business investment. Weak growth in other service industries and weak manufacturing figures are responsible for pushing down growth in aggregate Q3 business investment.

QNA figures for 2018 Q3 showed manufacturing and mining edging up 0.1 per cent. Following a Q1 fall of 4.0 per cent, this sector had grown by 11.3 per cent in Q2. Statistics Norway's November investment intentions survey indicates real manufacturing investment growth of around 10 per cent compared with the projection published at the same time in 2017. According to the survey, refined petroleum products and chemicals and pharmaceuticals manufacturing are contributing most to the upswing in manufacturing investment in 2018. Among industries that are slowing the upturn we find basic metals.

The investment intentions survey also includes companies' projections for investment next year. Investment projections for manufacturing and mining for 2019 published in November indicate annual growth of around 10 per cent from the level in the current survey, after adjustment for normal under-reporting. The increase is associated with large projects in refined petroleum products, chemicals and pharmaceuticals manufacturing, basic metals and pulp and paper manufacturing. There is therefore good reason to believe in continued high growth in manufacturing investment through 2019.

Power supply companies are planning to further increase investment in the last quarter of this year. Growth in electricity production is making a particular contribution to the upswing due to a further increase in wind power development. Power supply growth is

expected to level off in 2019. At the same time, investment in the distribution network is falling sharply as a result of the completion in 2018 of the installation of AMS meters.

Norges Bank's regional network surveys economic developments in Norway, including expected investment, by compiling information from businesses throughout Norway. The most recent report, published in December, revised down expected investment growth for the coming 12-month period from 6.1 to 4.3 per cent. Service industry growth is expected to be moderate in the near term.

Our projections indicate that aggregate growth in mainland business investment will be about 2 per cent this year. Weak Q3 figures and lower expectations of further investment in services have pushed down our projections somewhat since September. The investment intentions survey indicates continued growth in 2019 and 2020, particularly in manufacturing and mining. As the cyclical upturn in Norway matures and interest rates increase, we assume moderate growth in aggregate business investment up to 2021.

Higher growth in exports next year

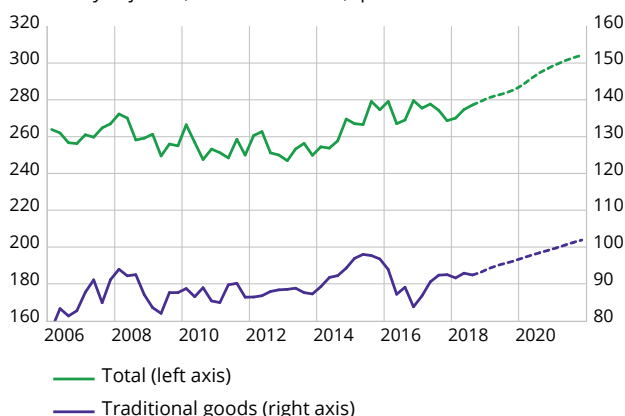
Traditional goods exports were slightly reduced in Q3, according to seasonally adjusted QNA figures, but have remained roughly unchanged for the past four quarters. Exports of farmed fish have increased for the seventh consecutive quarter. Exports of basic chemicals and chemical and mineral products increased sharply in Q2 and Q3, while exports of refined petroleum products slumped. The export price index for the large group basic chemicals and chemical and mineral products fell in the last two quarters, while refined petroleum products and electricity have increased in price for the past four quarters. The export price of electricity was more than twice as high in Q3 this year as in 2017 Q3. On balance, prices for traditional goods exports nonetheless remained almost unchanged in Q3 of this year following high growth in Q1 and Q2.

Maintenance work and reduced production led to a large decline in the volume of combined oil and gas exports in the second half of last year and into 2018. Since then exports have picked up somewhat, mainly thanks to a large increase in gas exports in Q2 and Q3. The oil price rise expressed in USD and a stronger dollar exchange rate have contributed to a sharp rise in prices expressed in NOK in the last four quarters. In 2018 Q3 the value of oil and gas exports was the highest for four years.

Overall service exports increased in each of the first three quarters of this year, following a decline through 2016 and 2017. Aggregate service exports have primarily been boosted by exports of mainland services. Preliminary Q3 figures show a rise in prices for service exports. Nevertheless, prices for aggregate service exports did not rise in the first three quarters of the year.

Figure 10. Exports

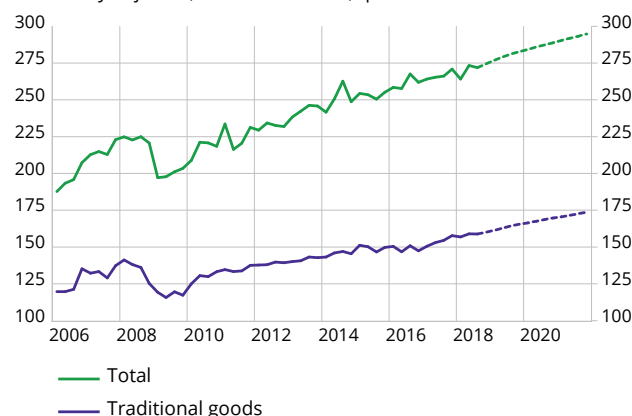
Seasonally adjusted, billion 2016 NOK, quarter



Source: Statistics Norway

Figure 11. Imports

Seasonally adjusted, billion 2016 NOK, quarter



Source: Statistics Norway

We now project slightly lower growth in exports in the near term than we did one quarter earlier. As a consequence of political unrest and trade restrictions, we expect weaker global market growth and hence somewhat lower growth in demand for Norwegian export goods and services. This year, weak growth in traditional goods exports and reduced oil and gas exports will dampen aggregate export growth. From next year onwards we assume increasing growth in oil and gas exports, which will only really increase when the large Johan Sverdrup field starts production towards the end of 2019. This will help to maintain growth in overall exports at a high level, even though exports of traditional goods and services are expected to contribute somewhat less to growth than previously forecast.

Following strong Q2 growth, preliminary QNA figures for Q3 indicate weak developments in imports of both goods and services. Imports of basic chemicals, chemical and mineral products and basic metals increased, while vehicle imports fell for the third consecutive quarter. This year's imports of fighter aircraft came in Q2 and Q3, and make a relatively large contribution to fluctuations in goods imports. Third-quarter growth of service imports was barely positive. Norwegians' travel abroad increased in all quarters so far this year, while imports of petroleum-related services fell sharply in Q3 after a large increase in Q2. Annual growth in imports in 2018 appears likely to be approximately the same as in 2017. Strong growth in petroleum investment next year will stimulate growth in exports, which are projected to be somewhat lower subsequently as a result of moderate growth in domestic demand and a still weak krone.

The trade surplus has shown positive correlation with the oil price expressed in NOK since 2006. Following a large increase in the surplus in 2017, an even larger increase is indicated for 2018. The surplus is expected to be somewhat reduced for the next three years as a result of a lower annualised oil price during these years than in 2018. The net factor income and transfers surplus strengthened last year, and the surplus is expected

to increase even more this year. A strengthening of the Norwegian economy relative to other countries in the years ahead will increase disbursements to other countries. This will curb growth in the net factor income and transfers surplus. A growing petroleum fund can be expected to continue contributing to this surplus. The sum of the trade surplus and the net factor income and transfers surplus is the current account balance. Expressed as a share of GDP, this is expected to be between 8 and 10 per cent in the projection period.

