

Economic trends

Perspectives

What many people had feared became a reality in 2014: a sharp fall in oil prices that may be permanent. From an average of USD 110 per barrel in the period 2011 to July 2014, oil prices plummeted, via a trough at USD 45 in mid-January this year, to around USD 60 in early March. The strengthening of the US dollar and weakening of the Norwegian krone reduce the fall in prices measured in Norwegian kroner. At the time of writing, the oil price measured in kroner is 25 per cent less than the average price in 2013. In isolation, the price fall will reduce income earned in the petroleum industry by about 30 per cent compared with 2014. This price effect alone will bring about a nominal reduction in gross domestic product (GDP) of 6 per cent. Norway's fall in income will be somewhat lower because of foreign ownership. New oil production technologies make it highly likely that oil prices will remain substantially lower than in 2011–2013, and than indicated by earlier projections.

The fall in oil prices has two main effects on the Norwegian economy: the country's income is reduced, and demand from the petroleum industry for deliveries from Norwegian companies falls as a result of weakened profitability. The strength of these effects naturally depends on the size and duration of the fall in oil prices. The size of the fall depends on what is being compared. From the record price of NOK 630 per barrel prior to the summer of 2014, our projections imply a NOK 170 per barrel fall in prices in 2015, easing off to NOK 105 in 2017. A better picture of the changes in outlook is obtained by making a comparison with the projections made prior to the summer of 2014. The price fall will then be NOK 123 in 2015, easing to NOK 59 in 2017. It should also be remembered that an oil price of around USD 60 will not appear low in a long-term perspective. Ten years ago, «no-one» dared to believe that such a high oil price would be a conservative forecast for the average price over a period of many decades.

The direct effects on activities of the oil price fall will largely take the form of lower investment and intermediate inputs in the petroleum industry and in the companies that make direct and indirect deliveries to the industry. According to our projections, petroleum investment will fall from a record-high level, by 16 per cent in 2015 and by 8 per cent in 2016, measured in relation to the preceding year. Most of the production and many of the fields under development will continue to be profitable, however. Even current oil prices assure the profitability for several decades yet to come of substantial oil and gas production and associated demand for deliveries from Norwegian companies. The impact on demand will be limited by the high share of imports in these deliveries. Moreover, a weaker krone and lower wage growth will stimulate internationally exposed mainland industries, which will also benefit from some growth in foreign demand. Among those who will lose their jobs are a number of foreigners, who will return home, and many who will find other work relatively quickly. According to our projection, unemployment will peak at 4.1 per cent in 2016.

The overall impact on activities is relatively limited compared with the size of the fall in oil prices. Two underlying premises are important for the limited fall in resource utilisation: the fall in income largely takes the form of reduced saving rather than lower current demand, and the competitiveness is strengthened through a depreciation of the Norwegian krone in real terms and slower wage growth.

The low impact on demand of the fall in income is due to the fact that it is the state that receives most of the petroleum earnings and accordingly sustains most of the direct revenue loss due to lower oil prices. Because of the fiscal rule, this will be reflected almost entirely in reduced saving in the Norwegian Pension Fund Global. The real return on a fund worth more than twice the country's GDP is so large that current oil and gas revenue would have to be low for many years before it had more than a marginal effect on Norway's spending of petroleum revenue, as long as the Fund's value does not fluctuate with movements in oil prices. The fiscal rule is a very important stabilising mechanism for the Norwegian economy. It is important for the overall demand effects that households do not increase their saving substantially when government saving falls. Our analyses and those of others indicate that this type of «Ricardian equivalence» does not apply to any appreciable extent in the Norwegian economy.

The improvement in Norway's competitiveness ensuing from a permanent fall in oil prices depends fundamentally on our having retained an independent exchange rate. This normally falls when petroleum revenue falls. The improved competitiveness is also contingent on the social partners accepting that wage growth must not be allowed to swallow up the effects of the weakened krone on competitiveness, but must rather move in the direction of wage growth in our competitor countries. The depreciation in real terms does not reduce Norway's loss of direct revenue due to lower oil prices. But it curbs further losses stemming from higher unemployment, and it distributes the income loss among the entire population. In particular, some of the loss is transferred from the state to households, because a weaker krone and weaker wage growth reduce public spending on wages and pension substantially more than the tax bases.

No matter how adaptable an economy is, it cannot conjure away the loss of national income when the price of a resource of which the economy is a net exporter falls. The question, however, is how important this is in a perspective of a number of years and when account is taken of other changes. The decade 2004–2014 provides a basis for an informed answer, because during it we experienced a dramatic increase in oil prices. 2004 was the last year in which most long-term oil-price forecasts were around USD 25–30 per barrel. The Ministry of Finance's 2004 report on long-term perspectives for the Norwegian economy foresaw USD 30 in 2003 money. Actual petroleum price developments were very much more favourable for Norway, and we sold large quantities of oil and gas at those high prices. The gain was amplified by the fall in prices for imports and a strong increase in the supply of cheap services and general capacity as a result of inward labour migration following the EU enlargement in 2004. These were also changes not foreseen in the 2004 projections. With the exception of the years of the financial crisis, which affected every country, Norway has been very fortunate in each of the last ten years with respect to developments in easily identifiable key variables.

Even given projections for these variables that appear highly pessimistic today, The Ministry of Finance's 2004 report is not bleak reading. In it, real disposable income per capita increases by an average of 1.7 per cent annually up to 2060 in the main scenario, with slightly stronger growth in the period 2004–2014. What was the actual annual growth in real disposable income in this period, which many call an economic golden age? It was markedly lower than forecast in 2004, barely 1.4 per cent. There is an even larger gap to the per capita growth in real income of 2.8 per cent in the period 1970–2003, which in turn was lower than growth in the 1950s and 1960s.

Clearly, some important factor must have followed a far more unfavourable path than foreseen for the «golden age» of 2004–2014. It was obviously not the record-high oil price, other terms of trade gains or increased access to relatively cheap labour that caused low growth in real income. The explanation lies in weak productivity growth. As in the USA and most countries in Western Europe, productivity growth has been generally far weaker since 2005 than in previous years. In Norway, annual growth in labour productivity has varied around 1.3 per cent for mainland companies. The Ministry of Finance's 2004 report assumed labour productivity growth of close to 2 per cent annually in mainland companies.

However, an explanation does not provide much clarification if it goes no further than stating that productivity growth has been an important ingredient. In the end, productivity growth is merely a sophisticated term for a large number of changes that only rarely can be identified and measured. It is unlikely that the weak productivity growth since 2005 is due to slower advances in expertise and technology. These processes take place far too slowly to provide an explanation for the sharp weakening in productivity growth. The main causes of the year-to-year changes in productivity growth must rather be sought among the factors that lead to variations in the utilisation of labour and other capacity. During the financial crisis in 2008 and 2009 utilisation was abnormally low. The average figures for the years following 2004 still bear the imprint of the weak productivity during those years. Inward labour migration also probably resulted in relatively strong growth in labour-intensive jobs. This is a factor that pushes down productivity growth, even though Norway as a society benefits from the jobs being done. But other mechanisms must also have been important, since productivity growth also fell in countries that experienced quite a different immigration and emigration scenario than Norway.

Our projections and retrospective look at developments in the period 2004–2014 have one important common factor: although the oil price is naturally important to the Norwegian economy,

it is not as crucial as many appear to believe. For the next four years, we expect what must be described as a major fall in oil prices to have a moderate impact on activities, because conditions for other industries will improve. The weak growth in real income after 2004 shows that a number of small changes, apparently without significance in themselves, in combination have an effect on productivity over a number of years which far exceeds the impact on income of even major oil price changes, also in years with high oil production.

The effects on the Norwegian economy of slowing activity in the petroleum industry have been analysed since the beginning of the Norwegian oil age. The insights in Storting Report no. 25 (1973–1974) are still relevant. Although resources have proved to be many times as great as envisioned at that time, and despite export opportunities for segments of the supplier industries, petroleum activities will very largely be a transient windfall. The question remains when and how rapidly a contraction will come, and how difficult it will be to adapt labour to other activities.

Adjustments have taken place and take place continuously in the Norwegian economy. Gross labour market flows and changes in industry structure in the last few decades have not been any less pronounced than in other wealthy countries. Adaptability has been and will continue to be an important prerequisite for prosperity and economic growth. On the whole, the petroleum-driven adjustments have been a comfortable process from which all parties involved have benefited, because pay and other conditions have been better in petroleum-related industries than in the jobs workers left, partly through the distribution of economic rent to the employees. Adjustments in the reverse direction are unlikely to proceed as smoothly. Some of the workers having to find new jobs will suffer a loss. General wage growth and natural wastage will dampen the negative effects of this, particularly if the adjustments can be distributed across many years. Nonetheless, some reluctance and demands for measures to restrict the changes must be expected.

There is reason to warn against employing special policy measures to improve the profitability of petroleum-related activities as a direct result of the fall in oil prices. The price fall does not represent a crisis that calls for action over and above the mechanisms that are already in place in the form of a flexible exchange rate, a smoothly functioning wage formation model and the monetary and fiscal policy framework. The scaling back of petroleum activities and creation of new jobs has to happen sooner or later. The consequences of the fall in oil prices are that this transition has begun.

Economic developments in Norway

According to preliminary national accounts figures, mainland GDP rose by 2.3 per cent in 2014, the same as the previous year. After almost two years of near-trend growth at an estimated 2¼ per cent, there was a transition to slower growth in the second half of last year. Mainland GDP excluding the energy sector increased from the second to the fourth quarter of 2014 by an annualised 1.5 per cent.

Reduced demand from the petroleum industry and moderate developments in household consumption were

important factors underlying the lower GDP growth in the second half of the year. The sharp decline in crude oil prices through the autumn of 2014 and into 2015 will amplify the negative impulses from the petroleum industry in the period ahead. Expansionary fiscal and monetary policy will help to curb the slowdown. The fall in oil prices and prospects of even lower interest rates have led to a pronounced depreciation of the krone, which weakened by an annual average of 5.3 per cent in 2014. It is assumed to weaken almost as much in 2015, thereby contributing to a marked improvement

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

	2013*	2014*	Seasonally adjusted			
			14:1	14:2	14:3	14:4
Demand and output						
Consumption in households etc.	2.1	2.1	1.0	0.7	0.1	1.0
General government consumption	1.7	2.5	0.2	0.8	0.6	0.9
Gross fixed investment	6.8	1.2	0.7	1.2	-1.5	-2.7
Mainland Norway	2.9	1.8	1.8	1.2	-1.3	-2.9
Extraction and transport via pipelines	17.1	0.0	-2.2	0.6	-2.5	-1.3
Final domestic demand from Mainland Norway ¹	2.1	2.1	0.9	0.8	-0.1	0.1
Exports	-3.0	1.7	2.1	-0.5	1.4	3.4
Crude oil and natural gas	-7.6	0.9	4.0	-3.5	4.1	4.8
Traditional goods	1.0	2.7	1.2	3.0	0.5	1.5
Imports	4.3	1.6	-0.3	1.0	2.8	-3.7
Traditional goods	3.2	0.0	0.7	-0.1	-0.8	-0.6
Gross domestic product	0.7	2.2	0.5	1.1	0.5	0.9
Mainland Norway	2.3	2.3	0.4	1.2	0.1	0.5
Labour market						
Man-hours worked	0.7	1.6	0.2	0.3	0.2	0.3
Employed persons	1.2	1.1	0.2	0.3	0.3	0.2
Labour force ²	1.0	1.1	-0.1	0.4	0.5	0.6
Unemployment rate, level ²	3.5	3.5	3.5	3.2	3.7	3.7
Prices and wages						
Annual earnings	3.9	3.1	..	..	..	..
Consumer price index (CPI) ³	2.1	2.0	2.1	1.8	2.1	2.0
CPI adjusted for tax changes and excluding energy products (CPI-ATE) ³	1.6	2.4	2.5	2.4	2.4	2.4
Export prices, traditional goods	3.1	4.1	1.0	-1.0	0.5	2.3
Import prices, traditional goods	2.1	5.5	2.2	0.1	1.0	1.4
Balance of payment						
Current balance, bill. NOK	299.6	266.7	104.9	51.0	44.8	66.0
Memorandum items (unadjusted level)						
Money market rate (3 month NIBOR)	1.8	1.7	1.7	1.8	1.7	1.6
Lending rate, credit loans ⁴	4.0	3.9	4.1	4.0	3.9	3.8
Crude oil price NOK ⁵	639	621	657	657	646	526
Importweighted krone exchange rate, 44 countries, 1995=100	89.0	93.7	93.1	91.5	93.1	97.0
NOK per euro	7.8	8.4	8.4	8.2	8.3	8.6

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..

in cost-competitiveness. This, coupled with slightly higher growth in Norwegian export markets and low Norwegian investment demand, has led to higher exports and lower imports, thereby spurring activity in the Norwegian economy.

