

Economic Survey

Statistics Norway



Statistisk sentralbyrå

- Economic developments in Norway
- Forecasts 2016-2019

1/2016

Economic trends

Perspectives

The oil price has plunged, and the Norwegian economy is currently in a clear economic downturn. In 2015 mainland GDP increased by only 1.0 per cent, the weakest growth since the financial crisis in 2009. There was barely any growth through the second half of last year, and unemployment has risen by almost 1.5 percentage points in the course of a year and a half. We assume that the cyclical downturn will be accompanied by low or no growth in real wages and that unemployment will continue to increase slightly this year.

The impact of the sharp fall in demand from the petroleum industry has been countered by a number of factors that will continue to affect the Norwegian economy in the near term. Low and steadily declining interest rates, a weak krone and increased spending over government budgets will push up growth through the current year. We also expect international growth to pick up slightly, and a gradual slowing of the fall in petroleum investment towards the end of this year will provide a basis for a moderate upturn from early next year. We accordingly expect unemployment to gradually decline slightly. Growth in real wages will continue to be weaker than we have been used to for the past 25 years.

The fall in the oil price has had a significant negative impact on the Norwegian economy. However, the effects on the overall activity level have been relatively limited, viewed in light of the major negative earnings shock implied by such a large fall in prices for our most important export product. The negative effects ensue primarily from direct demand impulses generated by the petroleum sector. Between the third quarter of 2014 and the fourth quarter of 2015, petroleum investment fell by a seasonally adjusted 27 per cent from a record high level. In the same period, overall demand from the petroleum sector was reduced by the equivalent of 3 per cent of mainland GDP. This has been partly offset by lower imports, and the import share has probably declined somewhat and cushioned the impact of the fall in demand for Norwegian production. The decline has impacted some industries, regions and occupational groups harder than others. There has been a pronounced rise in unemployment in Southern and Western Norway, while the rise in unemployment has been more moderate or totally absent so far in other parts of the country. The effects will probably spread gradually. House prices have shown similar developments. The situation for those who have been hit hardest by the downturn is dramatic. The situation for the Norwegian economy as a whole is serious, but not critical.

The relatively moderate impact on activities of a major negative shock to the Norwegian economy demonstrates the capacity of the Norwegian system to handle the short-term consequences of shocks. A number of important mechanisms in the Norwegian economy have contributed to dampening the negative effects of the fall in the oil price in the short term. The fiscal rule for use of income generated by petroleum activities, coupled with very sound state finances, means that a fall in the oil price will not negatively affect public spending in the short term. If current petroleum revenue had been spent to a greater extent, the impulses from the fall in the oil price would have been much greater, as we experienced 30 years ago. Instead, a fairly expansionary fiscal policy can now be conducted.

Monetary policy has also had the effect of stimulating the economy through lower interest rates. A flexible exchange rate normally also acts as an important stabiliser for the Norwegian economy when the oil price changes, by distributing the loss of income due to the oil price fall and facilitating a restructuring of the Norwegian business sector to increase output of internationally exposed products other than oil and gas. A sharp weakening of the krone exchange rate in pace with the falling oil price and interest rate level has appreciably strengthened the competitiveness of Norwegian manufacturers. Whereas hourly labour costs in Norwegian manufacturing were 57 per cent higher in Norway than in the EU in 2012, the difference in 2015 was 37 per cent. This reduces

the negative impact of the oil price fall, and facilitates restructuring. The improvement in competitiveness has taken place rapidly and undramatically. Under normal circumstances, such a change would not have been possible under a fixed exchange rate regime. Nominal wage growth has also slowed, despite underlying upward pressure on inflation. This must be attributable to the wage leader model, and reflects poor profitability, in the petroleum-related segment of manufacturing, among others. Another stabilising mechanism operating through the exchange rate is that the value of the Government Pension Fund Global increases in terms of Norwegian kroner when the krone depreciates, while the state pays most of its expenses in kroner. This allows for increased spending within the limits of the 4 per cent fiscal rule. A countering effect is that household purchasing power is reduced when the krone weakens. Although Norway is still an attractive country in which to work and live, emigration from Norway was higher and immigration lower in 2015 than in previous years. Net immigration was at its lowest level since the EU enlargement in 2007. This has served to curb the increase in unemployment.

Although the short-term effects of the fall in oil prices in the country as a whole do not justify use of the word «crisis», economic growth is low. Per capita growth in mainland GDP in 2015 was approximately zero. It is important to note that when we emerge towards the end of our projection period from the downturn we are now in, the Norwegian economy will be growing appreciably more slowly, both overall, and not least per capita, than we have been used to in recent decades.

We cannot expect that the sources that have made the strongest contribution to activity growth in recent years will do so to the same extent going forward. The oil and gas sector will be an important part of the Norwegian economy for some decades to come, but investments are unlikely to reach the same level of importance as before. The Government Pension Fund Global has grown strongly in recent years because the state's net cash flow from petroleum activities has far exceeded the government budget deficit. With limited growth due to large deposits, there will no longer be scope for strong growth in public spending within the confines of the fiscal rule. When government budgets are impacted by the effects of the ageing population after 2020, scope for manoeuvre will be reduced further. We can hope that the global economy will grow faster than it has done since the financial crisis in 2008, but this will remain a hope.

The business sector restructuring we face is not substantially greater than we have experienced since the early 1990s. The Norwegian economy has generally proved highly adaptable. For enterprises, restructuring capacity means being able to adapt to and utilise a changed operating environment and new technology. For society, restructuring capacity additionally means that resources accrue to the activities that yield the greatest return. In the short term, it is a matter of making sure that labour resources do not suffer attrition, by providing some stimulus to demand. In the longer term, an increase in the quantity and quality of labour and capital through increased work input, education and investment in fixed assets may contribute to growth. Higher labour force participation may still have a lot to contribute, but in the long term it is productivity growth, i.e. a higher yield from the resource input, that will be the chief source of income growth.

People with high qualifications and high work output make an important contribution to material prosperity. Although labour force participation in Norway is relatively high, there is still scope for increasing per capita work input, for example by reducing part-time work for those fit for work, encouraging healthy elderly people to stay in work longer, and getting marginal groups out into the labour market. Evaluations of the pension reform and various changes in the social security system show that economic incentives are effective: people work more when it pays more to work. Reforms of this kind show that it is possible to maintain a generous welfare state with good income-replacement schemes and at the same time provide incentives for higher labour force participation. Incentives also work in other areas. Low throughput in higher education has an adverse effect on labour force participation. Although the possibility of securing full-time, income-generating work is motivation enough for many, research shows that if students are given a financial incentive to complete their studies in the nominal time,

more of them do so. There is moreover reason to believe that educational institutions will also work for higher throughput if they have stronger incentives to do so.

But education is not just about number of years of school and higher education; knowledge must be acquired and used. Within the education system, there are substantial differences among schools in how they contribute to students' skills. This indicates that there is potential for more people to benefit more from the basic schooling system. These quality differences probably also exist in higher education, and many analyses show quite substantial differences in efficiency among comparable public institutions and entities. These represent a waste of important resources, and hence a potential for improvement. Differences in efficiency also exist in the private sector, but here the market mechanism will ensure in the long term that the least efficient are pushed out of the market. Whereas the authorities have a clear part to play in ensuring productivity growth and greater efficiency in the public sector, productivity-promoting measures in the private sector are primarily the enterprises' own responsibility. The role of the authorities should be limited to providing good, general and industry-neutral framework conditions, through the taxation and education systems and by putting appropriate infrastructure in place. However, there may be reason to reduce regulation that inhibits competition and to be cautious about subsidising industries and enterprises with falling employment.

The challenges facing the Norwegian economy appear to be easily dealt with luxury problems compared with the situation in a number of countries no great distance away. Problems of a political, humanitarian and economic nature have triggered a flood of migrants to Europe. How this inflow of migrants will be handled, whether by means of joint European solutions or not, is unclear at present, but Norway will accept some of them. The consequences of immigration depend very much on how well and how rapidly the immigrants become integrated. The road to good integration in Norwegian society goes through participation in education and work, with a view to being as self-sufficient as possible. A fundamental tenet of the Norwegian welfare model is that it should pay to work, while at the same time welfare schemes constitute an insurance against loss of income that ensures a decent standard of living. The level of welfare benefits is thus equivalent to the minimum wage level. The wages that employers are willing to pay reflect the productivity of the individual and their contribution to value added. But if the productivity of many of those who are fit for work is permanently lower than the level that defines a wage floor in the labour market, it creates a dilemma for welfare and inclusion policy. The lower employment rate we observe in a number of groups, among both immigrants and persons without an immigrant background, is in some instances due to lack of skills. It will be costly to allow these persons to be financed by welfare benefits, and for most people a life on welfare is not very appealing. One potential remedy is skills-building programmes, either through education or through customised and subsidised training in working life, for example through wage subsidies or similar schemes. But large-scale increased inclusion in the labour market of persons with permanently limited skills is very likely to mean downward pressure on welfare benefits and the wage level of groups who already have low wages. Successful integration of immigrants and other groups into the Norwegian labour market may therefore imply dilemmas that challenge aspects of the Norwegian welfare state.

The measures with which we should meet the long-term challenges are the same ones that it would be wise to implement under any circumstances: socio-economic profitability should be the guideline. It will hopefully be easier to follow this guideline when it becomes more evident that extraction of limited oil and gas resources must inevitably come to an end, and that future prosperity will essentially come from sources other than petroleum revenue.

Economic developments in Norway

The Norwegian economy is currently in a clear cyclical downturn which, according to our projections, will continue in 2016. In 2015, mainland GDP increased by only 1.0 per cent, the weakest growth since the financial crisis depressed growth in 2009. Seasonally adjusted quarterly figures show that GDP growth, calculated as an annual rate, has been below trend growth, estimated at about 2 per cent, since the third quarter of 2014. The economic situation weakened further in the second half of last year. According to the preliminary

national accounts figures, mainland GDP was roughly unchanged from the second to the fourth quarter. As a result of weak economic developments, unemployment increased markedly. The unemployment rate measured by the labour force survey (LFS) rose from the second quarter of 2014 to the fourth quarter of 2015 by almost 1.5 percentage points, to 4.6 per cent, after adjustment for normal seasonal variations.

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

	2014*	2015*	Seasonally adjusted			
			15:1	15:2	15:3	15:4
Demand and output						
Consumption in households etc.	1.7	2.0	0.6	0.6	0.2	0.6
General government consumption	2.9	1.8	-0.1	0.4	0.5	0.3
Gross fixed investment	0.0	-4.0	0.2	-0.6	-0.5	-0.9
Mainland Norway	1.3	0.2	-0.1	1.2	2.4	-0.4
Extraction and transport via pipelines	-2.9	-14.7	-0.1	-4.7	-8.1	-2.8
Final domestic demand from Mainland Norway ¹	2.0	1.6	0.3	0.6	0.7	0.3
Exports	2.2	2.3	-3.0	0.3	5.6	-2.9
Crude oil and natural gas	1.9	0.9	-6.0	0.0	9.6	-4.8
Traditional goods	2.5	5.5	2.2	0.4	0.8	2.6
Imports	1.5	0.6	3.8	-1.8	-2.6	1.6
Traditional goods	1.0	1.7	4.0	-0.5	-4.5	3.9
Gross domestic product	2.2	1.6	-0.1	0.0	1.6	-1.2
Mainland Norway	2.3	1.0	0.2	0.2	0.0	0.1
Labour market						
Man-hours worked	1.5	0.6	0.0	0.1	-0.1	-0.2
Employed persons	1.1	0.6	0.0	0.2	0.1	-0.1
Labour force ²	1.1	1.4	0.2	0.4	0.3	-0.1
Unemployment rate, level ²	3.5	4.4	4.1	4.3	4.6	4.6
Prices and wages						
Annual earnings	3.1	2.8	..	..	..	..
Consumer price index (CPI) ³	2.0	2.1	2.0	2.2	2.0	2.5
CPI adjusted for tax changes and excluding energy products (CPI-ATE) ³	2.4	2.7	2.3	2.6	2.9	3.0
Export prices, traditional goods	4.0	3.4	2.0	-0.3	-0.4	-1.2
Import prices, traditional goods	5.5	5.5	2.8	-0.3	1.7	0.0
Balance of payment						
Current balance, bill. NOK	376.7	282.6	87.5	78.0	62.1	55.0
Memorandum items (unadjusted level)						
Money market rate (3 month NIBOR)	1.7	1.3	1.4	1.4	1.2	1.1
Lending rate, credit loans ⁴	3.9	3.2	3.5	3.3	3.1	2.8
Crude oil price NOK ⁵	621	430	428	491	421	380
Importweighted krone exchange rate, 44 countries, 1995=100	93.7	103.4	101.0	100.2	105.1	107.4
NOK per euro	8.4	8.9	8.7	8.6	9.1	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.

The dominant factor underlying the weak production developments is a sharp fall in demand from the petroleum industry. Petroleum investment started falling in the fourth quarter of 2013, and by the fourth quarter of 2015 had dropped by 27 per cent. This development was initially a reaction to the high cost level and relatively poor profitability, and was exacerbated by a dramatic fall in the oil price. From a level of around USD 110 per barrel up to the summer of 2014, it fell in several rounds, bottoming out in mid-January 2016, when the price was well under USD 30 per barrel.

Given the size of the petroleum and supplier industries, one might initially have expected the economic downturn to be even more pronounced. One of the reasons that the downturn in the Norwegian economy has not been deeper is that because of the fiscal rule and regulatory framework around the Government Pension Fund Global, the authorities can meet the downturn with increased spending and tax relief and not be compelled to tighten the policy.

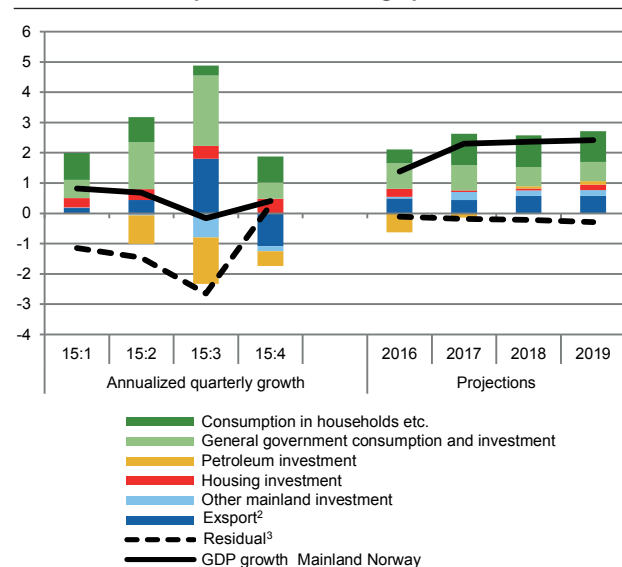
A steadily more expansionary monetary policy is another important reason that the downturn has not been more acute. Lower interest rates coupled with the decline in oil prices led to the krone depreciating almost 30 per cent from the peak of its strength in early 2013 to the end of 2016. This means a strong improvement in cost-competitiveness, which in turn eases the situation for all Norwegian internationally exposed business.

Traditional goods exports have picked up appreciably, with growth of 5.5 per cent in 2015, although some of this increase must be attributed to temporary factors. The improvement in competitiveness has also helped to curb imports, thereby stimulating Norwegian production. Owing to increased globalisation and specialisation, imports normally increase substantially more than GDP, but imports increased by only 0.6 per cent in 2015.

Fiscal policy, measured in terms of the budget deficit, is strongly expansionary at present. According to the final government budget, the increase in the structural, non-oil budget deficit (SNOBD) in 2015 was equivalent to 0.5 per cent of trend mainland GDP. Overall, however,

fiscal policy appears to have had a slightly less expansionary effect in 2015 than previously assumed. The adopted budget for 2016 is more expansionary than the 2015 budget, with an estimated fiscal impulse of 0.7 per cent of trend mainland GDP, and it has a similar orientation. According to the same source, despite the decline in the oil price, in 2015 SNOBD was 2.6 per cent of the Government Pension Fund Global at the start of the budget year, and thus far below the 4 per cent limit. However, given even lower oil prices and a need for a fiscal policy that stimulates the economy, this situation may change if global stock exchanges also falter.