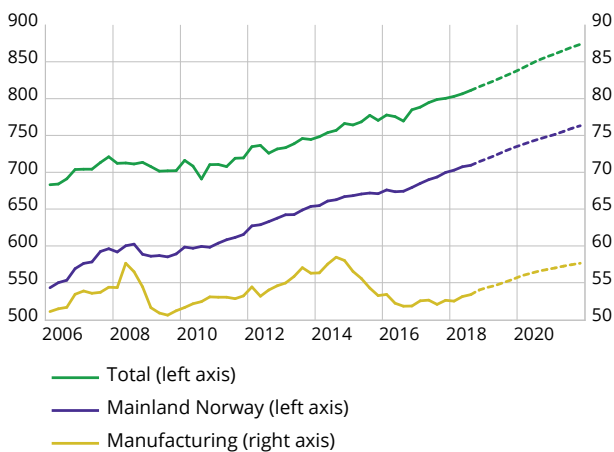
Norwegian economy close to cyclically neutral

Mainland GDP edged up by only 0.3 per cent from Q2 to Q3 of 2018. This is appreciably weaker than average growth since end-2016 of just on 0.6 per cent. It is also lower than estimated trend growth for the Norwegian mainland economy, an annualised 2 per cent. The decline can be partly attributed to this year's extremely dry summer. Value added in agriculture and forestry plunged by a whole 27 per cent from Q2 to Q3, which in isolation pushed down mainland GDP growth by 0.2 percentage point. Power production, on the other hand, made a positive contribution, with third quarter growth of almost 4 per cent. There is good reason to exclude both these industries when considering the macroeconomic situation, as both are largely governed by naturally occurring factors. Even so, mainland GDP growth was no more than 0.4 per cent in Q3 – which is also lower than estimated trend growth.

Growth in some sectors of the economy is high, however. The construction industry has long been in this category, primarily as a result of low interest rates and large public investment projects in buildings and infrastructure. The high level of construction activity has thus been an important driver behind the turnaround in the Norwegian economy. Although housing starts have declined appreciably, growth remains buoyant. Gross value added in construction increased by 1.1 per cent in Q3, admittedly somewhat down on growth through the first half of the year, but still considerably higher than growth in the rest of the economy.

Figure 12. Gross domestic product

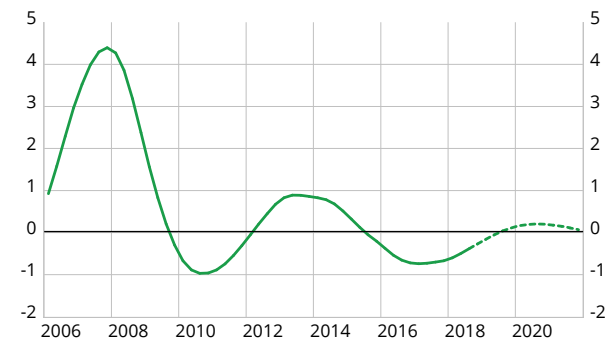
Seasonally adjusted, billion 2016 NOK, quarter



Source: Statistics Norway

Figure 13. Output gap, Mainland Norway

Deviation from estimated trend GDP in percent



Source: Statistics Norway

Norwegian manufacturing is also growing satisfactorily. Manufacturing was hard hit by the cyclical downturn that started in 2014, but this past year has benefited from the turnaround in the Norwegian economy. In Q3 value added in manufacturing increased further, by 0.5 per cent, following Q2 growth of 1.2 per cent. Q3 growth was driven by solid growth in shipbuilding and refined petroleum products. The activity level has now risen by just over 3 per cent from the trough in 2016. However, the overall level of activity in Norwegian manufacturing is still 9 per cent lower than the peak in 2014.

Value added in service industries other than general government rose by 0.4 per cent in Q3, following growth of as much as 1.2 per cent in Q2. Growth was curbed by stagnation in both finance and insurance and in the hotel and restaurant business. The latter industry has been growing strongly recently, which has been attributed to the relatively weak krone attracting more foreign tourists to Norway, and to Norwegians holidaying to a greater extent at home in Norway. There is reason to believe that this effect is now virtually exhausted. The activity level in general government rose by 0.6 per cent in Q3. This is somewhat stronger

Box 1. Implications of a weaker krone exchange rate

We have assumed in our projections that the krone will appreciate in the near term, so that the EUR/NOK exchange rate falls to 9.2 towards the end of the projection period. There is naturally great uncertainty associated with this projection. This box uses our KVARTS model of the Norwegian economy to illustrate what our projections would have looked like given a weaker krone, close to the current level, through the projection period.

The exchange rate plays an important part in economic developments. It affects economic activity through its impact on cost-competitiveness. As it takes a long time before a weaker krone is fully reflected in all prices, changes in the nominal exchange rate will be reflected in increased exports and reduced imports. A depreciation of the krone leads to price rises that reduce household real disposable income, which in turn depresses consumption. However, the improvement in the current account is the dominant effect, so that mainland GDP is 0.2 per cent higher in 2020 and 0.4 per cent higher in 2021 than in the projection scenario. Manufacturing in particular benefits from the weaker krone. Both increased output and lower real wages contribute to increased employment.

However, there are factors that we have not taken into account in our projections that may suggest that the effects could have been somewhat different. For example, movements in the krone exchange rate determine the value of the Government Pension Fund Global (GPGF) measured in NOK. In the alternative scenario with a weaker krone, the GPGF will increase in value measured in NOK compared with the projection scenario. If the fiscal rule is adhered to slavishly, fiscal room for manoeuvre will therefore increase, which could conceivably lead to a somewhat more expansionary fiscal policy than we have assumed. According to our calculations, the scenario with a weaker krone might generate as much as NOK 10 billion of "extra" oil revenue over the government budget for 2021.

Effects of a weaker krone exchange rate. Deviation from projection scenario in per cent

	2019	2020	2021
Mainland GDP	0.0	0.2	0.4
- Manufacturing	0.1	0.5	1.1
Consumption, household etc.	0.0	-0.1	-0.1
Household real disposable income	-0.2	-0.4	-0.4
Exports, traditional goods	0.1	0.4	0.6
Employment	0.0	0.1	0.2
Unemployment (percentage points)	0.0	-0.1	-0.1
Consumer price index	0.1	0.4	0.7
Import-weighted krone exchange rate	1.3	3.5	4.4

than growth through the first half year, but in line with growth through 2017 and only marginally higher than estimated trend growth in the Norwegian mainland economy as a whole.

In the near term, we expect activity growth in the Norwegian economy to remain at somewhat over trend. The negative demand impulses from petroleum activities have reversed, and this will generate positive growth impulses, particularly in 2019. Manufacturing, which has been recording moderate growth for over a year, will benefit from this reversal.

Box 2. How should seasonally adjusted annual figures be interpreted?

Statistics Norway started publishing monthly national accounts figures in September 2018. The monthly figures extend back to January 2016. Since then, the quarterly national accounts have been calculated as the sum of three months from the monthly national accounts. The great majority of economic variables in the monthly national accounts are seasonally adjusted. Some are also adjusted for calendar effects (but are still described only as seasonally adjusted). An example of calendar effects is that public holidays such as Christmas Day may fall on a weekend one year and on a weekday the next. Thus the number of working days in a month may vary from year to year.

Because of this calendar effect adjustment, sums for the year based on the unadjusted figures often differ from sums for the year based on the seasonally adjusted figures. The table illustrates the difference between seasonally adjusted and unadjusted mainland GDP figures for the years 2016 and 2017. The difference in growth rates can be largely attributed to calendar effects as described above. For example, there were two fewer working days in 2017 than in 2016. Allowance is thus made for this in the seasonally adjusted figures, but not in the unadjusted figures. Annual growth therefore appears to be stronger in the seasonally adjusted figures for 2017. There was one more working day in 2016 than in 2015. The difference therefore has the opposite sign: annual growth appears stronger in the unadjusted figures for 2016.

With the introduction of monthly national accounts, the technical handling of calendar effects was changed. This is the main reason why the difference between annual growth rates in seasonally adjusted and unadjusted series appears larger in the period prior to 2016.