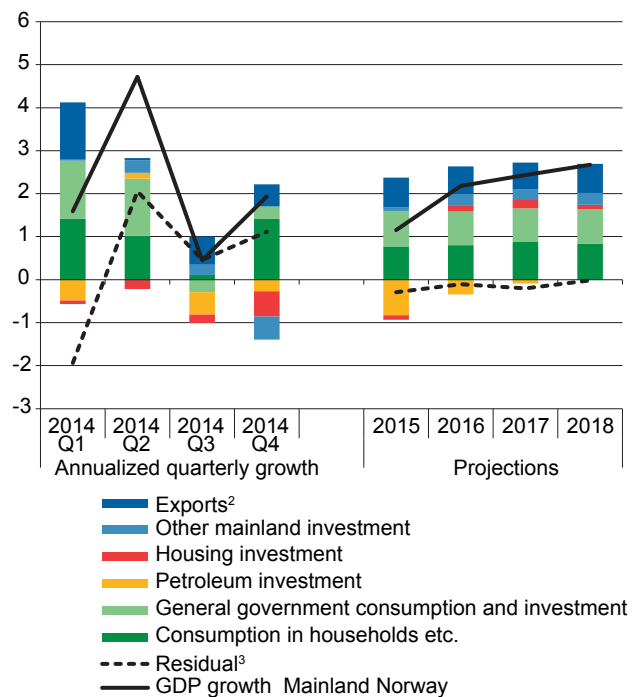
The economic turnaround in mid-2014 has so far only had a limited impact on the labour market. Employment increased by an annual average of 1.1 per cent in 2014, but with a weakly negative tendency towards the end of the year. The unemployment rate, measured by the Labour Force Survey (LFS) remained at an annual average of 3.5 per cent in 2014, but with a rising tendency through the second half of the year. It is now 3.7 per cent.

Preliminary figures report annual wage growth in 2014 at 3.1 per cent, the lowest growth in 20 years and markedly down from 3.9 per cent in 2013. Wages increased by approximately the same amount in all industries last year. The rise in prices measured by the consumer price index (CPI) was 2.0 per cent in 2014, slightly lower than the previous year, and means that real wages increased by 1.1 per cent. This is considerably lower than in recent years, when real wage growth has been approximately 2–3 per cent. The underlying rise in prices, measured by the CPI adjusted for tax changes and excluding energy products (CPI-ATE), climbed sharply from 2013 to 2014, from 1.6 to 2.4 per cent. Tumbling electricity prices caused the CPI to increase appreciably less than the CPI-ATE, while the rise in the CPI-ATE compared with the previous year can be largely attributed to the depreciation of the Norwegian krone.

Measured by the increase in the structural non-oil budget deficit (SNOBD), fiscal policy in 2014 was the most expansionary to date in the 2000s, apart from 2009, the year of the fiscal crisis. Because part of the increase in the budget deficit is due to tax relief for individuals, the immediate expansionary effect on the real economy is dampened, however. The adopted budget for 2015 is almost as expansionary as the 2014 budget.

Money market rates fell markedly for the first time in two years after the central bank reduced the key policy rate in December 2014. The weaker outlook for developments in the real economy formed the background to Norges Bank's signal that there is also a definite possibility of further interest rate reductions. We assume that money market rates will average 1.1 per cent in 2015 after a 0.5 percentage point reduction in the key rate in the course of the first half of the year. In consequence, typical mortgage rates will fall from 3.9 per cent in 2014 to 3.3 per cent this year and down further to 3.0 per cent in 2016. This, coupled with tax relief, will increase household income. Low employment growth and the lowest growth in real wages for more than 15 years is nevertheless expected to result in household real income only increasing by 2 per cent this year. The decline in interest rates in itself will boost household consumption. We expect consumption

Figure 2.1. **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 Economic Survey 1/2014. 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.

growth also to be 2 per cent, roughly the same as last year.

Many of the same factors underlying the cyclical slowdown through 2014 will also apply in the period ahead. The fall in demand from the petroleum industry will place a damper on activity, while the improved cost-competitiveness due to the depreciation of the krone, coupled with expansionary monetary and fiscal policy, will stimulate activity. Last year petroleum investment accounted for almost 9 per cent of mainland GDP and a decline of an estimated 16 per cent in 2015 will in isolation mean reduced demand, direct or indirect, for most industries in Norway. Continued weak developments in household demand and in mainland business investment will exacerbate the cyclical downturn this year, and mainland GDP is expected to increase by only 1.1 per cent. Subsequently, a reduced fall in petroleum investment combined with a certain upswing in consumption, housing investment, business investment and demand from abroad will push up mainland GDP. In early 2016 already the economy may enter a moderate cyclical upturn that gathers a little momentum in the following years.

Employment growth will be very moderate in 2015 and next year, but slow growth in the labour supply as well will check the increase in unemployment, which will probably peak in 2016 at 4.1 per cent. The production upswing will also gradually be reflected in higher

Box 1 Restructuring after the fall in oil prices

In the wake of the fall in oil prices and decline in petroleum-related investment, many are wondering what the macro-economic effects will be, and which industries will gain greater relative importance in the Norwegian economy going forward. These questions were discussed both in Cappelen, Eika and Prestmo (2010), which focused on adjustments in the wake of a contraction in petroleum activities due to depletion of Norwegian offshore resources, and in Cappelen, Eika and Prestmo (2013), which analysed the consequences of a permanently lower oil price.

Factors other than activity in and revenue from the petroleum industry will also influence the future mix of industries. These include increased globalisation, economic developments in other countries, differing potential for productivity improvements, shift of demand associated with preferences as we grow more prosperous and needs associated with the ageing population.

Viewed in isolation, however, the effect of lower demand from the petroleum industry will be that industries that deliver goods and services to the resource production sector will contract. Other industries, mainly other internationally exposed activities, will grow. The isolated effects of lower revenue from petroleum activities mean little in the short term. The principle underlying the fiscal rule means that only 4 per cent of the change in income leads to a change in the budget deficit compared with what would otherwise have been the case. Despite a sharp increase in the non-oil budget deficit, Norway's use of resources is still far below the chalk line drawn by the fiscal rule. It will therefore take several years before growth in the budget deficit has to be checked as a result of reduced income. When the tightening takes place, the change in relation to a scenario with continued high oil prices will be small initially, but become gradually more pronounced as the reductions in deposits in the Government Pension Fund Global build up. The slower activity will prompt lower key rates which, in conjunction with a lower oil price, will cause the krone to depreciate and thereby facilitate adjustments. A lower exchange rate will add to the weakening of the krone. Thus, market conditions and the orientation of economic policy will both help to ease the changes.

The calculations presented here are based on the assumption of a markedly lower oil price than in the years 2011–2014. They may not have any consequences for the orientation of fiscal policy within our projection period, but will be of importance for public resource consumption in the long term. However, the reduced investment in oil and gas production implies quite different impulses to the Norwegian economy than those characterising developments in recent years. The decline is taking place in parallel with increased global economic activity and a continued substantial positive impetus generated by fiscal policy. What adjustments do we envisage from 2014 up to 2018?

If we consider first the aggregate labour market balances, we now forecast that total employment will increase by 70 000 persons from 2014 to 2018. The labour force, adjusted for an expected decline in inward labour migration, will increase by a good 80 000, such that LFS unemployment increases by just over 10 000, or 0.3 percentage point. On the macroeconomic level, then, the adjustment will not be painless, but will also involve increased unemployment and a reduction in labour force participation. Some of the decline in labour force participation is attributable to an increase in the numbers in the highest age groups as a share of the working age population, since the propensity to work is lower in these age groups. As explained in our 2010 analysis, lower population growth will dampen growth in the labour force going forward, while the ageing population in the 2020s and onwards will require that increased resources are channelled into the production of healthcare services. Viewed in this light, the contraction of petroleum-related activity can be regarded as coming at a favourable time.

What changes in employment, distributed by industry, do we envisage? The decline in investment in petroleum activities up to 2018 can be forecast to lead to employment cutbacks of up to 30 000 persons when adjustments in the supplier sector have been completed, but perhaps closer to 15 000 by 2018. Our projections show an increase in overall employment of 70 000 persons from 2014 to 2018, so that employment associated with other activities will increase by about 85 000. Our calculations show that overall manufacturing employment will remain roughly unchanged in the years ahead. The decline in the supplier industry will thus be offset by growth in other manufacturing activity. We project overall employment growth in other goods production excluding agriculture at just under 20 000, mostly in building and construction. Growth in housing and construction investment will contribute to this. In private services, including retail trade and transport, which will also be negatively impacted by the decline in petroleum investment, growth in numbers employed of just under 20 000 is projected. Thus the changes here will mainly lead to these industries growing less in terms of employment than they have done since 2000. Employment in public services is projected to increase by some 35 000 persons.

References:

Cappelen, Ådne, Torbjørn Eika and Joakim Prestmo (2010): *Nedbyggingen av petroleumsvirksomheten: Hvor store blir utfordringene for norsk økonomi? [Contraction of the petroleum industry: how great will the challenges to the Norwegian economy be?]* Reports 2010/46

Cappelen, Ådne, Torbjørn Eika and Joakim Prestmo (2013): *Petroleumsvirksomhetens virkning på norsk økonomi og lønnsdannelse. Framtidig nedbygging og følsomhet for oljeprissjokk. [The effect of petroleum activities on the Norwegian economy and wage formation. Future contraction and sensitivity to oil price shocks].* Reports 59/2013

employment, but growth in the labour supply will curb the reduction in unemployment. In 2015, wage growth may fall to below 3 per cent as a result of labour market weakening. The depreciation of the krone will contribute to a rise in inflation, but CPI inflation will be restrained by lower energy prices to a projected 2.3 per cent. Given this outcome, real wage growth will be 0.6 per cent this year. We assume that the krone will undergo a slight general strengthening in the period ahead. 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 fall in inflation over the next few years, to under 2 per cent in 2017 and 2018. Continued low nominal wage growth will nonetheless result in real wage growth that gradually increases to 1.7 per cent in 2018.

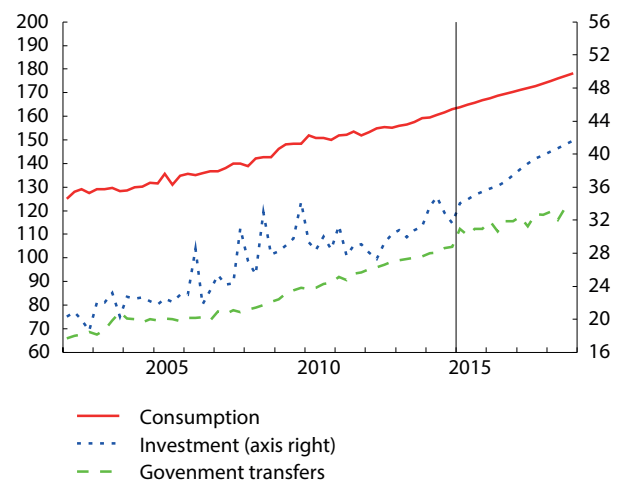
During a ten-year period up to 2013, the Norwegian economy was subject to growing impulses from petroleum activities, both indirectly via the fiscal rule and directly through increased demand from the petroleum industry. A strong krone and high cost inflation gave rise to what many referred to as the two-track Norwegian economy. Traditional exposed industries struggled, while more sheltered industries flourished, such as the petroleum industry and petroleum supplier industry. In 2014, these tendencies waned, and although fiscal policy may still generate counter-impulses, the reversal of the two track economy will gather pace in 2015. Business sector developments going forward will be characterised by a contraction in the supplier industry, relatively weak developments in many sheltered industries and fairly high growth in traditional exposed industries. These development tendencies are described in Box 1 on adjustment after the fall in oil prices.