Figure 1. **GDP growth Mainland Norway and contribution by final demand components¹. 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 components¹. Percentage points. annual rate**

	KNR-tall				Prognose			
	15:1	15:2	15:3	15:4	2016	2017	2018	2019
Consumption by households and non-profit organisations	0.9	0.8	0.3	0.9	0.5	1.0	1.0	1.0
General government consumption and investment	0.6	1.5	2.3	0.5	0.8	0.8	0.6	0.6
Petroleum investment	0.0	-0.9	-1.5	-0.5	-0.6	-0.1	0.1	0.1
Housing investment	0.3	0.4	0.4	0.5	0.3	0.1	0.1	0.2
Other mainland investment	0.0	-0.1	-0.8	-0.2	0.1	0.3	0.2	0.2
Exports	0.2	0.4	1.8	-1.1	0.5	0.4	0.6	0.6
Other deviations	-1.1	-1.5	-2.6	0.3	-0.1	-0.2	-0.2	-0.3
Growth in mainland GDP	0.8	0.7	-0.2	0.4	1.4	2.3	2.4	2.4

¹ See footnotes to Figure 1.

Source: Statistics Norway.

Cuts in an already historically low key policy rate in June and September last year brought the money market rate down to 1.1 per cent at the beginning of 2016. The bank interest rates households now face have followed money market rates down – with a varying time lag. A typical mortgage had an average interest rate of 2.7 per cent in January 2016. There are prospects of a further decline in interest rates, and that rates will remain low for quite a long time. The interest rate situation has helped to stimulate the housing market, and house prices in most places in Norway continued to rise markedly until January 2016, despite the cyclical downturn. House prices rose by an annual average of 6.1 per cent in 2015, prompting an appreciable rise in housing investment through 2015. As a result of the decline in residential construction through 2014, annualised housing investment did not increase more than 1.6 per cent last year nonetheless.

Growth in many public investment projects coupled with increased residential construction translated into an increase of just over 3 per cent in value added in construction in 2015. However, the downturn in the petroleum industry led to very weak developments in manufacturing activity through the year, despite the improved competitiveness. Manufacturing value added fell by an annual average of over 3 per cent in 2015. In private services, including services for own dwelling, which account for about half of the mainland economy, the increase in value added was in line with mainland GDP. The fall in petroleum sector demand is also depressing growth in these groups of industries, but factors such as increased tourism and steady, moderate consumption growth are buoying up activity.

Household real disposable income increased by 2.3 per cent in 2015. Despite declining interest rates and a high rise in house prices, household consumption increased by only 2.0 per cent after a relatively steady trend through the year. Increased uncertainty about own income developments due to the relatively high unemployment is a factor that has probably prompted the increase in saving, from 8.8 per cent of income in 2014 to 9.4 per cent in 2015.

Employment increased by an annual average of 0.6 per cent in 2015, but growth through the year was very low and unemployment fell by 0.1 per cent in the fourth quarter. The labour force measured by the LFS edged up by an annualised average of 1.4 per cent, but fell in the fourth quarter of 2015. Annual wage growth in 2015 is estimated to be 2.8 per cent, which is the lowest wage increase since World War II. Inflation measured by the consumer price index (CPI) was 2.1 per cent in 2015, slightly higher than the previous year. Real wages consequently increased by 0.7 per cent in 2015. Real wage growth has not been as low since the late 1980s. Underlying inflation, measured by the consumer price index adjusted for tax changes and excluding energy products (CPI-ATE) has risen markedly for the past four years, from 0.9 per cent in 2011 to 2.7 per cent in 2015.

In the second half of 2015 and in January 2016, the 12-month rise in the CPI-ATE was 3.0 per cent or close to it. The rise in the last three years can be attributed to the depreciation of the krone. From 2014 to 2015, the import-weighted krone exchange rate weakened by a little over 10 per cent. The fall in oil prices and decline in electricity prices led to the CPI increasing appreciably less than the CPI-ATE.

The forces driving the economy have undergone little change from 2015 to 2016. The fall in demand from the petroleum industry will continue to exert downward pressure on activity developments, while the effects of improved cost-competitiveness and an expansionary fiscal and monetary policy will stimulate activity. Mainland business investment, which fell through 2015 at an annualised average rate of just under 3 per cent, is expected to edge up slightly in the period ahead. Housing investment is expected to increase fairly appreciably in 2016 but more moderately after that. Household consumption, like household income, will rise very moderately through 2016, but pick up in 2017. Underlying export growth will increase slightly going forward because of the time-lagged effects of the improved cost-competitiveness and, in due course, somewhat higher global growth. Aided by a falling off of the decline in petroleum investment, this may lead to mainland GDP growth rising above trend in early 2017. In our projections, the entire period 2017–2019 is characterised by a very weak cyclical upturn.

Employment growth is expected to be very modest this year, but lower growth also in the labour supply will curb the rise in unemployment. Unemployment will probably peak in the course of 2016 and the annual average is projected to be 4.7 per cent. Unemployment is expected to fall gradually down to 4.1 per cent in 2019, in pace with a pick-up in the business cycle.

We forecast that average annual wage growth will be around 2.5 per cent this year and next. Good profitability in many manufacturing segments as a consequence of the weak krone exchange rate and an improved international economy will lead to wage growth picking up slightly towards the end of the projection period. The depreciation of the krone we have experienced will lead to relatively high inflation this year, but CPI inflation will be checked by a much lower oil price than last year. We assume that the oil price will revive somewhat and contribute to a moderate strengthening of the krone in the near term. This, in conjunction with the fact that the effect on inflation of the depreciation of the krone will wane over time, will contribute to a slowing of inflation over the next few years, to under 2 per cent. Higher taxes and energy prices will nonetheless keep CPI inflation close to 2.0 per cent. Whereas real wage growth may be close to zero this year, our projections indicate a gradual increase in subsequent years, and that real wage growth will reach a moderate 1.2 per cent in 2019.

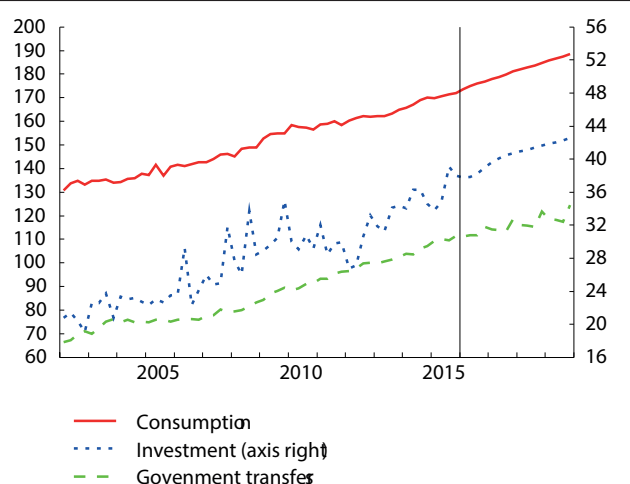
Table 3. **Main economic indicators 2015-2019. Accounts and forecasts. Percentage change from previous year unless otherwise noted**

	Accounts	Forecasts								
	2015	2016			2017			2018		2019
		SSB	NB	FIN	SSB	NB	FIN	SSB	NB	SSB
Demand and output										
Consumption in households etc.	2.0	1.2	1.5	1.9	2.8	2	2.8	2.9	2.4	2.7
General government consumption	1.8	2.7	..	2.7	2.1	..	1.4	2.1	..	2.1
Gross fixed investment	-4.0	-1.0	..	0.2	2.5	..	2.5	2.6	..	3.5
Extraction and transport via pipelines1	-14.7	-13.5	-11	-8.1	-3.7	-6	-5.5	1.8	-3	3.2
Mainland Norway	0.2	3.2	..	..	4.4	..	..	2.5	..	3.2
Industries	-2.8	1.0	..	4.5	5.4	..	6.7	3.6	..	3.6
Housing	1.6	5.5	..	1.4	1	..	4.4	1.2	..	3.7
General government	3.2	3.9	..	3.0	6.7	..	3.2	2.2	..	2.2
Demand from Mainland Norway2	1.6	2.0	2.2	2.4	3.0	2.3	2.9	2.6	2.8	2.7
Stockbuilding3	0.5	0.0	..	..	0.0	..	..	0.0	..	0.0
Exports	2.3	1.8	..	1.3	1.4	..	2.4	1.8	..	1.8
Crude oil and natural gas	0.9	0.8	..	-2.4	0.1	..	0.1	0.1	..	0.1
Traditional goods4	5.5	2.8	2.3	4.0	3.2	4	4.0	3.7	4	3.4
Imports	0.6	1.6	-0.8	2.7	2.8	2.8	4.5	3.3	3.8	3.6
Traditional goods	1.7	1.5	..	3.3	2.8	..	4.6	3.8	..	3.9
Gross domestic product	1.6	1.1	0.9	1.2	1.9	1.5	1.6	1.9	1.9	2.0
Mainland Norway	1.0	1.4	1.1	1.8	2.3	1.9	2.1	2.4	2.3	2.4
Labour market										
Employed persons	0.6	0.2	0.3	0.5	1.4	0.6	0.9	1.5	1.1	1.3
Unemployment rate (level)	4.4	4.7	4.6	4.5	4.5	4.4	4.2	4.3	4.1	4.1
Prices and wages										
Annual earnings	2.8	2.5	2.8	2.7	2.4	3.1	3.0	2.7	3.5	3.1
Consumer price index (CPI)	2.1	2.4	2.8	2.5	2.0	2.5	2.1	2.1	2	1.9
CPI-ATE5	2.7	2.5	2.9	2.5	1.8	2.5	2.1	1.7	2	1.6
Export prices, traditional goods	3.4	0.0	..	..	2.1	..	..	2.2	..	1.8
Import prices, traditional goods	5.5	2.0	..	..	2.4	..	..	2.1	..	1.5
Housing prices	6.1	1.4	..	..	5.1	..	..	6.1	..	4.9
Balance of payment										
Current balance (bill. NOK)	282.6	146.9	..	..	153.9	..	..	179.6	..	179.0
Current balance (per cent of GDP)	9.0	4.7	..	..	4.7	..	..	5.2	..	5.0
Memorandum items:										
				
Household savings ratio (level)	9.4	9.4	..	..	8.9	..	..	8.4	..	7.8
Money market rate (level)	1.3	0.7	0.8	0.8	0.5	0.7	0.9	0.7	1.5	1.1
Lending rate, credit loans (level)6	3.2	2.4	..	..	2.2	..	..	2.3	..	2.7
Crude oil price NOK (level)7	430	329	..	440	378	..	474	407	..	410
Export markets indicator	4.5	4.0	..	..	4.7	..	..	5.1	..	5.2
Importweighted krone exchange rate (44 countries)8	10.4	2.4	3.8	1.5	-1.5	-1.7	0.6	-1.1	-2.5	-1.1

¹ Forecasts from Ministry of Finance incl. service activities incidental 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.1 (2015-2016), (MoF), Norges Bank, Pengepolitisk rapport 4/2015 (NB).

Figure 2. **General government. Seasonally adjusted, billion 2013-kr., quarterly**



Source: Statistics Norway.

Fiscal policy

According to preliminary quarterly national accounts (QNA) figures, general government consumption increased by 1.8 per cent in 2015, just over one percentage point down from the previous year. The decline in military spending led to moderate overall growth. Growth was fairly stable during the year following a decline at the end of 2014. Consumption growth last year as a whole was lower than forecast. This is partly due to some of the expenses associated with the inflow of asylum-seekers not being considered general government consumption, but service exports. Gross general government investment increased by just over 3 per cent in 2015, half that of the previous year.

Transfers to households increased by about 7 per cent in 2015. Almost 3 percentage points of the increase can be attributed to changes in the rules for disability pensions that are offset by increased taxes for persons receiving a disability pension. Given consumer price inflation of just over 2 per cent in 2015, this means that real growth in transfers adjusted for the change in disability pensions was about 2 per cent. Overall real growth in public consumption, gross investment and transfers from 2014 to 2015 was also approximately 2 per cent. Reduced tax rates led to fiscal policy as a whole appearing more expansionary than the spending components indicate in isolation. However, revised figures indicate that fiscal policy was only weakly expansionary in 2015. In the Final Budget Bill for 2015, the Ministry of Finance estimated that the structural, non-oil budget deficit (SNOBD) as a share of trend mainland GDP would increase by half a percentage point from 2014 to 2015. The revised expenditure figures indicate that the increase was slightly lower.

The fiscal policy programme for 2016 is based on the National Budget 2015 (NB) and the Supplementary Proposition in November, as well as the agreement between the four coalition parties. As a result of the increased expenses associated with receiving the flow of

asylum-seekers to Norway, the Government proposed in November to increase gross allocations by NOK 9.5 billion next year, largely for consumption purposes. However, some of the increase in spending will be covered by spending cuts that cover both consumption and gross general government investment of just over NOK 2 billion. We therefore now expect growth in general government consumption to be 2.7 per cent in 2016. A significant part of the increased consumption that the asylum-seekers are contributing to this year will be registered as non-residents' consumption in Norway, and not as general government consumption, as assumed in our previous economic survey. The proposed tax cuts for personal taxpayers were reduced in the Supplementary Proposition by almost NOK 2 billion (accrued), to just over NOK 7 billion overall in 2016 compared with just over NOK 9 billion in NB 2016. A proposed cut in the aid budget of just over NOK 4 billion was the most important contribution to covering the shortfall. The budget changes were balanced by means of an increase in SNOBD of just over NOK 1 billion. In the budget agreement with the coalition parties, direct personal taxes were increased by just over NOK 1 billion again, so that reductions in accrued direct taxes will amount to approximately NOK 8 billion. This weakening of the budget was countered by increased indirect taxes on electricity and air travel amounting in all to NOK 2 billion (accrued). Total tax relief in 2016 will then be just under NOK 6 billion, of which some NOK 5 billion applies to companies as a result of the reduction from 27 per cent to 25 per cent in the tax rate on ordinary income.

We assume growth in gross general government investment of just under 4 per cent in 2016. This year the Armed Forces will again import two fighter aircraft, so that the increase in overall investment will be for military, not civilian purposes. We assume real growth in household transfers of about 2.5 per cent in 2016. Some of this growth is linked to the increase in the number of asylum-seekers; see Box 2.5 in Økonomiske analyser 1/2016. Overall, real growth in public consumption, investment and transfers is expected to be 2.7 per cent this year. The effect, coupled with lower taxes, means that fiscal policy will be more expansionary in 2016 than in 2015, and SNOBD as a share of trend GDP will increase.

Fiscal policy for 2017–2019 has not yet been adopted. There is reason to expect that high costs will accrue in both 2017 and 2018 in connection with asylum-seekers. Even if the number of asylum-seekers should decline compared with the level in 2015, the expenses associated with settling them will still be high in 2017. Accommodation expenses may increase public transfers in 2017. We have therefore assumed on the basis of uncertain data that growth in general government purchases of goods for consumption purposes will be just over 2 per cent annually in the period 2017 to 2019. Turning to gross general government investment, 2017 is the first year in which six new fighter aircraft

will be purchased, and this is reflected in the increase in investment. We have also assumed a further increase in investment in civil infrastructure. This means a clear increase in general government real capital. In isolation this will lead to higher growth in general government consumption as a result of the increased capital services from public infrastructure, which by definition is part of general government consumption and production.

We assume that the Government will maintain the Scheel Committee's proposal of lower tax on ordinary income by reducing the tax rate from 25 to 23 per cent in 2017. Such a reduction will be offset by adjustment of the tax system for taxpayers required to pay advance tax, such that only mainland enterprises are affected. The loss of revenue due to such a change can be projected at close to NOK 6 billion in 2017. The budget agreement for 2016 contains plans for increased environmental taxes in the near term. We have therefore chosen to increase fuel taxes in 2017, so that the annual revenue effect is NOK 3 billion. There will be corresponding increases in 2018 and 2019 as well. This will add about 0.1 percentage point to CPI inflation in these years. We assume cuts in personal tax of some NOK 3 billion in 2017, bringing total tax relief to about NOK 6 billion next year.

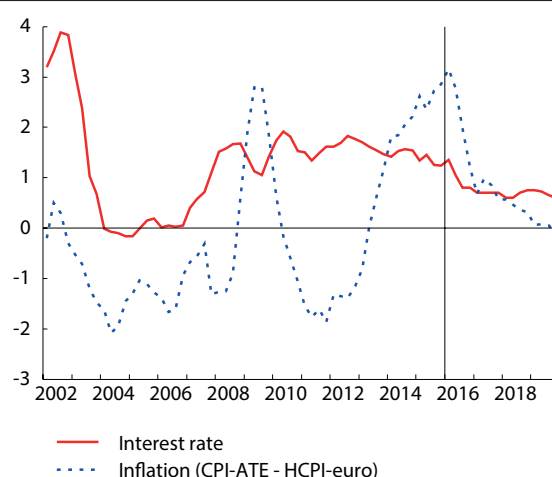
We have assumed that real growth in pension transfers to households will be about 2 per cent annually in 2018 and 2019. Other transfers will grow slightly less in real terms, so that total growth in transfers is expected to be about 1.5 per cent annually. We have not assumed changes in indirect tax rates in 2018 and 2019. The projected increase in environmental taxes means that our projections will lead to a slight increase in overall taxes in 2018 and 2019. This, coupled with an extrapolation of our spending increase projections, means that fiscal policy in 2018 and 2019 is projected to be roughly cyclically neutral. One reason for this, other than environmental considerations, is that SNOBD is approaching the 4 per cent path of the fiscal rule.

