Economic Survey

Statistics Norway

Statistisk sentralbyrå

- Economic developments in Norway
- Forecasts 2016-2019

4/2016

Economic developments in Norway

The Norwegian economy continues to reflect the effects of the oil downturn and weak global demand growth. According to the quarterly annual accounts (QNA), mainland GDP only increased by an annualised rate of 0.6 per cent in the third quarter, after somewhat higher growth through the first half of the year. By way of comparison, we estimate trend growth at 2 per cent. The cyclical downturn, largely a consequence of the fall in demand from and employment in the petroleum industry, has now lasted for over two years. However, the fall in petroleum investment appears to have abated. Whereas this investment declined by 4 per cent per quarter for the two previous years, the decline in the third quarter of 2016 was only 0.6 per cent.

For the past two quarters, more restrained household consumption has contributed to the subdued developments in activity. The consumption picture is a consequence of stagnating income development, without taking into account share dividends, which have been affected by tax planning. Real disposable income excluding share dividends is now projected to fall by 0.1 per

Table 1. **Macroeconomic indicators. Growth from previous period unless otherwise noted. Per cent**

	2014	2015*	Seasonally adjustedt			
			15:4	16:1	16:2	16:3
Demand and output						
Consumption in households etc.	1.9	2.1	0.5	0.3	0.4	0.0
General government consumption	2.7	2.1	0.6	0.6	0.7	0.4
Gross fixed investment	-0.7	-3.8	0.4	-0.4	-0.2	2.6
Mainland Norway	0.4	0.6	1.3	0.3	1.7	3.4
Extraction and transport via pipelines	-3.2	-15.0	-2.7	-3.1	-4.9	-0.6
Final domestic demand from Mainland Norway[1]	1.8	1.8	0.7	0.4	0.8	0.8
Exports	3.1	3.7	-2.0	-2.1	-1.4	1.1
Crude oil and natural gas	2.7	3.2	-5.5	2.7	-1.3	0.8
Traditional goods	3.1	5.8	-0.2	-5.0	-1.5	-0.7
Imports	2.4	1.6	4.3	0.5	-2.6	1.3
Traditional goods	2.1	1.9	4.1	0.6	-2.9	-0.3
Gross domestic product	1.9	1.6	-1.6	1.1	0.0	-0.5
Mainland Norway	2.2	1.1	-0.1	0.3	0.4	0.2
Labour market						
Man-hours worked	1.4	0.3	-0.1	0.0	-0.1	0.1
Employed persons	1.2	0.3	-0.2	-0.1	0.0	0.1
Labour force[2]	1.1	1.4	-0.2	0.5	-0.6	0.7
Unemployment rate. level[2]	3.5	4.4	4.6	4.7	4.7	4.9
Prices and wages						
Annual earings	3.1	2.8	..	..	..	..
Consumer price index (CPI)[3]	2.0	2.1	2.5	3.2	3.4	4.0
CPI adjusted for tax changes and excluding energy products (CPI-ATE)[3]	2.4	2.7	3.0	3.2	3.2	3.3
Export prices. traditional goods	3.4	2.3	0.1	0.8	3.4	0.6
Import prices. traditional goods	4.4	4.7	0.0	-0.1	0.9	0.1
Balance of payment						
Current balance. bill. NOK	346.0	270.0	52.9	42.8	40.3	..
Memorandum items (unadjusted level)						
Money market rate (3 month NIBOR)	1.7	1.3	1.1	1.1	1.0	1.1
Lending rate. credit loans[4]	3.9	3.2	2.8	2.7	2.6	2.5
Crude oil price NOK[5]	621	430	380	304	388	391
Importweighted krone exchange rate. 44 countries. 1995=100	93.7	103.4	107.4	108.1	105.9	105.2
NOK per euro	8.4	8.9	9.3	9.5	9.3	9.3

[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] Period averages.
[5] Average spot price. Brent Blend.
Source: Statistics Norway and Norges Bank

cent in 2016. Slow wage growth and high price inflation coupled with very low growth in overall employment have contributed to this situation.

Despite the weak income developments, housing demand is very high. This is probably largely due to the very low mortgage rates, which appear likely to remain low for a long time. The high demand is manifested in high house price inflation and accelerated residential construction.

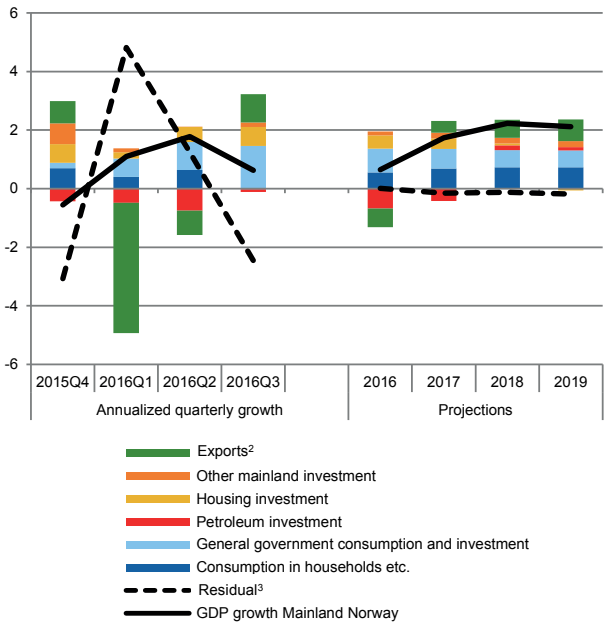
Mainland business investment is also following a positive course, with growth in all of the last four quarters. However the growth is not very strong, and can hardly be taken as evidence that a pronounced turnaround is under way. The power supply industry stands out as a large industry with a substantial increase in investment in the third quarter. The service industries, which account for the bulk of investment in mainland industries, have shown some growth tendencies through the past year, but investment was almost unchanged from the second to the third quarter of this year. Manufacturing investment, however, has fallen for the past two quarters.

Exports have followed a weak trend through the past year, but increased exports of petroleum and services added some growth to overall Norwegian exports in the third quarter. Traditional goods exports, on the other hand, have fallen for four consecutive quarters, but the decline appears to have abated. The third-quarter fall was 0.7 per cent, while the change for the year 2016 is projected to be -5.1 per cent. The decline is due partly to the slump in global demand for petroleum-related products in the wake of the fall in the oil price, but more random factors also play a part. The improvement in cost-competitiveness due to the depreciation of the krone has slowed the decline.

Monetary policy has definitely contributed to braking the economic downturn through cuts in the key policy rate to the record low level of 0.5 per cent in March 2016. As a result, typical mortgage rates fell right down to 2.5 per cent in May, and our most recent figures show them still at that level. The interest rate cuts have contributed to the krone being weak in a historic perspective, although the low oil price itself is the main explanation. The fiscal policy stance has also dampened the cyclical downturn. Public sector demand is increasing more than trend mainland GDP growth, and tax relief has been given. In the third quarter, growth in public consumption and investment was close to trend, if purchases of fighter aircraft that do not affect the activity level in Norway are excluded.

Weak economic developments in 2016 have led to unemployment increasing somewhat. However, unemployment measured by the labour force survey (LFS) has dipped slightly very recently, after increasing up to last summer and peaking at 5 per cent of the labour force as an average for the months June to August. The

Figure 1. **GDP growth Mainland Norway and contribution by final demand components[1]. Percentage points**



[1] Demand components are calculated as the change in each variable, adjusted for the direct and indirect import shares, relative to the level of GDP Mainland Norway in the preceding period. The import shares can be found in box 4. All variables are seasonally adjusted and at constant prices.

[2] Exports is defined as total exports minus exports of crude oil, natural gas, ships, oil platforms and planes.

[3] The residual is the sum of all the demand factors that are left out as well as changes in stocks and statistical discrepancies.

Source: Statistics Norway.

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

	QNA figures				Projection			
	15:4	16:1	16:2	16:3	2016	2017	2018	2019
Consumption by households and non-profit organisations	0.7	0.4	0.6	0.0	0.6	0.7	0.7	0.7
General government consumption and investment	0.2	0.6	1.0	1.5	0.8	0.7	0.6	0.6
Petroleum investment	-0.4	-0.5	-0.7	-0.1	-0.7	-0.4	0.2	0.1
Housing investment	0.6	0.2	0.5	0.6	0.5	0.4	0.1	-0.1
Other mainland investment	0.7	0.1	0.0	0.2	0.1	0.2	0.2	0.2
Exports[1]	0.8	-4.4	-0.8	1.0	-0.6	0.4	0.6	0.7
Other deviations[1]	-3.1	4.8	1.2	-2.5	0.0	-0.2	-0.1	-0.2
Growth in mainland GDP	-0.6	1.1	1.8	0.6	0.7	1.7	2.2	2.1

[1] See footnotes to Figure 1.
Source: Statistics Norway.

average unemployment rate for the last three-month period, August–October, was 4.8 per cent. Weak employment developments have been offset by very weak developments in the labour supply too.

The time-lagged effects of the substantial weakening of the krone from the beginning of 2013 to early 2016, coupled with a sharp increase in electricity prices, have pushed up inflation. The 12-month rise in the consumer price index gathered pace through the first half of 2016, and was as high as 4.4 per cent in July before falling back slightly. CPI inflation will probably be 3.6 per cent as an annual average in 2016. However, a clear reduction in the rise in electricity prices and the recent moderate strengthening of the krone mean that inflation will be substantially lower in 2017 and a little lower still in 2018. In 2019, a slightly weaker krone will cause inflation to pick up somewhat again. Annual wage growth in 2016 appears to be as low as 2.2 per cent, which means a decline in real wages of a full 1.4 per cent. Wage growth is likely to be somewhat higher next year, so that real wage growth will again be weakly positive.

Our calculations point to growth in the Norwegian economy gathering pace in the near term, and to a cyclical turnaround early next year. These calculations are based on the assumption that the fall in petroleum sector demand slows substantially through 2017 and gradually gives way to a moderate increase, and that global growth picks up a little in the near term. A change to growth in real wages will prompt higher consumption growth and business sector investment will show a certain increase as a time-lagged consequence of the improvement in competitiveness that lies behind us. Housing investment will also exhibit clear growth in 2017, from a high level in 2016.

House prices are expected to rise somewhat through 2017 as well. As a result of a high level of residential construction over a long period of time, together with moderate income developments, house prices are expected to fall through 2018 and 2019. The period with extremely low interest rates will also come to an end in due course. Greater awareness of this, coupled with higher property taxes in some places, points the same way. The softening of house prices combined with a slightly higher rise in costs due to higher wage growth will result in a gradual levelling off and after a while a fall in housing investment towards the end of the projection period. However, the fall in housing investment will be compensated for by slightly higher growth in exports and both mainland and petroleum-sector business investment, such that mainland GDP growth may remain slightly above trend.

It appears unlikely that the cyclical turnaround will imply any particularly high growth in activity. According to the projections, unemployment will also only fall slightly. Employment is admittedly expected to pick up appreciably in the years ahead, but so will the labour supply. We therefore assume that the key policy rate will remain unchanged through 2019. According to our calculations, the krone will strengthen a little in the near term and then weaken slightly towards the end of the projection scenario. An expansionary fiscal policy in 2017 is assumed to be replaced by a fairly neutral stance in 2018 and weakly contractionary fiscal policy the following year. According to our calculationsthe structural non-oil budget deficit (SNOBD) in the projection period will be equivalent to just on 3 per cent of the Government Pension Fund Global.

Expansionary fiscal policy also in 2017

Public sector consumption growth gathered pace in the second half of 2015, and was relatively high in the first half of 2016. The growth rate slowed somewhat in the third quarter of this year. We assume the same underlying growth in the fourth quarter, which will result in an increase of 2.2 per cent from 2015 to 2016. This is slightly lower than previously assumed. It is also lower than the growth projection for the current year in the National Budget for 2017 (NB 2017). Gross public sector investment has exhibited strong growth, also after adjustment for the purchase of fighter aircraft for the Armed Forces. We now forecast annualised growth in 2016 to be about 6 per cent, which is slightly higher than previously assumed. However, total purchases of goods and services are quite close to previous projections. Transfers to households appear likely to increase by 4.4 per cent in 2016, so that real growth in transfers will be about 1 per cent. This is consistent with previous projections and NB 2017. Real growth in general government purchases of goods and services and transfers to households will thus be approximately as expected in 2016. Overall real growth in these three expenditure items is now projected to be 2.2 per cent in 2016. This is slightly higher than estimated trend growth in the mainland economy. Lower tax rates in 2016 mean that, overall, fiscal policy is somewhat more expansionary than the aforementioned growth in expenditure might indicate in isolation. NB 2017 forecasts that the structural, non-oil budget deficit (SNOBD) as a share of trend mainland GDP will increase by one percentage point from 2015 to 2016. In 2016, SNOBD is equivalent to 2.8 per cent of the value of the Government Pension Fund Global (GPFG) at the beginning of 2016.

Projections for fiscal policy in 2017 are based on NB 2017. Consumption growth is forecast to be 1.7 per cent. Gross general government investment will continue to grow strongly. The increase next year is primarily the result of purchases of new fighter aircraft increasing from two aircraft in 2016 to six aircraft per year going forward. Growth in transfers to households will edge up slightly next year, in pace with slightly higher wage growth in 2017 than in 2016. This means that, given lower consumer price inflation, the transfers will make a considerably larger contribution to household real income next year than this year. Real growth in the three expenditure components is projected to be 2.3 per cent in 2017, which is slightly higher than in 2016.