Growth in mainland GDP in per cent

	Growth in mainland GDP unadjusted	Growth in mainland GDP seasonally adjusted	Working days ¹	Increase in working days
2016	1,1	0,8	228	0,4
2017	2,0	2,4	226	-0,9

¹ Working days are calculated as the number of Mondays to Fridays less 25 days of holiday and any public holidays and Christmas Eve.

The construction industry has been growing strongly in recent years. Our projections indicate, as they have done for a while, that growth will decline going forward. Although we expect housing investment to start growing again soon, the pace will be substantially lower than in 2016 and 2017. At the same time, growth in public infrastructure investment will slow. We also foresee that the broad-based upswing in service industries will continue, as the moderate cyclical upturn matures further. Growth in general government is expected to remain fairly stable at slightly below trend growth for the Norwegian economy.

On balance, our projections indicate mainland GDP growth of 2.0 per cent in 2018. Our estimate for trend growth in the Norwegian mainland economy is also 2.0 per cent. We believe nonetheless that the economy is in a cyclical upturn, as underlying growth is still higher than trend. This is attributable to the fact that the annual growth figure for 2018 is reduced by 0.3–0.4

Figure 14. Labour market status

Percent of population in working age, LFS



Source: Statistics Norway

percentage point because there are fewer business days this year than last (see also Box 2). We expect growth to remain slightly higher than trend in 2019 and 2020, sustaining the current cyclical upturn. The projections also mean that the Norwegian economy will be out of the economic downturn in the course of 2019. Our projections show growth towards the edge of the projection period slowing towards what we regard as trend growth.

Tighter labour market

Sustained growth in output and vacancies point to a tighter labour market with growing employment. Employment growth remained stable at about 0.4 per cent from 2017 Q1 to 2018 Q1. Following second quarter growth of 0.2 per cent, growth reverted to 0.4 per cent in Q3. The labour force has also grown so far this year, causing the fall in unemployment to level off at around 4 per cent.

Growth in overall employment in recent years can be attributed to sustained growth in some industries. Commercial services, general government and the hotel and restaurant industry have been important contributors, and this also applied to Q3 of this year. Following zero growth in Q1 and a decline in the following quarter, employment in petroleum-related services increased in Q3. Employment increased in most manufacturing segments and the overall Q3 increase was 0.3 per cent.

Relatively large numbers are employed in retail trade, which is quite sensitive to consumption in the economy. Thus a large fall in goods consumption in Q3 may have contributed to a decline in employment in this industry. However, increasing number of job vacancies in the retail trade industry may indicate that the Q3 fall in employment is of a temporary nature.

According to seasonally adjusted figures, vacancies in Q3 accounted for 2.5 per cent of the number employed and number of vacancies combined. This is equivalent to a 0.1 percentage point increase since the previous

Box 3. Calculating the output gap

It is usual to assess the economic situation by comparing output with an underlying trend level. The difference between them is called the output gap. If output is higher than trend, the economy is said to be in an expansion, and if output is growing faster than trend, it is in a cyclical upturn. Similarly, below trend output implies a slump, while lower than trend output growth means a cyclical downturn. Mainland GDP is often used as an indicator of output in the Norwegian economy.

In this report, we have adjusted the procedure for determining the business cycle. In the past, we used the seasonal pattern calculated by the National Accounts to revise the unadjusted mainland GDP figures. In connection with the change from the publication of quarterly to monthly national accounts, the seasonally adjusted and calendar day-adjusted GDP figures from the National Accounts get a different seasonal pattern (see Box 2). Our new procedures use historic correlation between GDP growth and change in the number of business days to adjust for calendar day effects.

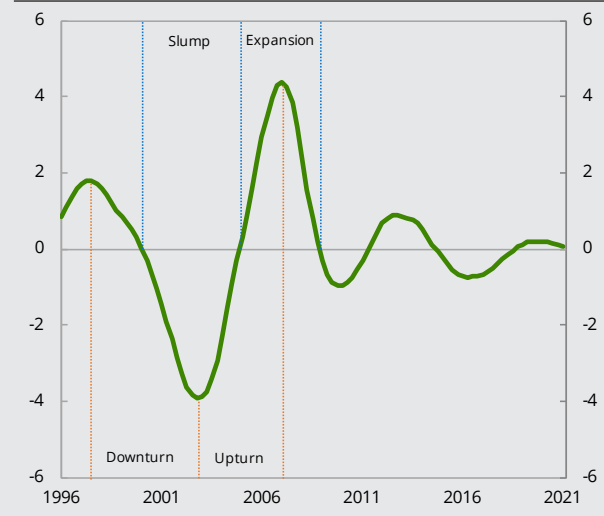
We use the so-called Hodrick-Prescott (HP) filter on seasonally and calendar-adjusted GDP series to find trend growth. The HP filter allows trend growth to vary over time. How much trend growth varies is determined by the smoothing coefficient. In other words, the choice of smoothing coefficient influences how much of the changes in the GDP series can be attributed to trend, and how much is output gap. As the Norwegian economy is relatively small, random variations in individual industries and the start-up of major investment projects may have a considerable impact on variables, even at the aggregate level. In order to capture real business cycles and not other factors, it is therefore necessary to use a relatively high value for the smoothing coefficient; see Eika and Lindquist (1997). We use a high value (40 000), which implies stable trend growth over time.

The figure shows GDP deviation from computed trend in per cent for the period 1995 to 2021. The Norwegian economy was in a cyclical downturn from 1998 to 2003. The subsequent upturn lasted until the end of 2007. The downturn in 1998 led the Norwegian economy into a slump that lasted from 2001 to 2005. From 2005 to 2009 the Norwegian economy was in expansion. The figure also shows that the Norwegian economy has been in an upturn since 2017, and from 2019 will be in an approximately cyclically neutral situation.

Reference

Eika, T. and Lindquist, K. (1997). Konjunkturimpulser fra utlandet [Economic impulses from abroad]. Reports 97/2. Statistics Norway.

Mainland GDP. Deviation from estimated trend in per cent



Source: Statistics Norway.

quarter. The trend since the fourth quarter of 2017 is thus continuing, both with respect to level and as a share of the total number of jobs.

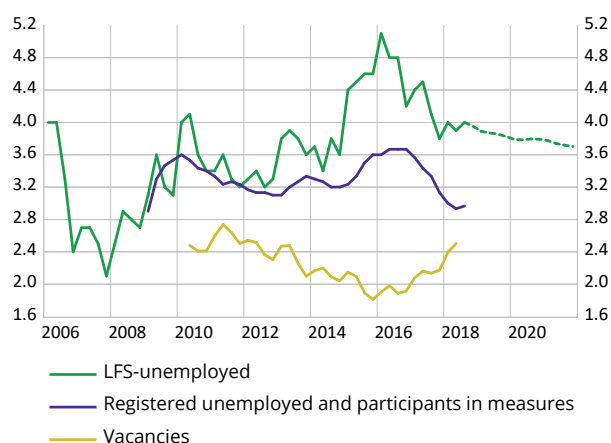
Unemployment measured by the Labour Force Survey (LFS) fell from 4.5 per cent in April (average for March–May) 2017 to 4.0 per cent in September (average for August–October) 2017, and remained stable for the remainder of the year. Following a further fall to 3.7 per cent in April (average for March–May) this year, unemployment has increased again. It remained unchanged at 4.0 per cent from July (average for June–August) to September (average for August–October). Figures from both the LFS and the national accounts reveal positive employment growth. As more workers have entered the labour market, in line with the increased demand for labour, the labour force has increased and this has contributed to unemployment not falling these past few months.