Our assumption that oil prices will remain fairly low in the near term implies no substantial transfers of capital to the Government Pension Fund Global in our projection period. The expansionary fiscal policy in 2016 and 2017 will bring SNOBD up to a level close to the 4 per cent path in 2018. However, the economic situation in our projections does not indicate any substantial further increase in SNOBD. In our projection scenario, the economy will be in a moderate upturn from 2017 to 2019, and a more cyclically neutral fiscal policy may then be conducted.

Monetary policy

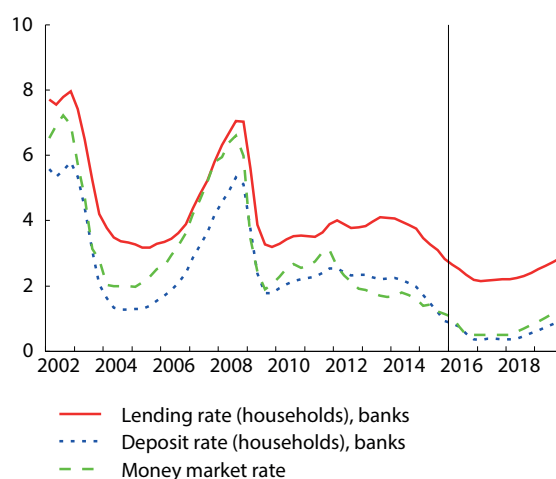
The key rate was lowered twice in 2015, by a total of 0.5 percentage point. Following the last interest rate cut in September last year, the key rate is 0.75 per cent. The three-month money market rate declined from about 1.5 per cent at the end of 2014 to 1.1 per cent at the beginning of 2016. The annualised money market

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



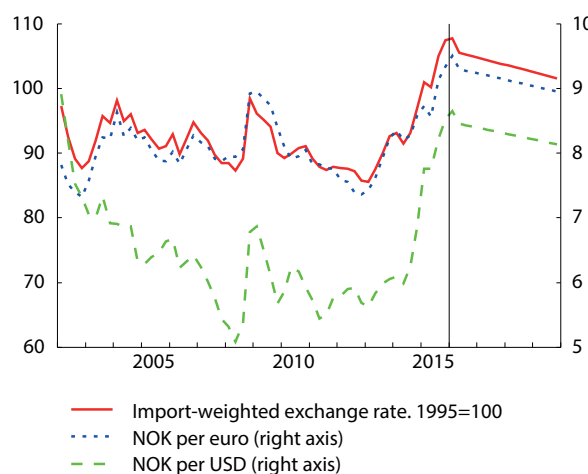
Source: Norges Bank and Statistics Norway.

Figure 4. Norwegian interest rates. Per cent



Source: Norges Bank and Statistics Norway.

Figure 5. Exchange rates



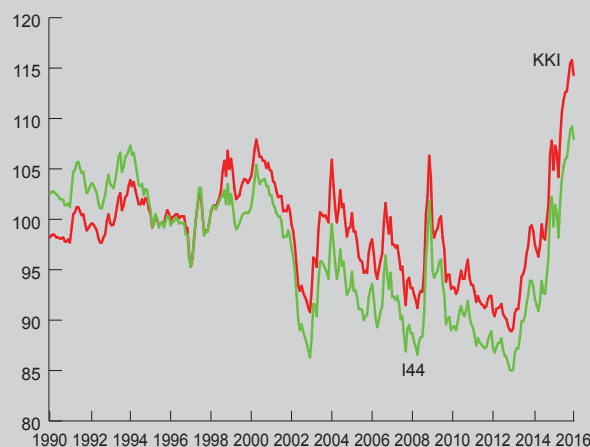
Source: Norges Bank.

Box 1 The import-weighted krone exchange rate and the trade-weighted krone exchange rate

Approximately 60 per cent of Norway's foreign trade in traditional goods (e.g. exports and imports of goods excluding oil, gas, ships and platforms) takes place with countries outside the euro area. The krone exchange rate as measured against the euro consequently provides limited information about the international value of the Norwegian krone. It is therefore important to supplement this information with alternative exchange rate indicators that more accurately reflect the breadth of our trading pattern. Examples of these are the trade-weighted exchange rate index (TWI) and the import-weighted krone exchange rate (I44). The trade-weighted exchange rate index is calculated on the basis of the exchange rate of the Norwegian krone against the currencies of Norway's 25 most important trading partners, and is a geometrical average based on the OECD's current trade weights. The weights in the import-weighted krone exchange rate are calculated on the basis of the composition of traditional goods imports from Norway's 44 most important trading partners. Both indices are structured in such a way that high values denote a weak krone and low values a strong krone.

The figure shows that on both indices the krone was consistently considerably weaker in the 1990s than from the early 2000s and up to 2012. The krone was the strongest on record in early 2013, but has since weakened markedly. However, the paths of the two indices do not quite coincide. For example, in January 2013 the krone was around 17 per cent stronger than the average for the 1990s measured by the import-weighted exchange rate, whereas according to the trade-weighted index it was only 12 per cent stronger. This reflects the fact that the two indices were designed for slightly different purposes: the import-weighted exchange rate shows developments in the exchange rate for an average of Norwegian imported goods, while the trade-weighted exchange rate index is intended to reflect the competitiveness of Norwegian manufacturing in both the export and the domestic market. The different paths are

Import-weighted krone exchange rate (I44) and trade-weighted exchange rate index (TWI) 1995 = 100



Source: Macrobond

due to the fact that the krone strengthened considerably more in relation to countries from which Norway imports than in relation to countries to which it exports. The international purchasing power of the krone was accordingly strengthened more than the international competitiveness of Norwegian manufacturing was weakened. This trend was particularly pronounced from 1993 to 2004.

From January 2013 to January 2016, the krone depreciated by 28.5 per cent measured by the import-weighted exchange rate and by 30.2 per cent measured by the trade-weighted exchange rate index. This means that the international purchasing power of the krone weakened slightly less than the international competitiveness of manufacturing strengthened. From January to February this year, the krone strengthened by just under 2 per cent measured in terms of both currency baskets.

rate was a record low 1.3 per cent in 2015, down 0.4 percentage point from the previous year.

Following the depreciation of the krone in 2013 and 2014, it appreciated somewhat from the beginning of 2015 and up to May 2015. The depreciation then continued, and at the end of 2015 the krone was worth 10 per cent less measured in terms of the import-weighted exchange rate than in May 2015. The krone depreciated by an annualised 10.4 per cent measured by the same index. The weakening was particularly pronounced against the US dollar, which from 2014 to 2015 became almost 30 per cent more expensive measured in Norwegian kroner. The dollar exchange rate rose by over 17 per cent through 2015, from about 7.50 at the beginning of the year to approximately 8.80 at the end of the year. In the same period, the euro exchange rate rose from just over 9.00 to about 9.60.

Interest rates facing households continued to fall through 2015. Whereas the average interest rate on

credit loans secured on dwellings offered by banks and mortgage companies was just over 3.6 per cent at the end of 2014, it had fallen to close to 2.7 per cent by the end of 2015. Interest rates on bank deposits also fell through 2015, from almost 1.9 per cent to just over 0.9 per cent. The monthly interest rate statistics, which are based on a sample survey rather than the full quarterly statistics, show that the greatest interest rate reductions last year were in March, August and December; i.e. 2–3 months after the preceding key rate cut.

Growth in private and municipal sector debt, measured as the seasonally adjusted three-month moving average of gross domestic debt (C2), compared with the previous three-month period and as an annual rate, increased from 5 per cent at the beginning of the year (November 2014 – January 2015) to just over 7 per cent in April 2015 (March – May 2015). It then declined to 4 per cent at the end of the year (November 2015 – January 2016). Growth in household debt showed a similar course through 2015, and at the end

of the year was 4.6 per cent, 0.7 percentage point lower than one year earlier. Debt growth in non-financial enterprises declined in the same period from 4.6 to 3.1 per cent. This can be explained by the weak developments in investment.

We expect Norges Bank to cut the key rate further this year, with one interest rate cut in March and one in the summer, to bring about growth in the Norwegian economy. Despite the weakened krone of the past few years, and hence imported inflation, we see little risk of high inflation in the near term, even with these interest rate cuts. The money market rate may decline to 0.5 per cent at the end of 2016 and remain at that level through 2017, before rising moderately in 2018 and 2019 as we anticipate. The average interest rate on credit loans secured on dwellings offered by banks and mortgage companies may then remain at 2.2 per cent from the end of the year until mid-2018.

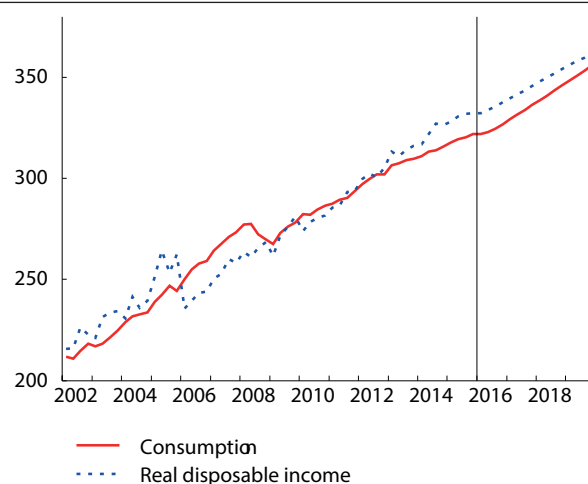
We forecast a gradual near-term appreciation of the krone of 1.5 per cent in 2017 and about 1 per cent in both 2018 and 2019. The krone will nevertheless depreciate by 2.4 per cent as an annual average in 2016 measured against the import-weighted krone exchange rate. The euro exchange rate will then end at about 9.00 in 2019. The strengthening can be partly considered a reversal of the depreciation of the krone over the past few years. A higher oil price may also contribute to this strengthening, as may higher interest rates in Norway than in the euro area. Higher inflation in Norway than in the EU will have an offsetting effect, but this difference in inflation will be appreciably less after 2016.

Household income, consumption and saving

The real disposable income of households and non-profit organisations rose by 2.3 per cent in 2015, about half a percentage point less than the previous year. The annual growth follows strong growth in the first and fourth quarters, but a clear decline in the summer of last year. Due to the lowest annual wage growth for a long time and a very small rise in employment, the contribution to growth attributable to wage income was barely 1 percentage point last year. This is less than half the 2014 contribution. Higher public transfers made the greatest contribution to wage growth last year by about 1.5 percentage points. Some of this increase is due to compensation for new rules for taxation of National Insurance disability benefit. As a result of low interest rates, net interest income also made a clear contribution to income growth last year. Higher tax on income and wealth pushed down income growth, however, as the effects of taxation on disability benefit were greater than the tax relief granted to households.

Consumption growth has been fairly weak in the years following the financial crisis, and has been generally weaker than income growth. Overall household

Figure 6. **Income and consumption in households. Seasonally adjusted, billion 2013-kr., quarterly**



Source: Statistics Norway.

consumption rose in 2015 by a moderate 2 per cent while goods consumption only rose by 1.1 per cent. Purchases of vehicles, clothing and footwear pushed up growth in goods consumption quite appreciably on an annual basis last year. However, goods consumption, which represents about 10 per cent of overall consumption, increased by a moderate 0.6 per cent. Purchases of furniture and white goods, an important consumer goods group, also showed very weak developments last year, with a decline of 2.9 per cent. Seasonally adjusted figures show that goods consumption, which included purchases of vehicles, clothing and footwear and sports equipment, fell on a fairly broad front through the second half of last year. In January, the seasonally adjusted goods consumption index increased by as much as 0.9 per cent. The increase must be seen in conjunction with the decline in December, however, and the goods consumption level is still lower than in November. Consumption of services, on the other hand, rose by a full 3.4 per cent in 2015, with health services, post and telecommunications services, leisure services, and hotel and restaurant services making particularly large contributions to growth. Norwegians' consumption abroad increased by only 1.2 per cent last year. The depreciation of the krone through 2015, which has made it relatively more expensive to shop in other countries, has curbed growth substantially.

Household saving in the form of financial and housing investment, calculated as a share of disposable income, has risen by close to 6 percentage points since the 2008 financial crisis, to a level of 9.4 per cent in 2015. Some of the increased saving following the financial crisis can probably be attributed to precautionary saving. This means that households reduce consumption when they view the future of both their own financial situation and the national economy as uncertain. The rise in the saving ratio during the past few years may also to some extent be attributed to the ageing population and the pensions reform introduced on 1 January 2011.

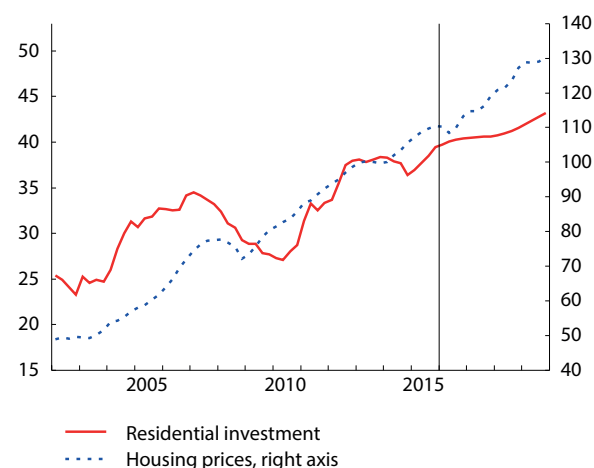
Developments in consumption are largely determined by movements in household income, wealth and interest rates. We expect public transfers to continue to make clear contributions to growth in real disposable income through the whole projection period, especially in 2017. Wage income will continue to move on a fairly weak trend in the near term due to relatively low wage growth. Fairly moderate employment growth, especially in 2016, will also curb growth in wage income. However, tax relief will contribute positively to developments in real disposable income in 2016 and 2017. Net interest income will boost annualised income growth appreciably this year and next as a result of a pronounced annualised decline in lending rates. Higher inflation this year will curb real income growth, however, while lower inflation in the next three years will be reflected in higher real income growth. We now expect annual growth in real disposable income of about 1.5 per cent this year and approximately 2.5 per cent in the period 2017–2019. Positive developments in real house prices, apart from a slight decline in 2016, may stimulate growth in consumption in the near term. All in all, we now expect consumption growth of a good 1 per cent this year, rising to just under 3 per cent in the remainder of the projection period. We assume that the saving ratio will gradually decline to somewhat less than 8 per cent in 2019.

House prices and housing investment

As an annual average, house prices were 6.1 per cent higher in 2015 than in 2014, according to Statistics Norway's house price index. However, seasonally adjusted figures show a clear tendency for the rise in house prices to slow through the year. The rise in prices in the first quarter of 2015 was 1.6 per cent compared with the previous quarter, while it had declined to 0.6 per cent in the fourth quarter of the same year. The monthly house price statistics from Norsk Eiendom (the Norwegian Property Federation) show identical developments through 2015. For the first two months of 2016, these statistics show a seasonally adjusted rise in house prices of 0.7 per cent in January, and a slight decline of 0.2 per cent in February. Underlying the figures for the country as a whole are large regional differences in house price developments, with a sharp rise in prices in Oslo and a fall in Stavanger.

House prices and household debt have a reciprocal effect on each other. Following a decline in lending rates through 2015, households are encountering appreciably lower real interest rates, which stimulate borrowing. Gross household debt is growing nominally and in real terms, but debt growth compared with the same quarter a year previously declined from about 6.5 per cent in the first three quarters of 2015 to 6 per cent in the fourth quarter. This tendency is supported by figures for domestic household debt growth, which increased by only a seasonally adjusted 4.6 per cent, calculated as an annual rate, in the period November 2015 – January 2016, compared with the previous three-month period.

Figure 7. **Residential market. Left axis adj. indices. 2013=100. Right axis per cent**



Source: Statistics Norway.

In the short term, house prices are affected by changes in household expectations regarding developments in both their own financial situation and the national economy. The consumer confidence indicator from TNS Gallup and Finance Norway has fallen for six consecutive quarters. The decline was particularly pronounced in the fourth quarter of 2015, but also the first quarter of this year showed a decline, particularly in households' assessment of their financial situation. The indicator value is approaching the value in the fourth quarter of 2008, which is the lowest since the banking crisis in the early 1990s.