Table 3. **Main economic indicators 2015-2019. Accounts and forecasts. Percentage change from previous year unless otherwise noted**

	Accounts	Forecasts										
	2015*	2016			2017			2018			2019	
		SN	NB	MoF	SN	NB	MoF	SN	NB	MoF	SN	NB
Demand and output												
Consumption in households etc.	2.1	1.5	1.9	1.4	1.9	2.1	2.3	2.0	2.0	2.6	2.0	1.8
General government consumption	2.1	2.2	..	2.6	1.7	..	1.7	1.9	..	..	1.8	..
Gross fixed investment	-3.8	0.0	..	0.0	1.5	..	1.6	3.3	..	1.8	2.5	..
Extraction and transport via pipelines[1]	-15.0	-15.8	-15.5	-14.0	-11.8	-4.2	-10.0	5.1	0.0	-6.8	3.7	3.0
Mainland Norway	0.6	5.6	..	..	5.0	..	..	2.5	..	..	1.8	..
Industries	-1.6	2.6	..	1.8	3.6	..	4.4	3.5	..	4.8	3.7	..
Housing	1.6	9.3	7.6	8.7	6.9	4.0	5.6	1.3	1.5	4.0	-1.1	0.5
General government	3.0	6.0	..	5.3	5.0	..	5.1	2.5	..	..	2.4	..
Demand from Mainland Norway[2]	1.8	2.6	2.5	2.5	2.5	2.7	2.6	2.1	2.2	2.7	1.9	2.1
Stockbuilding[3]	0.2	0.2	..	..	0.0	..	..	0.0	..	..	0.0	..
Exports	3.7	-1.7	..	-0.3	1.2	..	-0.4	1.6	..	0.9	2.0	..
Crude oil and natural gas	3.2	0.8	..	1.7	0.0	..	-4.1	-1.0	..	-3.6	-0.8	..
Traditional goods[4]	5.8	-5.1	-4.0	-1.5	3.0	3.1	4.6	3.5	3.2	5.9	4.4	3.3
Imports	1.6	1.1	0.6	-0.5	1.8	3.0	3.0	2.8	2.1	3.4	2.9	2.7
Traditional goods	1.9	0.1	..	0.0	1.3	..	3.6	2.7	..	4.4	3.0	..
Gross domestic product	1.6	0.4	0.7	1.2	1.4	1.3	0.6	1.7	1.5	1.3	1.7	1.7
Mainland Norway	1.1	0.7	0.9	1.0	1.7	1.8	1.7	2.2	2.1	2.4	2.1	2.1
Labour market												
Employed persons	0.3	-0.1	-0.3	0.2	0.8	0.8	0.7	0.8	1.1	1.1	0.8	0.9
Unemployment rate (level)	4.4	4.7	4.7	4.7	4.5	4.7	4.6	4.4	4.4	4.3	4.3	4.1
Prices and wages												
Annual earnings	2.8	2.2	2.5	2.4	2.6	3.2	2.7	2.9	3.4	3.0	3.4	3.7
Consumer price index (CPI)	2.1	3.6	3.6	3.4	2.3	2.6	2.0	2.1	2.1	1.9	2.4	1.8
CPI-ATE[5]	2.7	3.0	3.3	3.0	2.0	2.7	2.1	2.0	2.1	2.0	2.2	1.8
Export prices. traditional goods	2.3	3.1	..	..	1.9	..	..	1.3	..	..	2.9	..
Import prices. traditional goods	4.7	0.9	..	..	0.8	..	..	1.2	..	..	2.2	..
Housing prices	6.1	7.3	..	..	7.2	..	..	1.5	..	..	-0.7	..
Balance of payment												
Current balance (bill. NOK)	270.0	159.4	..	..	201.3	..	..	210.3	..	..	229.8	..
Current balance (per cent of GDP)	8.7	5.1	..	..	6.2	..	..	6.2	..	..	6.4	..
Memorandum items:												
Household savings ratio (level)	10.4	6.5	..	..	6.6	..	..	6.5	..	..	6.4	..
Money market rate (level)	1.3	1.1	1.0	1.1	1.0	0.8	1.0	1.0	0.9	1.0	1.0	..
Lending rate. credit loans (level)[6]	3.2	2.6	..	..	2.6	..	..	2.6	..	..	2.6	..
Crude oil price NOK (level)[7]	430	375	..	371	451	..	425	464	..	447	503	..
Export markets indicator	4.9	3.1	..	..	4.1	..	..	4.5	..	..	4.6	..
Importweighted krone exchange rate (44 countries)[8]	10.4	1.9	2.3	2.8	-3.2	-2.1	0.1	0.0	-0.7	1.0	1.1	-1.1

[1] orecasts from Ministry of Finance incl. service activities incidential to extraction.
[2] Consumption in households and non-profit organizations + general government consumption + gross fixed capital formation in Mainland Norway.
[3] Change in stockbuilding. Per cent of GDP.
[4] Norges Bank estimates traditional exports. which also includes some services.
[5] CPI adjusted for tax changes and excluding energy products (CPI-ATE).
[6] Yearly average.
[7] Average spot price. Brent Blend.
[8] Increasing index implies depreciation. Ministry of Finance forecasts trade-weighted exchange rate.
Source: Statistics Norway (SN). Ministry of Finance. St.meld. nr.2 (2016-2017). (FIN). Norges Bank. Pengepolitisk rapport 3/2016 (NB).

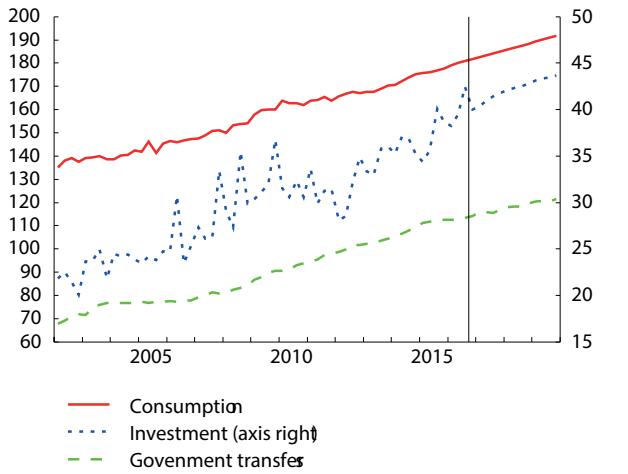
According to NB 2017, the Government's budget proposal entails an overall reduction in accrued direct and indirect taxes of about NOK 2.8 billion next year. This projection takes into account the changes that have taken place in the course of 2016. It is proposed that the tax rate on ordinary income for companies and personal taxpayers will be reduced from 25 to 24 per cent in 2017. Adjustments for petroleum tax and power supply taxation are proposed such that these two industries are not appreciably affected. Bracket tax for individuals is to be increased, so that most of the revenue loss due to reduced tax on ordinary income will be recouped. These two changes are projected to reduce accrued personal taxes by about NOK 2.5 billion. In addition, the rates for the minimum standard income deduction and the wealth tax system are to be changed. This will reduce direct personal taxation by about a further NOK 1.3 billion. A reduction in motor vehicle tax for private cars will impact revenue to the tune of over NOK 1.2 billion, so that direct personal taxation will be reduced by about NOK 5 billion in all. For the business sector, a tax on the financial industry equivalent to 5 per cent of salaries is proposed. Initial depreciation on machinery is also to be scrapped. Some minor changes in other areas are also proposed, which would result in overall business sector taxation increasing accrued tax revenue by about NOK 1 billion.

Changes in indirect taxes, including increased environmental charges, are projected to generate revenue of about NOK 1.4 billion. This will be used partly to finance the 12 per cent reduction in motor vehicle tax on private cars. Motor vehicle tax is defined as a direct personal tax and therefore does not affect the indirect tax component of the CPI. The effect on the CPI of changes in indirect taxes is equivalent to 0.1 percentage point in 2017.

NB 2017 forecasts that SNOBD as a share of trend GDP will increase by 0.4 percentage point from 2016 to 2017. This amounts to 3.0 per cent of the GPFG. Thus the draft national budget for 2017 implies a continuation of the expansionary fiscal policy of recent years, but at a more moderate rate than in the three previous years. At the time of writing, it is uncertain what fiscal policy the Storting will adopt in 2017.

There are no proposals for fiscal policy in 2018 and 2019. We have assumed that growth in general government consumption will be 1.8 per cent in both 2018 and 2019. When it comes to gross general government investment, we have assumed a continued moderate increase in investment in civil infrastructure. As mentioned, the purchase of fighter aircraft for the Armed Forces substantially increases investment in 2017, but there will be no new impulses of this nature in 2018 or 2019. The tax compromise based on the Scheel Committee's report means that the tax rate on ordinary income will be reduced further to 23 per cent in 2018. We assume that there will be a simultaneous upward adjustment of tax rates for individuals, so that only

Figure 2. **General government. Seasonally adjusted, billion 2014-kr., quarterly**



Source: Statistics Norway.

mainland enterprises are affected by the change. The loss of revenue due to this change can be projected at close to NOK 3 billion in 2018. We have assumed that fuel taxes will increase in 2018, yielding revenue of NOK 3 billion, and that there will be a similar increase in 2019 as well. This will add about 0.2 percentage point to CPI inflation both years.

We have assumed that real growth in pension transfers to households will be about 2 per cent annually in the period 2018 and 2019. Other transfers will grow somewhat less in real terms. Annual growth in real transfers is expected to be about 1.5 per cent annually. We have not made assumptions about changes in direct tax rates in 2019. The assumed increase in environmental taxes means that our projections will lead to a small increase in overall taxes in 2019, but not in 2018. Coupled with an extrapolation of the growth projections for expenditure, our projections now imply an approximately cyclically neutral fiscal policy in 2018 and a slight tightening in 2019 when the upturn will have lasted a while.

The value of the Government Petroleum Fund was NOK 7 460 billion at the beginning of 2016. At the end of November this year the GFPG was worth approximately NOK 100 billion less, partly as a result of the appreciation of the krone. If OPEC reaches agreement on a production cut at its meeting on 30 November, the oil price is expected to rise, which will boost revenue accruing to the GPFG. On a long-term basis, however, a higher oil price will also result in a slightly stronger krone than we have seen for most of 2016, which will reduce the value of the GPFG. Our projection for SNOBD is a good 3 per cent of the Fund›s value going forward.

Low interest rate and weak krone for a long time

Following the 0.25 percentage point interest rate cut in March this year, the key policy rate is now 0.5 per cent. Money market rates fell to 1.0 per cent after the cut, but

Box 1 **Implications of a lower oil price**

Our projections are based on an average oil price of USD 53 per barrel in 2017, with the price rising to USD 60 dollars per barrel towards the end of the projection period. However, there is substantial uncertainty associated with these projections. In this box we analyse the implications for the Norwegian economy of an appreciably lower oil price. In our calculation we set the price per barrel at USD 10 lower than in the projection scenario, and the difference is assumed to be attributable to supply side factors in the oil market.

A different oil price impacts the Norwegian economy through a number of channels. Many of these channels are incorporated in our simplified representation of the Norwegian economy – the KVARTS model. Key factors, such as petroleum investment, are exogenous to the model, however. We therefore make some assumptions about mechanisms that are not modelled.

- In the projection scenario, petroleum investment increases by 5.1 per cent and 3.7 per cent in 2018 and 2019, respectively. The lower oil price is assumed to lead to the investment level in 2017 remaining unchanged in 2018 and 2019.
- A lower oil price will affect countries to different extents, depending on the magnitude of their energy production. We assume that Norway›s export markets considered as a whole are stimulated, so that growth in demand from these markets increases by 0.1 percentage point each year from and including 2017.
- A lower oil price will also dampen inflation abroad. We assume that CPI inflation will be 0.2 percentage point lower in 2017, and a bare 0.1 percentage point lower in 2018 and 2019 than in our projection scenario. This is equivalent to the impact of the fall in oil prices on Norwegian inflation when account is not taken of exchange rate changes.

The reduced demand from the petroleum sector first impacts some manufacturing segments, but the table shows that the effects quickly spread to other parts of the Norwegian economy. Business investment falls quite considerably in 2017 already, and in 2019 is 2 per cent lower than in the projection scenario. Must of this effect is brought about through a financial accelerator. A lower oil price causes equity prices on the Oslo Stock Exchange to fall, which makes it more difficult and more expensive for Norwegian companies to secure finance through the stock market. This negatively impacts the investment level. Moreover, overall employment falls somewhat in 2018 and 2019, causing unemployment to rise by 0.1 percentage point. As a result, average wage growth declines, and so does household consumption. In 2019, consumption is 0.5 per cent lower than in the projection path.

The effects of the fall in the oil price are dampened by the depreciation of the krone. In 2019 the calculation shows that the import-weighted krone exchange rate is 1.5 per cent weaker than in our baseline scenario. This boosts cost-competitiveness, which stimulates exports, and in 2019 traditional goods exports are 1 per cent higher than in the baseline scenario. The net effect on manufacturing of a lower oil price will therefore be marginally positive. A large share of Norwegian exports target petroleum activities in other countries, and a lower oil price is likely to reduce demand from these markets. This factor is not included in the model, nor has it been taken into account in any other way in the calculation. The effects on Norwegian exports and manufacturing may thus be somewhat less positive in reality than indicated by our calculation.

On the other hand, we have assumed that fiscal policy will not change as a consequence of the oil price fall. This is not unreasonable within our time horizon, but it is nonetheless conceivable that fiscal policy could have become somewhat more expansionary. The size of the GPFG is negatively affected by lower transfers, but positively by a weaker krone exchange rate. In our calculation, these two effects virtually offset one another in 2019, with the result that the scope for manoeuvre of fiscal policy is almost unchanged compared with the baseline scenario.

On balance, the analyses show that a lower oil price depresses the level of activity in the Norwegian economy. The effects on mainland GDP are admittedly negligible in 2017, but in 2019 GDP is 0.4 per cent lower than in the baseline scenario. This means that the cautious cyclical upturn in our baseline scenario is cancelled for all practical purposes.