The stable unemployment measured by the LFS is supported by developments in the registered unemployed. According to the Norwegian Labour and Welfare Organisation (NAV), the seasonally adjusted sum of those registered as fully unemployed and those on labour market programmes declined through 2017 and

the first half of this year. Following an increase in the numbers of fully unemployed and persons on labour market programmes in July, probably due to changes in the NAV rules and registration system, this total has fallen since August. The fully unemployed accounted for 2.4 per cent of the labour force between July and October. The sum of the fully unemployed and persons on labour market programmes accounted for 2.9 per cent of the labour force in September and October. As a result of a break in NAV's statistics on registered job-seekers, the published figures for November are not directly comparable with those of previous months. The seasonally adjusted figures for the fully unemployed, which have been adjusted for the break in November, show that the underlying fall in the number of fully unemployed continued in November.

Both sustained growth in vacancies and a relatively broad-based cyclical upturn indicate that employment will continue to grow during the projection period. We forecast that employment in private sector service production, which is driven by higher private consumption, will contribute to overall employment. A continued improvement in the economic situation will also facilitate more entries into the labour market, which will have the effect of curbing the decline in unemployment.

Figure 15. Unemployed and number of vacancies
Percent of labour force and of the sum of occupied and vacant positions, seasonally adjusted and smoothed



Source: The Norwegian Labour and Welfare Administration and Statistics Norway

According to our projections, unemployment will fall from 3.9 per cent this year to around 3.7 per cent towards the end of the projection period.

Higher growth in real wages ahead

The historically low nominal annual wage growth of 1.7 per cent in 2016 was followed by somewhat higher growth of 2.3 per cent in 2017. However, this rise was not sufficient to substantially increase real wages. Average wage growth in 2018 appears likely to be close to the wage settlement norm of 2.8 per cent estimated subsequent to the wage leader settlement. In the near term we expect wage growth to pick up further in pace with the economic upturn.

Growth in average annual wages can be decomposed into carry-over and contributions from pay increases and wage drift. 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. The negotiated wage increase is the wage increase arising from central negotiations. Wage drift is the sum of all other factors that affect annual wages. According to the Technical Reporting Committee on Income Settlements (TBU), the carry-over at the beginning of 2018 was 1.1 percentage point on average for all wage bargaining areas, with variation of 0.6 to 1.4 percentage points across the different areas. The central government had a carry-over of 0.7 percentage point, local government of 1.4 percentage point and the retailers in the Enterprise Federation of Norway (Virke) a carry-over of 0.8 percentage point.

The carry-over into 2018 for manufacturing workers was 1.1 percentage point. The norm for the wage settlement in 2018, i.e. the wage growth negotiated by the wage leader, which is normative for the rest of the economy, was 2.8 per cent, the same as the average of the wage settlements from 2012 to 2017. For blue collar workers in manufacturing, the result of mediation in

this year's main settlement contributed 0.5 percentage point to annual wage growth in 2018. This, coupled with the carry-over into 2018 of 1.1 percentage point, results in annual wage growth from 2017 to 2018 of 1.6 per cent before the wage drift contributions. The pay increases in the main settlements of the negotiating area representing central government are larger, and in 2018 contribute 1.8 percentage points to wage growth, while the wage drift contribution is considerably smaller.

Wage statistics for Q3 indicate general basic wage growth of 2.7 per cent compared with the same quarter the previous year. A considerable portion of the amount available for distribution was this year transferred to local negotiations, and more of the wage growth therefore came about in the second half of the year. The basic wage index shows a positive tendency for the first three quarters of the year for most industries. Wage growth in manufacturing was lower than the norm in Q3. Key industries that largely shadow the manufacturing wage settlement, the public sector and private services production, were also lower than the manufacturing norm of 2.8 per cent in Q3.

Towards the end of the year, bonuses in particular, but also local wage settlements, point towards higher wage growth. According to our projections, wage growth for 2018 will therefore rise to 2.8 per cent for the year as a whole.

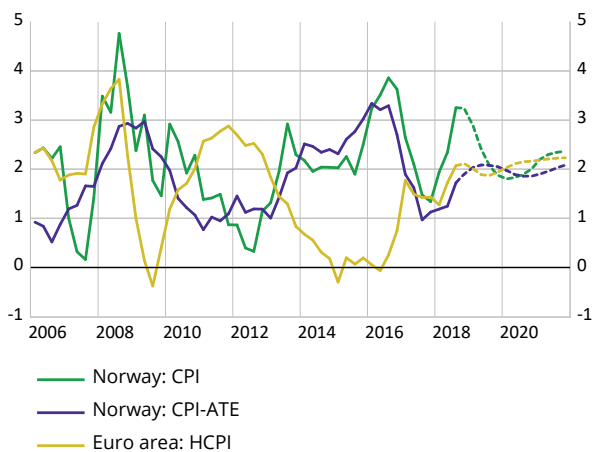
Business profitability will be sound going forward. Increased petroleum investment and a continued global upturn are key factors driving a further manufacturing upswing. Unemployment will continue to edge down, and labour market pressures will help to push wages up. The overall picture is one of higher wage growth in the years ahead, and according to our projections wage growth will rise gradually to around 4 per cent in 2021. Given inflation of just under 2 per cent, real wage growth will thus increase to over 2 per cent in 2021.

Higher underlying inflation

Underlying inflation measured by the 12-month rise in the consumer price index adjusted for tax changes and excluding energy products (CPI-ATE) has risen appreciably since this summer following low and stable inflation in the first half of the year. The 12-month rise in the CPI in June was 1.1 per cent, while it rose to 1.9 per cent in August and September. The inflation rate in October was 1.6 per cent. The fall in inflation from September to October can be largely ascribed to developments in prices for food and air travel. A decomposition of the CPI-ATE by supplier sector shows that the higher underlying inflation in the second half of the year is largely due to developments in prices for goods, both produced in Norway and imported, while the rise in prices for services as a whole has been far more stable through the year.

Figure 16. Consumer price indices

Percent growth from same quarter previous year



Source: Statistics Norway

Energy prices continue to contribute to the 12-month rise in the consumer price index (CPI) being markedly higher than in the CPI-ATE. Following a summer of abnormally high electricity prices as a result of hot, dry weather, substantial amounts of precipitation pushed prices down somewhat from August. The 12-month rise in electricity prices including grid charges was 30.3 per cent in October, and far lower than the year's highest listing of 37.9 per cent for August. At the same time, fuel prices have remained at a high level so far this year as a consequence of a high oil price and strong US dollar. Now that the oil price has fallen considerably, inflation for the remainder of the year will be affected. The 12-month rise in the CPI in October was 3.1 per cent, compared with a rise of 3.4 per cent in September. CPI-ATE inflation was 2.3 per cent in September and 2.0 per cent in October. The contribution of energy prices to CPI inflation was 1.1 percentage point in both months. The difference between the rise in the CPI and in the CPI-ATE has thus narrowed somewhat since the peak in July and August, when it widened to 1.3 percentage points.

A decomposition of the CPI-ATE by consumer group shows that the price level for clothing and footwear was lower in September and October this year than at the same time in 2017. The rise in prices for food and non-alcoholic beverages has fluctuated through the year, and developments in these prices were also one of the main reasons for the fall in 12-month CPI inflation from September to October. A review of the individual groups in the CPI reveals substantial variation in price inflation in recent months for the various food categories. Whereas vegetables and dairy products have pushed up CPI inflation, prices for meat products and eggs have moved on a weaker trend. Movements in prices for vegetables must be considered bearing in mind the poor harvest after the dry summer. In this year's agricultural agreement, the government met the agricultural organisations halfway on requirements to reduce overproduction of milk, pork, mutton and

chicken. In the forecast for 2019 from market regulator Nortura, there is still excess production of pork and eggs, while market balance is approaching for mutton and lamb production. At the same time, there is a large quantity of mutton and pork in regulatory stockpiles. This indicates that the rise in prices for some products will also be moderate next year, both directly to consumers and through processing in the food industry.