Fiscal policy

The rate of growth in consumption and gross general government investment increased somewhat in 2014 compared with previous years. In conjunction with reduced taxes, this contributed to the strongest fiscal policy impulse since the financial crisis, measured as developments in the structural, non-oil budget deficit (SNOBD) as a share of trend mainland GDP. General government consumption increased by 2.5 per cent last year, while gross investment increased by a full 8.5 per cent according to preliminary calculations. Public transfers to households increased by as much as 3.8 per cent in real terms, and also contributed appreciably to stimulating economic development. The combined growth in real terms of these three large expenditure components was 3.6 per cent from 2013 to 2014.

The budget settlement between the Government and the coalition parties in the Storting implies that the expansionary impulses will be maintained in 2015 approximately as in the previous year. The budget resolution implies that growth in general government spending will increase slightly more than the estimate in the National Budget for 2015, while the investment projection will not be appreciably affected. A smaller

Figure 2. **General government. Seasonally adjusted, billion 2012-kr., quarterly**



Source: Statistics Norway.

reduction in taxes than the original government proposal will have an offsetting effect. We now expect general government spending growth in 2015 to be approximately on a par with growth in 2014, while growth in gross investment will be lower than in 2014, and is projected to be just over 5 per cent. Transfers to households will increase substantially from 2014 to 2015 as a consequence of changes in the rules for disability benefits, as a result of which they are now taxed at the same rate as wage income. This factor in isolation means that both transfers and taxes will increase by NOK 12 billion more than if the rules from 2014 had been maintained. After adjusting for this change in rules, we assume that the real value of transfers will increase by a good 3 per cent in 2015. A somewhat weaker labour market going forward will contribute to the increase. We estimate combined real growth in consumption, investment and transfers at just below 3 per cent from 2014 to 2015. Added to this come lower taxes, with the result that fiscal policy will push mainland economic growth up appreciably compared with assumed trend growth. The fiscal impulse, measured as the change in SNOBD as a share of trend mainland GDP, is 0.6 percentage point, i.e. approximately the same size in 2015 as in 2014.

We assume that the general lines of fiscal policy for 2014 and 2015 will be maintained in 2016 and 2017. Tax reductions are assumed to be in line with the changes in the current year. Growth in general government consumption and gross investment is assumed to be approximately on a par with this year, with the exception of higher investment in military equipment in the form of fighter aircraft. Two aircraft are to be purchased in both 2015 and 2016 for use in training in the USA. From 2017 and up to and including 2024, six fighter aircraft are to be delivered to Norway each year. The total investment costs are projected to be about NOK 68 billion (in 2015 money) for 52 fighter aircraft. However, the cost estimate was based on a far weaker dollar exchange rate than now looks likely to be the case. Exchange rate movements are shrouded in

uncertainty, and the investment costs may be appreciably higher than originally assumed. The increased growth in general government gross investment in 2017 is thus due to increased military investment. Growth in investment for non-military purposes in 2017 is projected to be approximately as in the two preceding years. Consumption growth is assumed to remain close to 2.5 per cent annually except in 2017, when it will be lower because of variation in the numbers of business days in the different years.

In this report, we also present projections for 2018. We have largely continued the projections for growth in public consumption and investment from previous years, but have not assumed a further reduction in the tax level. In the period 2015–2018, when oil prices are appreciably lower than previously, the Government Pension Fund Global will grow less than assumed earlier. We therefore forecast that at the beginning of 2018, SNOBD as a share of the Fund's value will be 3 per cent, compared with 2.6 per cent in 2015.

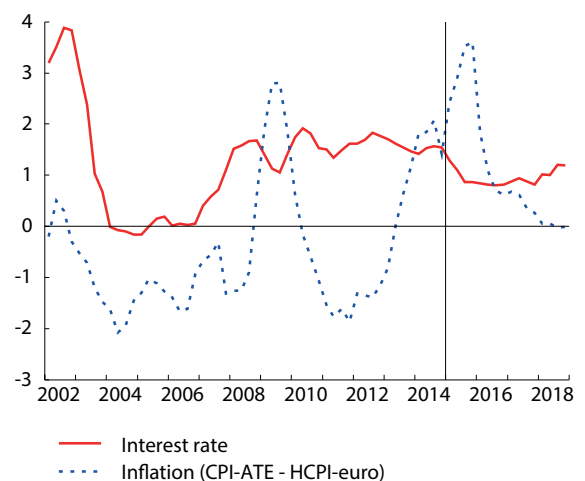
Monetary policy

In December 2014, the key policy rate was reduced to 1.25 per cent, after remaining unchanged at 1.5 per cent since March 2012. The key rate has accordingly reverted to the record-low level of summer 2009. Three-month money market rates were around 1.7 per cent for the two years preceding the interest rate cut in December. This was also the annualised rate in 2014. This is the lowest level we have observed as an annual average. Since the cut, money market rates have been around 1.4 per cent.

From the beginning of 2014 and up to May, the krone strengthened somewhat. It then depreciated until mid-December, with half of the weakening taking place in the first half of December. Because the krone also weakened appreciably through the second half of 2013, the import-weighted value of the Norwegian krone fell by 5.3 per cent as an annual average in 2014. The krone has strengthened again since mid-December last year but measured by the import-weighted krone exchange rate, it is still weaker than in the first 11 months of 2014. The euro exchange rate moved from 8.10 to 9.50 from mid-June to 16 December, while the dollar exchange rate moved during the same period from 6.00 to 7.60. The dollar has subsequently strengthened somewhat more, while at the beginning of March this year the euro had fallen to about 8.60.

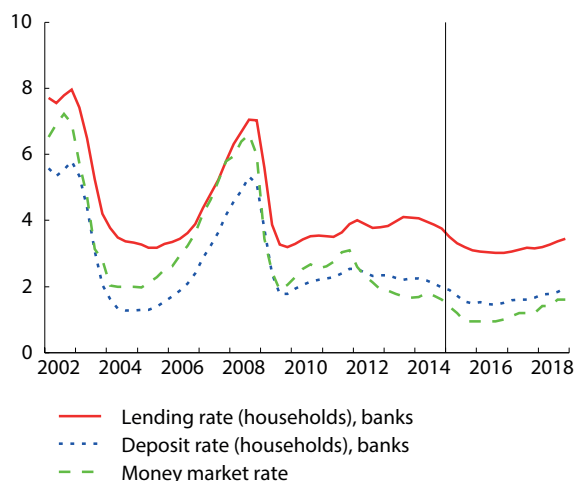
Interest rates facing households fell through 2014. Whereas the average interest rate on credit loans secured on dwellings offered by banks and mortgage companies was 4.08 at the end of 2013, it had fallen to 3.64 per cent by the end of 2014. Interest rates on bank deposits fell also through 2014, from 2.24 per cent to 1.86 per cent. New monthly interest rate statistics show that the largest interest rate reductions last year took place in June and December. The monthly statistics also show that the fall in lending rates has continued

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



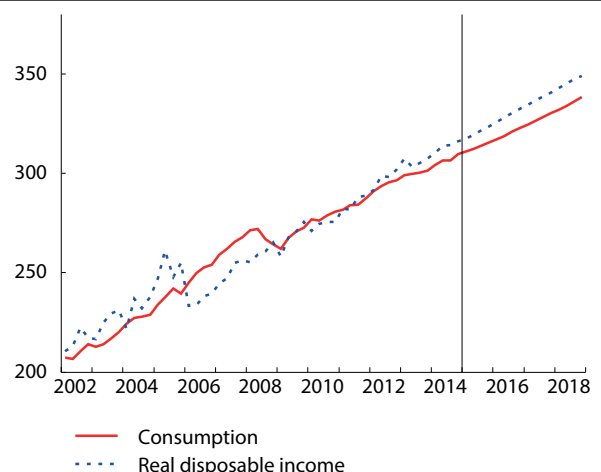
Source: Norges Bank and Statistics Norway.

Figure 4. Norwegian interest rates. Per cent



Source: Norges Bank and Statistics Norway.

Figure 5. Exchange rates



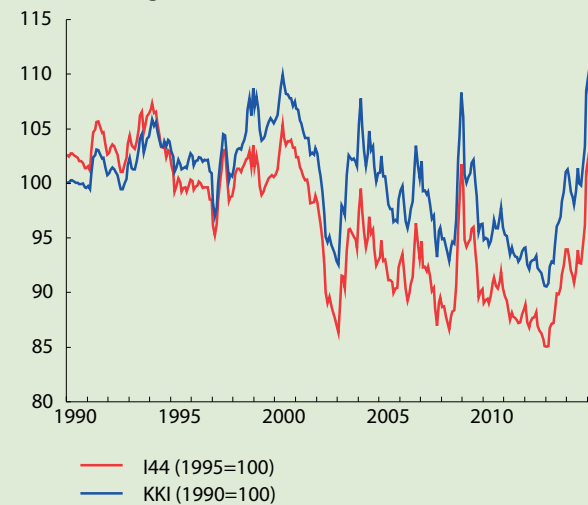
Source: Statistics Norway.

Box 2 Import-weighted krone exchange rate and trade-weighted exchange rate index

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 that are not members of the EU monetary union. Thus the krone-euro exchange rate provides limited information about the international value of the Norwegian krone. It is therefore important to supplement with alternative exchange rate indicators that provide a more accurate expression of the breadth of our trading pattern. Examples of these are the trade-weighted exchange rate index and the import-weighted exchange rate. 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 imports of traditional goods from Norway's 44 most important trading partners. Both indices are structured such that high values mean a weak krone and low values a strong krone.

In the figure, both indices show that the krone has been generally stronger since around 2000 than in the 1990s, that it was record-strong in early 2013 and that it has since depreciated 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 due to the fact that the krone strengthened considerably more in relation to countries

Import-weighted krone exchange rate and trade-weighted krone exchange rate



Kilde: Macrobond

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

From January 2013 to January 2015, the krone depreciated by 20.2 per cent measured by the import-weighted exchange rate and by 21.2 per cent measured by the trade-weighted exchange rate. 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 3 per cent measured in terms of both currency baskets.

into 2015. The reduction in average interest rates on outstanding credit loans was in fact only 0.05 per cent in January this year. But the interest rate for new credit loans secured on dwellings taken out in January averaged 3.17 per cent, compared with 3.40 per cent on similar loans taken out in December 2014.

Despite low interest rates, debt growth has not been particularly high. Growth in private and municipal sector debt, measured by the credit indicator gross domestic debt (C2), was around 7 per cent in 2012, and around 6 per cent in 2013. This credit indicator fell further through 2014, and in the three-month period November 2014–January 2015, private and municipal sector debt was about 5 per cent higher than in the previous three-month period, seasonally adjusted and calculated as an annual rate. Household debt growth has been over 6 per cent since summer 2010 and until late 2014, but in the three-month period November 2014–January 2015 household debt, seasonally adjusted and annualised, was only 5.3 per cent higher than

in the previous three-month period. Debt growth in non-financial enterprises has increased through 2014, and was 4.4 per cent for the last three-month period.

In light of prospects of slow growth combined with increased unemployment and relatively low inflation, we assume that there will be further interest rate cuts this year. The first interest rate cut will probably come at the monetary meeting on 19 March already and we assume that there will be one further cut before the summer. The key policy rate will then be reduced to 0.75 per cent, while money market rates will be down to 1.0 per cent. We assume that the economic situation will improve through 2016, but that the key rate will not be raised before 2017 and 2018. Money market rates are assumed to increase to 1.6 per cent at the end of 2018.

Lower money market rates are expected to prompt banks to cut their interest rates further. According to our projections, interest on credit loans secured on dwellings may come down to 3.0 per cent in 2016

before edging up towards 3.5 per cent at the end of 2018.

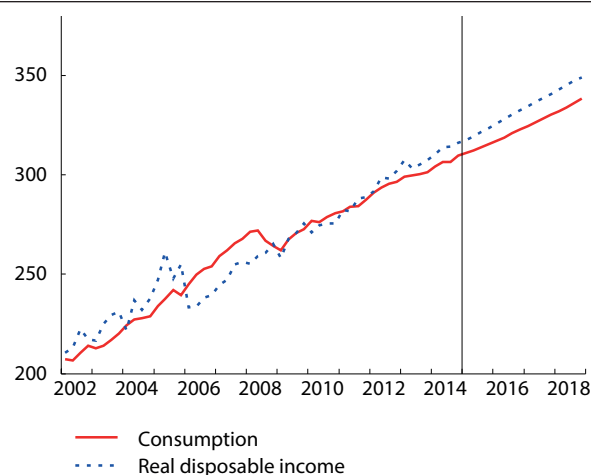
In its advice on countercyclical capital buffers in banks, Norges Bank has placed emphasis on the ratio between credit and GDP. This ratio lies at a high level, but credit growth has been reduced in recent years. Norges Bank has also placed emphasis on property price movements. In December 2014, Norges Bank recommended that the buffer requirement be maintained unchanged. At the same time, the Bank wrote that if house prices should continue to rise markedly faster than household income, with a further build-up in financial imbalances, it will be appropriate to advise the Ministry to raise the level of the countercyclical capital buffer. As house prices have risen considerably since Norges Bank issued this advice, it is likely that Norges Bank will recommend that the buffer be raised now in March. In December 2014, Finanstilsynet (the Financial Supervisory Authority of Norway) advised the Ministry of Finance to increase the countercyclical buffer by 0.5 percentage point, to 1.5 per cent, and will no doubt repeat the recommendation that the Ministry increase the requirement now. It is not clear how much significance a change in the buffer requirement will have for banks' adaptation. We have based our projections on the assumption that a change in the requirement will have little effect on banks' interest rates and lending, but it depends to some extent on how inter-bank competition is affected by an increase in the requirement. If it results in increased lending rates and reduced lending growth, it may curb house price developments in the near term.