Effects of a 10 USD lower oil price from the first quarter of 2017. Deviation from baseline scenario in per cent unless otherwise indicated

	2017	2018	2019
Mainland GDP	0.0	-0.3	-0.4
- Manufacturing	0.3	0.2	0.2
Mainland business investment	-0.7	-1.7	-1.9
Employment	0.0	-0.1	-0.1
Wages	-0.1	-0.1	-0.2
Unemployment rate. percentage points	0.0	0.1	0.1
Household consumption	-0.1	-0.4	-0.5
Import-weighted krone exchange rate	1.0	1.2	1.5
Exports. traditional goods	0.5	0.7	1.0
CPI inflation. percentage points	-0.1	0.0	0.1
Money market rate. percentage points	0.0	0.0	0.0
Assumptions:			
Oil price	-18.9	-18.3	-17.1
Petroleum investment	0.0	-4.9	-8.2
Export market indicator	0.1	0.1	0.1
CPI inflation abroad. percentage points	-0.2	-0.1	-0.1

Source: Statistics Norway.

since early August have been around 1.1 per cent. Prior to the policy rate cut, money market rates were in the area 1.1–1.2 per cent. The spread between the policy rate and money market rates has thus widened.

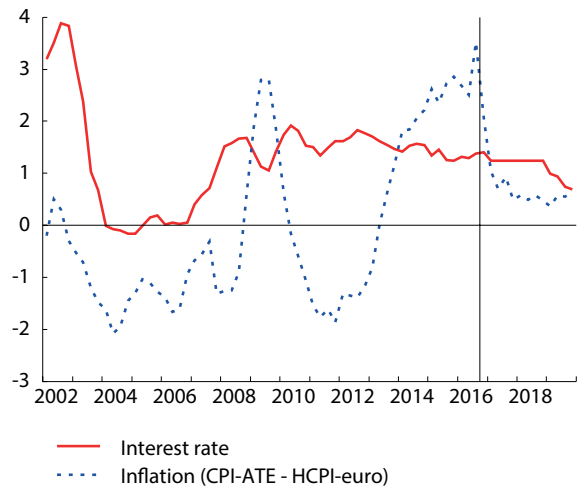
After being weak for three years, the krone has strengthened in the course of 2016. The euro exchange rate, as a monthly average, was 9.60 in January but had fallen to 9.10 in November. The krone strengthened against the dollar from a rate of 8.80 in January to 8.20 in April. Since the US elections, the dollar has strengthened against several currencies, including the Norwegian krone, and at the end of November was about 8.60. Measured by the import-weighted exchange rate, the krone appreciated by around 6 per cent in the first 11 months of the year. It is nonetheless weak compared with the recent past, and the currencies in the basket for calculating the import-weighted krone exchange rate are about 17 per cent more expensive now than the average for the years 2011–2013.

Deposit and lending rates have fallen more than money market rates since the rate cut. The average interest rate on credit loans secured on dwellings fell from 2.7 per cent at the end of the first quarter to 2.5 per cent at the end of the second quarter, and remained at that level at the end of the third quarter. New monthly interest rate statistics, which in contrast to the quarterly statistics are not based on a full count, show that the interest rate reduction mainly took place in May. The interest rate on deposits fell from 0.9 per cent at the end of the first quarter to 0.8 per cent at the end of the second quarter, and remained more or less unchanged through the third quarter.

As in our previous report, we believe that the key rate will be kept at the current low level for several years ahead. There are several reasons for this low level. LFS unemployment was 4.8 per cent (August–October) and appears likely to be an annualised 4.7 per cent this year, which is a relatively high level. Two years ago, unemployment was 3.5 per cent. Mainland GDP growth was only 0.2 per cent in the third quarter. On an annual basis, growth will be clearly under one per cent, and hence far less than trend mainland GDP growth, estimated at about 2 per cent. Although the unemployment peak and GDP growth trough have passed, the expected upturn will be weak. We therefore assume that interest rates will remain unchanged through the remainder of the projection period.

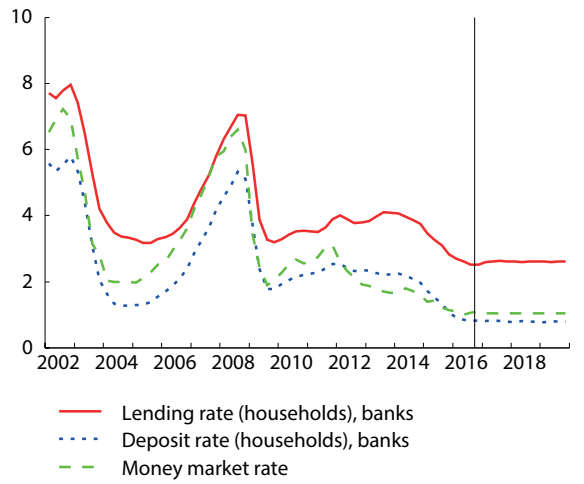
Estimated yields on Norwegian government bonds fell through the first half of the year, but have risen since the summer. The 10-year government bond yield was 1.4 per cent at the beginning of the year and 1.6 per cent at the end of November, after lying at less than 1.0 per cent in the first half of July. Developments in government bond yields indicate expectations of a higher interest rate level ahead.

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



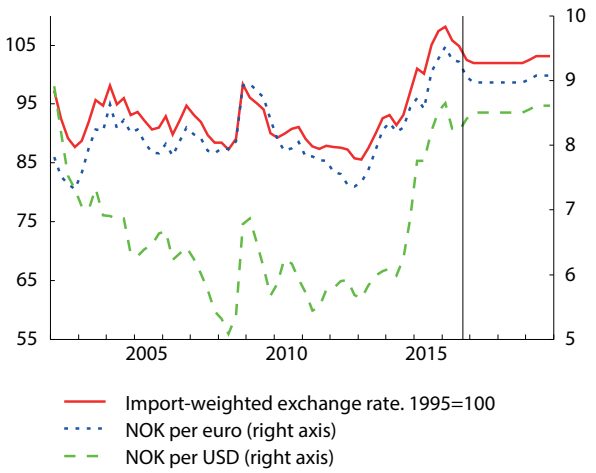
Source: Norges Bank and Statistics Norway.

Figure 4. **Norwegian interest rates. Per cent**



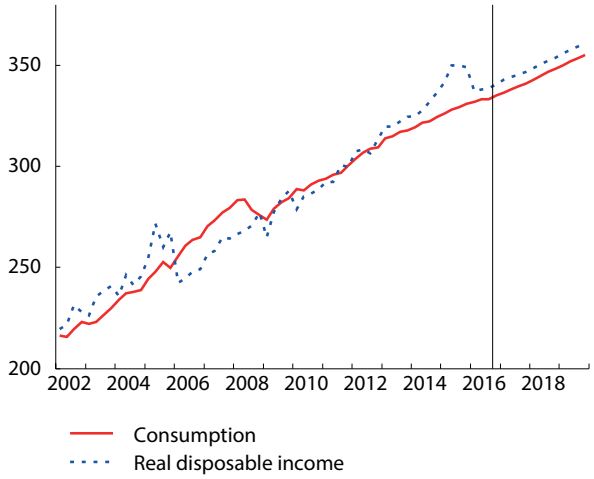
Source: Norges Bank and Statistics Norway.

Figure 5. **Exchange rates**



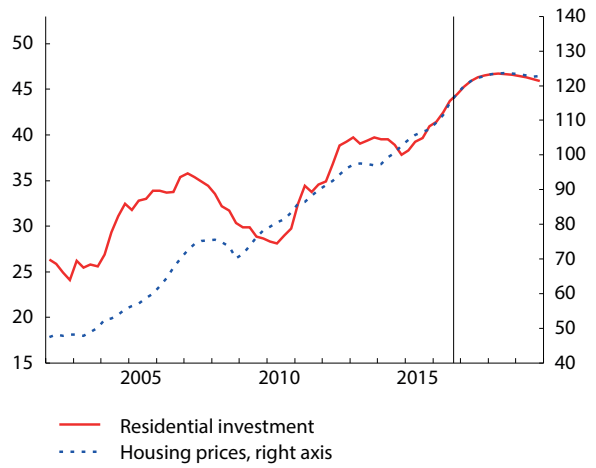
Source: Norges Bank.

Figure 6. **Income and consumption in households. Seasonally adjusted, billion 2014–kr., qarterly**



Source: Statistics Norway.

Figure 7. **Housing market. Seasonally adjusted. Left axis, billion 2014-kr., quarterly. Right axis index, 2014=100**



Source: Statistics Norway.

Both higher oil prices and a smaller inflation differential between Norway and the EU point to a strengthening of the krone, while a slightly reduced interest rate differential in 2019 points the other way. We therefore assume a slight strengthening of the EUR-NOK exchange rate of about NOK 9.00 at the approaching year-end, with a reversal in 2019. Because of changes in the krone exchange rate through 2015 and up to the present, this implies a depreciation of 1.9 per cent this year, measured in terms of the import-weighted krone exchange rate, while the krone will appreciate by 3.2 per cent next year.

Brief pause in consumption growth

After moderate growth through 2015 and the first half of this year, growth in consumption by households and non-profit organisations paused in the third quarter, according to QNA figures. Developments in goods consumption were particularly subdued. Whereas annual growth was 1 per cent in 2015, goods consumption showed virtually zero growth in the first quarter of the year and fell back 0.3 per cent in the second quarter and 0.5 per cent in the third quarter. Purchases of vehicles, clearly the most important product group among consumer durables, continued on the weak tendency of the previous quarter and fell a full 1.5 per cent in the third quarter. Important non-durable consumer goods such as food and clothing and footwear – which together account for more than 30 per cent of all goods consumption – showed a decline of around 1 per cent in the same quarter. Seasonally-adjusted figures show that goods consumption increased by 0.6 per cent from September to October, pointing to a certain upturn in goods consumption in the fourth quarter of this year.

While purchases of food and vehicles continued to fall, consumption of electricity and other products, including clothing and footwear, household equipment and sports equipment contributed most to growth in October. Consumption of services increased by 0.8 per cent in the third quarter, or an annualised 3.1 per cent. This growth is broad-based and in line with the growth rates of the six previous quarters.

Developments in consumption are largely determined by changes in households' income, wealth and interest rates. Household real disposable income rose by a full 5.2 per cent in 2015, almost double the previous year›s growth. However, this strong growth can be explained by a sharp rise in share dividend distributions last year, probably tax-motivated and based on expectations of higher taxes on such income from 2016. If we exclude dividend distributions, which probably provide little impetus to consumption, real disposable income increased by a moderate 2.5 per cent in 2015. Wage income is households' most important source of income. Although growth in annual wages was lower than it had been for a long time, and employment showed little increase, it was nonetheless wage income coupled with government transfers that contributed most to income growth last year. As a result of lower interest rates, net interest income also made a clear contribution to income growth.

Fairly low growth in both wage income and government transfers through the first three quarters of the year, coupled with very strong inflation in the first quarter indicates that annualised growth in real disposable income excluding share dividends will be very

Table 4. **Household real disposable income. Percentage growth compared with previous year**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total	8.3	-6.6	6.0	3.4	3.2	2.3	4.1	4.4	3.8	2.7	5.2	-2.9	2.1	1.9	2.0
Excluding share dividends	4.2	4.4	4.8	2.6	3.4	1.8	4.1	4.3	3.7	2.3	2.5	-0.1	1.8	1.9	1.9

Source: Statistics Norway.

weak this year. At the same time, net interest income will make a smaller contribution to income growth this year than last as a result of a further fall in lending rates on an annual basis. We envisage wage income continuing to move on a weak trend as a result of low wage growth and a fairly modest increase in employment. Government transfers will contribute clearly to growth in real disposable income on an annual basis throughout the projection period. Lower inflation will contribute appreciably to pushing up real wage growth in the years 2017 to 2019. All in all, we expect close to zero growth in real disposable income excluding dividends this year, increasing to almost 2 per cent in the course of the next three years. The increased growth in real income, coupled with increased real house prices this year and next, will gradually push up consumption growth. Overall, we expect consumption growth of around 1.5 per cent this year and around 2 per cent in the years 2017 to 2019. These consumption developments are far weaker than in the cyclical upturn prior to the financial crisis in 2008, when consumption increased by almost 5.5 per cent annually at the most.

Household saving in the form of financial and housing investment as a share of disposable income has increased from a level of just over 3.5 per cent in 2008 to around 10.5 per cent in 2015. According to quarterly income and capital accounts published in September, the seasonally adjusted saving ratio fell through the first half of this year to a level of just over 6 per cent. The saving ratio excluding share dividends also fell during the period, from a level of about 5 per cent in 2015 to around 3 per cent. Given the income and consumption developments we are assuming here, we envisage that the total saving ratio as an annual average will be around 6.5 per cent this year and for the remainder of the projection period.

Housing market turnaround in 2018

According to Statistics Norway›s seasonally adjusted house price index, house prices rose by 3.2 per cent in the third quarter compared with the previous quarter, while the corresponding quarterly growth was 1 per cent in the first quarter and 1.8 per cent in the second quarter. Unchanged house prices from the third quarter and for the rest of the year will result in a 6.2 per cent rise in house prices as an annual average for 2016. If fourth-quarter house prices rise at the same rate as the average so far this year, the annual rise will be 7.2 per cent.

The monthly house price statistics published by Real Estate Norway show an even stronger rise in house prices in the first three quarters of the year, and the rise continued in October. House price inflation also exhibits large regional differences, and this is particularly pronounced in the Oslo area, with a 12-month rise of over 20 per cent.

In the long term, house prices are positively influenced by an increase in household real disposable income and by lower real interest rates after tax, while they are depressed by an increased supply of new dwellings. Our calculations also take into account that household borrowing and house prices are positively correlated and mutually influence one another.

Lending rates fell through 2015, and there has been a further decline this year. This stimulates borrowing, but growth in borrowing may have been dampened by lower underlying income growth. Household gross debt is growing, and for the past four quarters debt growth has been stable at an annualised rate of around 6 per cent.