The rent sub-index has a weighting of slightly over 20 per cent in the CPI-ATE and has often moved on a stable trend when other prices have fluctuated widely, and thus acted as a stabilising component of the consumer price index. For the last four months with higher underlying inflation, the 12-month rise in rents has been 1.6 per cent, with the exception of August, when it was down to 1.4 per cent. The rent index is derived from prices for existing and new rental contracts through the rent survey. The rent in existing contracts is largely regulated according to movements in the consumer price index. Given higher CPI inflation in the current year than last year, we expect inflation to rise in 2019. An expected upturn in lending rates points the same way.

The 12-month change in air travel prices was -15.9 per cent in October. The decline must be viewed in light of high prices for air travel in October 2017. Prices for air travel fell sharply from October to November 2017, so that the 12-month fall in October will probably be reversed into a rise when the November CPI figures are available. Prices for air travel have moved on a surprisingly weak trend so far this year, given the increase in fuel costs, but here, too, lower oil prices will reverse cost developments.

Following on the hot, dry summer, this autumn's mild, wet weather has considerably improved the resource situation in the power market. According to the Norwegian Water Resources and Energy Directorate (NVE), the substantial precipitation this autumn has brought reservoir levels up to near normal in all domestic Elspot (bidding) areas with the exception of Northern Norway, where reservoir levels are lower than normal. Another factor that has pushed up electricity prices this year is the high prices for coal, gas and CO₂ quotas in Europe, which inflate European power prices and affect Norwegian prices through power exchange with other countries. The forward price for coal for delivery in Europe next year recently fell back from very high levels earlier this autumn. Coupled with a fall in the oil price, this is expected to bring down the production costs for fossil fuel in the European market. Prices in the forward market for contracts for delivery of electricity this winter have moved subsided slightly since our last projection, but remain at a high level. The contracts are still priced far higher in 2019 Q1 than in subsequent quarters next year. There is reason to stress that electricity prices are uncertain. Cold weather is rapidly reflected in higher power prices. In addition

to the price of the power itself, electricity prices to consumers include grid charges and taxes. NVE has forecast that grid charges will increase by up to 30 per cent by 2025 owing to investment in the distribution network. In light of forward prices in the power market, we now expect electricity prices, including grid charges, to increase by about 25 per cent as an annual average from 2017 to 2018. Even given higher grid charges, we assume that annualised prices to consumers will remain unchanged from 2018 to 2019, and will fall somewhat in 2020 as a result of the carry-over from 2019 Q1. This will have the effect of reducing CPI inflation for these years. In 2021 we have assumed that electricity prices including grid charges will shadow movements in the CPI.

The fall in the oil price means that our projection for the rise in prices for refined products will be somewhat lower for the remainder of the year than previously forecast. On balance, we project that energy prices will now push CPI inflation up by 0.9 percentage point in 2018. Given lower oil prices, the average price for refined products will remain unchanged from 2018 to 2019, and then largely shadow general inflation. Our assumptions for energy prices as a whole push CPI inflation down by 0.1 percentage point in both 2019 and 2020. In 2021 it is assumed that the overall energy prices roughly shadow general inflation.

Overall real tax changes are projected to raise the CPI by 0.3 percentage point in 2018. In the budget settlement for 2019, this year's increase in the tax on sugar and chocolate is partly reversed, and electricity taxes go slightly down. This is expected to reduce CPI inflation by 0.1 percentage point next year. For 2020 and 2021, we have adjusted most of the special tax rates for inflation, but have assumed that higher environmental taxes will increase the CPI by 0.1 percentage point.

There are prospects of higher growth in Norwegian wages next year, when the cyclical upturn takes hold, than in 2018. Increased productivity growth in the next phase of the economic upturn will dampen the effects of increased wages on inflation for a while to come. An expected appreciation of the krone and moderate global inflation will gradually result in modest price impulses from imported goods and services. These will be countered by the time-lagged effects of higher energy prices from the current year and higher electricity prices into next year. Wage growth will increase further in 2020 and 2021, while productivity growth will gradually slow as capacity utilisation rises. In isolation, this will push inflation up further. However, the strengthening of the krone further along the projection pathway will substantially weaken import price inflation, despite rising inflation abroad. Direct and indirect effects of low import price inflation, coupled with reduced inflationary impulses from energy prices, will dampen the rise in inflation through the projection period.

Given the projected developments in energy prices and special taxes, the CPI and the CPI-ATE will rise by 2.7 and 1.5 per cent, respectively, in 2018. As a result of the fall in the oil price the krone has appreciated somewhat less in 2019 than assumed in our last projection. This is the main reason that the projection for CPI-ATE inflation has been revised up to 1.9 per cent for 2019. The CPI is projected to rise by 1.8 per cent in 2019 as a consequence of lower energy prices and taxes. We project underlying inflation for the years 2020 and 2021 to be somewhat lower than in 2019, and lower than Norges Bank's inflation target.

Table 5. National accounts: Final expenditure and gross domestic product. At constant 2016 prices. NOK million