We assume that households will consider the economic outlook to be weak throughout 2016, and that the confidence indicator will only begin to rise in 2017, as the economic situation improves. Debt growth will decline in real terms despite lower real interest rates, and nominal debt growth in 2016 is estimated at 5 per cent. Nominal debt growth will then remain at 4.5 per cent in 2017, before rising to over 6 per cent in 2018 and 2019. Growth in household real disposable income will be low in 2016, and we expect this to be reflected in a weak nominal decline in house prices in the next few quarters of this year after adjustment for normal seasonal variation. As house prices have risen through 2015 and early 2016, this will result in an annualised rise in house prices of just under 1.5 per cent in 2016.

With clearly higher growth in household real disposable income and persistently low real interest rates, we expect the rise in house prices to be about 5 per cent in 2017, 6 per cent in 2018 and 5 per cent until 2019. When we adjust for inflation in the projection scenario, this corresponds to a decline in real house prices of 1 per cent in 2016 and an average annual rise in real prices of slightly over 3 per cent for the remainder of the projection period.

According to the QNA, housing investment increased by 1.6 per cent in 2015 after declining through 2014.

Box 2 Effects of increased petroleum investment

In recent months the oil price has hovered around USD 30 per barrel, in stark contrast to the price level of around USD 110 per barrel that prevailed for several years, up to the summer of 2014. US oil producers have managed to deliver oil at far lower prices than were anticipated a short time ago. This has caused the oil price to fall more than many believed possible.

Norwegian petroleum investment began to decline almost a year before the oil price began to fall in earnest. Thus the oil price alone cannot explain the fall in investment. One important reason for the weak investment trend has been the high cost of investing and operating on the Norwegian continental shelf. Development costs are reported to have fallen considerably over the past year. As a result, fields that were regarded as unprofitable a short while ago, even with prices at around USD 60–70 per barrel, may be profitable at prices around today's oil price of just under USD 40. In isolation, the cost cuts will boost petroleum investment.

There is still great uncertainty surrounding oil prices and expectations are diverging. Some expect a considerably higher oil price just 1–2 years from now, while others are more cautious. We have based our projections on an oil price of around USD 40 per barrel through 2016 and only a moderate increase subsequently. Petroleum investment will then continue to fall in 2016 and 2017, prior to a slight upturn in 2018 and 2019. Should the oil price rise appreciably, it is highly probable that some of the smaller discoveries will become more profitable, so that more fields will be developed. In addition, exploration investment will be more profitable in the challenging fields in the Barents Sea, causing these investments, too, to revive. The uncertainty associated with developments in petroleum investment is not only related to oil and gas prices, but also to cost developments, including the ability to simplify development solutions, and attitudes to project uncertainty. In order to isolate the effects on the Norwegian economy of changes in petroleum investment, economic developments abroad are kept unchanged. We also keep the oil price, the orientation of monetary and fiscal policy and exchange rates unchanged. Direct import of platforms, employment in the production industry and demand relating to day-to-day operations are not increased either. These are factors that could have dampened the effects of investment. Countering these effects are households' expectations regarding their own financial situation and the Norwegian economy, which are also kept constant.

Higher petroleum investment initially leads to increased activity in the shipyard and engineering industry, in employment agencies that hire out staff to shipyards, in addition

to services associated with extraction, which deliver a large portion of the engineering and drilling services demanded by the petroleum industry. There are rapid knock-on effects to most industries in the economy, causing employment and wages to rise. This pushes up households' overall real income, so that consumption and housing demand rise. With higher output, real capital has to be adjusted upward. As a result, mainland business investment increases, leading to a further increase in demand. A large portion of the deliveries, particularly business investment, have a high import share, which increases, dampening the effects on Norwegian value added. Because effects on wages are moderate, exports do not fall, despite increased activity in the economy.

Overall, this calculation shows that 10 per cent higher petroleum investment increases mainland GDP by 0.5 per cent after 4 years, resulting in almost 0.1 percentage point lower unemployment and 0.2 per cent higher wages. These figures are not high per se, but if this increase in investment should take place in 2017, it would raise our projection for mainland GDP growth in 2017 from 2.3 to 2.7 per cent, and thereby appreciably strengthen the recovery of the Norwegian economy. If the signs are reversed, the calculation can also illustrate the consequences of a sharper downturn than the one we are assuming. A further fall in petroleum investment of 10 percentage points in each of the years ahead will probably be more than sufficient to prevent the turnaround occurring in the course of our projection horizon.

Effects on the Norwegian economy of a 10 per cent increase in petroleum investment. Deviation from the baseline scenario in per cent unless otherwise specified.

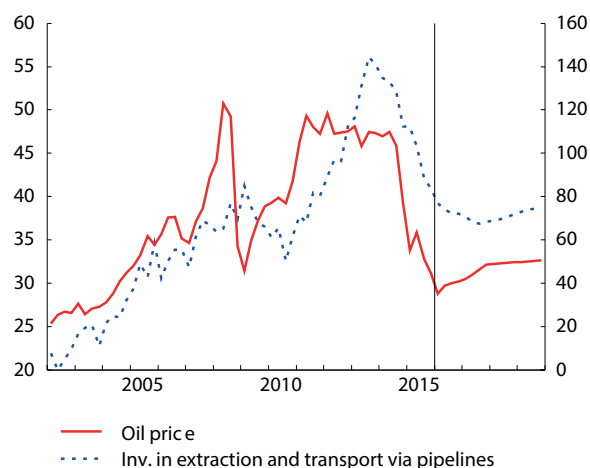
	Year 1	Year 2	Year 3	Year 4
Household consumption	0.1	0.2	0.3	0.4
Mainland investment	0.1	0.1	0.2	0.3
Business investment	0.2	0.3	0.3	0.3
Mainland GDP	0.4	0.4	0.4	0.5
Value added, manufacturing	0.6	0.6	0.6	0.6
Exports	0.0	0.0	0.0	0.0
Imports	0.8	0.8	0.9	1.0
Employment	0.1	0.1	0.2	0.2
Unemployment, percentage points	-0.1	-0.1	-0.1	-0.1
Wages	0.1	0.2	0.2	0.2
CPI	0.0	0.0	0.0	0.0
Household real disposable income	0.2	0.3	0.4	0.4
House prices	0.1	0.4	0.7	1.0
Memo:				
Petroleum investment	10.0	10.0	10.0	10.0

Statistics Norway's building statistics show a clear increase in building start permits for residential buildings through 2015. Figures from the Norwegian Home Builders' Association support these developments in housing starts. We estimate volume growth in 2016 to be about 5.5 per cent. We expect housing investment to remain at a high level through the remainder of the projection period in pace with rising house prices. Annual growth in housing investment is expected to be an average of 2 per cent for these three years.

Petroleum investment

Petroleum investment began declining in the fourth quarter of 2013, and has fallen steadily since then. The decline was particularly pronounced in the third quarter of last year, at over 8 per cent, but the fall in the fourth quarter of almost 3 per cent was also considerable. Investment in 2015 fell by a full 14.5 per cent as an annual average. Following a decline lasting a good two years, the investment level at the end of 2015 was down to the same level as at the end of 2011. There are

Figure 8. **Petroleum investments and oil price in USD. Seasonally adjusted, billion 2012-kr., quarterly**



Source: Statistics Norway.

some signs that the decline is about to come to a halt. The fall in the fourth quarter of 2015 was less than half the average for the previous four quarters.

The decline in investment in the petroleum industry in the fourth quarter of last year was particularly marked for drilling and pipelines, which decreased by 5.6 per cent compared with the previous quarter. Investment in platforms and drilling rigs, which fell by a full 11.3 per cent in the third quarter of 2015, increased by 2.7 per cent in the fourth quarter, and thus helped curb the decline in investment.

The investment slump after the 2008 financial crisis was relatively short-term and moderate. The decrease in exploration investment and production drilling was limited, and the dip in 2010 was almost entirely due to the halting of new field developments. This time, however, we see a clear reduction in every kind of investment. Upgrading of existing fields has been deferred, while several projects have gradually been completed. New fields may have been postponed in anticipation of work to cut development costs resulting in improved profitability. At the same time, lower expectations of profitability have depressed exploration investment, and production drilling has declined in pace with lower platform investment. This trend is expected to continue through 2016, albeit at a somewhat lower pace. Investment in the Johan Sverdrup field is in progress, and start-up of several small fields is expected in 2016. This will help curb the decline.

Oil and gas prices have fallen markedly during the past two years. The fall in oil prices has been substantial, although it has been somewhat dampened by the depreciation of the krone. The decline in gas prices has been appreciably less than for oil prices, and has thus moderated the reduction in petroleum revenue. We have assumed a modest increase in the oil price, to just over USD 50 per barrel in 2019. We further assume that gas prices will continue to decline slightly for the

next few quarters before they, too, rise gradually. After considerable cost reductions, this may make both the Snorre 2040 and Johan Castberg fields profitable, so that development of these fields can start, and prompt a weak upswing in investment in 2018 and 2019.

There is great uncertainty associated with developments in oil and gas prices in the near term. At the same time, rig rates will fall sharply due to overcapacity. Resource addition slowed to a lower rate than extraction in 2015, although as many exploration wells were drilled in 2015 as in both 2013 and 2014. The oil companies have reported markedly lower exploration investment in 2016, probably for the reasons given above. The uncertainty factors are expected to persist, so that we assume a continued decline in exploration investment in 2016, and that this investment will remain low in the years up to 2019.

In our projections, petroleum investment as a share of mainland GDP has fallen from close to 9 per cent in 2013 to barely 5 per cent in 2019. This is about the same level as in 2005. If the segment's purchases of goods and services for current operations and labour costs are included, the petroleum sector's demand is equivalent to just over 8 per cent of mainland GDP. The industry will remain an important part of the Norwegian economy, albeit to a considerably lesser extent than before.

Oil and gas extraction, measured in energy content, increased by 4.4 per cent in 2015, following a 1.8 per cent increase in 2014. This is the first time that extraction has increased since the peak in 2004, and is due to growth in both oil and gas extraction. The decline in extraction in older fields will be countered by the start-up of more fields, so that we expect virtually unchanged extraction volumes to the end of our projection period.

Business investment

Mainland business investment has been relatively stable since the first half of 2010 but for a weakly negative tendency through 2015. Investment in the fourth quarter of 2015 was 5.0 per cent lower than the level in the first quarter of 2015. This is 4.5 per cent higher than in the first quarter of 2010, however. Even though the weak developments through 2015 were broad-based, there are certain signs of investment growth in the near term.

Manufacturing investment declined less at the end of last year than earlier in the year. A considerably lower investment level in the food industry and declining investment in oil-related sectors – like metal goods and repair and installation of machinery and equipment – explain much of the decline. In 2015, manufacturing investment made up 14.4 per cent of mainland business investment, and the share has been declining for a long period. The manufacturing share is down 4 percentage points from 2008 and down 7 percentage points from 2002. Investment in services has moved in the opposite

Box 3 Significance for the Norwegian economy of the global fall in equity prices

We have recently integrated into Statistics Norway's macro-econometric KVARTS model a financial accelerator mechanism that acts through business sector investments. In the model, aggregate credit and equity prices are determined simultaneously, through higher equity prices leading to more credit and vice versa. This system is then affected reciprocally and simultaneously by investments via real capital relations in each industry. International financial markets are closely integrated. The global MSCI equity index and the oil price together constitute an important explanatory variable for Norwegian equity prices.

In the period following the international financial crisis there has been a marked rise in equity prices globally. In many countries, equity prices are far higher than the previous peak in 2008 (see figure). However, stock markets have fallen again since the summer of 2015. In the projection scenario, we have assumed that the decline continues into the second quarter of this year, to a total of around 25 per cent, before prices gradually revert to the peak of last summer towards the end of the projection period.

Against this backdrop, we have made an alternative projection where the global equity price index is kept constant at the peak level of the second quarter of 2015 throughout the projection period until the end of 2019. By comparing this scenario with the baseline scenario, we can illustrate the effects of the global stock market fall and the gradual recovery of the Norwegian economy, as they play out in KVARTS. This is a partial shift, where we keep other exogenous explanatory variables unchanged in relation to the baseline scenario. In reality, one might imagine

that persistently high equity prices, as in the alternative scenario, would go hand in hand with higher global economic growth and higher demand for Norwegian exports. Monetary and fiscal policy are also kept unchanged in relation to the baseline scenario. The krone-euro exchange rate is determined endogenously in the model, however.

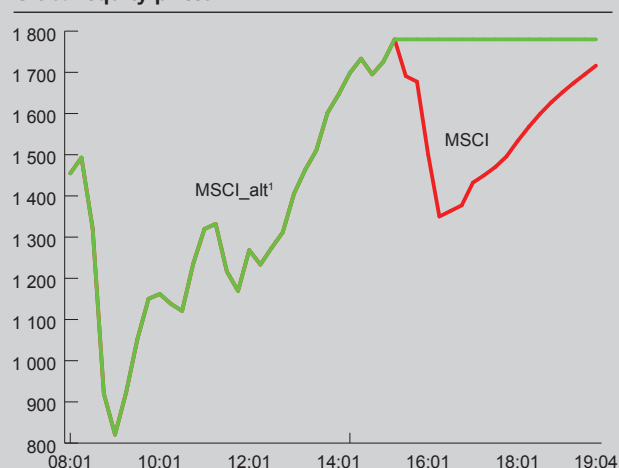
In the baseline scenario, Norwegian equity prices mirror the fall in the global equity price index. The decline in Norwegian equity prices contributes in turn to depressing Norwegian investments through the accelerator mechanism. Business investment is affected quickly, with a decline of 2.8 per cent in 2016 compared with the alternative scenario. Manufacturing investment undergoes the sharpest decline, of 2.3 per cent in 2016, increasing to 3.4 per cent in 2017. The decline is gradually reversed as equity prices pick up again. Lower activity in the Norwegian economy leads to somewhat lower housing investment and house prices. Total mainland investment is reduced by over 1 per cent in 2016. Mainland GDP is 0.2 per cent lower in 2016, but the effect wanes gradually to zero in the course of the projection period, in line with the reduced effect on mainland investment. Imports fall somewhat as a result of high import shares in the investments. The krone exchange rate and other domestic prices suffer little effect, and exports are thus more or less unchanged, so the balance of trade improves somewhat. Real income falls somewhat as a consequence of a small increase in unemployment and gradually lower pay. Consumption is 0.1 per cent lower from 2016 and for the remainder of the projection period, largely as a consequence of lower real disposable income and through the wealth-effect of lower house prices. We have disregarded any direct wealth effects on consumption due to the fall in equity prices.

Effects of a global fall in equity prices¹

	2015	2016	2017	2018	2019
Mainland GDP	0	-0.2	-0.1	0	0
Consumption by households etc.	0	-0.1	-0.1	-0.1	-0.1
Unemployment rate (level)	0	0.04	0.03	0.02	0.01
Mainland investment	-0.1	-1.2	-0.8	-0.3	0
Business investment	-0.2	-2.8	-1.9	-0.6	0
Manufacturing investment	-0.1	-2.3	-3.4	-2.1	-1.1
Housing investment	0	0	0	-0.1	-0.2
Exports	0	0	0	0	0
Imports	0	-0.3	-0.2	-0.1	-0.1
Annual wages	0	0	0	-0.1	-0.1
House prices	0	0	-0.1	-0.2	-0.2
Oslo Børs benchmark index	-2.7	-20.3	-11.9	-4	0.9
Memo:					
Global MSCI equity index	-2.7	-21.5	-17.9	-11.1	-5.4

¹ Percentage difference between the baseline scenario and the alternative scenario where the global MSCI equity index remains constant at the level of the second quarter of 2015 for the remainder of the projection period.

Global equity prices



¹ MSCI_alt represents the alternative scenario of the global equity index MSCI.
Source: Macrobond and Statistics Norway.

direction, and in 2015 it represented 62.3 per cent of total mainland business investment. Developments in investment in services therefore account for much of the overall developments in business investment. Even though investment in services also fell in 2015, the decline came to a halt at the end of the year. There was clear growth in professional, scientific and technical services and in transport. Retail investment, however, exhibited a negative tendency.

Statistics Norway's latest survey of manufacturing companies' future investment intentions indicates growth of about 5 per cent in 2016. Pronounced growth is particularly expected in export-oriented sectors like chemicals and pharmaceuticals and in the metals industry where it will be mainly driven by large projects operated by Hydro at Karmøy and Yara at Herøya. Projections for power supply indicate growth of about 10 per cent in 2016 from already high levels. According to the National Accounts, investment in power supply was NOK 22 billion in 2015. This is only 30 per cent less than manufacturing investment. The projections from the investment intentions survey for power supply in 2016 do not include investments for the land-based wind power plants at Fosen, Snillfjord and Hitra, which amount to about NOK 11 billion over a 5-year period. Construction will begin in the second quarter of 2016, and the plants are expected to be completed in 2020. In addition to wind park development, upgrading of old power stations is expected to stimulate growth in electricity production.