In the short term, house prices are also influenced by changes in households' assessments of developments in both their own financial situation and the Norwegian economy. The consumer confidence indicator of Kantar TNS and Finance Norway provides us with a measure of these expectations. The index fell for six consecutive quarters, from the third quarter of 2014 to the first quarter of this year. The unadjusted second quarter index showed a slight improvement, however, and it rose strongly from the second to the third quarter. The index remained nearly unchanged in the fourth quarter.

We have assumed that households will not change their assessment of the economic outlook in the immediate future, but that the consumer confidence indicator may rise as the cyclical upturn takes hold. Nominal debt growth is projected to be about 6 per cent in 2016, and to edge up in 2017 before falling back towards the end of the projection period. However, we have not assumed that there will be any tightening of banks' credit practices in relation to households, as proposed by the Financial Supervisory Authority of Norway, Finanstilsynet, this autumn. The extraordinarily low and falling real interest rates have caused house price inflation to accelerate thus far in 2016. Household real disposable income excluding share dividends will remain approximately unchanged in 2016, and this will lead to a somewhat weaker rise in house prices towards the end of the year after adjustment for normal seasonal variations. As house prices rose through 2015, and because house price inflation has been high so far this year, we now project that house prices will rise by 7.3 per cent in 2016.

Given somewhat higher near-term growth in household real disposable income and persistently low real interest rates, we expect house prices to rise more than 7 per cent in 2017 as well. Much of this annual rise can be ascribed to the strong rise in house prices through 2016. A zero rise in house prices through 2017 would have resulted in house price inflation of close to 3 per cent for the year. High housing investment in 2016 and 2017 will gradually increase the supply of new dwellings. This, coupled with moderate income growth and slightly higher real interest rates will check the rise in house prices, resulting in an annual rise of 1.5 per cent in 2018 and a fall of just over 0.5 per cent in 2019.

Box 2 **Do we have a housing bubble?**

A rapid rise in house prices and debt increases the risk of financial instability. NB 2017 states that previous financial crises have almost always been characterised by a general belief in the period prior to the crisis that the rise in prices and debt is correct and can be explained. This is the case if house price and debt developments can be explained in the long term by fundamental factors such as incomes, interest rates and the housing supply. Otherwise, there may be a price bubble in the housing market. There may be many reasons for a price bubble. Price movements may, for example, be driven by expectations of a continued rise in prices.

A recent study from Norges Bank, based on data up to and including 2014, examines different measures of whether house price developments are consistent with stable, long-term equilibrium, and it finds no support for any price bubble in the Norwegian housing market in the 2000s.1 The question we ask below is whether our model-based projections for house price developments after 2014 provide evidence for maintaining that a house price bubble is now developing.

In Statistics Norway's KVARTS macroeconomics model, developments in house prices and in household gross debt, adjusted for general price inflation, are determined over time by macroeconomic variables that have already been observed.2 In the long term, house prices are positively influenced by higher debt and income, and negatively by more housing wealth. Debt is pushed up by higher house prices and housing wealth, while increased real interest rates after tax push it down. Population size is implicitly included in the income variable, but household size has no effect. Changes in households' assessments of the economic situation, measured by a consumer confidence indicator3, also influence house price inflation, but only in the short term.

In the version of KVARTS that is used for our projections, housing market relations are quantified by means of quarterly data for the period 1986 (2)–2014 (4). The sub-model satisfactorily explains developments in house prices and debt during the estimation period.

The figure shows how accurately the model forecasts the changes in house prices and household debt for seven quarters after the estimation period, when we insert actual observations for all the explanatory variables and adjust for general price inflation. We see that the model somewhat overestimates real debt growth in all quarters (by about 0.4 percentage point on average). The model is fairly accurate with respect to the rise in real house prices for the year 2015 as a whole: The forecast error for the four quarters combined is 0.8 percentage point. The model has slightly more difficulty forecasting developments in the first two quarters of 2016, where the total forecast error is about 1.5 percentage points. In isolation, greater household optimism in the third quarter – measured in the form of a large increase in the consumer confidence indicator – pushed up the projected real rise in house prices by 1.4 percentage points, and the forecast error for this quarter is very small.

The consumer confidence indicator in the model may reflect many factors that influence households' perception of their own financial situation and the Norwegian economy. Changes in the indicator do not in themselves represent changes in fundamentals: A strong increase in the value of

Quarterly rise in house prices and household gross debt, adjusted for inflation measured by the National Accounts consumption deflator, 2014 (1) – 2016 (3). The figures are not seasonally adjusted and figures for household disposable income and gross debt in 2016 are our projections. The vertical bands 2015 (1) – 2016 (3) indicate forecast uncertainty

higher house prices going forward. In the model, this gives a short-term inflationary impulse, and not a persistent contribution to the rise in house prices. A more detailed discussion of the effects of changed expectations on house prices is provided in Box 2, Economic Survey 3/2013.

Any factors that influence supply and demand in the housing market, and which are not included in the model, may be a source of systematic forecast errors. If a growing share of dwellings are purchased by persons who are not themselves going to live in them, it may increase overall demand for dwellings. At the same time, it will lead to an increased supply of rental dwellings. There are signs4 that this may have contributed to the sharp rise in house prices in Oslo, where house prices have risen far more than rents this past year. If dwellings increasingly become a portfolio investment, rather than a place to live, house price volatility may well increase. But this demand is not necessarily pushed up by expectations of a further rise in prices alone; it may also be prompted by a good return in the form of rent.

So far, however, the forecast errors we have seen in 2016 have not been so large as to provide clear evidence of a house price bubble in Norway. Other indications, which may lead to a different conclusion, are limited to certain geographical areas of the country. House prices may fall regardless. When they do so at the end of our projection scenario, it is as a result of fundamental factors – an increased supply of dwellings following high housing investment in 2016 and 2017, and moderate developments in income – and not as a result of a price bubble bursting.

In the event of a bubble bursting, expectations of a fall in house prices will make it attractive to postpone buying, and some of the investors in the housing market may be obliged to sell. It is conceivable that such a situation could trigger a sharp fall in house prices.

[1] A.K.Anundsen (2016): "Detecting imbalances in house prices: What goes up must come down?" Working Paper 11/2016, Norges Bank Research.
[2] See A.K. Anundsen and E.S.Jansen (2013): "Self-reinforcing effects between housing prices and credit", Journal of Housing Economics 22, 192-212, where the model is quantified on the basis of data from the period 1986 (2) – 2008 (4). They also show that when a lagged rise in housing prices results in higher housing investment – as in KVARTS – this will dampen house price inflation after a while.
[3] The consumer confidence indicator is designed to capture households› perception of the current situation and their expectations regarding developments one year ahead in both their own financial situation and the Norwegian economy. The indicator is the unadjusted collective indicator of Kantar TNS and Finance Norway, which is published quarterly; see https://www.finansnorge.no/aktuelt/sporreundersokelser/forventningsbarometeret1/forventningsbarometeret-2016/optimistene-i-flertall
[4] See "Boligmarkedet i Oslo – Bor eierne selv i de kjøpte boligene?" [The Oslo housing market – Do the owners live in the dwellings they buy?]. Fakta om boligmarkedet, juni 2016, Eiendomsverdi.

When we adjust for inflation, this is equivalent to a rise in real house prices of nearly 4 per cent in 2016 and 5 per cent in 2017, and a fall of about 0.5 per cent in 2018 and nearly 3 per cent in 2019.

This projection scenario for house prices, in which house prices peak in 2018 and then fall, is the result of an interaction among economic fundamentals. In Box 2 we consider whether there is a price bubble developing in the housing market that may lead to a different, more dramatic house price scenario in the near future.

According to the QNA, housing investment increased by 1.6 per cent in 2015 after falling through 2014. So far this year, the growth rate of housing investment has risen from one quarter to the next – from 1 per cent in the first quarter to over 3 per cent in the third quarter. Statistics Norway›s building statistics also show a clear tendency towards increased housing start permits through 2015 and so far in 2016. However, preliminary figures for October show a seasonally adjusted decline on the previous month. Given unchanged seasonally adjusted starts from the third quarter and for the remainder of the year, this indicator will rise by close to 6.5 per cent. According to our projections, the rise in house prices through 2016 and 2017 will boost housing investment further. We project that the growth in volume in housing investment will be over 9 per cent in 2016 and close to 7 per cent in 2017. A fall in house prices through 2018 and 2019 will cause growth in housing investment to moderate to about 1.5 per cent in 2018, while the investment level will decrease by about 1 per cent from 2018 to 2019.

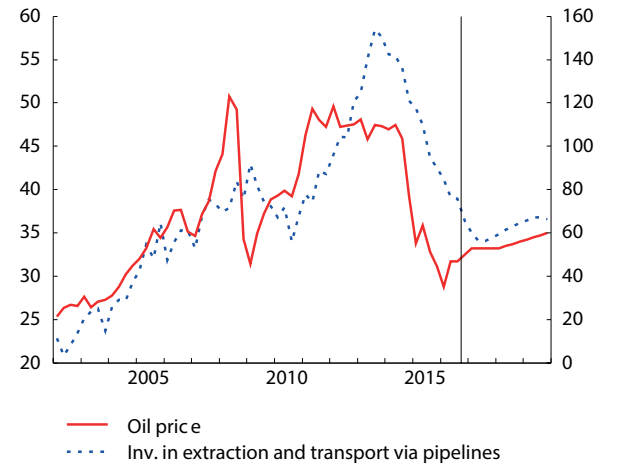
Petroleum investment will bottom out in 2017

Petroleum investment is continuing to fall markedly. Investment fell by an average of more than 4 per cent per quarter in 2014 and 2015. Investment also declined in the third quarter of this year, but only by 0.6 per cent compared with the previous quarter. Investment in petroleum drilling and exploration and in pipelines contributed to the decline. Conversely, investment in production platforms, drilling rigs and modules rose.

According to the Norwegian Petroleum Directorate, the cost of developing a field on the Norwegian continental shelf has fallen by over 40 per cent since autumn 2014. This estimate is based on how the investment estimates for the Utgard, Oda, Zidane, Trestakk, Snilehorn, Johan Castberg, Snorre Expansion and Johan Sverdrup Phase 2 projects have changed. The largest savings are attributable to increased efficiency due to changed development solutions and to companies planning wells that are quicker to drill. Lower costs associated with pipelines and cables, and lower prices for hire of drilling rigs have also contributed to cost reductions.

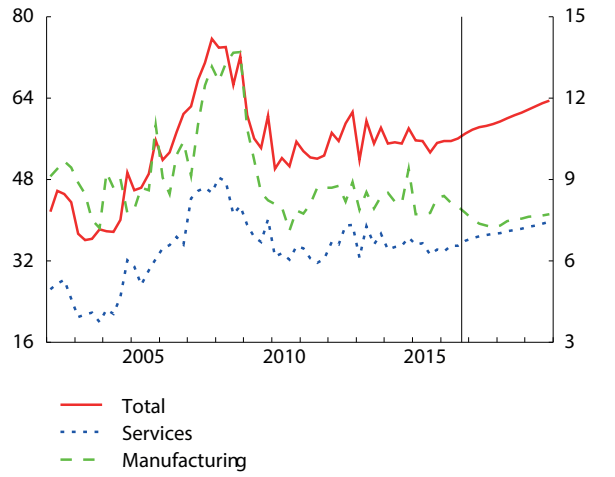
In line with developments in the first three quarters of the year, oil companies are reporting that they expect considerably lower investment this year compared with 2015. The expected decline is mainly due to lower investment in field developments and operating fields,

Figure 8. **Petroleum investments and oil price in USD. Seasonally adjusted, billion 2014-kr., quarterly**



Source: Statistics Norway.

Figure 9. **Investments. Mainland Norway. Seasonally adjusted, billion 2014-kr., quarterly**



Source: Statistics Norway.

and in exploration. Petroleum investment is expected to be 15 per cent lower in 2016 than in 2015. The decline is expected to continue next year, but at a somewhat slower pace that is due to increased field development. This upswing in field development is attributable to the fact that the authorities have received plan for development and operations (PDOs) for two projects this autumn. The authorities are also expected to receive the PDO for the Oda field in December or early next year. There are also plan to deliver PDO applications for the Pil og Bue, Johan Castberg and Snorre 2040 development projects in the latter part of 2017. Although these are extensive field developments, particularly the last two, they will probably not generate a great deal of investment in 2017, as they are expected to start up towards the end of the year at the earliest.

There are several reasons for adjusting the investment projections emerging from the investment intentions survey in relation to previous projections (see Økonomiske *analyser* 4/2014 Box 1). First, we believe that the rise in price for investments in the next few years will be less than previously assumed because of the sharpened focus on cost reductions. Second, licensees have as a rule underpredicted their actual investment levels, particularly for projections more than one year ahead. We have taken this into account in our earlier projections by assuming that this year's underprediction will be repeated next year. However, as expectations regarding investments this year were adjusted sharply down through 2015, this assumption will probably mean an investment level in 2017 that we find unrealistically low. Our projection for investment in 2017 is therefore higher than a mechanical adjustment of registered planned investment would indicate.

The investment picture drawn for the next few years is also coloured by envisaged developments in the global economy. Lower development costs, a weak cyclical upturn and a moderately rising oil price will help to turn the decline in investment to a modest rise from the end of 2017. As a result of the sharp fall through 2016, the annual average for 2017 will be about 12 per cent lower than for 2016 nonetheless. Annual growth is expected to be between 3 and 6 per cent in 2018 and 2019.

Oil and gas production were higher in the first three quarters of the year than in the same period last year, with contributions from both oil and gas extraction. Going forward, however, we expect oil production to fall, but gas extraction to increase moderately. Overall, this means a moderate downturn in oil and gas extraction through the projection period.