	Unadjusted		Seasonally adjusted							
	2016	2017*	16.4	17.1	17.2	17.3	17.4	18.1	18.2	18.3
Final consumption expenditure of households and NPISHs	1 412 437	1 443 445	356 168	358 807	360 090	363 251	365 716	365 948	369 764	369 151
Household final consumption expenditure	1 335 785	1 364 740	336 940	339 387	340 547	343 551	345 796	345 682	349 199	348 577
Goods	616 187	625 914	154 717	155 890	156 639	158 093	159 221	158 112	160 345	158 173
Services	653 016	669 032	164 225	165 615	166 722	167 856	168 872	169 588	170 936	172 041
Direct purchases abroad by resident households	110 297	113 236	28 591	28 303	27 932	28 695	28 567	29 180	28 886	29 228
Direct purchases by non-residents	-43 715	-43 441	-10 593	-10 421	-10 747	-11 092	-10 864	-11 199	-10 967	-10 864
Final consumption expenditure of NPISHs	76 652	78 704	19 228	19 420	19 543	19 699	19 920	20 266	20 565	20 574
Final consumption expenditure of general government	759 622	778 468	191 557	192 564	193 614	194 790	197 520	197 457	198 026	198 549
Final consumption expenditure of central government	384 318	391 089	97 106	96 689	97 382	97 906	99 112	99 214	99 582	99 929
Central government, civilian	339 917	346 231	86 052	85 555	86 195	86 696	87 786	87 803	88 119	88 387
Central government, defence	44 401	44 858	11 054	11 134	11 187	11 210	11 326	11 411	11 462	11 542
Final consumption expenditure of local government	375 304	387 379	94 451	95 875	96 232	96 883	98 408	98 243	98 444	98 620
Gross fixed capital formation	790 306	818 871	202 521	203 970	204 654	203 222	207 025	194 044	207 112	208 126
Extraction and transport via pipelines	165 374	159 147	41 102	39 720	40 794	36 914	41 719	36 207	41 000	41 691
Ocean transport	12 272	3 902	3 640	1 002	999	1 852	49	866	573	-343
Mainland Norway	612 660	655 822	157 778	163 249	162 860	164 456	165 258	156 972	165 538	166 778
Industries	265 758	290 345	68 756	73 572	68 923	74 631	73 218	68 944	74 820	74 676
Service activities incidental to extraction	2 101	2 436	448	379	434	803	819	725	782	972
Other services	164 823	185 026	42 212	47 344	44 669	46 692	46 321	41 864	45 515	44 985
Manufacturing and mining	37 387	36 450	9 621	9 349	8 407	9 023	9 671	9 288	10 334	10 345
Production of other goods	61 447	66 434	16 475	16 500	15 413	18 114	16 407	17 067	18 190	18 373
Dwellings (households)	181 394	194 017	47 368	49 294	49 009	48 967	46 746	45 602	43 458	43 109
General government	165 508	171 460	41 655	40 382	44 927	40 857	45 293	42 426	47 260	48 993
Acquisitions less disposals of valuables	392	414	99	106	97	104	107	107	113	109
Changes in stocks and statistical discrepancies	105 366	107 799	16 852	21 530	23 670	29 204	32 199	39 464	30 104	29 903
Gross capital formation	896 064	927 084	219 472	225 606	228 421	232 530	239 331	233 615	237 329	238 138
Final domestic use of goods and services	3 068 123	3 148 996	767 198	776 977	782 124	790 570	802 567	797 019	805 118	805 839
Final demand from Mainland Norway	2 784 719	2 877 734	705 504	714 619	716 563	722 496	728 494	720 376	733 328	734 478
Final demand from general government	925 130	949 927	233 212	232 946	238 541	235 646	242 813	239 883	245 286	247 542
Total exports	1 098 601	1 096 104	279 564	275 483	277 743	274 255	268 619	270 042	274 692	277 196
Traditional goods	355 679	361 646	83 759	86 700	90 560	92 350	92 482	91 594	92 893	92 400
Crude oil and natural gas	373 694	379 333	97 896	96 130	97 265	95 350	90 452	89 459	90 143	92 115
Ships, oil platforms and planes	17 240	14 459	9 325	7 468	2 934	1 883	2 174	3 679	3 234	3 061
Services	351 988	340 666	88 584	85 184	86 984	84 671	83 510	85 309	88 422	89 621
Total use of goods and services	4 166 724	4 245 100	1 046 761	1 052 459	1 059 867	1 064 825	1 071 185	1 067 061	1 079 810	1 083 035
Total imports	1 047 428	1 064 025	261 910	264 163	265 360	266 105	270 852	264 134	273 272	271 845
Traditional goods	597 231	613 190	147 406	150 581	152 995	154 467	157 775	156 881	158 966	158 893
Crude oil and natural gas	8 683	10 974	1 912	2 386	2 510	2 943	3 194	3 743	3 796	3 437
Ships, oil platforms and planes	50 718	49 624	15 354	14 942	12 867	10 134	11 709	7 346	11 266	9 691
Services	390 796	390 237	97 238	96 255	96 987	98 561	98 175	96 164	99 245	99 824
Gross domestic product (market prices)	3 119 296	3 181 071	784 852	788 296	794 507	798 720	800 333	802 927	806 538	811 190
Gross domestic product Mainland Norway (market prices)	2 712 752	2 767 631	679 235	684 742	689 898	693 452	699 662	702 822	707 466	709 437
Petroleum activities and ocean transport Mainland Norway (basic prices)	406 544	413 440	105 616	103 554	104 609	105 268	100 671	100 105	99 073	101 752
Mainland Norway excluding general government	2 353 989	2 398 334	588 989	592 776	597 970	600 735	606 757	610 177	614 638	616 689
Manufacturing and mining	1 767 119	1 797 869	441 158	443 967	448 181	450 547	455 085	457 871	461 630	462 735
Production of other goods	208 315	208 289	51 827	52 543	52 630	52 046	52 612	52 494	53 117	53 374
Services incl. dwellings (households)	307 695	316 783	76 767	77 036	78 738	79 546	81 014	81 598	80 903	80 495
General government	1 251 109	1 272 797	312 565	314 389	316 813	318 955	321 459	323 779	327 610	328 866
Taxes and subsidies products	586 870	600 464	147 831	148 809	149 789	150 188	151 672	152 306	153 009	153 954
Taxes and subsidies products	358 763	369 297	90 246	91 966	91 928	92 717	92 905	92 645	92 828	92 748

Source: Statistics Norway.

Table 6. National accounts: Final expenditure and gross domestic product. At constant 2016 prices. Percentage change from previous period

	Unadjusted		Seasonally adjusted							
	2016	2017*	16.4	17.1	17.2	17.3	17.4	18.1	18.2	18.3
Final consumption expenditure of households and NPISHs	1.3	2.2	1.1	0.7	0.4	0.9	0.7	0.1	1.0	-0.2
Household final consumption expenditure	1.2	2.2	1.1	0.7	0.3	0.9	0.7	0.0	1.0	-0.2
Goods	0.5	1.6	0.7	0.8	0.5	0.9	0.7	-0.7	1.4	-1.4
Services	2.5	2.5	0.7	0.8	0.7	0.7	0.6	0.4	0.8	0.6
Direct purchases abroad by resident households	0.7	2.7	4.2	-1.0	-1.3	2.7	-0.4	2.1	-1.0	1.2
Direct purchases by non-residents	8.1	-0.6	-3.0	-1.6	3.1	3.2	-2.1	3.1	-2.1	-0.9
Final consumption expenditure of NPISHs	2.5	2.7	1.3	1.0	0.6	0.8	1.1	1.7	1.5	0.0
Final consumption expenditure of general government	2.1	2.5	0.5	0.5	0.5	0.6	1.4	0.0	0.3	0.3
Final consumption expenditure of central government	2.7	1.8	0.8	-0.4	0.7	0.5	1.2	0.1	0.4	0.3
Central government. civilian	3.1	1.9	0.9	-0.6	0.7	0.6	1.3	0.0	0.4	0.3
Central government. defence	-0.5	1.0	-0.2	0.7	0.5	0.2	1.0	0.8	0.4	0.7
Final consumption expenditure of local government	1.5	3.2	0.3	1.5	0.4	0.7	1.6	-0.2	0.2	0.2
Gross fixed capital formation	5.2	3.6	0.0	0.7	0.3	-0.7	1.9	-6.3	6.7	0.5
Extraction and transport via pipelines	-16.0	-3.8	0.2	-3.4	2.7	-9.5	13.0	-13.2	13.2	1.7
Ocean transport	..	-68.2	-31.7	-72.5	-0.2	85.4	-97.4	..	-33.8	-159.8
Mainland Norway	10.7	7.0	1.1	3.5	-0.2	1.0	0.5	-5.0	5.5	0.7
Industries	16.5	9.3	1.2	7.0	-6.3	8.3	-1.9	-5.8	8.5	-0.2
Service activities incidental to extraction	-57.3	15.9	92.7	-15.3	14.5	84.8	2.1	-11.6	7.9	24.3
Other services	22.4	12.3	-3.1	12.2	-5.7	4.5	-0.8	-9.6	8.7	-1.2
Manufacturing and mining	16.3	-2.5	4.2	-2.8	-10.1	7.3	7.2	-4.0	11.3	0.1
Production of other goods	9.1	8.1	10.4	0.2	-6.6	17.5	-9.4	4.0	6.6	1.0
Dwellings (households)	6.6	7.0	4.1	4.1	-0.6	-0.1	-4.5	-2.4	-4.7	-0.8
General government	6.7	3.6	-2.2	-3.1	11.3	-9.1	10.9	-6.3	11.4	3.7
Acquisitions less disposals of valuables	4.0	5.5	-1.7	7.1	-8.8	7.0	2.8	0.1	5.7	-3.6
Changes in stocks and statistical discrepancies	-11.9	2.3	-26.0	27.8	9.9	23.4	10.3	22.6	-23.7	-0.7
Gross capital formation	2.8	3.5	-2.6	2.8	1.2	1.8	2.9	-2.4	1.6	0.3
Final domestic use of goods and services	2.0	2.6	-0.1	1.3	0.7	1.1	1.5	-0.7	1.0	0.1
Final demand from Mainland Norway	3.5	3.3	1.0	1.3	0.3	0.8	0.8	-1.1	1.8	0.2
Final demand from general government	2.9	2.7	0.0	-0.1	2.4	-1.2	3.0	-1.2	2.3	0.9
Total exports	1.1	-0.2	3.9	-1.5	0.8	-1.3	-2.1	0.5	1.7	0.9
Traditional goods	-8.6	1.7	-6.0	3.5	4.5	2.0	0.1	-1.0	1.4	-0.5
Crude oil and natural gas	4.9	1.5	9.2	-1.8	1.2	-2.0	-5.1	-1.1	0.8	2.2
Ships, oil platforms and planes	44.9	-16.1	196.9	-19.9	-60.7	-35.8	15.4	69.2	-12.1	-5.3
Services	5.1	-3.2	1.7	-3.8	2.1	-2.7	-1.4	2.2	3.6	1.4
Total use of goods and services	1.7	1.9	0.9	0.5	0.7	0.5	0.6	-0.4	1.2	0.3
Total imports	3.3	1.6	-2.1	0.9	0.5	0.3	1.8	-2.5	3.5	-0.5
Traditional goods	-0.1	2.7	-2.3	2.2	1.6	1.0	2.1	-0.6	1.3	0.0
Crude oil and natural gas	-5.2	26.4	-28.3	24.8	5.2	17.3	8.5	17.2	1.4	-9.4
Ships, oil platforms and planes	42.6	-2.2	-1.1	-2.7	-13.9	-21.2	15.5	-37.3	53.3	-14.0
Services	5.4	-0.1	-1.3	-1.0	0.8	1.6	-0.4	-2.0	3.2	0.6
Gross domestic product (market prices)	1.2	2.0	2.0	0.4	0.8	0.5	0.2	0.3	0.4	0.6
Gross domestic product Mainland Norway (market prices)	1.1	2.0	0.7	0.8	0.8	0.5	0.9	0.5	0.7	0.3
Petroleum activities and ocean transport	1.8	1.7	10.9	-2.0	1.0	0.6	-4.4	-0.6	-1.0	2.7
Mainland Norway (basic prices)	0.9	1.9	0.7	0.6	0.9	0.5	1.0	0.6	0.7	0.3
Mainland Norway excluding general government	0.6	1.7	0.8	0.6	0.9	0.5	1.0	0.6	0.8	0.2
Manufacturing and mining	-4.9	0.0	0.1	1.4	0.2	-1.1	1.1	-0.2	1.2	0.5
Production of other goods	1.6	3.0	1.1	0.4	2.2	1.0	1.8	0.7	-0.9	-0.5
Services incl. dwellings (households)	1.4	1.7	0.9	0.6	0.8	0.7	0.8	0.7	1.2	0.4
General government	1.9	2.3	0.3	0.7	0.7	0.3	1.0	0.4	0.5	0.6
Taxes and subsidies products	2.0	2.9	1.1	1.9	0.0	0.9	0.2	-0.3	0.2	-0.1