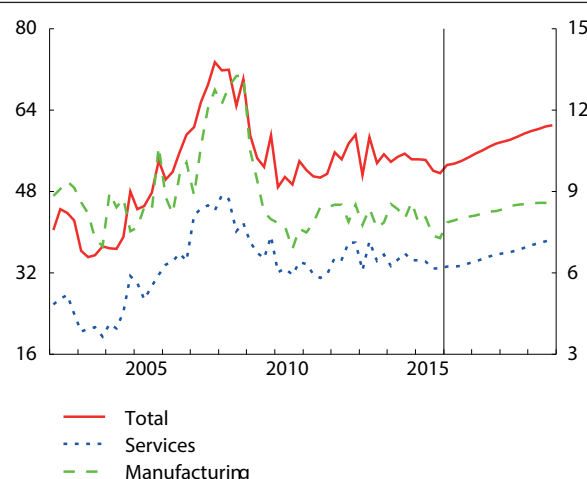
Norges Bank's Regional Network monitors economic developments in Norway by gathering information from enterprises and activities throughout the country. The March reports indicated weakly rising investment over the next 12 months in retail and other services.

We expect the generally weak business investment in 2015 to give way to a moderate rise in the near term. An improved global economic situation, a weak krone exchange rate and low interest rates mean that in the near term we expect increased investment in industries with few ties to the petroleum industry. We expect growth in business investment to rise to about 5 per cent in 2017, and that the growth rate will then remain in the range of 3–4 per cent to the end of the projection period. Even given these developments, the investment level in 2019 will be about 12 per cent lower than the investment peak in 2008.

Balance of payments

Exports of traditional goods and services have approximately tripled during the past 30 years. Since the financial crisis in 2008 and the economic downturn in 2009–2010, annual growth in traditional goods exports has been lower than in the two decades preceding the financial crisis. However, growth has picked up in the past two years to over 5 per cent through both 2014 and 2015. The volume of traditional goods exports in 2015 was thus 5.5 per cent higher than the volume

Figure 9. Investments. Mainland Norway. Seasonally adjusted, billion 2013-kr., quarterly



Source: Statistics Norway.

in 2014. In the fourth quarter of last year, traditional goods exports rose by over 10 per cent as an annual rate, according to seasonally adjusted QNA figures.

This strong growth was mainly due to strong growth in exports of refined oil products in the last half of last year. Other large groups of export goods that had a positive impact on annual growth were chemicals, chemical and mineral products, with 7.2 per cent annual growth, and engineering products, with 5.5 per cent growth. Despite a decline in the third and fourth quarters of last year, exports of farmed fish rose by over 5 per cent in 2015, compared with 2014. However, exports of fish and fish products fell by over 7 per cent in 2015, following a decline in four of the last five quarters.

The overall volume of oil and gas exports peaked in the first two years of the millennium. It then declined by about one-fourth, and is now back at the same level as in the early 1990s. In the past two years, the overall export volume has barely increased, but both oil and gas exports have fluctuated widely from one quarter to the next. The same applies to prices, and in the last two quarters of 2015, gas exports were larger than oil exports, calculated in both constant 2013 prices (volume) and current prices (value).

Service exports have risen by over 20 per cent since the cyclical trough in 2009, but the growth rate has been slowing. Following a broad-based decline in the fourth quarter, annual growth was 2.6 per cent in 2015. Exports of telecommunications, ICT, banking and insurance services and non-residents' consumption in Norway, which collectively account for about one-fourth of all service exports, grew considerably in 2015, and by 12 per cent overall.

The rise in prices for traditional goods exports has been slowing since the second quarter of 2014, and was negative in the last three quarters of last year. The

Box 4 Import shares

Consumption of goods and services can be divided into intermediate inputs and final deliveries, such as consumption, investments and exports. Some final deliveries come directly from imports, while the remainder are covered by production in Norway. Most production employs intermediate inputs that to a varying degree are purchased abroad. The companies can import intermediate inputs themselves or purchase intermediate inputs from Norwegian vendors who have imported them, so goods and services produced in Norway normally contain a certain share of imports.

In this box, we calculate the import shares for different sectors of the Norwegian economy. We do this by studying the effects on imports of the individual final delivery components in a static matrix model. The analysis takes account of the use of intermediate inputs and direct import of final deliveries, but not factors such as changes in relative prices, knock-on effects due to changes in earnings, the need for changes in production capacity (investment) and changes in interest and exchange rates. The import shares are calculated for years with final national accounts figures, the last of these being 2013.

Of the main groups of final delivery categories, investments have by far the highest import share. Consumption has a share approximately the same as the average for all final deliveries, while exports have the lowest import share. There are generally relatively small changes in import shares over time.

We break down total new investments according to both type and industry. The import share in construction investment is relatively modest, while it is high for ships and machinery. Other types of investment, which include platforms and drilling rigs and machinery, also have a substantial import content. Shipping has the highest import share of the industries. The share of imports in petroleum activities fell in 2012, but rose in 2013. The import share of investment in the housing sector is appreciably lower.

Consumption accounts for about half of total final deliveries. There are major variations among the different product categories of household consumption. Norwegians' consumption abroad is regarded in its entirety as imports. The category 'miscellaneous goods' – which consists of clothing and footwear, consumer electronics and furniture – has the highest import share for domestic consumption, while 'own vehicles' also has a significant import content. As very few cars are produced in Norway, the import share for this last group (around 37 per cent) seems surprisingly low. The explanation lies in the fact that mark-ups and taxes accounted for about two thirds of the costs associated with vehicle purchases in 2013. Energy products are largely produced in Norway, but despite Norway's high oil production, a substantial amount of petrol and diesel fuel is imported. In periods of low electricity production, electricity is also imported from neighbouring countries. The combined effect is that 16 per cent of the energy products in household consumption are imported. Public consumption, which consists largely of labour costs, is the component with by far the lowest import share.

There are also major variations among the different export product groups. Exports of shipping services and traditional goods have a high import content due to the fact that much of the intermediate input is purchased outside Norway. Exports of oil and gas are distinguished by the low share of imports involved. This is because most of the production value consists of petroleum rent. This was substantial in 2013, because the oil price was still high at that time.

Import shares

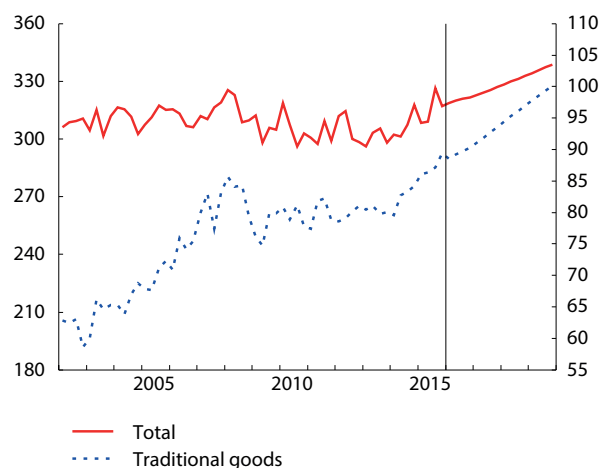
	%	Import share		
	2013	2011	2012	2013
Total final deliveries ^{1,2}	1.00	23.0	23.0	23.4
Consumption	0.50	21.5	22.1	22.4
Consumption by households and non-profit org. ³	0.32	27.9	29.2	29.4
Food products and beverages	0.05	27.2	29.0	29.9
Energy products etc.	0.02	16.2	15.9	16.4
Own vehicles	0.02	34.1	36.4	36.8
Misc. goods	0.06	44.2	46.4	47.8
Housing	0.05	6.0	6.7	6.2
Other services	0.11	17.7	18.6	17.8
Norwegians' consumption abroad	0.02	100.0	100.0	100.0
Public consumption	0.17	9.4	8.7	9.2
New investment	0.18	37.8	35.0	35.2
By type:				
Buildings and infrastructure	0.07	21.4	21.3	20.7
Ships	0.00	63.0	67.2	67.9
Other types	0.10	49.3	43.1	44.2
By industry:				
Mainland	0.12	33.1	32.1	32.2
General government	0.03	30.3	27.6	28.0
Manufacturing	0.01	33.6	42.3	44.7
Other goods-producing industries	0.01	41.4	38.8	41.9
Housing	0.03	21.4	21.3	20.7
Other service industries	0.04	38.9	40.0	40.5
Production and pipeline transport	0.06	43.5	39.2	40.3
Shipping	0.00	62.4	66.0	63.8
Exports	0.31	17.8	17.7	18.3
Traditional goods	0.10	32.2	32.7	32.2
Oil and gas	0.15	4.4	3.2	3.4
Other goods	0.00	27.9	28.5	30.9
Shipping etc.	0.02	41.7	53.6	55.1
Other services	0.04	20.3	25.1	23.9

¹ Shares in column 1 do not add up to 1 because changes in stocks have been excluded.

² Share of the value of final deliveries

³ Household consumption corrected for Norwegians' consumption abroad. Sale of used fixed assets has been excluded from exports.

Figure 10. Exports. Seasonally adjusted, billion 2013-kr., quarterly



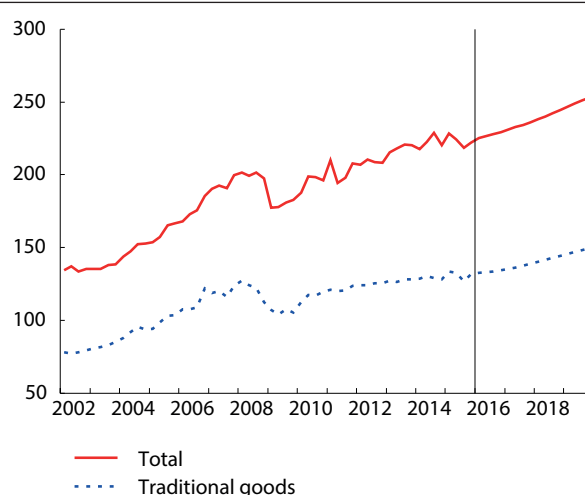
Source: Statistics Norway.

average price level in 2015 was 3.4 per cent higher than the average in 2014, nonetheless. Lower export prices for refined oil products and metals were the primary reason for falling prices. While international prices for commodities and semi-processed goods declined sharply last year, the depreciation of the krone reduced the effect on export prices in Norwegian kroner. The average price level for oil and gas exports was nevertheless a full 19 per cent lower in 2015 than in 2014. The decline in prices was much greater for oil than for gas. A weaker krone has contributed to the strong growth in non-residents' consumption in Norway in 2015.

Growth in traditional goods exports in 2014 and 2015 is expected to continue through the projection period. The weak krone has strengthened export companies' cost-competitiveness, but an assumed gradual appreciation of the krone in the near term will reverse some of this gain. Lower growth in Norwegian export markets this year will curb export growth compared with last year. We expect particularly low demand for some export sectors related to offshore petroleum development. Growth in traditional exports is thus expected to be lower than global market growth. Exports of oil and gas are largely determined by production, and are not expected to change much during the projection period.

Growth in imports of traditional goods has shown a declining tendency for the past six years. After rebounding after the financial crisis to over 9 per cent in 2010, growth declined to 1.5 per cent in 2015. Imports of refined oil products (which were about as large as exports of refined oil products), computers and electronics and passenger cars provided the greatest stimulus to growth last year. In each of the third and fourth quarters, one fighter aircraft worth just over NOK 1 billion was imported. Overall service imports were virtually unchanged from 2014 to 2015. Imports of financial and business services increased by over 10 per cent, while imports of oil-related services declined by just over 15 per cent. Growth in Norwegians' consumption abroad levelled off in 2014 and hardly increased in

Figure 11. Imports. Seasonally adjusted, billion 2013-kr., quarterly



Source: Statistics Norway.

2015. The depreciation of the krone explains much of these developments.

From 2012 up to and including 2015, the krone depreciated by 19 per cent, measured against the import-weighted krone exchange rate. This led to a rise in import prices, which was about 12 per cent over the same period.

We expect increased growth in domestic demand this year to help push up import growth from last year's low growth rate. Time-lagged effects of the depreciation of the krone will amplify the rise in import prices, which in isolation will curb growth in the volume of imports this year. Imports of fighter aircraft and an expected strengthening of the krone will help increase import growth from 2017.

A plunge in oil prices and substantial terms of trade losses as a result of lower export prices and a weakened krone reduced the trade surplus by almost NOK 110 billion from 2014 to 2015. Low oil prices and a continued terms of trade loss are expected to reduce the trade surplus considerably also this year. Rising oil prices and an improved terms of trade situation is then expected to lead to a moderate increase in the trade surplus, which may remain at 1990s levels nonetheless. The current account surplus as a share of GDP is expected to remain at about 4–5 per cent during the projection period.

Developments in economic activity

Mainland GDP increased by only 1.0 per cent in 2015, following close to zero growth through the second half of the year. Growth has now been very weak for six consecutive quarters, and well under the around 2 per cent that we estimate to be trend growth. Growth rates have not been so weak since 2009. The weak developments in manufacturing, particularly in petroleum-related industries, have served in particular to push down growth. On the other hand, a clear rise in the construction industry lifted growth somewhat. Overall GDP,

which includes the petroleum industry and shipping, increased by 1.6 per cent in 2015. Value added in shipping fell over the year as a whole, and in the petroleum industry in three of the four quarters. As a result of strong third-quarter growth, annual output growth was just over 4 per cent nonetheless. This factor alone explains why overall GDP rose more than mainland GDP.

However, production growth is a poor indicator of how the petroleum industry is affecting the Norwegian economy at present. Demand from the industry has fallen markedly, leaving its mark on production in many other parts of the economy. Manufacturing is particularly exposed, and value added in all the most dedicated supplier industries fell sharply in the fourth quarter of 2015 and to a large extent also earlier this year. The largest decline took place in the manufacturing segment repair and installation of machinery and equipment, which fell by almost 10 per cent from the third to the fourth quarter. Value added in the shipbuilding and other transport equipment industry also shrank in the fourth quarter, but less than in the four preceding quarters. This is probably partially attributable to the strong increase in exports. Last year this industry reported an average decline of a full 14.5 per cent. Value added in services associated with petroleum extraction sank by around 12 per cent from 2014 to 2015.

Although the decline was by far the most pronounced in oil-related industries, the fall in the level of manufacturing activity was broad-based – despite a considerable improvement in cost-competitiveness due to a weaker krone exchange rate and moderate wage growth. Some commodity-based manufacturing segments have admittedly experienced a certain growth recently. Value added in the pulp and paper industry rose relatively markedly in the last two quarters of 2015. Chemicals and pharmaceuticals manufacturing reported solid growth throughout the year. On balance, however, value added in manufacturing fell by 1.5 per cent from the third to the fourth quarter, and by just over 3 per cent from 2014 to 2015.

Developments in goods-producing industries other than manufacturing and mining were mixed through last year. Growth in the construction industry was positive throughout the year, albeit slowing towards the end. Value added from the third to the fourth quarter rose by only 0.4 per cent. The overall level for 2015 was 3.1 per cent higher than in 2014. The low interest rates prevailing are probably an important factor behind the positive development, as is increased public sector investment. Developments in mainland goods production excluding manufacturing are otherwise dominated by industries such as fishing, agriculture and power production, which are largely affected by naturally occurring factors. Developments in these industries therefore do not tell us as much about the underlying economic situation. Overall, primary industries declined 0.6 per cent from the third to the fourth quarter, but the annual average was 1.8 per cent higher than the previous year.

Figure 12. **Gross domestic product. Seasonally adjusted , billion 2013-kr., quarterly**

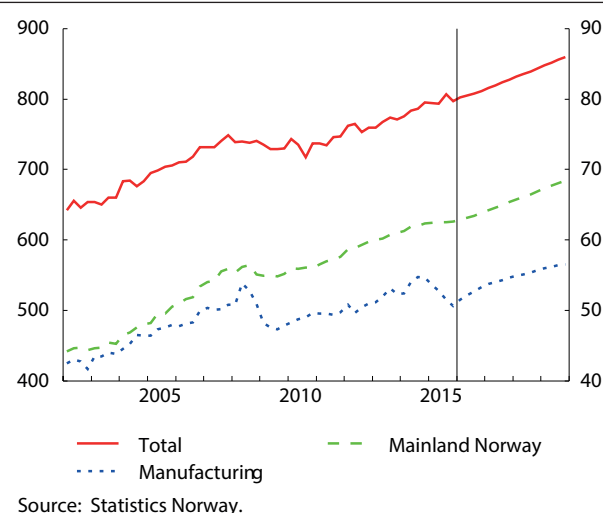
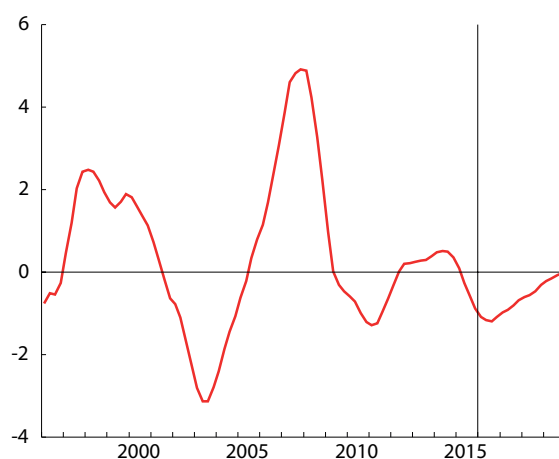


Figure 13. **Output gap. Mainland Norway. Deviation from trend. Per cent**



Value added in power supply rose in the first two quarters of the year, but fell in the last two.