Mainland business investment slightly up

The decline in mainland business investment gradually slowed through 2015 and gave way to a moderately positive tendency through the first half of 2016. Third-quarter QNA figures revealed a 0.8 per cent increase on the previous quarter. Growth took place primarily in other goods production, particularly power supply, but investment in services also edged up. Manufacturing investment, on the other hand, was reduced by 1.6 per cent.

Statistics Norway›s most recent survey of manufacturing companies' projections for future investments (KIS) indicates growth of about 8 per cent in 2016. This represents considerably stronger growth than indicated by the QNA figures so far. There are several reasons why these two sources of data are not directly comparable. First, the QNA are usually published before the KIS statistics, and the response rate they are based on is therefore lower than that for the KIS survey. Second, the KIS survey reports figures for new investment while investment in the QNA is gross investment, i.e. new investment and net acquisitions of existing fixed assets. Third, and probably the most important cause of the large discrepancies in the 2016 figures, the investment concept in the QNA also includes research and development (R&D), which is not registered by the KIS survey.

R&D investment amounted to about 20 per cent of total manufacturing investment in the third quarter. Whereas the annual national accounts figures for R&D investment in manufacturing stem from the annual R&D survey, the quarterly distribution of R&D investment is assumed to shadow production. The weak developments in manufacturing investment in the QNA must therefore be viewed in light of the moderate growth in manufacturing production in the same period.

The KIS figures for 2017 indicate a decline in manufacturing investment of between 10 and 15 per cent after adjustment for normal under-reporting. Most of this decline can be explained by the fact that the high investment rate in 2016 in oil refinement, chemicals and pharmaceuticals manufacturing is not expected to be maintained in 2017. The decline in 2017 is somewhat offset by high investment projections in the wood and wood products industry, and in rubber, plastics and minerals.

In the electricity supply industry, KIS figures indicate increasing investment growth, from 13 per cent in 2016 to 15 per cent in 2017. The growth in transmission and distribution of electricity is particularly high. Investment in power production, including several wind farm projects, is making a positive contribution. The increase must be viewed against the background of the subsidy scheme for increasing power production from renewable energy sources (green certificates) and the new rules for faster depreciation of operating assets in wind power plants that were approved by the ESA in July.

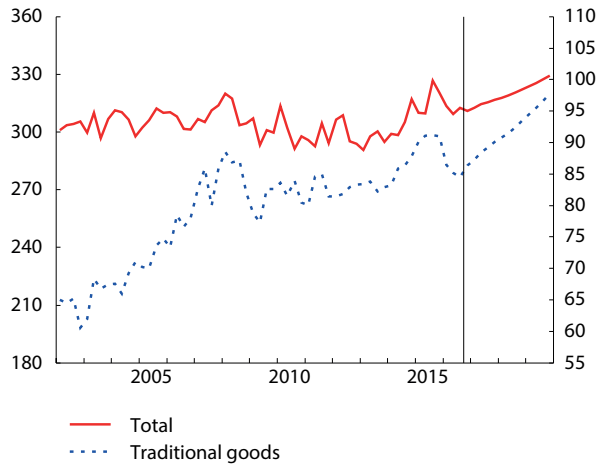
Norges Bank's regional network surveys economic developments in Norway, including expected near-term investment – by compiling information from companies and activities throughout Norway. The September reporting indicates increasing investment over the next 12 months in both retail trade and other services.

We expect weakly growing business investment due to a moderate global cyclical upturn, a weak krone exchange rate and very low interest rates. Growth is particularly expected in industries with limited links to the petroleum industry. We project that growth in business investment as a whole will increase from almost 3 per cent in 2016 to just under 4 per cent in 2019. These are very low growth rates compared with previous cyclical upturns. Even given these developments, the investment level will be about 10 per cent lower in 2019 than in the peak year of 2008.

Towards a slight increase in exports

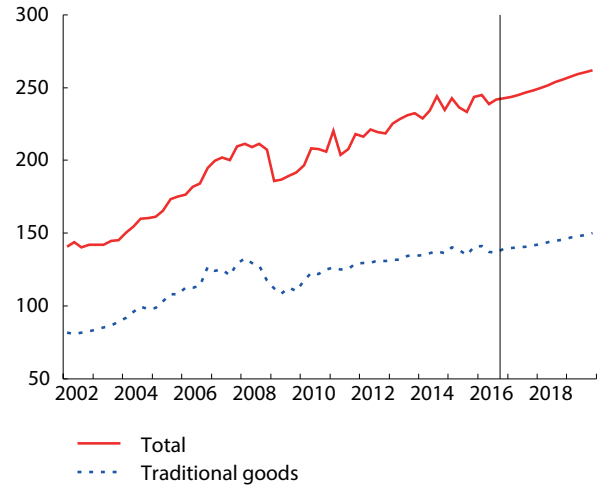
The recent weak developments in traditional exports continued in the third quarter. Exports of traditional goods calculated in constant prices (volume) have declined for four consecutive quarters. The reduction in the third quarter was 0.7 per cent, according to seasonally adjusted QNA figures. The volume of exports

Figure 10. **Exports. Seasonally adjusted, billion 2014-kr., quarterly**



Source: Statistics Norway.

Figure 11. **Imports. Seasonally adjusted, billion 2014-kr., quarterly**



Source: Statistics Norway.

in the first three quarters of the year was almost 6 per cent lower than the volume in the same period last year. Much of the reduction can be attributed to a weak global economic situation generally and reduced global demand from oil- and gas-related activities in particular. Exports of engineering products – which is the largest group of traditional export goods, a substantial portion of which have gone to petroleum activities in other countries – have slumped by over 20 per cent in the course of a year and a half. Lower exports of refined petroleum products have also contributed to depressing exports of traditional goods for the past three quarters. Reduced exports of refined petroleum products are linked to reduced imports of these products. This year export volumes of farmed fish have been lower than last year's level.

For the past year, exports of oil and gas combined have fluctuated around a higher level than a few years ago. A slight third-quarter increase was due to oil exports increasing more than gas exports fell. Substantial growth in non-residents' consumption in Norway, prompted by

a weak krone exchange rate, contributed to an increase in overall service exports following a sharp reduction in service exports through the first half of the year.

The price index for traditional goods exports rose through the first half of this year, after levelling off through 2015. Export prices for farmed fish have risen more than 50 per cent through the last five quarters, while exports of fish and fish products saw a price rise of over 15 per cent through the same period. In the third quarter, the rise in prices for traditional goods exports as a whole appeared to come to a halt again, which is partly attributable to a strengthening of the krone. The sharp fall in oil and gas prices through almost two years has also come to a halt, and prices have remained relatively stable for the last two quarters. The price index for overall service exports has moved on a weak trend this year, but rose in the third quarter.

Exports of traditional goods and services alike appear likely to be lower this year. A small increase in oil and gas exports is not preventing a decline in overall exports. From next year, however the prospects for exports are brighter. The weakening of the krone in the last few years has improved the cost-competitiveness of export companies, and the effects of this weakening are not exhausted. The decline in oil-related exports in the wake of the fall in oil prices is expected to come to a halt and give way to a rise. This, coupled with accelerating growth in demand in Norwegian export markets generally, means that exports of traditional goods and services alike are projected to increase from 2017. An anticipated slight reduction in exports of oil and gas through the projection period will curb overall export growth.

Weak developments in imports of both traditional goods and services through the current year reflect stagnation and to some extent a fall in household goods consumption and in business investment. A demand shift from imported to domestically produced goods and services due to the weak krone exchange rate has contributed to this, and has had a generally dampening effect on imports. However, although reduced, import volumes for traditional goods and services in the first three quarters of the year were higher than volumes in the same period in 2015. In particular, third quarter imports of cars, ships and aircraft, and services associated with oil and gas extraction made a positive contribution to growth in total imports. Modest, but positive growth in domestic demand is expected to stimulate imports through 2017–2019.

The trade surplus was severely reduced through 2014 and 2015, largely due to the plunge in oil prices. A generally weaker trend in prices for exported than for imported goods and services implies a large terms of trade loss. This year, developments in export and import volumes will also contribute to a sharp reduction in the trade surplus. From 2017, however, a rising oil price is expected to improve the terms of trade situation and yield an increased surplus. In recent years, the balance of income and current transfers has been strongly boosted by low growth in the Norwegian economy, and accordingly in payments to other countries, and by a weak krone exchange rate that has resulted in higher payments from abroad measured in Norwegian kroner. This year, too, the surplus on the balance of income and current transfers is growing, but as from next year we do not expect any significant growth. The current account balance as a percentage of GDP is accordingly projected to rise from 5.1 per cent in 2016 to over 6 per cent in 2019.

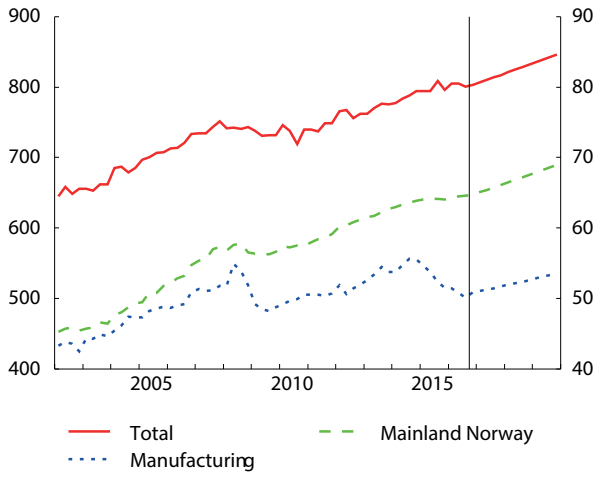
Moderately increasing production growth in the near term

Mainland GDP increased by 0.2 per cent from the second to the third quarter of 2016, following growth of 0.3 and 0.4 per cent in the first and second quarters and close to zero growth through much of 2015. Electricity production pushed growth up by 0.2 percentage point in the first quarter, but pushed down growth to the same extent in the second quarter. If we exclude these effects, the second-quarter QNA figures thus indicate that underlying growth was picking up, but the weak third-quarter figures change this situation.

Second quarter manufacturing figures also showed some signs of improvement, but here, too, third-quarter figures were disappointing. The decline continued – at an accelerating pace. Value-added fell by a full 1.8 per cent compared with the previous quarter, making this the eighth consecutive quarter with a decline. The value-added level has now fallen by 10 per cent in all since the third quarter of 2014, largely as a result of reduced demand from the petroleum sector, in Norway and abroad. The petroleum-dependent manufacturing segments are still falling most, but this time the decline was quite broad-based. The food industry and commodity-based manufacturing are admittedly enjoying a certain upswing, but on balance the improved competitiveness of recent years due to a weaker krone, coupled with moderate wage growth, has not been sufficient to push up the level of activity in manufacturing – even though these are industries that in theory should be relatively sheltered from the petroleum sector.

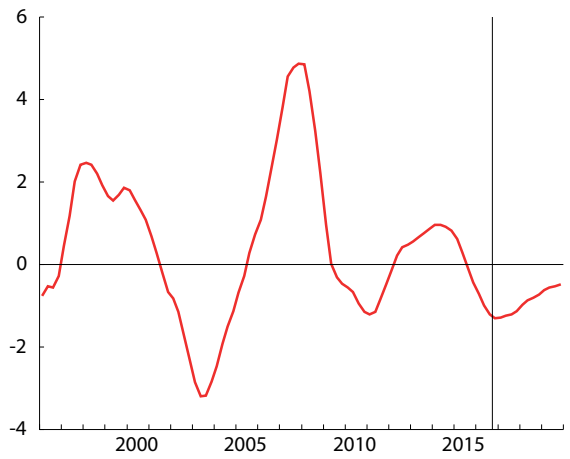
Value added in other mainland goods production edged up 0.2 per cent from the second to the third quarter. Growth in construction remains high, but nonetheless markedly lower than in the first half of this year. This must be viewed in light of the already high level of activity. The industry has long been an important driver of the Norwegian economy, largely as a result of low interest rates that stimulate residential construction. Extensive public-sector investment in construction has also contributed. Developments in the other goods-producing segments were also relatively weak, with the exception of fishing and aquaculture. Electricity output fell by 1.5 per cent compared with the previous quarter. Agriculture and forestry also showed some decline in the third quarter. However, the common factor in these

Figure 12. **Gross domestic product. Seasonally adjusted, billion 2014-kr., quarterly**



Source: Statistics Norway.

Figure 13. **Output gap. Mainland Norway. Deviation from trend. Per cent**



Source: Statistics Norway.

industries is that the activity level is largely governed by naturally occurring factors. Thus they are not particularly good indicators of the underlying economic situation.

Value added in service industries excluding general government edged up 0.4 per cent in the third quarter, following growth of 0.9 per cent in the second quarter, but fell through the preceding four quarters. The slight increase in growth for the mainland economy as a whole so far this year can be largely attributed to this group of industries. Third-quarter growth reported by the service industries was moreover fairly broad-based, which augurs well for a further rise. Growth in the hotel and restaurant industry is particularly strong. Value added in this industry rose by 1.3 per cent from the second to the third quarter, and has risen by a total of 11 per cent since the fourth quarter of 2014. Much of this growth can probably be attributed to the relatively weak krone, which has led to more foreign tourists visiting Norway and to more Norwegians holidaying in Norway.

General government value-added edged up only 0.3 per cent, following weak growth in the first half of the year as well. Growth rates so far this year are thus appreciably lower than average growth rates last year. Growth is also markedly lower than trend growth for the Norwegian mainland economy, estimated to be an annualised 2 per cent.

We base our projections on the assumption that petroleum sector demand will continue falling weakly through 2017. However, the decline will gradually wane and give way to a moderate rise, offering prospects of an improvement in Norwegian economic activity going forward.