The Ministry of Finance recently asked Finanstilsynet to consider whether it is appropriate to take steps to restrain the rise in credit and house prices. The Ministry of Finance will probably assess the proposals from Finanstilsynet at the time when the countercyclical capital buffer requirement is set. Tightening up the equity capital requirement for mortgage customers may be quite as effective a measure for restraining the rise in credit and house prices as increasing the buffer capital requirement for banks.

We believe that the krone will strengthen in the near term, bringing the euro exchange rate down to 8.30 in early 2016. We have assumed that exchange rates will remain unchanged after that. The anticipated appreciation will be due partly to a reversal of some of the weakening, which we believe to be greater than indicated by the fundamentals, and partly to the rise in oil prices that we believe will take place in the near term, in line with market expectations.

On an annual basis, we will see a weakening of the krone from last year to this year of about 2 per cent measured against the euro and about 4.7 per cent measured by the import-weighted krone exchange rate. The annualised weakening is due to the weakening of the krone through 2014 being greater than the strengthening we

Figure 6. **Income and consumption in households. Seasonally adjusted, billion 2012-kr., quarterly**



Source: Statistics Norway.

project through the current year. Next year, the krone will appreciate by close to 2.5 per cent on an annual basis, measured both against the euro and in terms of the import-weighted krone exchange rate.

Household income, consumption and saving

The real disposable income of households (including non-profit organisations) rose by 2.5 per cent in 2014, slightly less than the previous year. According to seasonally-adjusted figures, this annual growth is a result of a strong increase in real disposable income through the first half of the year, and correspondingly weak growth through the second half of the year. This reflects developments in wage income (annual wages and employment) through 2014. Even though annual wage growth was lower in 2014 than for a long time, employment growth remained at a fairly high level, at 1.1 per cent. Wage income thus made a major contribution to income growth last year of close to 2 percentage points, or about 1 percentage point after income and wealth tax is deducted. This is somewhat less than in 2013, and less than half the contribution of wage income to growth in 2012, when employment increased by a full 2.1 per cent. At the same time, annual wage growth was 4 per cent. Higher public transfers, mainly as a result of increased disbursements of pensions and sickness benefit, were also relatively large factors in income growth in 2014. However, net interest income did not make a contribution of any significance to growth. Inflation of 2.4 per cent, measured by the consumption deflator in the National Accounts, curbed growth in real income last year.

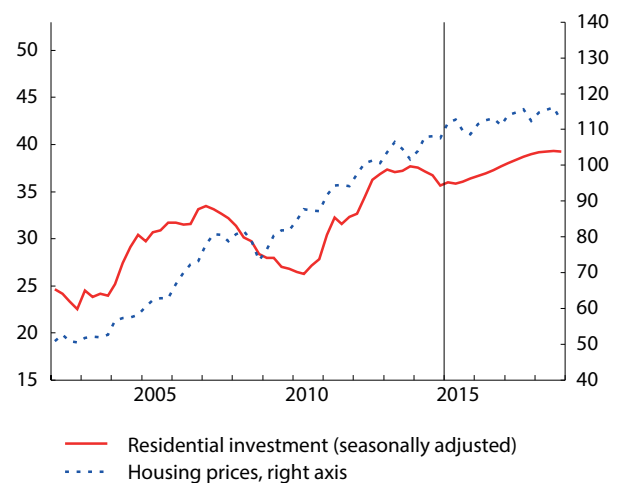
Consumption growth has been fairly weak in the years following the financial crisis, and has been generally weaker than real income growth. Consumption growth in 2014 was just over 2 per cent, while goods consumption rose by only 1.0 per cent. Consumption of food, beverages, clothing and footwear pushed up growth. However, purchases of vehicles only rose slightly last

year. Other important groups of consumer goods like furniture and white goods also moved on a weak trend last year, with a decline of almost 2 per cent. Seasonally-adjusted figures show that vehicle purchases fell considerably through the second and third quarters, and purchases of furniture and white goods fell sharply in the third quarter. In January, the goods consumption index fell by a seasonally-adjusted 0.3 per cent, following particularly weak developments in consumption of electricity and purchases of own vehicles and household articles. In combination, this points to weak consumption growth in the first quarter of 2015. Service consumption rose by 3.1 per cent in 2014, with housing consumption, cultural and leisure services, hotel and restaurant services and financial services making a particular contribution to growth. Norwegians' spending abroad only rose by 4.4 per cent last year, compared with as much as 11.0 and 7.8 per cent in 2012 and 2013, respectively. The depreciation of the krone through 2014, which has made it relatively more expensive to shop abroad, has certainly curbed growth substantially compared with the preceding years.

Household saving in the form of financial and housing investment, calculated as a share of disposable income, has risen by about 4.5 percentage points since the 2008 financial crisis to a level of 8.3 per cent in 2014. Since the financial crisis, saving has increased more than can be explained by our model. One reason may be an increase in precautionary saving, which is not captured by the model. This means that households reduce consumption when they view the future of both their own financial situation and the national economy as uncertain. However, seasonally-adjusted figures show that in the last three quarters of 2014 the saving ratio was stable at near 8.5 per cent, an indication that precautionary saving is no longer increasing. The increase 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 household income, housing wealth and interest rates are important drivers of consumption. Public transfers in particular are expected to continue to make a relatively clear contribution to real disposable income growth during the projection period. Wage income will move on a weak trend in 2015, as a result of weak employment and annual wage growth, but increasing employment growth will lead to higher wage income later in the projection period. Net interest income will make a relatively small contribution to growth. Slightly higher inflation in 2015 than in 2014 will curb developments in real income, while low inflation in 2016 to 2018 will have the opposite effect. We expect annual growth in real disposable income of just over 2 per cent in 2015, just under 3 per cent next year, and about 2.5 per cent in both 2017 and 2018. Weak developments in real house prices and even a fall in the period 2016 to 2018 will curb consumption through the projection period as housing wealth declines.

Figure 7. Residential market. Left axis adj. indices. 2012=100. Right axis per cent



Source: Statistics Norway.

Our projections for income, housing wealth and interest rates indicate that consumption growth this year and next will be just over 2 per cent, approximately the same as last year, and will subsequently rise to close to 2.5 per cent in 2017 and 2018. We anticipate that the saving ratio will not increase noticeably this year, but that weak developments in real house prices may result in it edging up further in the period 2016 to 2018 to a level of just over 9 per cent. This is historically high, and the saving ratio has not been at a similar, albeit slightly higher level, since 2005. The saving ratio at that time was 9.7 per cent as a result of high, tax-motivated share dividend disbursements.

House prices and housing investment

House prices were 2.7 per cent higher in 2014 than the previous year. The real rise in house prices, where consumer price inflation is deducted, was 0.7 per cent. These figures hide twelve-month growth that declined through 2013 and rose through 2014. In the first quarter of 2014, house prices were at the same level as in the first quarter of 2013, while they were 5.8 per cent higher in the fourth quarter than at the same time the previous year, according to Statistics Norway's house price index. This tendency is consistent with the monthly figures for house prices from Norsk Eiendom (the Norwegian Property Federation), where seasonally-adjusted prices have risen every month since February 2014.

Recent figures from Norsk Eiendom show a continued strong rise in house prices into 2015. The seasonally-adjusted index rose by 0.6 per cent in January and by 0.5 per cent in February. Given unchanged house prices through the remainder of the year, house prices in 2015 as an annual average will end up 5.4 per cent above the 2014 level.

According to our model, an increase in household disposable income and lower interest rates has a positive

Table 2. **Main economic indicators 2013-2017. Accounts and forecasts. Percentage change from previous year unless otherwise noted**

	Accounts 2014	2015			Forecasts			2017		2018
		SN	NB	MoF	SN	NB	SN	NB	SN	
Demand and output										
Consumption in households etc.	2.1	2.1	2	2.7	2.2	2 1/4	2.4	2 3/4	2.3	
General government consumption	2.5	2.5	2 1/2	2.2	2.4	..	1.8	..	2.5	
Gross fixed investment	1.2	-3.6	..	-0.9	1.1	..	3.5	..	3.2	
Extraction and transport via pipelines ¹	0.0	-15.9	-15	-8.0	-8.1	-5	-2.3	-2 1/2	-0.1	
Mainland Norway	1.8	1.4	3	..	4.2	..	5.3	..	3.9	
Industries	0.3	1.5	..	1.2	4.8	..	4.5	..	4.8	
Housing	-1.6	-2.2	..	3.4	3.2	..	4.1	..	1.9	
General government	8.5	5.1	..	3.2	4.3	..	7.9	..	4.4	
Demand from Mainland Norway ²	2.1	2.1	2 1/4	2.5	2.7	3	2.9	2 3/4	2.7	
Stockbuilding ³	0.4	0.2	..	..	0.2	..	-0.5	..	0.0
Exports	1.7	1.7	..	2.2	1.7	..	1.6	..	2.0	
Crude oil and natural gas	0.9	-0.5	..	0.6	-0.1	..	-0.2	..	0.3	
Traditional goods ⁴	2.7	5.1	4 1/2	3.6	3.8	2 1/4	3.8	3 1/2	3.9	
Imports	1.6	1.8	2	2.5	2.8	..	1.3	..	2.6	
Traditional goods	0.0	1.3	..	3.6	2.8	..	4.0	..	3.9	
Gross domestic product	2.2	0.9	1 1/4	1.6	1.7	1 3/4	1.9	2 1/4	2.2	
Mainland Norway	2.3	1.1	1 1/2	2.0	2.2	2 1/4	2.4	2 1/2	2.7	
Labour market										
Employed persons	1.1	0.2	1/2	0.8	0.3	3/4	1.0	1 1/4	1.0	
Unemployment rate (level)	3.5	3.9	3 3/4	3.6	4.1	4	3.9	3 3/4	3.8	
Prices and wages										
Annual earnings	3.1	2.9	3 1/4	3 1/4	3.1	3 1/2	3.1	4	3.4	
Consumer price index (CPI)	2.0	2.3	2 1/2	2.1	2.0	2 3/4	1.7	2 1/2	1.7	
CPI-ATE ⁵	2.4	2.7	2 1/2	2.1	1.9	2 3/4	1.7	2 1/2	1.7	
Export prices, traditional goods	4.1	2.6	..	..	1.7	..	1.8	..	2.0
Import prices, traditional goods	5.5	3.4	..	..	1.0	..	1.4	..	1.5
Housing prices	2.7	3.6	..	..	1.2	..	1.9	..	0.4
Balance of payment										
Current balance (bill. NOK)	266.7	162.3	..	..	171.5	..	200.8	..	210.0
Current balance (per cent of GDP)	8.7	5.2	..	11.7	5.3	..	5.9	..	6.0	
Memorandum items:										
Household savings ratio (level)	8.3	8.5	..	9.5	8.9	..	9.0	..	9.2	
Money market rate (level)	1.7	1.1	1.4	1.7	1.0	1.4	1.2	..	1.5	
Lending rate, credit loans (level) ⁶	3.9	3.3	..	..	3.0	..	3.1	..	3.3
Crude oil price NOK (level) ⁷	621	460	..	650	502	..	525	..	540	
Export markets indicator	4.2	4.2	..	..	4.8	..	5.6	..	6.2
Importweighted krone exchange rate (44 countries) ⁸	5.3	4.7	2.9	1.0	-2.3	-3.1	-0.2	-1.3	0.0	

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 (2014-2015), (MoF), Norges Bank, Pengepolitisk rapport 4/2014 (NB).

influence on house prices, while an increased supply of new dwellings curbs prices. At the same time, household borrowing and house prices mutually reinforce each other. The rise in house prices is curbed by real house prices now being higher than the economic fundamentals would imply, but positively affected by real debt being lower than house price levels and real interest rates would indicate. The latter also stimulates real debt growth.