Value added in service industries other than general government edged up only 0.1 per cent from the third to the fourth quarter of 2015, following zero growth in the first three quarters. Value added rose by 1.0 per cent as an annual average – i.e. the same growth rate as mainland GDP. The segment within this group reporting strongest growth was the hotel and restaurant industry. The industry's value added climbed fairly steadily throughout the year, and increased by about 7 per cent compared with 2014. This is largely attributable to the weak krone, which has led to more foreign tourists visiting Norway and to more Norwegians holidaying in Norway. Banking and insurance services also reported relatively solid growth last year. Value added rose by 1 per cent from the third to the fourth quarter, and by almost 4 per cent from 2014 to 2015. Value added in general government grew by 0.5 per cent from the third

to the fourth quarter, a marginal increase on the three preceding quarters. Value added in 2015 as a whole increased by 1.7 per cent, so there was higher growth in general government than in the rest of the domestic economy, and this also contributed positively to mainland GDP growth. It is worth noting, nonetheless, that the growth rate was appreciably lower than estimated trend growth in mainland GDP.

In the near term, we expect production in the Norwegian economy to improve gradually compared with 2015, although reduced demand from the petroleum industry will dampen the general activity level for some time ahead. On the other hand, time-lagged effects of the weaker krone will result in improved cost-competitiveness in large sectors of trade and industry.

On balance, we expect weak developments in manufacturing through most of 2016, but picking up somewhat towards the end of the year. Activity in those manufacturing segments that primarily supply the petroleum sector, such as shipbuilding, is expected to fall further this year. In the slightly longer term, however, these industries will show some growth, as demand impulses from the petroleum industry gradually grow less negative and after a while become positive. We forecast some growth in other manufacturing this year already, and that it will gather pace in subsequent years. Export-oriented manufacturing will also benefit from foreign demand picking up slightly in the near term.

We project further that activity growth will also improve gradually in other mainland industries in the course of the year, driven by increased housing and business investment. The construction sector will probably be an important driver of growth in coming years, although contributions to growth will be weaker towards the end of our projection scenario. Growth in general government demand is projected to remain stable for the next four years, but still somewhat lower than estimated trend growth in mainland GDP.

The overall picture is of slowly increasing growth in much of the mainland economy in the near term. We forecast that mainland GDP growth will be 1.4 per cent as an annual average this year, before rising to 2.4 per cent in the course of the next three years. These growth rates are somewhat higher than we estimate trend growth to be. The projections thus imply that we will embark on a very weak economic upturn next year.

The labour market

As a result of weak economic growth, employment rose by only 0.6 per cent in 2015, as against 1.1 per cent in the two previous years. Employment increased by a moderate 0.4 per cent through the last three quarters of 2015, but was down 0.1 per cent in the last quarter.

In recent years there have been substantial differences in employment developments from one industry to the next, and major changes have taken place in

the employment pattern. For a long period there was particularly strong growth in employment in services associated with the production of crude oil and natural gas, but this past year employment in this industry has fallen by over 6 per cent. Employment has also fallen over the past year in manufacturing segments that primarily supply the petroleum industry, such as the shipbuilding and other transport equipment industry and repair and installation of machinery and equipment. Overall, manufacturing employment fell by just over 2 per cent from 2014 to 2015. In the same period, however, construction employment increased by 2.6 per cent. Employment in central and local government increased by 1.2 and 0.7 per cent, respectively.

Growth in the labour force began to fall off at the end of 2015. After increasing by around 0.9 per cent through the first three quarters of 2015, the labour force shrunk by 0.1 per cent in the fourth quarter. In 2015, 30 000 more people moved to Norway than left the country, the lowest net immigration since the EU enlargement in 2007. This partly reflects that the Norwegian labour market has grown less attractive, as high unemployment and a weak krone contribute to lower expected wages measured in terms of international purchasing power.

In the first three quarters of 2015, the labour force increased more than employment, causing a rise in unemployment. LFS unemployment was 4.1 per cent in the first quarter and rose to 4.6 per cent in the third quarter of 2015. The decrease in the labour force paralleled the decrease in employment in the fourth quarter of 2015, with the result that the unemployment rate remained unchanged. The average unemployment rate in 2015 was 4.4 per cent, up from 3.5 per cent the previous year. However, from the third quarter of 2015 to the period November–January 2016, employment increased slightly more than the labour force, thereby reducing the unemployment rate to 4.5 per cent.

According to NAV, the increase in registered unemployed and persons on labour market programmes as a percentage of the labour force was less than the increase in LFS unemployment in 2015. The NAV statistics for those registered as fully unemployed and the total of these persons and persons on labour market programmes also show a clear increase through 2015, however. The average number of fully unemployed increased by 5 300 persons from 2014 to 2015. At the end of February 2016, over 108 400 persons were either on programmes or registered as fully unemployed, an increase of over 1 000 persons from December 2015, after adjustment for normal seasonal variations.

The unemployment situation varies considerably from one county to the next. There has been an especially large increase in unemployment in Rogaland and Hordaland, where the labour market is very closely connected to the petroleum sector. Unemployment has fallen in some regions, largely due to the positive

Box 5. Assumptions concerning asylum-seekers

In the second half of 2015, the number of asylum-seekers rose sharply. More than 31 000 arrived last year, compared with 11 500 in 2014. This box provides an account of our projections in connection with the inflow of asylum-seekers in excess of 11 000 persons. The projections differ somewhat from the assumptions we made in our projections for December 2015. In the following we focus in particular on:

Number of asylum-seekers and the effects on population developments and the labour force.

Costs associated with asylum-seekers, and how we allocate the costs.

Asylum-seekers and the population

We assume that the inflow of asylum-seekers has peaked, and that numbers in each of the years 2016 and 2017 will be 20 000. We have assumed that the annual inflow of asylum-seekers in both 2018 and 2019 will be reduced to 15 000. It is also assumed that 16 per cent of the asylum-seekers are minors.

We assume that 75 per cent of the asylum-seekers are granted asylum in the fifth quarter following their arrival, and that they will then be settled and included in the population count. Thus, of those who arrived in the third quarter of 2015, 75 per cent will be settled in the fourth quarter of 2016. It is assumed that those who are refused asylum leave the country, and equally large percentages are assumed to be refused in each of the first five quarters after their arrival.

Given these assumptions, the extra inflow of asylum-seekers will increase the annual average population growth by 17 000 persons in 2017, rising to 30 000 persons in 2019.

Viewed in isolation, this will raise annual population growth during the period by about 0.15 per cent on average. We assume that the resulting labour supply will increase by 2 700 persons in 2018 and 10 000 persons in 2019.

Changes as a result of the extra inflow of asylum-seekers

	2015	2016	2017	2018	2019
Asylum-seekers and the population (persons)					
Extra inflow of asylum-seekers	20 200	9 000	9 000	4 000	4 000
Extra average stock of asylum-seekers	5 900	21 400	10 100	7 700	4 500
Extra population, annual average	0	700	17 000	23 800	30 000
Extra labour supply			800	2 700	10 000
Costs (in billions of 2016-NOK)					
Total extra costs	1.8	6.4	9.1	10.6	10.0
Extra costs, public consumption	1.4	4.6	4.8	5.9	6.0
Extra costs transfers abroad/exports	0.5	1.5	0.7	0.5	0.3
Extra costs, transfers	0.0	0.3	3.6	4.2	3.7
Contribution to growth in public consumption, percentage points	0.2	0.4	0.0	0.1	0.0
Contribution to growth in real transfers to households, percentage points	0.0	0.1	0.7	0.1	-0.1

Costs

In the short term, the budgetary consequences of more asylum-seekers are attributable to the processing of applications for asylum and the costs of accommodation, food etc. We base our figures largely on information from and assumptions made in the Government's Supplementary Proposition associated with the increased refugee arrivals. We simplify, and allocate 75 per cent of the costs prior to settlement to public consumption and the remainder to transfers to other countries/exports of services. Box 5.3 in chapter 5 of Økonomiske analyser 1/2016 provides a more detailed account of how this is entered in the national accounts.

The costs associated with asylum-seekers after settlement are assumed to be distributed in such a way that 75 per cent of the costs for the adults take the form of transfers and the remainder is public consumption. Of the expenses for unaccompanied minors, we assume that an amount equivalent to that for the adults is entered as transfers and the remainder as public consumption. We assume that 2.5 per cent of the extra number settled will enter the labour force in each quarter until the time when the two-year introduction programme is completed. From then on, it is assumed that 60 per cent of those who are not unaccompanied minors succeed in financing their stay without special benefits. This will reduce costs in 2019 in particular, when many will have completed the introduction programme.

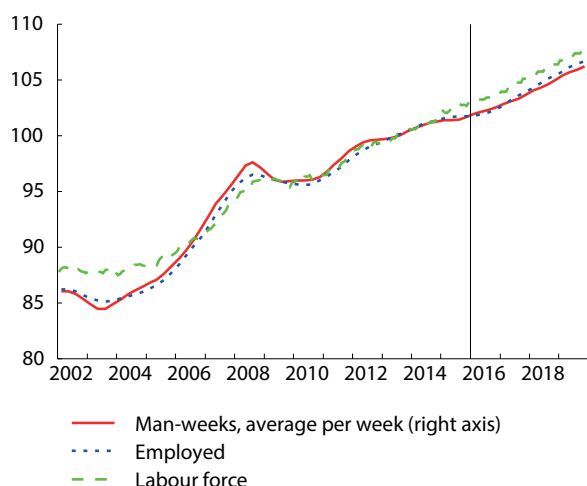
The increased expense due to the extra inflow of asylum-seekers is projected to be NOK 1.8 billion in 2015, NOK 6.4 billion in 2016, and to peak at NOK 10.6 billion in 2018. This will push up growth in public consumption by 0.4 percentage points in 2016 and growth in transfers to households by 0.7 percentage point. Other impulses to the economy can be described as minor within our projection horizon.

impulses generated by the weaker krone, expansionary fiscal policy and low interest rates.

Although several occupational groups are affected by increasing unemployment, decidedly the largest

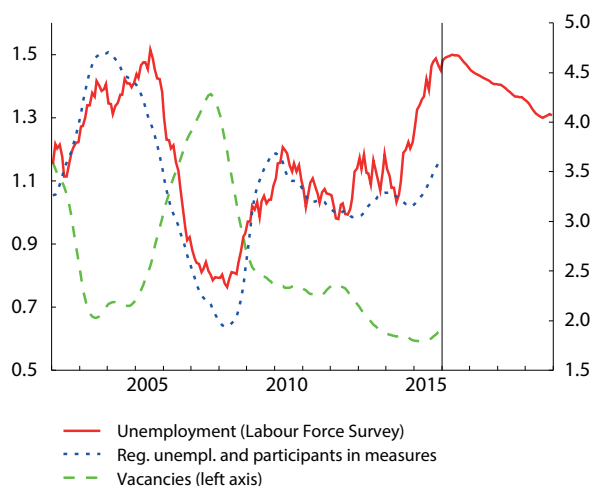
percentage increase is reported for engineers and ICT-related professions. There has also been a clear increase in unemployment in manufacturing.

Figure 14. **Labour force, employment and number of man-hours.** Seasonally adjusted and smoothed indices. 2013=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.

A slacker labour market is also reflected in the significantly fewer vacancies advertised than in the past. The decline in vacancies was particularly pronounced in the fourth quarter of 2015, when figures were 10 per cent lower than in the same quarter the previous year. A fall in the number of vacancies per job applicant may indicate that job prospects for the unemployed have worsened. There is a decline in almost all industries, but particularly in oil and gas activities and commercial services. Commercial services also hire out a large amount of labour to other industries. The number of vacancies in retail trade increased somewhat in the fourth quarter.

Growth in man-hours worked was roughly on the same level as employment growth last year. Normally the number of man-hours worked increases less than employment during a cyclical downturn, but this effect was countered by the fact that there was one more working day in 2015 than in 2014. As a direct

consequence this has pushed up average working hours by about 0.3 per cent.

Employment is projected to rise weakly this year, and at a somewhat faster pace in subsequent years. Improvements will take place in most industries. Increased petroleum investment after 2017 will also boost employment in industries related to the petroleum sector.

A weak krone and relatively high unemployment in Norway may lead to lower inward labour migration and slow the increase in the labour force. We expect large portions of the inflow of asylum-seekers from the second half of 2015 to begin entering the labour market in 2019. We do not expect the labour force to grow more than employment in the next few years, with the result that unemployment will peak at 4.7 per cent this year and fall back gradually to 4.1 per cent in the course of the projection period.

Wage developments

Annual wage growth has been very low for the past two years. Nominal wage growth fell from 3.1 per cent in 2014 to 2.8 per cent last year, the lowest since World War II. Growth in real wages fell by over one per cent to just over 0.5 per cent. National accounts figures also show that wage growth in 2015 was 2.8 per cent for both manufacturing and the economy as a whole. This is very close to the 2.7 per cent ceiling on the amount available for pay increases arrived at in the 2015 collective bargaining round, as proposed by the Confederation of Norwegian Enterprise (NHO) in agreement with the Norwegian Confederation of Trade Unions (LO). Developments in other industries show that the wage leader ceiling is very largely adhered to, and that there are small differences in wage growth across industries in 2015.

Unemployment increased by just under one percentage point last year. Higher unemployment, particularly in petroleum-related industries, pushed down growth in average wages in the economy as a whole. Wage growth is also affected by the profitability of manufacturing and the scale of inward labour migration. The weakening of the krone exchange rate through 2015 increased the profitability of some internationally exposed industries. In addition, a less tight labour market and a weaker krone have contributed to reducing immigration. However it will take some time before slower inward labour migration pushes up wage growth.

Growth in average annual wages can be decomposed into carry-over and contributions from pay increases and wage drift. In manufacturing, the carry-over into 2016 was 1 per cent, slightly lower than the preceding year. Although pay increases in manufacturing are slightly higher at the main settlement and the depreciation of the krone has improved competitiveness, the social partners have indicated that this year's pay increases will be moderate. LO's most important

responsibilities are to safeguard the purchasing power of its members, increase minimum wages, increase supplements to the equal pay profile and monitor pension changes. There is accordingly uncertainty as to how the wage increase in 2016 will be distributed between pay and pension. 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 negotiating areas. The carry-over in retail businesses in the Enterprise Federation of Norway (Virke) is 0.7 per cent, and in state and municipal government 0.5 and 0.7 per cent, respectively. We assume that the wage settlement in manufacturing will continue to act as a guide for wage formation in other industries, such that non-manufacturing wage settlements will also be moderate.

Growth in average annual wages is influenced by structural changes originating, for example, in changes in employment in industries, occupations and positions with an abnormal wage level and classified as wage drift. Cutbacks largely impact persons with a short seniority as employees and with low wages, which points to growth in average annual wages in 2016 being somewhat higher than the collective bargaining settlements in isolation might indicate. Countering this effect is the composition of employment in the industries. Cutbacks in the petroleum sector impact persons with a high wage level and this pushes down growth in average annual salaries in the economy as a whole. On balance, we project annual wage growth of 2.5 per cent in 2016.