We foresee fairly flat developments in manufacturing this year, then increasing, but very moderate growth for the next few years. The expected upswing must be viewed in light of the fact that the positive effects generated by improved cost-competitiveness in recent years are probably not exhausted. For manufacturing segments that are closely linked to the petroleum sector, the turnaround will take longer, however. Growth in activity in the other mainland industries is likely to pick up earlier, driven to some extent by increased business investment. The construction sector has demonstrated high growth through the past seven quarters, and this is expected to persist for a good while yet, making the sector an important growth driver, also going forward. We assume that growth in general government will be stable in the years ahead, but slightly less than estimated trend mainland GDP growth.

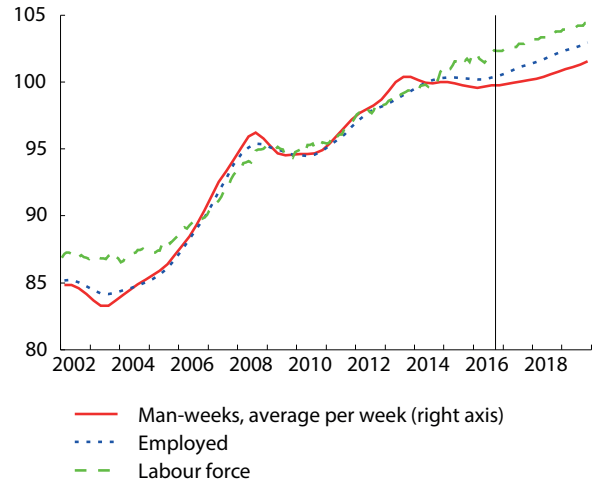
The overall result is a moderately increased pace of growth in the Norwegian economy in the near term. We project that mainland GDP growth will be 0.7 per cent this year, 1.7 per cent in 2017, and rise to just over 2 per cent for the two following years. These projections imply that the economy will enter a cautious cyclical upturn early in 2017, given that trend growth is estimated at 2 per cent.

Unemployment to fall slightly in the near term

According to the QNA, employment increased by 0.1 per cent in the third quarter of this year, following stagnation through 2015 and a slight decline in the first half of the year. However, labour force growth has also been moderate, so that unemployment has only increased modestly from the first quarter of this year.

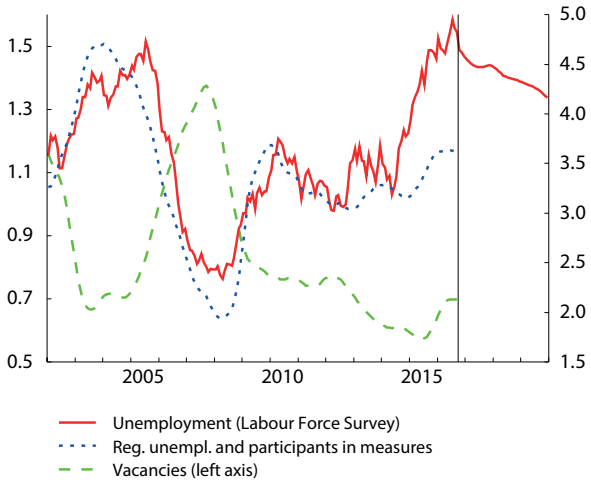
Growth in overall employment is being curbed by developments in the petroleum industry and other related industries. Employment in crude oil and natural gas extraction has fallen each quarter since the second quarter of 2014, and the decline was particularly pronounced in the third quarter of this year. A decline in employment since the fourth quarter of 2014 has also been noted in manufacturing segments that primarily

Figure 14. **Labour force. employment and number of man-hours. Seasonally adjusted and smoothed indices. 2014=100**



Source: Statistics Norway.

Figure 15. **Unemployment and number of vacancies. Per cent of labour force. Seasonally adjusted and smoothed**



Source: The Norwegian Labour and Welfare Service and Statistics Norway.

supply the petroleum industry, such as shipbuilding and other transport equipment and repair and installation of machinery and equipment. Manufacturing employment as a whole fell by 1 per cent in the third quarter of this year.

High housing investment boosted growth in employment in construction by 0.7 per cent in the first two quarters of 2016 and by 0.9 per cent in the third quarter. General government employment edged up by 0.2 per cent in the second and third quarters of the year. The weak krone has promoted a clear increase in employment in accommodation and restaurant businesses in 2014 and 2015, and this trend has continued so far this year.

A weak krone and relatively high unemployment have made the Norwegian labour market less attractive to foreign labour. The result has been lower net immigration and slower labour force growth so far this year. Polish and Swedish citizens were the largest groups leaving Norway, and net inward labour migration declined in the third quarter. Immigration from countries in conflict increased, however.

According to the LFS, unemployment has only risen marginally so far this year, but the number of long-term unemployed has increased. Unemployment increased from 4.7 per cent in the first two quarters of this year to 4.9 per cent in the third quarter after adjustment for normal seasonal variations. Unemployment in the period August to October, the last observation we have, averaged 4.8 per cent. The long-term unemployed, i.e. persons who have been unemployed for over six months, increased both in number and as a share of the unemployed. In the third quarter of 2015, barely 25 per cent of the unemployed were long-term unemployed, while the share was 37 per cent in the third quarter of this year.

The NAV statistics for those registered as fully unemployed and the total of these persons and persons on labour market programmes also show a stable trend so far this year. The number of registered fully unemployed persons increased by 300 from September to October, while the number of job-seekers on labour market programmes was approximately unchanged. There are still large variations across counties, and in October unemployment increased again in counties with extensive petroleum-related activities. The strong impulse from reduced petroleum-sector activity is also reflected in the unemployment figures broken down by occupation. Unemployment increased most in engineering and ICT, continuing a trend of recent years.

According to NAV statistics, manufacturing unemployment is high. However, unemployment developments vary across manufacturing segments. Unemployment among sheet metal workers and food production operators declined. This may indicate that demand for labour is increasing in manufacturing segments with less connection to the petroleum sector. Statistics Norway›s job vacancy statistics also show an increase of 0.2 per cent for the whole manufacturing industry in the third quarter of 2016 compared with the same quarter last year. The last time the number of vacancies in this industry increased was the fourth quarter of 2012.

We expect employment in 2016 to be slightly lower on an annual basis, but to rise towards the end of 2016 and continue rising. Relatively low consumption growth and low housing investment at the end of the projection period imply low employment growth, but this is countered by higher petroleum investment. At the same time, we expect that the labour force will pick up, but that growth will remain at a low level. The improved economic situation implies growth in the labour force. Many of the asylum-seekers who came to Norway last year will enter the labour force towards the end of

the projection period. A weak krone and relatively high unemployment will continue to dampen inward labour migration, which will curb labour force growth. We assume that unemployment has passed the current peak. As employment increases, unemployment will decline somewhat, but in our projections it remains at over 4 per cent throughout the projection period.

Large fall in real wages in 2016

Annual wage growth has been very low for the past two years. Nominal annual wage growth fell from 3.9 per cent in 2013 to 3.1 per cent in 2014 and further to 2.8 per cent last year. This is the lowest annual wage growth since World War II. Growth in real wages was over 0.5 per cent last year. National accounts figures show that there were small differences in annual wage growth across industries in 2015.

Growth in average annual wage growth can be decomposed into carry-over and contributions from annual wage settlements, and wage drift, which encompasses all other factors that influence registered wage growth. The manufacturing carry-over into 2016 was 1.1 per cent, which is slightly lower than the preceding year. Although pay increases in manufacturing are normally slightly higher in the main settlement and the depreciation of the krone has improved competitiveness, the Confederation of Norwegian Enterprise (NHO), in agreement with the Norwegian Confederation of Trade Unions (LO), arrived at a frame of only 2.4 per cent for this year›s wage settlement.

The change in the composition of employment influences developments in average annual wages. On the one hand, the fact that there are fewer employees in the petroleum industry depresses wage drift, because these employees have higher than average wages. On the other, the employees remaining after cutbacks will have high seniority and this pushes up wage drift, as do the relatively few new appointments at low wage levels. The wage index for average basic monthly salary for the first three quarters of 2016 indicates that the aforementioned composition effects so far this year are depressing wage growth. The wage index for basic monthly salary showed only a moderate increase in the first three quarters of the year.

The non-manufacturing wage carry-over into 2016 is also low. The Technical Reporting Committee on Income Settlements (TBU) has calculated the carry-over for several negotiations areas. The carry-over in retail businesses in the Enterprise Federation of Norway (Virke) is 0.7 per cent, and the carry-overs in central and local government are 0.5 and 0.75 per cent, respectively. This year›s wage settlement for these groups is moderate.

In our projections, we now assume that the composition effects make a weak negative contribution, with the result that average annual wage growth in 2016 will be 2.2 per cent. Given our projection for consumer price inflation, real wages will then fall by 1.4 per cent in 2016 and increase weakly by 0.5 per cent in 2017. The slower wage growth must be viewed in conjunction with the fact that segments of the economy have suffered a significant negative shock through the slump in oil prices. Permanently lower demand is expected from the petroleum sector, meaning that restructuring will be needed for a long time to come. This will reduce wage growth both because the demands in the centralised wage negotiations will be more subdued and because local pay increases will be reduced. Countering this effect, however, are improved profitability ensuing from the previous weakening of the krone exchange rate and a certain improvement in the global economic situation. Lower immigration will also push up wage growth, but this effect is likely to be marginal in the short term.

The wage settlement in manufacturing provided guidelines again this year for wage formation in other industries, with the result that the other wage settlements were moderate. After a while, the improved economic situation will translate into greater profitability, so that wages as a share of labour costs will decrease a little in the projection period. Increased profitability, somewhat lower unemployment and lower immigration will cause wage growth to rise somewhat towards the end of the projection period. However, growth in real wages will pick up appreciably more than nominal growth in the next few years. In 2019, we expect 1.5 per cent growth in real wages.

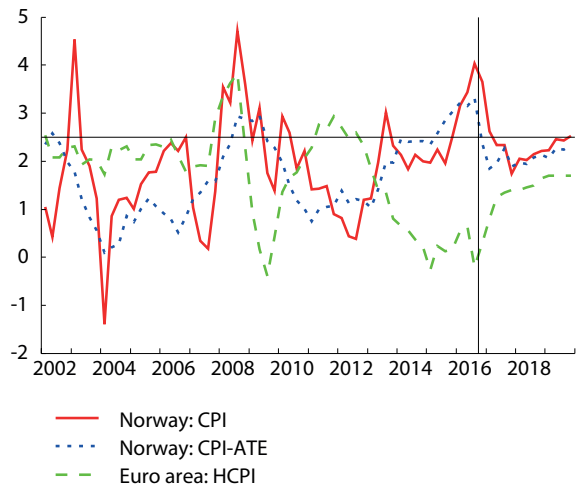
Lower inflation ahead

More than three years with a tendency to higher underlying inflation has now given way to a falling trend. The 12-month rise in the consumer price index adjusted for tax changes and excluding energy products (CPI-ATE) was 2.9 per cent in October this year. A peak of 3.7 per cent, the highest noted since the introduction of the inflation target, was reached in July 2016 after inflation of 3.0 per cent around the end of 2015.

For the past three years, movements in prices for energy products and tax changes have led to the rise in the overall consumer price index (CPI) remaining stable at around 2.0 per cent, despite higher underlying inflation. In 2016 this situation changed. Energy prices and tax changes combined have pushed up 12-month CPI inflation appreciably. In July, inflation peaked at 4.4 per cent. While the 12-month rise in the CPI-ATE was higher than CPI inflation at the beginning of the year, this changed in May. Since then, 12-month CPI inflation has been higher than CPI-ATE inflation. Limited precipitation and a cold late autumn coupled with various factors on the Continent have led to a marked increase in electricity prices recently. Thus 12-month CPI inflation increased slightly in October, reaching 3.7 per cent.

Developments in underlying inflation are dominated by the movements of the krone. However, changes in the

Figure 16. **Consumer price indices. Percentage growth from the same quarter previous year**



Source: Statistics Norway.

krone exchange rate only have a small immediate impact on prices, and it takes a long time before exchange rate changes pass through fully into domestic prices; see Box 6 in Economic Survey 1/2016.

From January 2013 to January 2016, the import-weighted krone exchange rate weakened by over 28 per cent. For the remainder of this year, the krone has strengthened on balance, and at the end of November it was 6 per cent stronger than at the beginning of the year. The initial depreciation led to a gradual increase in prices for imported goods. The year-on-year change in prices for imported consumer goods, excluding energy products and tax changes, was -0.8 per cent in the first quarter of 2013, peaking at 4.6 per cent i July 2016. The rise in prices for imported goods subsequently fell, and was 3.6 per cent in October. Imported goods account for more than a third of the CPI-ATE. From July to October, the slowdown in the rise in prices for this product group reduced CPI inflation by 0.3 percentage point.

The CPI-ATE by supplier sector shows that the inflation rate for consumer goods produced in Norway also increased on balance up to July this year. Imported intermediate inputs add to the effect of the krone exchange rate on prices for goods produced in Norway. Conversely, the inflation rate on services excluding rent has fluctuated around a virtually unchanged level while rents, after increasing through 2013, have moved on a weakly falling inflation path. The most recent slowing of inflation applies to all the main sectors.

There are prospects of continued low growth in Norwegian salaries and of moderate global inflation. The effects of the krone depreciation of recent years have waned, and will be countered in the near term by the appreciation that has taken place so far this year. Developments in inflation a little further ahead will be largely determined by what happens to the krone exchange rate. We assume that the krone will appreciate slightly in the short term before weakening to an equivalent extent towards the end of the projection period. These movements are small, but will lead to lower inflation for the next two years.

According to our projections, the annualised rise in the CPI-ATE will be 3.0 per cent in 2016, i.e. slightly higher than last year. After that CPI-ATE inflation appears likely to be about 2 per cent in 2017 and 2018 and slightly higher in 2019 when the krone again weakens a little.