Source: Statistics Norway.

Table 7. National accounts: Final expenditure and gross domestic product. Price indices. 2016=100

	Unadjusted		Seasonally adjusted							
	2016	2017*	16.4	17.1	17.2	17.3	17.4	18.1	18.2	18.3
Final consumption expenditure of households and NPISHs	100.0	102.0	100.7	101.0	101.9	102.0	102.7	102.9	103.7	104.7
Final consumption expenditure of general government	100.0	102.4	101.1	101.5	102.1	102.8	103.3	103.9	104.6	105.2
Gross fixed capital formation	100.0	100.7	100.2	100.1	101.0	100.4	101.3	101.9	102.1	103.0
Mainland Norway	100.0	102.1	100.6	101.1	102.2	102.0	103.0	103.9	104.4	105.5
Final domestic use of goods and services	100.0	101.6	100.7	101.2	101.3	101.7	102.1	103.1	103.8	105.0
Final demand from Mainland Norway	100.0	102.1	100.8	101.1	102.0	102.2	102.9	103.4	104.1	105.0
Total exports	100.0	109.2	102.7	108.6	107.5	107.2	113.7	116.5	122.7	127.1
Traditional goods	100.0	105.4	103.6	104.3	105.3	105.1	107.5	109.9	111.9	111.8
Total use of goods and services	100.0	103.6	101.2	103.1	103.0	103.1	105.0	106.5	108.6	110.6
Total imports	100.0	102.7	99.3	101.2	102.9	102.2	104.5	106.0	106.3	107.4
Traditional goods	100.0	103.7	100.1	101.9	103.5	103.5	105.9	107.0	108.1	109.9
Gross domestic product (market prices)	100.0	103.9	101.8	103.8	103.0	103.4	105.2	106.6	109.4	111.7
Gross domestic product Mainland Norway (market prices)	100.0	101.1	101.1	100.8	101.0	101.4	101.3	102.2	102.4	103.1

Source: Statistics Norway.

Table 8. National accounts: Final expenditure and gross domestic product. Price indices. Percentage change from previous period

	Unadjusted		Seasonally adjusted							
	2016	2017*	16.4	17.1	17.2	17.3	17.4	18.1	18.2	18.3
Final consumption expenditure of households and NPISHs	3,0	2,0	0,4	0,3	0,9	0,1	0,7	0,1	0,8	0,9
Final consumption expenditure of general government	2,0	2,4	1,1	0,4	0,6	0,7	0,5	0,5	0,7	0,5
Gross fixed capital formation	1,3	0,7	0,2	-0,2	0,9	-0,5	0,8	0,6	0,2	0,9
Mainland Norway	2,3	2,1	0,4	0,5	1,0	-0,2	1,0	0,9	0,5	1,0
Final domestic use of goods and services	2,3	1,6	0,6	0,5	0,1	0,3	0,4	0,9	0,8	1,1
Final demand from Mainland Norway	2,6	2,1	0,6	0,4	0,9	0,2	0,7	0,4	0,7	0,9
Total exports	-7,6	9,2	2,2	5,7	-1,0	-0,3	6,1	2,5	5,3	3,5
Traditional goods	4,0	5,4	2,1	0,7	0,9	-0,1	2,2	2,2	1,8	-0,1
Total use of goods and services	-0,5	3,6	1,1	1,9	-0,2	0,1	1,9	1,4	2,0	1,8
Total imports	1,3	2,7	-0,4	1,9	1,6	-0,6	2,3	1,5	0,2	1,0
Traditional goods	1,8	3,7	-0,4	1,8	1,6	0,0	2,4	1,1	1,0	1,6
Gross domestic product (market prices)	-1,1	3,9	1,5	1,9	-0,8	0,4	1,7	1,3	2,7	2,1
Gross domestic product Mainland Norway (market prices)	2,4	1,1	0,8	-0,3	0,2	0,4	-0,2	0,9	0,1	0,7

Source: Statistics Norway.