Given our projections for consumer price inflation, real wage growth in 2016 will be close to zero. The decline in wage growth must be seen bearing in mind that parts of the economy have suffered a considerable negative shock due to the fall in oil prices and reduced demand from the petroleum sector, which results in an increased need for restructuring. This will reduce wage

Table 4. **Average wage for the economy as a whole. Growth from the previous year in per cent. differences in growth and estimates of contributions in percentage points**

	2012	2013	2014	2015
Wages per hour worked	4.2	5.0	2.7	2.5
Annual earnings, accumulated	4.0	3.9	3.1	2.8
Estimated contribution to the difference from changes in:				
Number of working days	0.4	0.8	-0.4	-0.4
Sickness absence	-0.1	0.2	0.0	0.0
Overtime	-0.1	0.1	0.0	0.0
Contractual work hours per week. Full time	0.0	0.0	0.0	0.1
Payment in kind	0.0	0.0	0.0	0.0
Wage costs per hour worked	4.7	5.1	3.0	2.8
Wages per hour worked	4.2	5.0	2.7	2.5
Estimated contribution to the difference from changes in:				
Pension costs	0.5	0.1	0.2	0.3
Employer's contributions	0.0	0.0	0.1	0.0

Source: Statistics Norway.

growth, both because the demands in the centralised wage negotiations will be under pressure and because local pay increases will be reduced. Countering this effect are improved profitability ensuing from the weaker krone exchange rate and a certain improvement in the global economic situation. Reduced inward labour migration may also push up wage growth. After a period of time, improvements in the economic situation and lower unemployment from 2017 will lead to wage growth gathering pace. Real wage growth is increasing more than nominal growth, as consumer price inflation slows towards the end of the projection period.

Developments in wages and labour costs per hour worked are affected by changes in overtime, sickness

Table 5. **Wages. Percentage growth compared with previous year**

	Annual earnings, full-time equivalent			Wages and salaries per hour worked			Compensation of employees per hour worked		
	2013	2014	2015	2013	2014	2015	2013	2014	2015
Total	3.9	3.1	2.8	5.0	2.7	2.5	5.1	3.0	2.8
Petroleum activities and ocean transport	5.4	2.8	0.5	6.7	2.3	0.1	7.1	2.3	-0.2
Mainland Norway	3.9	3.1	2.9	4.9	2.7	2.6	5.1	3.0	3.0
Mainland Norway excluding general government	4.0	3.0	2.8	5.1	2.6	2.5	5.1	2.6	2.5
Production of goods	3.7	3.1	2.7	4.8	2.6	2.3	4.9	2.6	2.4
Manufacturing and mining	3.9	3.2	2.8	4.8	2.8	2.5	5.1	2.8	2.6
Construction	3.5	2.9	2.7	4.7	2.4	2.3	4.5	2.4	2.3
Production of other goods	4.2	3.5	2.6	5.0	3.1	2.3	5.5	3.1	2.3
Production of services	4.1	2.9	2.8	5.2	2.6	2.6	5.2	2.7	2.6
Wholesale and retail trade, repair of motor vehicles	3.5	2.8	2.7	4.8	2.6	2.8	4.7	2.6	2.8
Accommodation and food service activities	3.1	2.3	2.0	4.2	2.0	1.8	4.1	2.0	1.8
Financial and insurance activities	5.6	5.0	3.5	6.7	4.5	3.1	6.3	5.0	3.6
Production of other services	4.3	2.9	2.9	5.4	2.5	2.5	5.5	2.5	2.5
General government	3.7	3.3	3.1	4.6	3.1	2.9	5.0	3.8	3.8
Central government	3.8	3.4	2.8	4.7	3.1	2.5	4.7	3.9	4.3
Civil government	3.7	3.2	3.3	4.5	3.1	3.2	5.3	3.7	3.4

Source: Statistics Norway.

absence and contractual working hours. Annual variations in the number of business days also lead to developments in hourly wages differing from annual earnings for full-time equivalents. Growth in hourly wages was 0.3 percentage point lower than annual wage growth in 2015. Table 2.4 in Økonomiske analyser 1/2016 shows that this increase corresponds largely to the effect of there being one more working day in 2015 than in 2014. On the other hand, reduced contractual weekly working hours pushed up hourly labour costs. This may be due to companies laying off some employees without a corresponding reduction in wages. Labour costs reflect the amount employers have to pay for each hour worked. This payment differs from hourly wages in that the employer's social insurance and pension contributions are also included in this wage concept. The rise in hourly labour costs was 0.3 percentage point higher than growth in hourly wages in 2015, and was due to increased pension costs. It is this expense that has pushed up labour costs for the past four years.

Table 2.5 in Økonomiske analyser 1/2016 shows developments in annual wages, hourly wages and hourly labour costs in the various industries from 2013 to 2015. Measures of wage growth vary from one industry to the next, but on the whole growth in wages and labour costs per hour worked was approximately the same across industries in 2015. Finance and insurance is an exception, with a rise in hourly labour costs that was somewhat higher than the increase in hourly wages. The same applies in the central government sector, where higher pension costs add to the difference. Pension costs in the health trusts were particularly high.

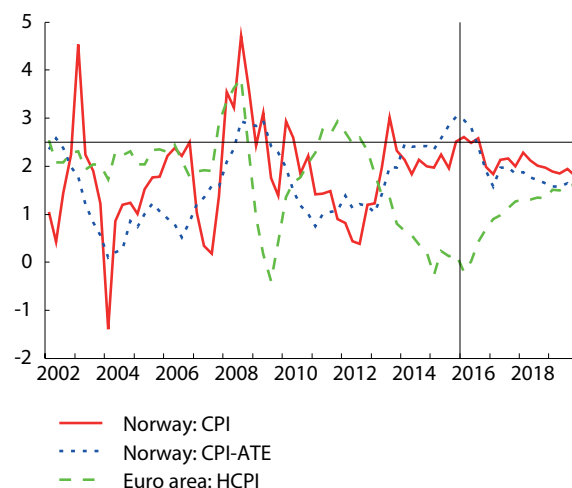
Inflation

The consumer price index (CPI) rose by 2.1 per cent in 2015 after the 12-month rise had fluctuated around this level through the year. Underlying inflation measured by the consumer price index adjusted for tax changes and excluding energy products (CPI-ATE) rose by 2.7 per cent. The 12-month rise in the CPI-ATE was around 1 per cent for several years, but the weakening of the krone from early 2013 pushed up inflation a few months later. The weakening has resulted in inflation rising through the past three years; see Box 6. The year-on-year rise in the CPI-ATE from the spring of 2015 and up to January 2016 was about 3.0 per cent.

The tax changes in 2015 had a neutral effect on CPI inflation. However, last year's fall in energy prices caused CPI inflation to end up markedly lower than CPI-ATE inflation. For the past three years, developments in prices for energy products have largely offset changes in underlying inflation, with the result that annualised CPI inflation has been 2.0 per cent or slightly higher.

Imported consumer goods account for almost one third of the CPI-ATE. The year-on-year change for these products was -1.1 per cent in March 2013. Since then,

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



Source: Statistics Norway.

the rise in prices for this group has gradually increased, and in December 2015 had reached 3.9 per cent. The change in the contribution of this product group to inflation can explain approximately three-quarters of the rise in inflation during the period. The rise in prices for goods produced in Norway has also increased somewhat, while the rate at which housing rents and prices for other services have risen has remained roughly unchanged. Intermediate inputs tend to account for a larger share of the production of goods than of services, and some intermediate inputs are imported. Higher import prices due to the depreciation of the krone may accordingly also help to explain the accelerated rise in prices for goods manufactured in Norway. Lower capital intensity in many service industries and less competition from abroad than in the goods-producing industries also means that the decline in wage growth is reflected more quickly in price growth for services.

The rise in the CPI was lower than the rise in the CPI-ATE throughout 2015. The price index for fuel and lubricants has been lower each month than at the same time the preceding year, and these prices have fallen by 5.4 per cent as an annual average. Electricity prices have fluctuated considerably, however. They were far lower in the third quarter than at the same time in 2014, and the annual average was 3.6 per cent down. CPI inflation last year was lowest in February at 1.9 per cent, and peaked in November at 2.8 per cent. The mild winter led to a fall in electricity prices in December and to CPI inflation being depressed to 2.3 per cent. However, low temperatures in January this year caused electricity prices to rise by 20 per cent compared with the preceding month. As a result, the 12-month rise in the CPI also increased to 3.0 per cent, the same as the CPI-ATE.

There are prospects of continued stable low growth in Norwegian salaries and very moderate global inflation. In the short term, the time-lagged effects of the depreciation of the krone that has already taken place

Box 6. Exchange rate pass-through to inflation

The import-weighted krone exchange rate has weakened almost 30 per cent in the course of the past three years. This factor plays a very important part in inflationary developments. In this box we take a closer look at how a change in the exchange rate is passed through to prices over time.

First, we use Statistics Norway's macroeconometric model KVARTS to carry out a stylised simulation in which the krone is permanently weakened by 10 per cent. The effect of exchange rate changes on inflation enters the model through the formation of prices for Norwegian imports, and to some extent also directly through the formation of Norwegian domestic and export prices. The fiscal and monetary policy is assumed to be unaffected.

All import prices in the model are determined largely by global market prices/costs abroad and the import-weighted krone exchange rate. In the long term, changes in the krone exchange rate will be fully passed through to Norwegian import prices, but it may take a long time. The pass-through lag generally varies from one product to the next. Domestic factors in Norway will also influence import prices for some products, with the result that exchange rate changes will also be passed through to import prices through feedback from the Norwegian economy.

According to our calculations¹, a permanent depreciation of the krone will push up inflation most in the fourth quarter after the change. A weakening of 10 per cent will thus raise CPI inflation by 1.76 per cent compared with the same quarter the previous year. Domestic costs are also affected by the exchange rate through prices for imported intermediate inputs and the effects of labour costs. These have an inflationary effect that persists for many years. In the fifth year following the change, CPI inflation is still 0.5 percentage point higher than it would be without the depreciation. The price level is then about 3.5 per cent higher than it would be without the depreciation of the krone.

In order to gain a better impression of how fluctuations in the krone exchange rate actually have affected the inflation picture, we performed a counterfactual calculation in which the krone was kept unchanged from the fourth quarter of 2010. In that quarter the krone was close to the average for

Table 1. Effects of a 10 per cent weaker krone exchange rate. Deviation from baseline scenario in percentage points unless otherwise indicated

	1st year	2nd year	3rd year	4th year	5th year
CPI inflation	1,52	0,52	0,51	0,50	0,47
CPI level (deviation in per cent)	1,49	2,00	2,51	3,01	3,49
Wage growth	0,89	0,50	0,50	0,50	0,44
Unemployment rate	-0,35	-0,43	-0,46	-0,46	-0,44

the ten years before the oil price began to fall in 2014. The comparison with actual developments shows a somewhat weaker krone in 2011 and 2012, and thereafter a gradually much stronger krone.

Actual inflation, measured by the rise in the CPI-ATE, increased gradually from 0.9 per cent in 2011 to 2.7 per cent in 2015. Without the actual exchange rate changes, inflation would have been considerably more stable than it was in reality. In the years 2011–2014 there would have been virtually no differences in the inflation rate, with rates in the interval 1.5 to 1.8 per cent. In 2015, however, inflation would have fallen by about 1 percentage point compared with the previous year. This decline in the counterfactual inflation is partly a consequence of the fact that labour costs would have increased less than they actually did in 2014 and 2015, because unemployment would have been higher and profitability in the wage leader sector substantially poorer with a stronger krone.

The fall in counterfactual inflation is also attributable to factors other than the exchange rate. As the Norwegian economy entered a clear cyclical downturn in the second half of 2014, it can also be assumed that margins in many areas were squeezed. This is of course most evident in deliveries to the petroleum industry. In addition, energy prices fell in both 2014 and 2015. As energy is an important production factor in most industries, this exerts downward pressure on CPI-ATE inflation. There were thus a number of factors other than the exchange rate pulling in the direction of lower inflation in 2015 than in 2014, but the weakening of the krone caused it to rise nonetheless.

¹ Boug, P., Å. Cappelen and T. Eika (2013): Exchange rate pass-through in a small open economy: the importance of the distribution sector, *Open Economies Review* 24(5), 853-879, is an earlier study of exchange rate pass-through to inflation carried out using the KVARTS model.

Table 2. Actual and counterfactual calculation – unchanged import-weighted krone exchange rate from 4th quarter 2010. Per cent

	2011	2012	2013	2014	2015
CPI-ATE inflation, counterfactual	1.5	1.6	1.8	1.6	0.8
CPI-ATE inflation, actual	0.9	1.2	1.6	2.4	2.7
Wage growth, counterfactual	4.5	4.3	4.1	2.6	1.6
Wage growth, actual	4.2	4.0	3.9	3.1	2.8
Unemployment rate, counterfactual	3.2	3.1	3.5	3.6	4.8
Unemployment rate, actual	3.3	3.2	3.5	3.5	4.4
Import-weighted krone exchange rate, counterfactual ¹	0.9	0.0	0.0	0.0	0.0
Import-weighted krone exchange rate, actual ¹	-2.4	-1.2	2.2	5.3	10.4

¹ Negative sign denotes appreciation.

may push inflation up further. In the slightly longer term, inflation will be largely influenced by the path taken by the krone exchange rate, and less by changes in inflationary impulses attributable to Norwegian economic developments. We assume that the krone

will strengthen somewhat through the remainder of the projection period. We forecast nonetheless that the import-weighted krone will weaken by 2.4 per cent as an annual average in 2016, but then strengthen by slightly more than 1 per cent annually until the end

Table 6. Consumer price index. Goods and services by consumption group

	Weights ¹	Percent change from previous year				Jan. 2016
		2012	2013	2014	2015	
Total	1000	0.8	2.1	2.0	2.1	3.0
Food and non-alcoholic beverages	130.5	1.2	1.1	3.0	2.9	1.8
Alcoholic beverages and tobacco	41.7	3.2	4.3	3.4	3.0	3.4
Clothing and footwear	51.7	-1.3	-2.0	-0.6	0.4	5.5
Housing, lighting and fuel	229.8	-1.8	5.3	1.3	1.3	3.0
Electricity, fuel oil and other fuels	35.3	-17.5	14.7	-5.7	-3.4	10.0
Furniture and household appliances etc.	66.6	0.1	0.4	3.2	5.2	6.6
Healthcare	31.8	3.0	2.6	2.5	1.7	0.5
Transport	158.9	2.5	1.4	2.3	1.3	1.5
Postal and telecom services	24.9	-5.9	-2.1	-0.8	1.1	4.2
Recreation and culture	112.9	0.3	0.9	2.1	3.4	4.8
Education	5.6	5.4	7.5	3.3	2.1	2.4
Hotel and restaurant services	56.6	3.2	2.9	2.5	2.4	2.7
Miscellaneous goods and services	89.3	3.3	1.9	2.5	1.9	1.8

¹ The weights apply from January 2016 to December 2016.

Source: Statistics Norway.

Table 7. Consumer price index adjust for tax changes and excluding energy products (CPI-ATE) by delivery sector¹

	Weights ²	Percent change from previous year				Jan. 2016
		2012	2013	2014	2015	
Total	1000	1.2	1.6	2.4	2.7	3.0
Agricultural products ³	36.7	0.0	0.6	2.7	2.4	1.6
Fish products ¹		0.9	0.5	5.2	4.6	
Other consumer goods produced in Norway ⁴	112.5	1.6	3.1	3.3	3.6	3.7
Imported consumer goods	335.5	-0.7	-0.2	1.4	3.0	4.6
Rent	210.3	1.8	3.0	2.8	2.4	1.8
Services excl. rent	305	2.7	2.3	2.8	2.4	2.4

¹ New definition of delivery sector from January 2016. Fish product are distributed to imported goods and Norwegian goods excl. agricultural products. Imported agricultural goods are included in imported goods.

² The weights apply from January 2016 to December 2016.

³ Including imported agricultural products before 2016.

⁴ Excl. fish products before 2016

Source: Statistics Norway.

of the projection period. According to our projections, the annualised rise in the CPI-ATE will be 2.5 per cent in 2016, i.e. slightly less than last year. Productivity growth normally increases when activity growth picks up. This, coupled with the reduced time-lagged effects of the krone depreciation and more immediate effects of the moderate near-term strengthening will subsequently lead to inflation gradually slowing. In 2019, CPI-ATE inflation may slow to 1.6 per cent.

In 2016, adopted increases in taxation rates will have the effect in isolation of pushing up CPI inflation by 0.1 percentage point. We assume that similar inflationary

impulses associated with environmental and carbon taxes will apply in subsequent years. Developments in energy prices are expected to push overall inflation slightly down in 2016, but after that slightly up. On the basis of forward prices in the power market, we forecast that electricity prices will increase by 5 per cent in 2016 as an annual average. A rise in prices roughly in line with general inflation is expected for the next few years. We assume that the oil price will pick up somewhat. Given these assumptions, CPI inflation is projected to be 2.4 per cent in 2016, and to be slightly higher than CPI-ATE inflation in the near term. CPI inflation in 2019 will then be 1.9 per cent.