Lower housing investment in 2014 than in 2013 has provided a weaker stimulus to growth in gross household debt, and the rate of growth in gross household debt has declined slightly through 2014. Despite continued weak growth impulses from housing investment and weaker developments in real income in 2015, a decline in real lending rates to very low levels will lead to credit growth being close to 6.5 per cent in 2015. In subsequent years, we expect credit growth to be reduced to just over 5.5 per cent as real interest rates rise somewhat later in the projection period. Debt adjusted for consumer price inflation will increase by about 4 per cent in real terms every year throughout the projection period.

In the short-term, house prices will be affected by changes in household expectations regarding developments in both their own financial situation and the national economy. While the consumer confidence indicator from TNS Gallup and Finance Norway showed increasing optimism through the first three quarters of 2014, the index declined in the fourth quarter of 2014 and the first quarter of this year. The change is particularly pronounced for households' perception of the Norwegian economy at present and one year ahead.

We have assumed that households will continue to view the financial outlook as relatively weak in the immediate future and that the consumer confidence indicator will remain at the present low level also in the second quarter of 2015. This will provide a negative stimulus to developments in house prices during the remainder of 2015, although we believe that sentiment will change, so that the indicator rises slightly towards the end of 2015. We expect slightly weaker developments in household real disposable income in 2015, while real gross debt growth is buoyed up by low real interest rates. House prices are expected to rise by about 3.5 per cent annually in 2015. This corresponds to a real increase of just over 1 per cent. In light of the somewhat stronger rise in house prices seen for over 12 months, we project a weak decline in nominal house prices subsequently in 2015. We expect the authorities to take steps to reduce growth in lending to households, which will contribute to this development. As a result of higher real wage growth and continued real credit growth, we foresee that the rise in house prices will pick up slightly again into 2016, so that the annual rise is just over 1 per cent. However, this is lower than the general inflation of almost 2 per cent. We expect the increase in house prices to be close to 2 per cent in 2017 and about 0.5 per cent

in 2018. On the whole, these projections correspond to real house prices being virtually unchanged from 2014 to 2018.

Housing investment showed a falling tendency through 2014, after peaking at a record-high level in 2013. This tendency was caused by a decline in housing starts, while investment in existing dwellings, which represents 30 per cent of total housing investment, rose in 2014. As an annual average, investment was 1.6 per cent lower in 2014 than the previous year. The figures for housing starts are very volatile, but they do not indicate any increase in investment in the near-term. According to the Norwegian Home Builders' Association, sales of new dwellings have picked up since the summer of 2014, following a decline through the first half of the year. Sales in January this year were considerably higher than in the same month in 2014, but were nevertheless lower than in January 2013. We project that housing investment will fall by just over 2 per cent in 2015. In the last three years of the projection period we expect a change to increased housing investment, with average annual growth of 3 per cent, because housing starts are stimulated by the continuing high level of house prices and the fact that the rise in house prices will be slightly higher than the increase in building costs early on in the period.

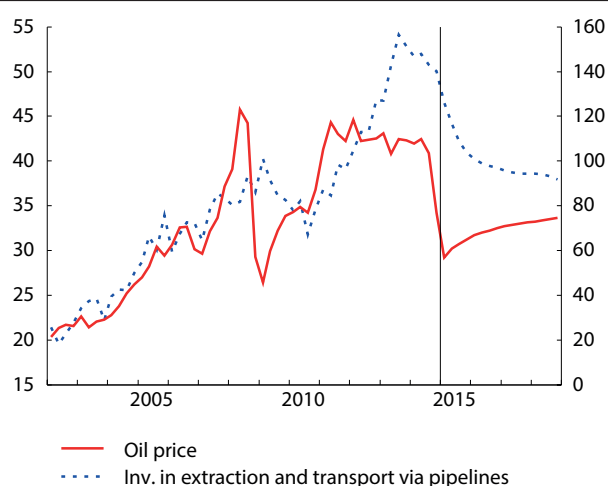
Petroleum investment

Petroleum investment peaked in the third quarter of 2013, and fell through 2014. As a result of strong growth during the first quarters of 2013, the investment level in 2014 as a whole was nevertheless the same as in the previous year. The decline in investment through the last 18 months is evenly distributed between production platforms on the one hand and drilling rigs and drilling, petroleum exploration and pipelines on the other.

Investment had thus begun to slow before oil prices began to decline. High cost inflation and a focus on improved profitability led to oil companies tightening their investment plans. Despite the decline through 2014, the investment level remains at a historically high level, resulting in large deliveries from the mainland. We estimate that 150 000 employees in Norway worked with investment deliveries to the petroleum sector in 2014; see Box 5.

The number of exploration wells declined slightly in 2014. A stronger decline is expected this year and next due to low oil prices. The decline in exploration will be markedly larger than after the fall in oil prices in 2008–2009. At the time, oil prices picked up quickly following a sharp fall through the winter. A more moderate price increase for the next few years will keep exploration drilling from rising to the same level as last year. Production drilling is important in order to maintain production. We believe that this activity will be less affected by low oil and gas prices than exploration drilling.

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



Source: Statistics Norway.

At the same time as several fields are completed, a gradual reduction in the number of new field developments is expected. This will contribute to a clear decline in investment in fields. Several upgrades and extensions of operating fields have also been completed, which also points to lower investment this year and next year.

Investment in the near term will be maintained by major investments associated with the development of the Johan Sverdrup field. The substantial investment in this field will nevertheless not prevent a clear decline in investment in the near term, but the decline will diminish slightly during the projection period.

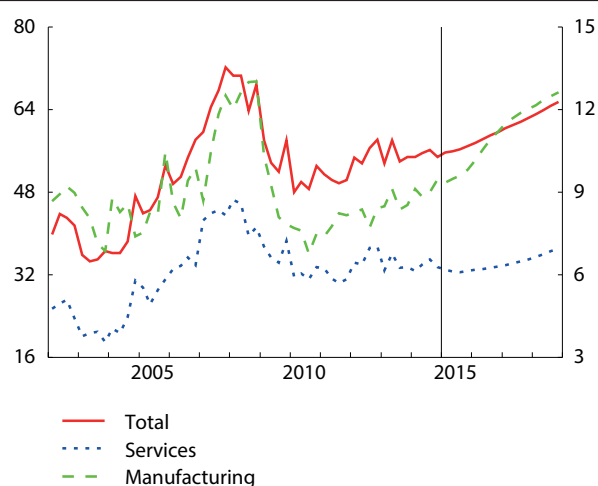
Oil and gas production fell markedly during the previous decade, but appears to have stabilised. It increased slightly from 2013 to 2014, measured in energy equivalent. Virtually unchanged production is expected in the next few years. The development of several new fields has helped prevent a further decline.

The decline in oil prices last year was not reflected noticeably in export prices for oil and gas before the fourth quarter. The decline came fairly late in the year, and the krone depreciated at the same time as the fall in oil prices. Oil prices in USD are expected to drop by close to 30 per cent from 2014 to 2015, while the export price for oil, measured in Norwegian kroner is expected to fall by about 20 per cent this year owing to the weak krone. Oil prices have recovered slightly during the past month. We expect oil prices in USD to remain low, albeit rising weakly in the near term. A continued strong USD exchange rate will dampen the decline in the profitability of potential projects and the fall in government income from petroleum activities.

Business investment

Since the decline in business investment came to a halt in the first half of 2010 in the wake of the financial crisis, underlying growth has been moderate. The

Figure 9. Investments. Mainland Norway. Seasonally adjusted, billion 2012-kr., quarterly



Source: Statistics Norway.

2.4 per cent decline from the third to the fourth quarters of 2014 is in contrast to investment growth during the year. From 2013 to 2014, business investment rose by 0.3 per cent.

The increase in business investment in recent years can be mainly attributed to petroleum-related activities like the shipbuilding and transport equipment industry, manufacture of metal goods, electrical equipment and machinery, and repair and installation of machinery and equipment. Other manufacturing segments also contributed to growth from 2013 to 2014. During this period, manufacturing investment rose by 5.3 per cent, and a sharp increase in investment in the food industry was a major factor in the increase. Petroleum refinement, chemicals and pharmaceuticals also contributed to the upswing, and at the end of last year these sectors were responsible for most of the manufacturing growth. Investment in services has remained at the same level since 2012. From the third to the fourth quarters of last year, investment in services declined by 4.5 per cent, after rising in the previous two quarters. Much of this change can be traced to developments in investments in transport other than shipping.

Statistics Norway's latest survey of manufacturing companies' future investment intentions points to increased investment. The companies now indicate growth in 2015 at about the same level as last year. This applies particularly to food and chemicals, where high growth has been recorded recently and the projections for growth have been revised up.

Following many years of strong growth, traditional investment in power supply – excluding expenses for research and development (R&D) – is at the same level as corresponding investment in manufacturing, and the growth is expected to continue. In the main revision of the National Accounts in 2014, R&D was reclassified from intermediate inputs to investment, see the discussion in Economic Survey 2/2014. Reported projections

Box 3 Direct and indirect import shares

Consumption of goods and services can be divided into final deliveries – i.e. consumption, investment and exports – and intermediate inputs, which constitute a production factor. Some of the final deliveries are covered directly through imports, while the remainder are delivered by Norwegian producers. However, imported intermediate inputs are also used in Norwegian production. The share that these inputs constitute of a final delivery is defined as the indirect import share. It includes imported intermediate inputs from all vendors associated with the delivery in question. The total share of imports in a final delivery is thus higher than the direct share. Because the import shares are different, changes in the various final delivery components will generate different impulses to Norwegian production.

Import shares are calculated by studying the effects on the import of the individual final delivery component in a static matrix model. This means excluding the effects of changes in relative prices, the ripple effects of changes in revenue earning, the need for changes in production capacity (investment) and possible effects on interest and exchange rates. The import shares in the table have been calculated for 2012, which is the last year for which final national accounts figures are available.

Import shares

Exports account for the lowest direct import share of the main groups of final delivery categories. However, when indirect imports are included as well, the import share for exports is close to the average for final deliveries. Investment has with a clear margin the highest import shares, both direct and total.

There are large differences between sub-groups of final deliveries. The direct import shares for investments in the form of buildings and infrastructure are moderate. The indirect import shares are relatively high, however. As regards other types of investment: machinery, oil platforms, drilling and vehicles – direct imports account for about a third, while total imports constitute slightly under half of these investments. Broken down by industry, investment in shipping has the highest total import share, at 62 per cent. The import share of petroleum-related activities decreased appreciably in 2012, but is higher than the average for investments as a whole, while housing investment is lowest by a clear margin.

Half of the final deliveries are associated with consumption, Public consumption, which consists largely of labour costs, is the component with clearly the lowest total import share. Within household consumption there are major variations in the import shares of the different product categories.

Norwegians' consumption abroad is naturally regarded as a direct import in its entirety. "Purchase of own vehicles" and "miscellaneous goods" stand out with high direct import shares. As very few cars are produced in Norway, the total import share for own vehicles of 34 per cent seems surprisingly low. The explanation lies in dealer mark-ups, and in the high level of excise duty on these goods. Dealer mark-ups and excise duty account for approximately two thirds of the expenses associated with car purchases. The import

share is highest for the group "miscellaneous goods". This group includes clothing and footwear, consumer electronics and furniture. Energy products are mainly 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 imported from neighbouring countries. In all, 16 per cent of the energy products in household consumption are imported.

There are large variations in the import shares of exports. Exports of shipping 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 can be largely attributed to the fact that a substantial share of the production value consists of petroleum rent.