Table 9. Main economic indicators 2006-2021. Accounts and forecasts. Percentage change from previous year unless otherwise noted

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017*	Forecasts			
													2018	2019	2020	2021
Demand and output																
Consumption in households etc.	5.0	5.3	1.7	0.0	3.8	2.3	3.5	2.8	2.1	2.6	1.3	2.2	2.0	2.4	2.6	2.4
General government consumption	1.9	2.0	2.4	4.1	2.2	1.0	1.6	1.0	2.7	2.4	2.1	2.5	1.8	1.8	1.8	1.7
Gross fixed investment	9.1	12.2	1.1	-6.8	-6.4	7.5	7.6	6.3	-0.3	-4.0	5.2	3.6	-0.2	4.5	2.2	1.1
Extraction and transport via pipelines	3.2	9.3	5.5	2.9	-8.0	11.4	14.6	19.0	-1.8	-12.2	-16.0	-3.8	3.1	13.2	0.5	0.2
mainland Norway	9.3	14.2	0.9	-10.4	-6.4	5.0	7.4	2.9	0.4	-0.2	10.7	7.0	-0.8	1.9	2.7	1.4
Industries	12.7	22.7	3.1	-18.4	-9.5	1.1	10.5	-3.2	-0.7	-2.8	16.5	9.3	1.8	3.4	3.0	1.6
Housing	4.0	2.7	-9.0	-8.1	-1.6	17.0	10.9	5.3	-1.4	3.2	6.6	7.0	-9.9	1.3	4.2	1.4
General government	8.4	8.7	7.2	7.7	-4.8	1.1	-1.8	11.8	4.4	0.2	6.7	3.6	5.2	0.0	0.6	1.0
Demand from Mainland Norway ¹	5.1	6.4	1.7	-1.4	1.2	2.5	3.7	2.3	1.9	2.0	3.5	3.3	1.3	2.1	2.4	2.0
Stockbuilding ²	1.0	0.5	-0.2	-2.1	3.7	-0.3	-0.3	0.3	-0.1	-0.5	-0.4	2.3	0.5	0.1	0.0	0.0
Exports	-0.8	1.4	0.1	-4.1	0.6	-0.8	1.6	-1.7	3.1	4.7	1.1	-0.2	0.2	2.4	3.7	3.0
Traditional goods	6.1	9.2	3.5	-8.0	3.3	-0.1	-0.2	1.3	3.1	6.9	-8.6	1.7	2.2	3.3	3.0	2.8
Crude oil and natural gas	-6.6	-2.4	-1.3	-1.6	-6.9	-5.6	0.5	-5.5	2.7	2.1	4.9	1.5	-4.0	-0.2	5.8	4.1
Imports	9.1	10.0	3.2	-10.3	8.4	3.9	3.0	5.0	2.4	1.6	3.3	1.6	1.5	3.6	2.3	2.1
Traditional goods	11.6	7.2	1.2	-12.1	9.2	4.6	2.6	2.3	2.1	3.2	-0.1	2.7	2.8	3.2	2.9	2.4
Gross domestic product	2.4	3.0	0.5	-1.7	0.7	1.0	2.7	1.0	2.0	2.0	1.2	2.0	1.4	2.4	2.7	2.1
Mainland Norway	5.0	5.7	1.8	-1.7	1.9	1.9	3.7	2.3	2.2	1.4	1.1	2.0	2.0	2.7	2.4	2.0
Manufacturing	2.6	3.8	2.7	-7.8	2.1	1.7	2.0	3.3	2.8	-4.6	-4.9	0.0	0.8	3.4	2.7	1.7
Labour market																
Total hours worked. Mainland Norway ³	3.2	4.8	3.5	-2.0	0.1	1.8	1.9	0.4	1.4	0.6	0.4	0.3	1.3	1.4	1.8	0.9
Employed persons	3.4	4.1	3.2	-0.5	-0.5	1.5	2.1	1.1	1.2	0.4	0.2	1.1	1.5	1.1	0.7	0.8
Labor force ⁴	1.6	2.5	2.9	0.2	0.6	1.3	1.5	1.2	0.7	1.5	0.2	-0.2	1.5	1.3	0.7	0.6
Participation rate (level) ⁴	71.8	72.6	73.5	72.5	71.7	71.5	71.4	71.2	70.7	71.0	70.4	69.7	70.2	70.7	70.9	71.1
Unemployment rate (level) ⁴	3.4	2.5	2.7	3.3	3.8	3.4	3.3	3.8	3.6	4.5	4.7	4.2	3.9	3.8	3.8	3.7
Prices and wages																
Wages per standard man-year	4.1	5.4	6.3	4.2	3.7	4.2	4.0	3.9	3.1	2.8	1.7	2.3	2.8	3.2	3.6	4.1
Consumer price index (CPI)	2.3	0.8	3.8	2.1	2.5	1.2	0.8	2.1	2.0	2.1	3.6	1.8	2.7	1.8	1.6	1.9
CPI-ATE ⁵	0.8	1.4	2.6	2.6	1.4	0.9	1.2	1.6	2.4	2.7	3.1	1.4	1.5	1.9	1.7	1.8
Export prices. traditional goods	11.3	2.4	2.8	-6.0	4.5	5.8	-1.9	2.7	3.4	2.0	4.0	5.4	5.7	1.2	1.3	1.7
Import prices. traditional goods	4.0	3.7	3.9	-1.5	0.0	4.0	0.3	1.5	4.4	4.7	1.8	3.7	5.0	2.3	0.9	1.3
Housing prices	13.7	12.5	-1.0	1.9	8.2	8.0	6.8	4.1	2.7	6.0	7.0	5.0	1.6	1.4	1.2	0.6
Income, interest rates and exchange rate																
Household real disposable income	-6.6	6.0	3.4	3.2	2.3	4.1	4.4	3.9	2.9	5.5	-1.7	1.7	1.7	2.5	3.1	2.5
Household saving ratio (level)	-0.4	0.9	3.8	5.2	4.0	5.9	7.1	7.4	8.2	10.3	7.1	6.9	6.5	6.7	7.6	8.2
Money market rate (level)	3.1	5.0	6.2	2.5	2.5	2.9	2.2	1.8	1.7	1.3	1.1	0.9	1.1	1.3	1.8	2.3
Lending rate. credit loans(level) ⁶	4.3	5.0	6.8	4.0	3.4	3.6	3.9	4.0	3.9	3.2	2.6	2.6	2.6	2.9	3.2	3.7
Real after-tax lending rate. banks (level)	0.2	2.9	1.1	0.7	0.1	1.3	2.1	0.7	0.8	0.1	-1.6	0.1	-0.7	0.4	0.9	0.9
Importweighted krone exchange rate (44 countries) ⁷	0.6	-1.7	0.0	3.3	-3.8	-2.4	-1.2	2.2	5.3	10.4	1.9	-0.8	0.0	-0.6	-2.1	-0.8
NOK per euro (level)	8.05	8.02	8.22	8.73	8.01	7.79	7.47	7.81	8.35	8.95	9.29	9.33	9.59	9.48	9.28	9.20
Current account																
Current balance (bill. NOK) ⁸	358	287	408	261	284	346	371	316	331	246	125	186	324	310	343	370
Current account (per cent of GDP)	16.1	12.2	15.7	10.7	10.9	12.4	12.5	10.3	10.5	8.1	4.0	5.7	9.2	8.4	8.9	9.2
International indicators																
Exports markets indicator	9.8	6.6	1.8	-9.6	11.1	6.5	1.4	2.0	5.2	5.1	4.0	4.7	3.4	4.4	4.3	4.2
Consumer price index. euro-area	2.2	2.1	3.3	0.3	1.6	2.7	2.5	1.4	0.4	0.0	0.2	1.5	1.7	1.6	1.9	1.9
Money market rate. euro(level)	3.1	4.3	4.6	1.2	0.8	1.4	0.6	0.2	0.2	0.0	-0.3	-0.3	-0.3	0.0	0.5	0.9
Crude oil price NOK (level) ⁹	423	422	539	388	485	621	650	639	622	431	378	453	592	544	532	528

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

² Change in stockbuilding. Per cent of GDP.

³ Employees

⁴ According to Statistics Norway's labour force survey(LFS). Break in data series in 2006.

⁵ CPI adjusted for tax changes and excluding energy products.

⁶ Yearly average. Lending rate. banks until 2006

⁷ Increasing index implies depreciation.

⁸ Current account not adjusted for saving in pension funds.

⁹ Average spot price Brent Blend.

Source: Statistics Norway. The cut-off date for information was 4 December 2018.

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