Electricity accounts for 3 per cent of the CPI. Because prices fluctuate widely, developments in electricity prices are an important factor underlying movements in the CPI, despite electricity's relatively modest share of the budget. Contrary to the normal situation, electricity prices rose from February and right up to July this year. This resulted in a strong year-on-year rise in electricity prices, from just under 4 per cent in February to almost 39 per cent in July. The effect of this increase, in isolation, is to push up the CPI by 1 percentage point. Electricity prices then remained fairly stable for some months, but both the spot price and forward prices have risen clearly this autumn. Despite an anticipated fall in underlying inflation, the 12-month rise in the CPI may therefore increase somewhat towards the end of the year.

We assume that the electricity index in the CPI will increase by about 23 per cent in 2016 as an annual average. The oil price fell through 2015 and up to the first quarter of this year, after which it has increased slightly. However, the oil price measured in kroner and as an annual average appears likely to fall by about 14 per cent this year. This will counteract the inflationary impulses from electricity. The increase in indirect tax rates is estimated to have pushed up CPI inflation by 0.1 percentage point. We estimate CPI inflation in 2016 at an annualised rate of 3.6 per cent.

We expect electricity prices to increase by around 6 per cent annually from 2016 to 2017, with a marked increase in grid rental, while the price of electricity itself appears likely to be roughly unchanged. It thus appears that electricity prices, oil prices and tax changes are all going to push CPI inflation up a little in 2017. The CPI is projected to increase by 2.3 per cent in 2017, i.e. 0.3 percentage point more than the CPI-ATE.

Tax changes in 2017 are projected to increase CPI inflation by 0.1 percentage point. We assume that increased environmental and carbon taxes in subsequent years will generate inflationary impulses of the order of 0.2 percentage point. For 2018 and 2019, we assume that energy prices excluding tax changes will rise approximately in pace with general price developments, but that increased taxes will result in a slightly higher rise in the CPI than in the CPI-ATE.

Table 5. **National accounts: Final expenditure and gross domestic product. At constant 2014 prices. Million kroner**

	Unadjusted		Seasonally adjusted							
	2014	2015*	14.4	15.1	15.2	15.3	15.4	16.1	16.2	16.3
Final consumption expenditure of households and NPISHs	1 284 876	1 311 465	324 594	326 053	327 987	329 284	330 868	331 776	333 216	333 175
Household final consumption expenditure	1 220 052	1 245 216	308 217	309 531	311 687	312 640	314 093	315 513	316 213	316 435
Goods	574 308	579 798	145 378	144 851	146 263	146 066	145 624	145 739	145 258	144 586
Services	583 933	604 358	147 654	149 269	150 293	151 522	152 957	154 124	155 831	157 041
Direct purchases abroad by resident households	96 942	99 797	24 357	24 550	24 808	25 071	25 351	25 531	25 617	26 228
Direct purchases by non-residents	-35 131	-38 737	-9 171	-9 139	-9 677	-10 019	-9 839	-9 881	-10 493	-11 420
Final consumption expenditure of NPISHs	64 824	66 249	16 377	16 522	16 300	16 644	16 775	16 263	17 003	16 740
Final consumption expenditure of general government	691 969	706 366	175 276	175 723	176 054	176 805	177 794	178 948	180 150	180 929
Final consumption expenditure of central government	346 561	354 962	88 068	88 265	88 395	88 878	89 432	89 899	90 777	91 264
Central government. civilian	304 455	313 292	77 564	77 815	78 024	78 506	78 961	79 534	80 383	80 895
Central government. defence	42 106	41 670	10 504	10 451	10 370	10 372	10 472	10 365	10 394	10 369
Final consumption expenditure of local government	345 408	351 404	87 208	87 457	87 660	87 927	88 361	89 049	89 373	89 665
Gross fixed capital formation	739 271	711 392	181 831	178 571	178 504	176 869	177 649	176 975	176 704	181 363
Extraction and transport via pipelines	215 413	183 085	50 279	49 414	47 474	43 663	42 502	41 194	39 174	38 930
Ocean transport	822	1 959	538	799	635	216	397	634	62	254
Mainland Norway	523 036	526 349	131 014	128 358	130 395	132 991	134 750	135 148	137 468	142 179
Industries	223 026	219 501	58 015	55 668	55 528	53 252	55 141	55 514	55 554	55 990
Service activities incidential to extraction	4 891	4 205	1 158	1 332	1 504	760	609	488	232	167
Other services	135 454	133 822	35 390	33 904	33 894	32 460	33 594	33 332	34 651	34 747
Manufacturing and mining	34 098	31 447	9 378	7 705	7 721	7 753	8 310	8 394	8 127	7 996
Production of other goods	48 583	50 027	12 089	12 728	12 409	12 279	12 628	13 300	12 545	13 080
Dwellings (households)	155 517	158 051	37 805	38 283	39 232	39 685	40 973	41 398	42 438	43 752
General government	144 493	148 796	35 193	34 407	35 634	40 054	38 636	38 236	39 476	42 437
Acquisitions less disposals of valuables	333	334	86	85	82	81	87	83	84	80
Changes in stocks and statistical discrepancies	144 327	151 488	30 234	46 374	38 267	32 322	32 502	48 147	43 878	34 289
Gross capital formation	883 931	863 215	212 065	224 946	216 771	209 192	210 151	225 122	220 583	215 651
Final domestic use of goods and services	2 860 776	2 881 046	711 934	726 721	720 812	715 281	718 813	735 846	733 949	729 755
Final demand from Mainland Norway	2 499 881	2 544 180	630 883	630 134	634 436	639 080	643 413	645 872	650 834	656 283
Final demand from general government	836 462	855 163	210 469	210 129	211 689	216 859	216 430	217 184	219 626	223 366
Total exports	1 220 367	1 265 859	316 935	310 161	309 827	326 871	320 410	313 640	309 242	312 694
Traditional goods	343 183	363 233	87 799	90 139	91 100	91 175	90 959	86 428	85 140	84 535
Crude oil and natural gas	551 366	569 005	144 831	138 515	137 977	151 075	142 829	146 681	144 775	145 926
Ships. oil platforms and planes	9 967	7 471	2 500	1 921	1 481	1 986	2 054	2 323	2 740	2 702
Services	315 851	326 150	81 804	79 586	79 269	82 636	84 568	78 208	76 588	79 531
Total use of goods and services	4 081 143	4 146 904	1 028 869	1 036 883	1 030 639	1 042 152	1 039 223	1 049 486	1 043 191	1 042 450
Total imports	940 772	955 940	234 411	242 553	236 193	233 282	243 386	244 693	238 431	241 609
Traditional goods	544 337	554 823	136 357	140 406	138 646	134 987	140 486	141 346	137 273	136 817
Crude oil and natural gas	13 651	13 471	3 911	3 773	3 422	2 913	3 342	3 425	2 723	3 185
Ships. oil platforms and planes	33 277	29 368	5 126	8 802	6 875	7 128	6 511	8 518	8 160	10 752
Services	349 507	358 279	89 017	89 572	87 250	88 255	93 046	91 405	90 276	90 855
Gross domestic product (market prices)	3 140 371	3 190 964	794 458	794 329	794 445	808 870	795 837	804 793	804 760	800 841
Gross domestic product Mainland Norway (market prices)	2 533 302	2 561 433	638 410	640 402	640 854	641 258	640 368	642 123	644 951	645 959
Petroleum activities and ocean transport	607 069	629 530	156 048	153 927	153 592	167 612	155 469	162 670	159 808	154 882
Mainland Norway (basic prices)	2 200 788	2 223 947	554 605	556 136	556 923	556 547	555 136	556 520	558 265	559 409
Mainland Norway excluding general government	1 663 062	1 676 707	419 309	420 231	420 585	419 500	417 133	417 973	419 415	420 197
Manufacturing and mining	218 628	211 627	55 570	54 607	53 731	52 361	51 554	51 414	50 803	50 083
Production of other goods	268 615	276 050	67 271	67 965	69 345	70 103	68 916	70 960	70 404	70 575
Services incl. dwellings (households)	1 175 819	1 189 030	296 468	297 659	297 509	297 036	296 663	295 599	298 209	299 540
General government	537 726	547 240	135 296	135 905	136 338	137 048	138 003	138 547	138 850	139 212
Taxes and subsidies products	332 514	337 486	83 805	84 267	83 931	84 711	85 232	85 603	86 686	86 550

Source: Statistics Norway.

Table 6. **National accounts: Final expenditure and gross domestic product. At constant 2013 prices. Percentage change from the previous periodg fra foregående kvartal**

	Unadjusted		Seasonally adjusted							
	2014	2015*	14.4	15.1	15.2	15.3	15.4	16.1	16.2	16.3
Final consumption expenditure of households and NPISHs	1.9	2.1	0.7	0.4	0.6	0.4	0.5	0.3	0.4	0.0
Household final consumption expenditure	1.7	2.1	0.8	0.4	0.7	0.3	0.5	0.5	0.2	0.1
Goods	0.9	1.0	0.9	-0.4	1.0	-0.1	-0.3	0.1	-0.3	-0.5
Services	2.3	3.5	1.0	1.1	0.7	0.8	0.9	0.8	1.1	0.8
Direct purchases abroad by resident households	3.9	2.9	0.3	0.8	1.1	1.1	1.1	0.7	0.3	2.4
Direct purchases by non-residents	3.9	10.3	5.2	-0.3	5.9	3.5	-1.8	0.4	6.2	8.8
Final consumption expenditure of NPISHs	6.9	2.2	0.2	0.9	-1.3	2.1	0.8	-3.1	4.6	-1.5
Final consumption expenditure of general government	2.7	2.1	0.8	0.3	0.2	0.4	0.6	0.6	0.7	0.4
Final consumption expenditure of central government	3.4	2.4	0.9	0.2	0.1	0.5	0.6	0.5	1.0	0.5
Central government. civilian	3.9	2.9	1.1	0.3	0.3	0.6	0.6	0.7	1.1	0.6
Central government. defence	0.3	-1.0	-0.5	-0.5	-0.8	0.0	1.0	-1.0	0.3	-0.2
Final consumption expenditure of local government	1.9	1.7	0.7	0.3	0.2	0.3	0.5	0.8	0.4	0.3
Gross fixed capital formation	-0.7	-3.8	-1.9	-1.8	0.0	-0.9	0.4	-0.4	-0.2	2.6
Extraction and transport via pipelines	-3.2	-15.0	-7.0	-1.7	-3.9	-8.0	-2.7	-3.1	-4.9	-0.6
Ocean transport	-4.9	138.3	-12.1	48.6	-20.6	-66.0	83.8	59.6	-90.2	308.5
Mainland Norway	0.4	0.6	0.2	-2.0	1.6	2.0	1.3	0.3	1.7	3.4
Industries	-0.7	-1.6	5.4	-4.0	-0.3	-4.1	3.5	0.7	0.1	0.8
Service activities incidential to extraction	-14.7	-14.0	-0.2	15.0	13.0	-49.5	-19.9	-19.8	-52.5	-28.0
Other services	-1.9	-1.2	4.7	-4.2	0.0	-4.2	3.5	-0.8	4.0	0.3
Manufacturing and mining	4.2	-7.8	15.7	-17.8	0.2	0.4	7.2	1.0	-3.2	-1.6
Production of other goods	1.0	3.0	1.1	5.3	-2.5	-1.0	2.8	5.3	-5.7	4.3
Dwellings (households)	-1.4	1.6	-2.8	1.3	2.5	1.2	3.2	1.0	2.5	3.1
General government	4.4	3.0	-4.4	-2.2	3.6	12.4	-3.5	-1.0	3.2	7.5
Acquisitions less disposals of valuables	-10.1	0.4	6.6	-1.0	-3.8	-1.4	7.4	-4.8	2.2	-4.8
Changes in stocks and statistical discrepancies	4.6	5.0	-33.1	53.4	-17.5	-15.5	0.6	48.1	-8.9	-21.9
Gross capital formation	0.2	-2.3	-8.0	6.1	-3.6	-3.5	0.5	7.1	-2.0	-2.2
Final domestic use of goods and services	1.6	0.7	-2.0	2.1	-0.8	-0.8	0.5	2.4	-0.3	-0.6
Final demand from Mainland Norway	1.8	1.8	0.6	-0.1	0.7	0.7	0.7	0.4	0.8	0.8
Final demand from general government	3.0	2.2	-0.1	-0.2	0.7	2.4	-0.2	0.3	1.1	1.7
Total exports	3.1	3.7	3.8	-2.1	-0.1	5.5	-2.0	-2.1	-1.4	1.1
Traditional goods	3.1	5.8	1.7	2.7	1.1	0.1	-0.2	-5.0	-1.5	-0.7
Crude oil and natural gas	2.7	3.2	5.2	-4.4	-0.4	9.5	-5.5	2.7	-1.3	0.8
Ships. oil platforms and planes	-2.2	-25.0	102.0	-23.2	-22.9	34.2	3.4	13.1	17.9	-1.4
Services	4.0	3.3	2.3	-2.7	-0.4	4.2	2.3	-7.5	-2.1	3.8
Total use of goods and services	2.0	1.6	-0.3	0.8	-0.6	1.1	-0.3	1.0	-0.6	-0.1
Total imports	2.4	1.6	-3.9	3.5	-2.6	-1.2	4.3	0.5	-2.6	1.3
Traditional goods	2.1	1.9	-0.8	3.0	-1.3	-2.6	4.1	0.6	-2.9	-0.3
Crude oil and natural gas	-11.8	-1.3	10.3	-3.5	-9.3	-14.9	14.7	2.5	-20.5	16.9
Ships. oil platforms and planes	13.1	-11.7	-66.9	71.7	-21.9	3.7	-8.6	30.8	-4.2	31.8
Services	2.6	2.5	1.8	0.6	-2.6	1.2	5.4	-1.8	-1.2	0.6
Gross domestic product (market prices)	1.9	1.6	0.8	0.0	0.0	1.8	-1.6	1.1	0.0	-0.5
Gross domestic product Mainland Norway (market prices)	2.2	1.1	0.5	0.3	0.1	0.1	-0.1	0.3	0.4	0.2
Petroleum activities and ocean transport	1.0	3.7	2.2	-1.4	-0.2	9.1	-7.2	4.6	-1.8	-3.1
Mainland Norway (basic prices)	2.2	1.1	0.4	0.3	0.1	-0.1	-0.3	0.2	0.3	0.2
Mainland Norway excluding general government	2.3	0.8	0.3	0.2	0.1	-0.3	-0.6	0.2	0.3	0.2
Manufacturing and mining	2.8	-3.2	-0.1	-1.7	-1.6	-2.6	-1.5	-0.3	-1.2	-1.4
Production of other goods	3.9	2.8	-0.4	1.0	2.0	1.1	-1.7	3.0	-0.8	0.2
Services incl. dwellings (households)	1.8	1.1	0.5	0.4	-0.1	-0.2	-0.1	-0.4	0.9	0.4
General government	1.9	1.8	0.6	0.5	0.3	0.5	0.7	0.4	0.2	0.3
Taxes and subsidies products	2.0	1.5	1.0	0.6	-0.4	0.9	0.6	0.4	1.3	-0.2

Source: Statistics Norway.