Import shares. 2012

	Share ^{1,2}	Direct	Indirect	Total
Total final deliveries	1.0	9.8	13.3	23.0
Consumption	0.493	12.5	9.6	22.1
Consumption by households and non-profit org. ³	0.320	19.2	10.0	29.2
Food products and beverages	0.049	14.4	14.6	29.0
Energy products etc.	0.022	10.7	5.2	15.9
Own vehicles	0.016	31.7	4.7	36.4
Misc. goods	0.062	37.4	9.0	46.4
Housing	0.052	0.0	6.7	6.7
Other services	0.108	2.8	15.8	18.6
Norwegians' consumption abroad	0.021	100.0	0.0	100.0
General government	0.170	0.1	8.6	8.7
New investment	0.181	17.0	18.0	35.0
By type:				
Buildings and infrastructure	0.070	0.7	20.6	21.3
Ships	0.005	51.7	15.5	67.2
Other types	0.097	26.8	16.3	43.1
By industry:				
Mainland	0.131	14.7	17.4	32.1
Manufacturing	0.009	29.5	12.8	42.3
Other goods-producing industries	0.012	27.4	11.4	38.8
General government	0.032	10.1	17.5	27.6
Housing	0.039	0.7	20.6	21.3
Other service industries	0.037	24.2	15.8	40.0
Production and pipeline transport	0.051	17.3	21.9	39.2
Shipping	0.002	50.7	15.3	66.0
Exports	0.321	1.5	16.2	17.7
Traditional goods	0.099	3.1	29.6	32.7
Oil and natural gas	0.164	0.0	3.2	3.2
Other goods	0.002	0.0	28.5	28.5
Shipping etc.	0.020	0.0	53.6	53.6
Other services	0.036	4.4	20.7	25.1

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.

regarding future investment indicate 10 per cent growth in 2015. The growth is mainly expected in electricity transmission and distribution, and the proposed change to the depreciation rules for wind power may lead to further growth in electricity production also in the near term.

Export-oriented industries are expected to contribute to investment growth this year, partly due to a weak krone exchange rate and lower interest rates. Moderate developments are nevertheless expected this year for investments on the whole as a result of the weak economic outlook. Increasing positive contributions from the service industries are also expected, in pace with an improved economic situation in the near term. We foresee that business investment growth will rise from 1.5 per cent in 2015 to about 5 per cent annually through the projection period.

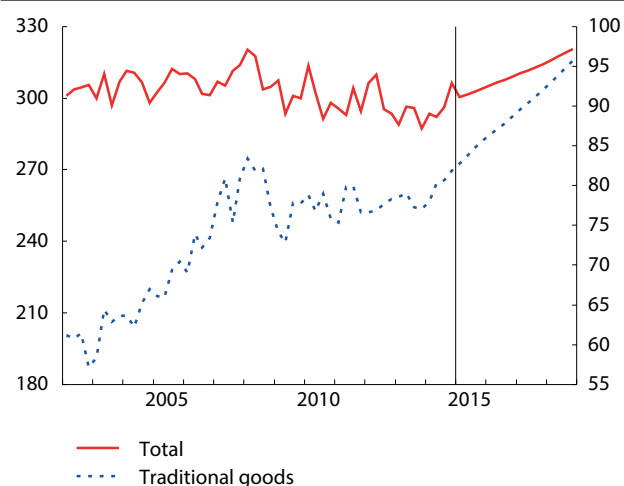
Balance of payments

Exports of traditional goods rose markedly through 2014, following a weak tendency in 2013. Seasonally-adjusted figures show that exports measured in constant prices rose by over 6 per cent from the fourth quarter of 2013 to the fourth quarter of 2014, following a slight decline through 2013. The volume of exports for the whole of 2014 was thus 2.7 per cent higher than in 2013. A broad-based increase in exports in the fourth quarter of 2014 reflects a pronounced increase in imports among several major trading partners. In 2014, high growth was reported for exports of farmed and wild fish, fishing products, electricity and metals. Exports of chemicals, pharmaceutical products, motor vehicles and machinery and equipment rose considerably also in 2013. All of these product groups are large and in combination account for over half of traditional goods exports. There has been a decline in oil and gas exports most years since the turn of the century. However, there was a slight increase in 2014.

Service exports have grown considerably since the financial crisis and the economic downturn in 2009, but the growth has shown a declining tendency. Last year's 2.6 per cent growth was the lowest for the past five years. Gross freight exports in shipping represent about one-fourth of service exports and made the largest contribution to growth last year. On the mainland, exports of business services increased most. Exports of services linked to transport, telecommunications and banking also displayed high growth in 2014, but lower than in 2013.

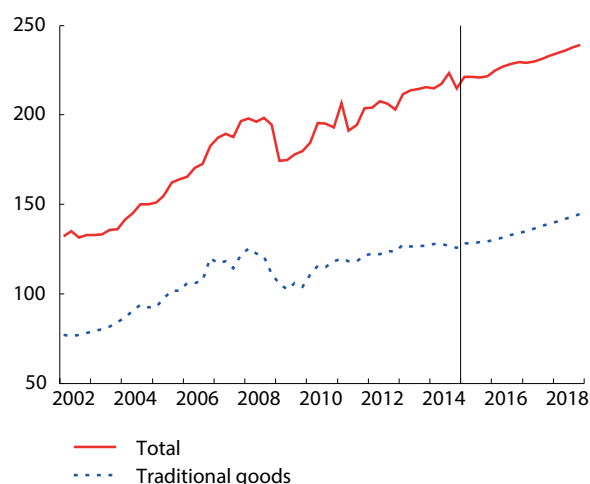
The price index for traditional goods exports in Norwegian kroner rose quickly through 2013. The rise continued in 2014, but was much slower. Annualised inflation was thus higher in 2014 than in 2013. Export prices for metals, a large group of export products, have risen for six consecutive quarters. The price index for overall service exports also rose less through 2014 than in 2013. Export prices for several large service groups have risen for many consecutive quarters. Prices

Figure 10. Exports. Seasonally adjusted, billion 2012-kr., quarter



Source: Statistics Norway.

Figure 11. Imports. Seasonally adjusted, billion 2012-kr., quarterly



Source: Statistics Norway.

for crude oil and natural gas fell by over 20 per cent from the fourth quarter of 2013 to the fourth quarter of 2014, sharply reducing the price index for overall exports.

Growth in exports of traditional goods and services depends on growth in demand in international markets and on Norwegian exporters' cost-competitiveness. We expect increasing international market growth in the near term. The depreciation of the krone has made Norwegian goods and services more competitive, which will push up export volumes this year. We project that growth in mainland exports will be between 3.5 and 4 per cent in the period 2016–2018. This is well below expected global market growth. Norwegian exporters will consequently lose market shares. Despite the improvement in cost-competitiveness in 2014 and 2015, cost levels are high, which will curb export developments. Some of the improvement will be reversed through the projection period. Oil and gas exports are determined by production. This is not likely to change much in the next few years.

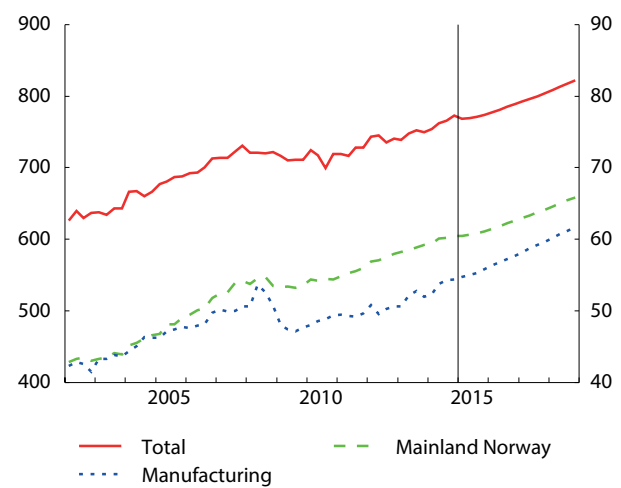
The volume of traditional import goods has not changed much in the past eight quarters. Service imports rose considerably through 2013, but levelled off in 2014. Some large groups of goods or services have increased considerably on an annual basis, while others have declined. A broad-based decline in the fourth quarter of last year may be related to the depreciation of the krone earlier in 2014. Imports of food, rubber, plastic and mineral products, computers and electronics, electrical equipment and passenger cars increased in 2014 as in 2013. A drilling rig for more than NOK 4 billion was delivered in the third quarter of last year, thereby lifting overall imports by almost 2 per cent. Norwegians' spending abroad accounts for about one-third of all service imports. Spending has risen for the past eight quarters, but growth declined sharply in 2014. The depreciation of the krone and good weather in the summer curbed growth last year.

The increase in prices for traditional goods imports was a little higher through 2014 than through 2013. We detect the impact of the weakening of the krone in rising inflation in the second half of 2014. Annual inflation more than doubled from 2013 to 2014. Import prices for services rose through 2013, but appear to have levelled off in 2014. The same is true of the price index for overall imports.

Growth in imports depends on growth in and the composition of Norwegian demand, as well as the level and path of cost-competitiveness. Reduced growth in mainland and offshore investment curbed growth in imports last year. A further decline in investment this year will have the same effect. Conversely, a strengthening of the krone will stimulate imports in the near term. Imports of a platform and two fighter aircraft this year and next and then six fighter aircraft a year will help push up imports during the projection period.

During the past two years, reduced net exports, terms of trade losses and last year's sharp fall in oil prices reduced the trade surplus to NOK 266 billion in 2014, a decline of over NOK 100 billion since 2012. This year we expect that a further terms of trade loss and lower oil prices will reduce the trade surplus to NOK 150 billion – which will be the lowest level since 1999. For 2016–2018, we have assumed a constant improvement of the terms of trade, for which a rising oil price will be important. The terms of trade gain will more than offset weaker growth in the overall export volume than in the overall import volume, and the trade surplus will rise again. In 2014, net factor income and transfers were positive for the first time since 2005. We expect to see more positive figures for the next few years. The current account surplus as a share of GDP is nevertheless expected to remain below 6 per cent during the projection period. We have not seen such a low surplus since 1999, before the beginning of the strong rise in oil prices.

Figure 12. **Gross domestic product. Seasonally adjusted , billion 2012-kr., quarterly**



Source: Statistics Norway.

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



Source: Statistics Norway.

Activity developments

In 2014, mainland GDP rose by 2.3 per cent – the same increase as the previous year. After remaining close to trend growth for one and a half years, developments in the mainland economy were more turbulent through the last three quarters of 2014. Major fluctuations in power production driven by naturally occurring factors explain some of the fluctuations, so underlying developments were smoother. Annualised growth in the two last quarters excluding electricity, gas and hot water supply, was about 1.5 per cent, following an increase of almost 4 per cent in the second quarter. The underlying tendency in the second half of the year was thus below projected trend growth of about 2¼ per cent. For the first time in a decade, value added in crude oil and natural gas production increased in 2014, so that the overall GDP rose by 2.2 per cent, i.e. about the same as mainland GDP.

Box 4 Impact of an increased fall in petroleum investment

Our projections are based on the assumption of a clear decline in petroleum investment in 2015, a slightly less pronounced decline in 2016 and a moderate decline in subsequent years. The background to the decline in 2015 is first and foremost increased focus on profitability and reduced costs. An exacerbating factor was the fall in oil prices in the second half of 2014 and into 2015. Many of the investment projects are large, and it takes a lot to stop them once they are under way. The expected decline in investment in 2016 is more directly attributable to the decline in oil prices. However, there is great uncertainty associated with developments. The oil companies are still sitting on the fence with respect to some major field developments, such as Johan Castberg, and the profitability of a number of projects for increased production from existing fields is being carefully examined. One such field is Snorre 2040. The general view appears to be that real oil prices have fallen permanently to a lower level. In such case, incentives to carry out exploration may be substantially reduced. The fall in investment demand may be somewhat dampened if prices for deliveries to the petroleum industry fall.

This box analyses the consequences of a substantial change in the scenario for petroleum investment compared with our forecasts. The annual growth rate for petroleum investment is reduced by 10 percentage points for each of the years 2016 to 2018, which means that the negative impulse wanes over time as the investment level falls in the reference path. The investment level may of course also be higher than we have assumed in our projections. The effects will then be roughly the same, but with the opposite sign. In order to examine the effects of investment changes in isolation, fiscal and monetary policy are assumed to remain unchanged.

The calculations show that this more pessimistic oil investment scenario will reduce mainland economic growth by 0.4 percentage point in each of the three coming years. This will delay the coming cyclical upturn by a good year, until some time into 2017. Unemployment will increase and remain at slightly over 4 per cent throughout the projection period. Annual wage growth will be negatively impacted and remain under or at 3.0 per cent up to and including 2018. This is too little to provide a stimulus of any

significance to export developments compared with the projection scenario within our horizon. These are also very modest effects compared with the effects of the changes in cost-competitiveness attributable to the exchange rate changes through recent years.