Table 8. National accounts: Final expenditure and gross domestic product. At constant 2013 prices. Million kroner

	Unadjusted		Seasonally adjusted							
	2014	2015	14.1	14.2	14.3	14.4	15.1	15.2	15.3	15.4
Final consumption expenditure of households and NPISHs	1 254 154	1 279 410	310 937	313 170	313 890	315 732	317 666	319 480	320 204	322 086
Household final consumption expenditure	1 194 398	1 217 780	296 174	298 254	298 872	300 678	302 364	304 206	304 761	306 491
Goods	564 394	570 806	140 292	141 065	140 961	142 070	141 968	143 546	142 632	142 639
Services	573 833	593 320	141 945	142 843	143 824	144 860	146 536	147 600	148 990	150 268
Direct purchases abroad by resident households	91 011	92 129	22 440	22 917	22 799	22 787	22 834	22 811	23 152	23 313
Direct purchases by non-residents	-34 840	-38 475	-8 503	-8 571	-8 712	-9 039	-8 974	-9 751	-10 012	-9 730
Final consumption expenditure of NPISHs	59 755	61 630	14 764	14 915	15 018	15 054	15 302	15 274	15 443	15 595
Final consumption expenditure of general government	671 433	683 615	165 619	167 143	168 895	170 059	169 905	170 506	171 321	171 892
Final consumption expenditure of central government	336 519	343 927	82 708	83 853	84 745	85 454	85 480	85 843	86 178	86 439
Central government, civilian	296 074	303 889	72 634	73 723	74 601	75 364	75 440	75 871	76 217	76 378
Central government, defence	40 445	40 038	10 074	10 130	10 144	10 089	10 040	9 972	9 962	10 060
Final consumption expenditure of local government	334 914	339 687	82 911	83 291	84 150	84 605	84 425	84 663	85 143	85 453
Gross fixed capital formation	717 466	688 521	179 847	182 383	181 840	173 502	173 764	172 796	171 846	170 225
Extraction and transport via pipelines	207 257	176 870	53 683	53 267	52 123	48 090	48 042	45 793	42 099	40 922
Ocean transport	795	1 434	37	226	407	183	678	438	157	219
Mainland Norway	509 415	510 216	126 127	128 890	129 310	125 228	125 044	126 565	129 591	129 084
Industries	218 221	212 197	53 777	54 762	55 347	54 255	54 311	54 134	52 045	51 620
Service activities incidental to extraction	2 402	2 029	505	703	616	579	657	684	371	317
Other services	135 803	132 403	32 826	33 834	35 134	33 861	33 743	33 511	32 480	32 573
Manufacturing and mining	33 438	30 478	8 527	8 331	8 001	8 590	7 838	8 036	7 372	7 277
Production of other goods	46 578	47 287	11 919	11 894	11 595	11 225	12 073	11 904	11 821	11 452
Dwellings (households)	149 953	152 326	38 283	37 877	37 684	36 371	36 959	37 654	38 492	39 450
General government	141 241	145 693	34 067	36 251	36 279	34 602	33 774	34 777	39 054	38 014
Changes in stocks and statistical discrepancies	154 242	171 167	34 150	41 600	42 363	37 848	52 706	46 026	35 269	37 610
Gross capital formation	871 709	859 688	213 998	223 983	224 203	211 350	226 471	218 822	207 116	207 834
Final domestic use of goods and services	2 797 296	2 822 713	690 554	704 296	706 988	697 140	714 041	708 809	698 640	701 812
Final demand from Mainland Norway	2 435 002	2 473 241	602 683	609 203	612 095	611 019	612 614	616 552	621 116	623 062
Final demand from general government	812 674	829 307	199 686	203 394	205 175	204 661	203 679	205 284	210 375	209 906
Total exports	1 230 629	1 259 347	302 357	301 338	307 556	317 849	308 379	309 180	326 445	317 141
Traditional goods	329 773	347 995	79 607	82 732	83 335	84 196	86 064	86 399	87 124	89 421
Crude oil and natural gas	592 123	597 210	147 326	142 548	147 210	153 727	144 470	144 454	158 349	150 706
Ships, oil platforms and planes	7 783	5 414	3 566	1 396	840	1 938	1 428	1 032	1 504	1 425
Services	300 950	308 728	71 858	74 662	76 171	77 989	76 417	77 296	79 469	75 588
Total use of goods and services	4 027 925	4 082 060	992 911	1 005 634	1 014 544	1 014 989	1 022 420	1 017 989	1 025 086	1 018 953
Total imports	888 773	893 773	217 434	222 357	228 786	220 093	228 400	224 316	218 544	221 955
Traditional goods	515 768	524 572	128 389	130 187	129 179	128 157	133 344	132 617	126 612	131 552
Crude oil and natural gas	13 944	13 610	3 392	3 139	3 543	3 979	4 052	3 510	2 864	3 082
Ships, oil platforms and planes	29 776	26 020	5 597	6 265	13 677	4 077	7 189	5 783	6 293	6 647
Services	329 286	329 571	80 057	82 766	82 388	83 879	83 815	82 406	82 775	80 674
Gross domestic product (market prices)	3 139 152	3 188 287	775 477	783 278	785 758	794 897	794 019	793 673	806 542	796 998
Gross domestic product Mainland Norway (market prices)	2 473 523	2 498 136	612 792	618 725	619 922	622 997	624 268	625 339	625 087	625 729
Petroleum activities and ocean transport	665 628	690 151	162 685	164 552	165 836	171 899	169 751	168 334	181 455	171 269
Mainland Norway (basic prices)	2 146 475	2 166 074	531 422	536 884	538 299	540 761	541 461	542 659	541 900	541 735
Mainland Norway excluding general government	1 628 383	1 639 226	402 612	407 489	408 725	410 501	410 638	411 295	409 888	409 042
Manufacturing and mining	215 819	208 687	52 448	54 041	54 698	54 676	53 669	52 779	51 562	50 666
Production of other goods	267 797	274 724	65 798	67 928	67 313	67 021	67 737	69 182	69 187	68 882
Services incl. dwellings (households)	1 144 768	1 155 815	284 366	285 519	286 715	288 804	289 232	289 334	289 139	289 495
General government	518 092	526 847	128 811	129 395	129 574	130 260	130 823	131 363	132 012	132 693
Taxes and subsidies products	327 048	332 062	81 369	81 841	81 623	82 236	82 808	82 681	83 187	83 994

Source: Statistics Norway.

Table 9. National accounts: Final expenditure and gross domestic product. At constant 2013 prices. Percentage change from the previous period

	Unadjusted		Seasonally adjusted							
	2014	2015	14.1	14.2	14.3	14.4	15.1	15.2	15.3	15.4
Final consumption expenditure of households and NPISHs	1.7	2.0	0.4	0.7	0.2	0.6	0.6	0.6	0.2	0.6
Household final consumption expenditure	1.7	2.0	0.4	0.7	0.2	0.6	0.6	0.6	0.2	0.6
Goods	0.6	1.1	0.6	0.6	-0.1	0.8	-0.1	1.1	-0.6	0.0
Services	2.9	3.4	0.6	0.6	0.7	0.7	1.2	0.7	0.9	0.9
Direct purchases abroad by resident households	3.0	1.2	-2.3	2.1	-0.5	-0.1	0.2	-0.1	1.5	0.7
Direct purchases by non-residents	5.1	10.4	-0.7	0.8	1.6	3.8	-0.7	8.7	2.7	-2.8
Final consumption expenditure of NPISHs	1.4	3.1	-0.4	1.0	0.7	0.2	1.6	-0.2	1.1	1.0
Final consumption expenditure of general government	2.9	1.8	0.5	0.9	1.0	0.7	-0.1	0.4	0.5	0.3
Final consumption expenditure of central government	3.6	2.2	0.7	1.4	1.1	0.8	0.0	0.4	0.4	0.3
Central government, civilian	4.2	2.6	0.7	1.5	1.2	1.0	0.1	0.6	0.5	0.2
Central government, defence	-0.3	-1.0	0.7	0.5	0.1	-0.5	-0.5	-0.7	-0.1	1.0
Final consumption expenditure of local government	2.2	1.4	0.3	0.5	1.0	0.5	-0.2	0.3	0.6	0.4
Gross fixed capital formation	0.0	-4.0	-1.7	1.4	-0.3	-4.6	0.2	-0.6	-0.5	-0.9
Extraction and transport via pipelines	-2.9	-14.7	-2.7	-0.8	-2.1	-7.7	-0.1	-4.7	-8.1	-2.8
Ocean transport	-24.3	80.5	-110.4	504.6	80.0	-55.0	269.9	-35.5	-64.2	39.5
Mainland Norway	1.3	0.2	-1.5	2.2	0.3	-3.2	-0.1	1.2	2.4	-0.4
Industries	-0.4	-2.8	-2.8	1.8	1.1	-2.0	0.1	-0.3	-3.9	-0.8
Service activities incidental to extraction	-56.4	-15.6	-84.4	39.3	-12.4	-6.0	13.5	4.1	-45.7	-14.4
Other services	0.5	-2.5	1.4	3.1	3.8	-3.6	-0.3	-0.7	-3.1	0.3
Manufacturing and mining	5.5	-8.9	8.6	-2.3	-4.0	7.4	-8.8	2.5	-8.3	-1.3
Production of other goods	-0.4	1.5	0.2	-0.2	-2.5	-3.2	7.6	-1.4	-0.7	-3.1
Dwellings (households)	-1.5	1.6	-0.3	-1.1	-0.5	-3.5	1.6	1.9	2.2	2.5
General government	7.3	3.2	-0.7	6.4	0.1	-4.6	-2.4	3.0	12.3	-2.7
Changes in stocks and statistical discrepancies	10.0	11.0	-5.8	21.8	1.8	-10.7	39.3	-12.7	-23.4	6.6
Gross capital formation	1.6	-1.4	-2.3	4.7	0.1	-5.7	7.2	-3.4	-5.3	0.3
Final domestic use of goods and services	2.0	0.9	-0.5	2.0	0.4	-1.4	2.4	-0.7	-1.4	0.5
Final demand from Mainland Norway	2.0	1.6	0.0	1.1	0.5	-0.2	0.3	0.6	0.7	0.3
Final demand from general government	3.7	2.0	0.3	1.9	0.9	-0.3	-0.5	0.8	2.5	-0.2
Total exports	2.2	2.3	1.5	-0.3	2.1	3.3	-3.0	0.3	5.6	-2.9
Traditional goods	2.5	5.5	-0.5	3.9	0.7	1.0	2.2	0.4	0.8	2.6
Crude oil and natural gas	1.9	0.9	5.1	-3.2	3.3	4.4	-6.0	0.0	9.6	-4.8
Ships, oil platforms and planes	-14.0	-30.4	25.0	-60.9	-39.8	130.7	-26.3	-27.7	45.8	-5.3
Services	3.2	2.6	-4.0	3.9	2.0	2.4	-2.0	1.1	2.8	-4.9
Total use of goods and services	2.1	1.3	0.1	1.3	0.9	0.0	0.7	-0.4	0.7	-0.6
Total imports	1.5	0.6	-1.3	2.3	2.9	-3.8	3.8	-1.8	-2.6	1.6
Traditional goods	1.0	1.7	0.0	1.4	-0.8	-0.8	4.0	-0.5	-4.5	3.9
Crude oil and natural gas	-11.9	-2.4	9.6	-7.5	12.9	12.3	1.8	-13.4	-18.4	7.6
Ships, oil platforms and planes	7.4	-12.6	4.3	11.9	118.3	-70.2	76.3	-19.5	8.8	5.6
Services	2.5	0.1	-4.2	3.4	-0.5	1.8	-0.1	-1.7	0.4	-2.5
Gross domestic product (market prices)	2.2	1.6	0.5	1.0	0.3	1.2	-0.1	0.0	1.6	-1.2
Gross domestic product Mainland Norway (market prices)	2.3	1.0	0.5	1.0	0.2	0.5	0.2	0.2	0.0	0.1
Petroleum activities and ocean transport	2.0	3.7	0.9	1.1	0.8	3.7	-1.2	-0.8	7.8	-5.6
Mainland Norway (basic prices)	2.4	0.9	0.5	1.0	0.3	0.5	0.1	0.2	-0.1	0.0
Mainland Norway excluding general government	2.5	0.7	0.4	1.2	0.3	0.4	0.0	0.2	-0.3	-0.2
Manufacturing and mining	3.4	-3.3	0.2	3.0	1.2	0.0	-1.8	-1.7	-2.3	-1.7
Production of other goods	4.8	2.6	1.1	3.2	-0.9	-0.4	1.1	2.1	0.0	-0.4
Services incl. dwellings (households)	1.8	1.0	0.3	0.4	0.4	0.7	0.1	0.0	-0.1	0.1
General government	2.0	1.7	0.7	0.5	0.1	0.5	0.4	0.4	0.5	0.5
Taxes and subsidies products	1.5	1.5	0.3	0.6	-0.3	0.8	0.7	-0.2	0.6	1.0

Source: Statistics Norway.

Table 10. **ational accounts: Final expenditure and gross domestic product. Price indices. 2013=100**

	Unadjusted		Seasonally adjusted							
	2014	2015	14.1	14.2	14.3	14.4	15.1	15.2	15.3	15.4
Final consumption expenditure of households and NPISHs	102.1	104.4	101.8	102.1	101.4	102.8	103.9	104.0	103.7	105.5
Final consumption expenditure of general government	103.0	106.4	102.2	102.8	103.0	104.1	105.7	106.2	106.4	107.4
Gross fixed capital formation	102.3	105.8	101.3	101.8	102.5	103.8	104.6	105.5	106.4	107.0
Mainland Norway	101.8	105.2	101.1	101.3	102.0	103.0	104.1	104.8	105.6	106.3
Final domestic use of goods and services	102.4	104.9	101.7	102.1	102.8	103.1	104.9	104.2	104.5	105.6
Final demand from Mainland Norway	102.3	105.1	101.7	102.1	101.9	103.2	104.5	104.8	104.8	106.2
Total exports	99.1	92.3	102.5	99.9	97.3	96.0	93.7	95.5	92.3	88.7
Traditional goods	104.0	107.6	104.1	102.4	102.9	106.1	108.2	107.9	107.4	106.2
Total use of goods and services	101.4	101.0	101.9	101.4	101.2	100.9	101.5	101.6	100.6	100.3
Total imports	104.6	109.9	104.2	103.1	105.1	106.1	109.8	109.5	111.7	110.1
Traditional goods	105.5	111.3	104.2	104.2	105.8	107.6	110.6	110.3	112.2	112.2
Gross domestic product (market prices)	100.5	98.5	101.3	100.9	100.0	99.5	99.2	99.3	97.6	97.6
Gross domestic product Mainland Norway (market prices)	102.1	104.5	100.9	101.7	102.3	103.2	103.8	104.3	104.4	105.1

Source: Statistics Norway.

Table 11. **National accounts: Final expenditure and gross domestic product. Price indices. Percentage change from previous period**

	Unadjusted		Seasonally adjusted							
	2014	2015	14.1	14.2	14.3	14.4	15.1	15.2	15.3	15.4
Final consumption expenditure of households and NPISHs	2.1	2.2	1.0	0.4	-0.7	1.4	1.1	0.0	-0.3	1.8
Final consumption expenditure of general government	3.0	3.3	1.1	0.6	0.2	1.1	1.5	0.5	0.1	1.0
Gross fixed capital formation	2.3	3.5	0.1	0.5	0.7	1.3	0.7	0.9	0.8	0.6
Mainland Norway	1.8	3.3	0.1	0.3	0.7	1.0	1.1	0.7	0.7	0.7
Final domestic use of goods and services	2.4	2.4	0.6	0.4	0.8	0.3	1.7	-0.7	0.2	1.1
Final demand from Mainland Norway	2.3	2.8	0.8	0.4	-0.2	1.3	1.2	0.3	0.0	1.3
Total exports	-0.9	-6.8	-1.2	-2.6	-2.6	-1.2	-2.5	2.0	-3.3	-4.0
Traditional goods	4.0	3.4	1.5	-1.6	0.5	3.1	2.0	-0.3	-0.4	-1.2
Total use of goods and services	1.4	-0.4	0.1	-0.5	-0.2	-0.2	0.6	0.1	-1.0	-0.3
Total imports	4.6	5.0	2.3	-1.1	2.0	0.9	3.4	-0.2	1.9	-1.4
Traditional goods	5.5	5.5	1.5	0.0	1.6	1.7	2.8	-0.3	1.7	0.0
Gross domestic product (market prices)	0.5	-2.0	-0.5	-0.4	-0.9	-0.5	-0.3	0.2	-1.7	0.0
Gross domestic product Mainland Norway (market prices)	2.1	2.4	0.1	0.7	0.6	1.0	0.6	0.4	0.2	0.6

Source: Statistics Norway.

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