Table 7. **National accounts: Final expenditure and gross domestic product. Price indices. 2014=100**

	Unadjusted		Seasonally adjusted									
	2014	2015*	14.2	14.3	14.4	15.1	15.2	15.3	15.4	16.1	16.2	16.3
Final consumption expenditure of households and NPISHs	100.0	102.3	99.5	99.6	100.5	101.4	101.4	101.9	103.4	104.8	105.5	105.6
Final consumption expenditure of general government	100.0	103.0	99.8	100.1	101.1	102.2	103.0	103.1	103.8	104.4	104.5	105.4
Gross fixed capital formation	100.0	102.6	99.6	100.5	101.0	101.9	102.9	101.8	103.6	103.7	104.6	104.3
Mainland Norway	100.0	102.7	99.3	100.4	101.2	101.5	102.1	103.0	103.9	104.4	104.7	105.1
Final domestic use of goods and services	100.0	102.3	99.7	100.0	101.1	102.3	101.7	101.0	103.9	105.1	104.0	104.4
Final demand from Mainland Norway	100.0	102.5	99.6	99.9	100.8	101.6	101.9	102.5	103.6	104.6	105.1	105.4
Total exports	100.0	92.1	100.9	97.6	96.4	93.3	94.7	92.7	88.2	81.8	84.3	84.2
Traditional goods	100.0	102.3	98.8	98.8	101.9	102.7	102.5	102.0	102.0	102.9	106.3	107.0
Total use of goods and services	100.0	99.2	100.0	99.3	99.6	99.6	99.6	98.4	99.1	98.1	98.1	98.4
Total imports	100.0	104.2	98.3	99.8	102.3	103.6	104.1	104.4	105.2	105.7	106.5	104.1
Traditional goods	100.0	104.7	99.1	99.8	101.7	104.1	104.3	105.1	105.2	105.0	106.0	106.1
Gross domestic product (market prices)	100.0	97.7	100.6	99.2	98.9	98.4	98.3	96.7	97.2	95.8	95.7	96.6
Gross domestic product Mainland Norway (market prices)	100.0	102.3	99.6	100.3	101.0	101.6	101.9	102.3	103.2	104.5	104.5	105.5

Source: Statistics Norway.

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

	Unadjusted		Seasonally adjusted									
	2014	2015*	14.2	14.3	14.4	15.1	15.2	15.3	15.4	16.1	16.2	16.3
Final consumption expenditure of households and NPISHs	2.2	2.3	0.3	0.1	0.8	0.9	0.0	0.5	1.4	1.4	0.7	0.1
Final consumption expenditure of general government	3.3	3.0	0.7	0.3	1.0	1.1	0.8	0.1	0.7	0.5	0.2	0.8
Gross fixed capital formation	3.8	2.6	0.7	0.8	0.5	1.0	1.0	-1.1	1.8	0.1	0.9	-0.4
Mainland Norway	3.6	2.7	0.5	1.1	0.8	0.3	0.5	1.0	0.9	0.4	0.3	0.3
Final domestic use of goods and services	2.7	2.3	0.5	0.4	1.0	1.2	-0.6	-0.7	2.8	1.1	-1.0	0.4
Final demand from Mainland Norway	2.8	2.5	0.4	0.4	0.9	0.8	0.3	0.5	1.1	0.9	0.5	0.4
Total exports	-1.7	-7.9	-3.3	-3.3	-1.2	-3.2	1.5	-2.1	-4.8	-7.3	3.1	-0.2
Traditional goods	3.4	2.3	-1.2	0.0	3.1	0.8	-0.2	-0.5	0.1	0.8	3.4	0.6
Total use of goods and services	1.4	-0.8	-0.7	-0.7	0.3	0.0	0.0	-1.2	0.7	-1.0	0.1	0.2
Total imports	4.9	4.2	-1.2	1.5	2.5	1.2	0.6	0.3	0.8	0.4	0.8	-2.2
Traditional goods	4.4	4.7	-0.1	0.8	1.9	2.4	0.2	0.8	0.0	-0.1	0.9	0.1
Gross domestic product (market prices)	0.3	-2.3	-0.5	-1.4	-0.3	-0.4	-0.1	-1.6	0.5	-1.4	-0.1	1.0
Gross domestic product Mainland Norway (market prices)	2.5	2.3	0.9	0.6	0.8	0.6	0.2	0.4	0.9	1.2	0.1	1.0

Source: Statistics Norway.

Table 9. **Main economic indicators 2004-2019. Accounts and forecasts. Percentage change from previous year unless otherwise noted**

													Forecasts			
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015*	2016	2017	2018	2019
Demand and output																
Consumption in households etc.	5.4	4.4	5.0	5.3	1.7	0.0	3.8	2.3	3.5	2.7	1.9	2.1	1.5	1.9	2.0	2.0
General government consumption	1.3	1.9	1.9	2.0	2.4	4.1	2.2	1.0	1.6	1.0	2.7	2.1	2.2	1.7	1.9	1.8
Gross fixed investment	10.0	12.0	9.1	11.7	0.9	-6.8	-6.6	7.4	7.6	6.3	-0.7	-3.8	0.0	1.5	3.3	2.5
Extraction and transport via pipelines	10.5	19.7	3.2	6.9	4.7	3.3	-8.9	11.3	15.1	19.3	-3.2	-15.0	-15.8	-11.8	5.1	3.7
mainland Norway	10.7	11.1	9.3	14.2	0.9	-10.4	-6.4	5.0	7.4	2.9	0.4	0.6	5.6	5.0	2.5	1.8
Industries	12.5	18.1	12.7	22.7	3.1	-18.4	-9.5	1.1	10.5	-3.3	-0.7	-1.6	2.6	3.6	3.5	3.7
Housing	16.3	9.7	4.0	2.7	-9.0	-8.1	-1.6	17.0	10.9	5.3	-1.4	1.6	9.3	6.9	1.3	-1.1
General government	2.6	-0.6	8.4	8.7	7.2	7.7	-4.8	1.1	-1.8	11.8	4.4	3.0	6.0	5.0	2.5	2.4
Demand from Mainland Norway[1]	5.1	5.1	5.0	6.2	1.6	-1.4	1.2	2.5	3.7	2.3	1.8	1.8	2.6	2.5	2.1	1.9
Stockbuilding[2]	2.4	-0.1	1.4	0.2	-0.1	-2.5	2.9	-0.3	-0.3	0.4	0.2	0.2	0.2	0.0	0.0	0.0
Exports	1.0	0.5	-0.8	1.4	0.1	-4.1	0.7	-0.8	1.4	-1.7	3.1	3.7	-1.7	1.2	1.6	2.0
Crude oil and natural gas	-0.7	-5.0	-6.6	-2.4	-1.3	-1.6	-6.9	-5.6	0.5	-5.5	2.7	3.2	0.8	0.0	-1.0	-0.8
Traditional goods	3.6	5.3	6.1	9.2	3.5	-8.0	3.3	-0.1	-0.2	1.3	3.1	5.8	-5.1	3.0	3.5	4.4
Imports	9.0	7.9	9.1	10.0	3.2	-10.0	8.3	4.0	3.1	4.9	2.4	1.6	1.1	1.8	2.8	2.9
Traditional goods	11.7	8.4	11.6	7.2	1.2	-12.1	9.2	4.6	2.6	2.3	2.1	1.9	0.1	1.3	2.7	3.0
Gross domestic product	4.0	2.6	2.4	2.9	0.4	-1.6	0.6	1.0	2.7	1.0	1.9	1.6	0.4	1.4	1.7	1.7
Mainland Norway	5.0	4.7	5.0	5.7	1.7	-1.6	1.8	1.9	3.8	2.3	2.2	1.1	0.7	1.7	2.2	2.1
Manufacturing	4.6	3.6	2.6	3.8	2.7	-7.8	2.1	1.7	2.0	3.3	2.8	-3.2	-3.9	1.0	1.8	1.9
Labour market																
Total hours worked. Mainland Norway	2.2	1.6	3.5	4.8	3.6	-2.0	0.2	1.7	1.8	0.3	1.4	0.4	-0.1	0.3	0.5	0.8
Employed persons	0.6	1.3	3.4	4.1	3.2	-0.5	-0.5	1.5	2.1	1.1	1.2	0.3	-0.1	0.8	0.8	0.8
Labor force[3]	0.3	0.8	1.6	2.5	3.4	0.0	0.5	1.0	1.8	1.0	1.1	1.4	0.4	0.6	0.7	0.7
Participation rate (level)[3]	72.6	72.4	72.0	72.8	73.9	72.8	71.9	71.4	71.5	71.2	71.0	71.2	70.7	70.6	70.7	70.8
Unemployment rate (level)[3]	4.5	4.6	3.4	2.5	2.6	3.2	3.6	3.3	3.2	3.5	3.5	4.4	4.7	4.5	4.4	4.3
Prices and wages																
Wages per standard man-year	3.5	3.3	4.1	5.4	6.3	4.2	3.7	4.2	4.0	3.9	3.1	2.8	2.2	2.6	2.9	3.4
Consumer price index (CPI)	0.4	1.6	2.3	0.8	3.8	2.1	2.5	1.2	0.8	2.1	2.0	2.1	3.6	2.3	2.1	2.4
CPI-ATE4	0.4	1.0	0.8	1.4	2.6	2.6	1.4	0.9	1.2	1.6	2.4	2.7	3.0	2.0	2.0	2.2
Export prices. traditional goods	8.4	4.0	11.3	2.4	2.8	-6.0	4.5	5.8	-1.9	2.7	3.4	2.3	3.1	1.9	1.3	2.9
Import prices. traditional goods	3.7	0.3	4.0	3.7	3.9	-1.5	0.0	4.0	0.3	1.5	4.4	4.7	0.9	0.8	1.2	2.2
Housing prices	10.1	8.2	13.7	12.6	-1.1	1.9	8.3	8.0	6.7	4.0	2.7	6.1	7.3	7.2	1.5	-0.7
Income. interest rates and excange rate																
Household real income	3.4	8.3	-6.6	6.0	3.4	3.2	2.3	4.1	4.4	3.8	2.7	5.2	-2.9	2.1	1.9	2.0
Household saving ratio (level)	7.0	9.6	-0.5	0.9	3.7	5.2	4.0	5.8	7.1	7.6	8.2	10.4	6.5	6.6	6.5	6.4
Money market rate (level)	2.0	2.2	3.1	5.0	6.2	2.5	2.5	2.9	2.2	1.8	1.7	1.3	1.1	1.0	1.0	1.0
Lending rate. credit loans(level)[5]	4.2	3.9	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	2.6
Real after-tax lending rate. banks (level)	2.0	0.8	0.2	2.9	1.1	0.7	0.1	1.3	2.1	0.7	0.8	0.1	-1.6	-0.3	-0.1	-0.4
Importweighted krone exchange rate (44 countries)[6]	3.0	-3.9	0.7	-1.8	0.0	3.3	-3.7	-2.4	-1.2	2.2	5.3	10.4	1.9	-3.2	0.0	1.1
NOK per euro (level)	8.4	8.0	8.1	8.0	8.2	8.7	8.0	7.8	7.5	7.8	8.4	9.0	9.3	9.0	9.0	9.1
Current account																
Current balance (bill. NOK)	220.6	322.8	357.7	287.4	408.3	258.2	282.7	344.9	368.6	314.2	346.0	270.0	159.4	201.3	210.3	229.8
Current balance (per cent of GDP)	12.4	16.2	16.1	12.2	15.6	10.7	10.9	12.7	12.4	10.2	11.0	8.7	5.1	6.2	6.2	6.4
International indicators																
Exports markets indicator	7.8	7.1	9.8	6.5	1.7	-9.8	11.3	6.3	1.4	2.1	4.9	4.9	3.1	4.1	4.5	4.6
Consumer price index. euro-area	2.1	2.2	2.2	2.2	3.3	0.3	1.7	2.7	2.5	1.3	0.4	0.1	0.3	1.2	1.5	1.7
Money market rate. euro(level)	2.1	2.2	3.1	4.3	4.6	1.2	0.8	1.4	0.5	0.2	0.2	0.0	-0.3	-0.2	-0.2	0.2
Crude oil price NOK (level)[7]	255	356	423	423	536	388	484	621	649	639	621	430	375	451	464	503

[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] According to Statistics Norway›s labour force survey(LFS). Break in data series in 2006.
[4] CPI adjusted for tax changes and excluding energy products.
[5] Yearly average. Lending rate. banks until 2006
[6] Increasing index implies depreciation.
[7] Average spot price Brent Blend.
Source: Statistics Norway. The cut-off date for information was 29 November

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