No model, including KVARTS, which was used for this projection, captures all relevant mechanisms associated with events like a substantial fall in petroleum investment. Less optimistic assessments of future developments could curb investment in mainland industries more than what emerges from the model. On the other hand, a more expansionary monetary policy would have boosted cost-competitiveness more, which could in turn have stimulated internationally exposed industries. Many of them are capital-intensive, and would consequently have had the effect of stimulating investment. The implications of this analysis are that far stronger negative impulses from the petroleum industry in the form of a fall in petroleum investment over a four year period, which is even stronger than we experienced from 1998 to 2002, could have a perceptible negative impact on the real economy without this leading to anything that can be described as a crisis in the Norwegian economy.

The impact of an increased fall in petroleum investment in the period 2016–2018. Growth deviation from the projection scenario in percentage points unless otherwise specified

	2016	2017	2018
Mainland GDP	-0.4	-0.4	-0.4
Manufacturing	-0.8	-0.7	-0.6
Consumption by households etc.	-0.1	-0.2	-0.4
Housing investment	0.0	-0.1	-0.4
Mainland business investment	-0.1	-0.1	-0.1
Exports	0.0	0.0	0.0
Imports	-0.6	-0.6	-0.6
House prices	-0.1	-0.4	-0.7
Annual wages	-0.1	-0.2	-0.4
Real disposable income	-0.3	-0.3	-0.4
CPI	0.0	0.1	0.0
Employment	-0.1	-0.2	-0.2
Unemployment (level)	0.1	0.2	0.2
Memo:			
Investment in production and pipeline transport	-10.0	-10.0	-10.0

Many factors contribute to production developments in the industries varying widely. Reduced demand from the petroleum sector and an improvement in cost-competitiveness translated into new impulses last year that have opposing effects. This may have an impact on developments in the industries, with different time lags. For example, it may take time before improvements in cost-competitiveness are reflected in production in capital-intensive activities, unless there is considerable available capacity. Long-term technological and market trends play an important role for some industries, and may imply tendencies that can be seen in comparable economies. In addition, naturally occurring factors will have a major impact on activity developments in certain industries.

Goods-producing industries reported the most pronounced slowing of activity in the second half of last year. In manufacturing and mining, value added growth fell from 2.7 per cent in the second quarter to 0.9 per cent in the third quarter, and further to only 0.3 per cent in the fourth quarter. However, the annualised increase in 2014 was a full 3.5 per cent, against 3.2 per cent the previous year.

Growth for the year as a whole has been high in manufacturing segments that deliver extensively to the petroleum sector. While growth in repair and installation of machinery and equipment was high up to the fourth quarter of 2014, there was a clear decline in the fourth quarter in the shipbuilding and transport

equipment industry, following very high growth previously. Manufacturing of metal goods, electrical equipment and machinery rose sharply through the whole of last year, and increased by an annual average of 6.8 per cent in 2014, down from 8.3 per cent the year before. This industry represents about 1/3 of the value added in manufacturing, and delivers extensively to the petroleum sector, but even more to exports.

Activity in the food and beverages industry rose appreciably last year, but there was a decline through the second half of the year. In other manufacturing industries, activity on an annual basis declined or remained at the same level as the previous year. There was an increase in the manufacture of pulp and paper products and textiles, wearing apparel and leather products in the fourth quarter, while the other manufacturing industries showed a decline.

Other goods-producing industries reported high annualised growth in 2014, but a fairly sharp decline in the second half of the year. Value added in fishing and aquaculture was more than 6 per cent higher in 2014 than the previous year, but declined by almost 11 per cent through the second half of the year. In construction, by far the most cyclically sensitive of these industries, growth was high until it stagnated in the fourth quarter. The increase in 2014 was 4.4 per cent.

Substantial deliveries are made to the petroleum sector by many service industries, but only the sector consisting of service incidental to oil and gas extractions is entirely dominated by this activity. There was a fairly substantial decline in value added in this sector through 2014, but owing to positive carry-over into 2014 and a certain increase in the fourth quarter of last year, the level in 2014 as an annual average was nevertheless the same as the previous year. The two sectors professional and scientific services and business services, whose joint value added almost matches that of the whole manufacturing sector, also make substantial deliveries to the petroleum sector. Activity in these two industries moved on a weak trend last year, and on an annual basis value added in professional and scientific services rose by 1.6 per cent, while business services remained virtually unchanged.

Postal and distribution services continued a declining tendency, and value added fell by more than 5 per cent in 2014. Activity in sale and management of property was also lower in 2014 than the previous year. In retail trade, where the value added almost matches that of the whole manufacturing sector, value added in 2014 rose 1.2 per cent, which was also appreciably less than the average. Growth was fairly high during the first half of the year, but declined markedly through the second half, in pace with developments in goods consumption. Growth in other market-oriented service industries was fairly high through 2014. Annualised growth was greatest in information and communication, at a full 4.7 per cent, while the segments hotel and restaurant

and finance and insurance activities grew by about 3.5 per cent.

Value added in general government as an annual average grew by 1.8 per cent, which was slightly less than for overall market-oriented services. With particularly low growth in the second quarter of last year, and slightly increasing growth at the end of the year, activity developments in general government had a stabilising effect.

It now appears clear that demand from the petroleum sector will decline further, which in isolation means a negative stimulus to most industries. The improvement in cost-competitiveness through the depreciation of the krone is assumed to remain at the same level this year as last year. This will continue to stimulate traditional internationally exposed industry, and the effects will increase over time. Both traditional exports and demand from the petroleum sector are very important factors for the Norwegian economy. However, developments in mainland demand are more important to the overall level of activity in the economy. However, the impulses from this demand are expected to undergo little change. We also expect the decline in demand from the petroleum sector to have a stronger effect than the stimulus generated by the internationally exposed sector. Activity developments will therefore continue to weaken for a while to come and mainland GDP is expected to increase by only 1.1 per cent in 2015. A reduced decline in petroleum investment, together with a certain upswing in consumption, housing investment, business investment and foreign demand will lead to mainland GDP picking up in the next few years. Growth may rise above trend level already in early 2016, thereby introducing a cyclical upturn. However, with negative stimuli from the petroleum sector and no strong growth in demand from either the mainland or abroad, the upturn will be very moderate.

Manufacturing industries that do not deliver much to the petroleum sector are expected to show higher growth in the years ahead than other industries. Conversely, activity in industries that deliver extensively to the petroleum sector may decrease sharply this year and next. However, the improvement of cost-competitiveness and available capacity may lead to the import share of deliveries to the petroleum sector declining, so that the fall in activity in the supplier industry may be less than the reduction in demand. In 2017 and 2018, activity in some of these industries may therefore increase slightly.

Developments in construction will be characterised in the short term by a decline in housing investment and a generally weak outlook for investment. Activity in construction will thus be reduced in 2015, but a certain turnaround to increased business investment, and not least increased housing investment, will lead to clear growth in the next few years. In market-oriented services, activity will move on a weak trend through 2015,

but then increase gradually towards the growth path of the mainland economy as a whole. Production growth in general government is expected to become fairly stable, and thus clearly higher than for the economy as a whole this year. When activity in the market-oriented part of the economy increases in earnest in 2017 and 2018, general government growth will remain slightly lower than for the mainland economy as a whole.

The labour market

According to the QNA, employment rose steadily in 2013 and 2014, by just over 1 per cent each year. The population has grown more than employment, so that employment as a share of the population has declined. However, changes in the age distribution of the population will affect employment rates. The share of economically active elderly is rising, which helps explain the tendency.

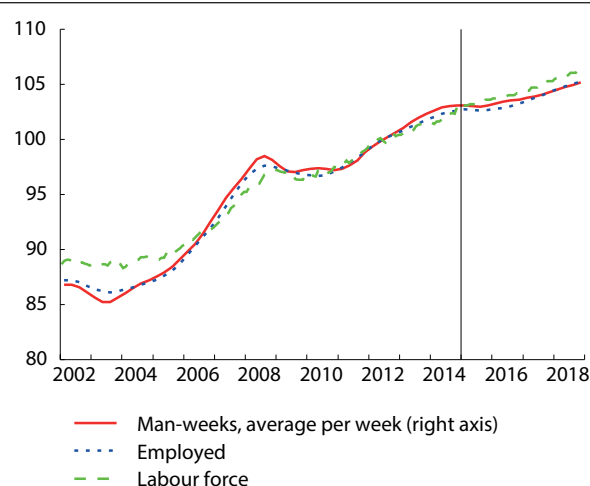
In recent years, there have been considerable differences in employment growth rates across industries. In particular, there was strong employment growth in services associated with crude oil and natural gas production for a long time, but employment fell also in this segment as of the second quarter of last year. There was also high employment growth in manufacturing that primarily supplies the petroleum sector, like shipbuilding and transport equipment, and repair and installation of machinery and equipment. In the second half of 2014, employment in these industries as a whole declined. Employment growth in the other manufacturing segments was somewhat lower than for the economy as a whole.

Outside manufacturing, employment in construction rose in 2014, but declined in retail trade. These have been the tendencies for these two large industries through the past three to four years. In 2014, general government employment rose by a bare 2 per cent, while employment growth in local government was slightly below average.

The unemployment rate increased as a result of the financial crisis to 3.6 per cent in the fourth quarter of 2010, according to the LFS. – Unemployment then declined into 2012, and fluctuated between 3.3 and 3.7 per cent in 2013. In the first half of 2014, unemployment fell slightly, but increased towards the end of the year. The annual average unemployment rate was the same as in 2013, 3.5 per cent. Average unemployment for the period November 2014 to January 2015 was 3.7 per cent.

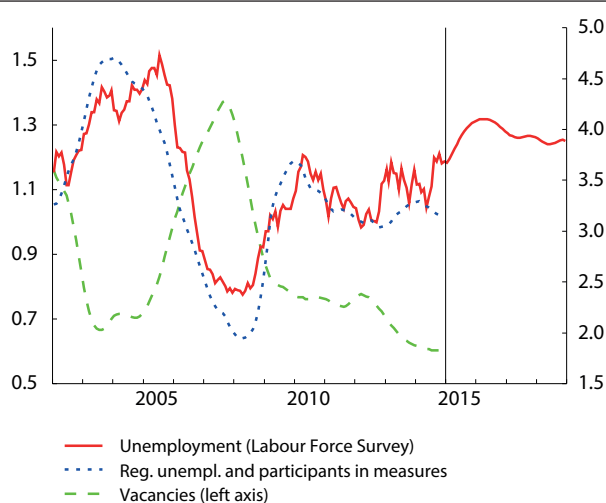
The statistics of the Norwegian Labour and Welfare Organisation (NAV) for registered unemployed and the total number of persons registered as unemployed or on labour market programmes showed approximately unchanged unemployment through 2014. NAV's figures showed a slight decline in the number of laid off persons in 2014. At the end of February 2015, some 95 000 persons were either on labour market

Figure 14. Labour force, employment and number of man-hours. Seasonally adjusted and smoothed indices. 2012=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.

programmes or registered as unemployed. So far this year, unemployment has risen for almost all occupational groups, but the greatest percentage increase in unemployment is in engineering and ICT.

Statistics Norway has published figures for vacancies since 2010. Following a long decline, the number of vacancies rose slightly in the fourth quarter of 2014. However, the number of vacancies only accounts for 2 per cent of all employment relationships. The increase is a result of a rising number of vacancies in many service industries.

The increase in the number of man-hours worked in mainland Norway in 2014 is somewhat higher than the rise in the number of employees, even if the figure is adjusted for one more working day in 2014 than in 2013. According to NAV, there was a slight decline in the number of layoffs compared with the same period in 2014, which pushes up the number of man-hours worked per employee. The LFS also shows a transition

Box 5 Employment associated with petroleum investment

Characteristic of the petroleum industry is that it is highly capital-intensive, and real capital per employee in petroleum production has increased since the early 2000s. High oil and gas prices and new technology have increased the profitability of fields that previously were not profitable, but more capital is required to produce the remaining petroleum resources.

In 2014, petroleum investment accounted for 8.7 per cent of mainland GDP. Approximately 40 per cent of this was directly or indirectly imported. Prestmo, Strøm and Midsem (2015) use an input-output model with over 20 industries to study how large a portion of total employment is directly or indirectly associated with the production of the goods and services that constituted petroleum investment in 2014. In this input-output model, employment is associated with the production in each industry according to a fixed ratio.

The study shows that, directly or indirectly, 155 000 persons in Norway were employed in the production of petroleum investment in 2014. The combined service industries deliver the bulk of the investment products in the petroleum industry. One important reason for this is that the service industries deliver a large amount of intermediate inputs to manufacturing and other goods producers which these industries need to produce the actual capital goods. We estimate that close to 100 000 of those employed in the service industries excluding petroleum services work directly or indirectly with production associated with investment in the petroleum industry. Petroleum services, which deliver drilling and engineering services to the petroleum industry, constitute an important supplier segment. 13 000 of those employed in this service industry, almost half of the total number employed, deliver services to the Norwegian petroleum industry.

Manufacturing produces a large portion of petroleum investment, but the fact that manufacturing production employs many goods and services from other industries in Norway and abroad reduces manufacturing's share of employment in investment deliveries. Of the manufacturing

industries, the engineering industry in particular produces capital goods for the petroleum industry. Calculations show that of the 125 000 employed in engineering, close to 30 000 can be linked to investment activity on the Norwegian continental shelf.

Reference: Prestmo, J., B. Strøm og H.K. Midsem (2015): *Ringvirkninger av petroleumsnæringen i norsk økonomi*. [Ripple effects of the petroleum industry for the Norwegian economy]. Reports 2015/8. Statistics Norway.

Employment associated with deliveries of petroleum investment, 2014

Primary industries, including fish-farming	1 200
Agricultural and forestry consumables	1 000
Fishing industry	200
Fish farming	0
Manufacturing	31 300
Production of consumer products	800
Intermediate inputs and investment products	2 300
Industrial commodities and refining	400
Engineering products and shipbuilding industry	27 700
Electricity production	300
Building and construction	3 400
Petroleum industry, own deliveries	200
Petroleum services	13 400
Shipping	500
Services from mainland industries excl. petroleum services	98 100
Research and development	1 600
Transport and communications	6 300
Banking and insurance	1 300
ICT services	4 200
Wholesale and retail trade	17 400
Other private services	65 900
Property management	1 300
General government	6 700
Defence	100
Central government	4 400
Local government	2 300
Total	155 100

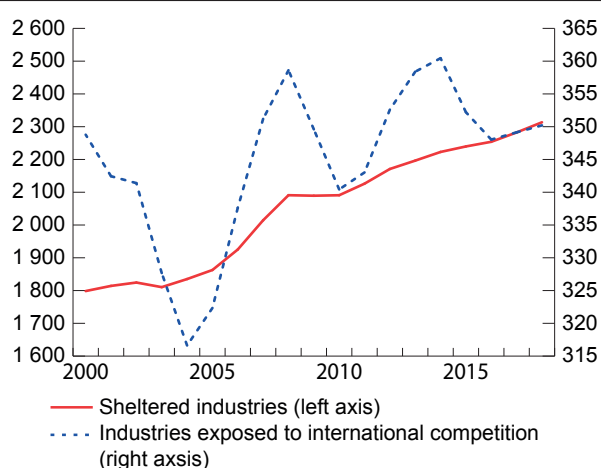
from part-time to full-time. In isolation, this raises the number of man-hours per employee. However, an increase in sickness absence and the 2014 strike has an offsetting effect.

Employment growth is projected to be weak this year and next year, and then increase somewhat in 2017 and 2018. This must be seen in the context of the general economic situation. In Figure 16 we have illustrated developments in employment in sheltered and internationally exposed industries. In 2015 and 2016, employment in exposed industries will decline, while it will rise at a steady pace in sheltered industries. In 2017 and 2018, employment growth will increase in both exposed and sheltered industries.

As shown in Box 1 on adjustments due to the ripple effects of reduced petroleum investment, there are

also great differences within sheltered and exposed industries. Activity in the petroleum sector is important to manufacturing, and demand from the petroleum sector directed at Norwegian manufacturing is expected to be much weaker going forward than in previous years. This implies a sharp decline in employment in the engineering industry in 2015, even though clear growth in the export markets and improvement of competitiveness will gradually lead to increased manufacturing production and higher employment growth. In construction we assume that there will be a turnaround to lower employment growth this year, but increased activity in the next few years will stimulate employment growth. Employment in services associated with oil production will decline markedly up to 2016. Employment in retail trade is also expected to pick up in 2016. On the other hand, we assume fairly steady

Figure 16. **Employed wage earners in sheltered industries and industries exposed to international competition. 1 000 persons**



Source: Statistics Norway.

growth to continue in both central and local government employment.

We expect the labour supply to increase more than employment in 2015 and 2016, so that unemployment rises. The effect of lower growth in demand from the petroleum sector means that unemployment in parts of the country with a high share of oil-related activities will rise sharply. We project that LFS unemployment will increase in the near term, bringing average unemployment in 2016 to 4.1 per cent. Unemployment will pick up into 2016, in pace with a stronger economic situation, so that unemployment falls to 3.8 per cent in 2018.

Wage developments

Following annual wage growth of about 4 per cent during the period 2009 to 2013, annual wage growth in 2014 declined to 3.1 per cent, the lowest nominal wage growth in 20 years. Real wage growth was just over 1 per cent. After the central wage settlement in 2014, the Confederation of Norwegian Enterprise (NHO) with the understanding of the Norwegian Confederation of Trade Unions (LO) estimated that wage growth for NHO manufacturing enterprises would be 0.6 percentage point lower than in 2013. This implied manufacturing wage growth of 3.3 per cent in 2014. Preliminary projections point to actual manufacturing wage growth being very close to this estimate. Wage developments in other industries show that the norm that was established after the central wage settlements in the wage leader was generally followed in the rest of the economy. There are therefore very small differences in wage growth between industries in 2014.

What can explain the decline in annual wage growth from 3.9 per cent in 2013 to 3.1 per cent in 2014? Even though average unemployment did not rise much from 2013 to 2014, unemployment increased slightly last year, particularly in occupations related to the petroleum sector. There was also a clear decline in irregular

payment increases from 2013 to 2014, which contributed to the decline in wage growth. Some of this may be linked to a number of oil-related workplaces disappearing last year. One would imagine that the depreciation of the krone through 2014, which boosts profitability in internationally exposed industries, would lead to increased wage growth towards the end of last year. However, calculations by the Norwegian Technical Calculation Committee for Wage Settlements indicate a marked decline in the wage drift in manufacturing from 2013 to 2014.

In manufacturing, the wage carry-over into 2015 is a little lower than the previous year. Manufacturing pay increases are normally lower at interim settlements. If this is the case also this year, there is much to indicate that annual wage growth for manufacturing workers will be lower in 2015 than in 2014. The social parties have indicated that this year's wage settlement will be moderate, which will contribute to overall manufacturing wage growth probably being less than 3 per cent this year. The wage carry-over into 2015 in non-manufacturing industries is also low. The manufacturing wage settlement guides wage developments in other industries. We therefore assume moderate wage settlements also in non-manufacturing industries, and project that average annual wage growth in 2015 will be 2.9 per cent.

Our projections for consumer price inflation imply that real wage growth in 2015 will be halved compared with 2014. This decline in wage growth must be seen in the context of both part of the economy having received a major negative shock through the fall in oil prices and the fact that we are forecasting higher unemployment. This will reduce wage growth, both through a dampening of the demands made in the central wage negotiations and through a decline in wage drift. Another factor is continued reduced employment in petroleum-related activities in Norway. Because the wage level

Table 3. **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**

	2011	2012	2013	2014
Wages per hour worked	4.1	4.2	4.8	2.8
Annual earnings, accumulated	4.2	4.0	3.9	3.1
Estimated contribution to the difference from changes in:				
Number of working days	0.0	0.4	0.8	-0.4
Sickness absence	-0.1	-0.1	0.0	0.1
Overtime	0.0	-0.1	0.1	0.0
Wage costs per hour worked	4.3	4.7	5.0	2.9
Wages per hour worked	4.1	4.2	4.8	2.8
Estimated contribution to the difference from changes in:				
Pension costs	0.2	0.5	0.2	0.0
Employer's contributions	0.0	0.0	0.0	0.1

Source: Statistics Norway..

Table 4. **Wages. Percentage growth compared with previous year**

	Annual earnings, full-time equivalents			Wages and salaries per hour worked			Compensation of employees per hour worked		
	2012	2013	2014	2012	2013	2014	2012	2013	2014
Total	4.0	3.9	3.1	4.2	4.8	2.8	4.7	5.0	2.9
Petroleum activities and ocean transport	4.7	6.1	3.0	4.4	6.9	2.6	5.0	7.5	2.6
Mainland Norway	4.0	3.8	3.1	4.1	4.7	2.8	4.7	4.9	2.9
Mainland Norway excluding general government	3.8	3.9	3.0	4.0	4.8	2.7	4.5	4.9	2.7
Production of goods	3.8	3.8	3.1	4.0	4.6	2.7	4.4	4.6	2.7
Manufacturing and mining	4.3	3.9	3.2	4.4	4.7	2.9	4.8	4.7	2.9
Construction	3.3	3.6	2.9	3.6	4.4	2.4	4.0	4.4	2.4
Production of other goods	3.7	4.8	3.3	3.3	5.5	3.0	4.3	5.6	2.9
Production of services	3.8	3.9	3.0	4.0	4.9	2.7	4.5	5.0	2.7
Wholesale and retail trade, repair of motor vehicles	3.4	3.6	2.7	3.5	5.1	2.5	4.0	5.1	2.5
Accommodation and food service activities	2.8	3.3	2.7	3.1	3.6	2.5	3.4	3.6	2.5
Financial and insurance activities	0.7	5.6	4.2	1.0	6.4	3.7	2.4	7.5	4.2
Production of other services	4.3	3.8	2.9	4.4	4.7	2.6	4.9	4.8	2.6
General government	4.3	3.7	3.3	4.5	4.4	3.0	5.2	5.1	3.5
Central government	4.0	3.8	3.4	4.3	4.6	3.0	5.2	4.5	3.3
Civil government	4.6	3.7	3.2	4.6	4.3	3.0	5.2	5.5	3.6

Source: Statistics Norway.

in this sector is generally higher than in the rest of the economy, this will push down growth in average wages. An offsetting effect is improved profitability as a result of the depreciation of the krone and a certain improvement in the global economic situation.

Developments in wages and labour costs per man-hour will be affected by changes in overtime, sickness absence and agreed working hours per year. Annual variations in the number of business days also contribute to developments in hourly wages differing from annual earnings. Growth in hourly wages was 0.3 percentage point lower than annual wage growth in 2014. Table 3 shows that this difference to a large extent corresponds to the effect of there being one more working day in 2014 than in 2013. The decline in sickness absence helped reduce expenses associated with hourly wages. Labour costs reflect what employers must pay for each hour of work performed. This payment differs from hourly wages in that employer's contribution to social insurance and pension costs is also included in this wage concept. The growth in labour costs was 0.1 percentage point higher than the growth in hourly labour costs in 2014, as a result of higher employer's social insurance contribution. During the three previous years, labour costs were pushed up by pension costs.

Table 4 shows developments in annual wages, hourly wages and hourly labour costs in the different industries from 2012 to 2014. The wage growth varies according to the industry, but the table generally shows that growth in wages and labour costs per man-hour was approximately the same in the different industries in 2014. The exceptions are in finance and insurance, where growth in hourly labour costs was somewhat higher than growth in hourly wages. Labour costs per man-hour were also higher than hourly wages per man-hour in local government.

In the near term, we expect wage growth to pick up slightly compared with 2015. This is partly due to the scope for wage growth increasing, given a moderate global cyclical upturn, and partly to the fact that the krone exchange rate will probably remain clearly weaker for the next few years than in the period 2010–2013. However, increased unemployment has an offsetting effect. Real wage growth is projected at just over 1 per cent in 2016, rising by two to three-tenths of a percentage point annually in 2017 and 2018. This is in line with our expectation of a slightly tighter labour market.

Box 6 shows the effects of increased unemployment, by comparing our baseline scenario with an alternative baseline scenario in which unemployment has been kept at the 2014 level from 2015 to 2018.

Inflation

The consumer price index (CPI) rose 2.0 per cent from 2013 to 2014, slightly less than the 2.1 per cent rise the previous year. Last year's tax changes had a neutral effect on CPI inflation, while low electricity prices led to CPI inflation ending up appreciably lower than the consumer price index adjusted for tax changes and excluding energy products (CPI-ATE).

The CPI-ATE rose by 2.4 per cent from 2013 to 2014, compared with 1.6 per cent the previous year. The 12-month rise in the CPI-ATE remained relatively stable around the annual average throughout 2014 after rising markedly through the second half of 2013. Underlying inflation has thus picked up from the very low levels in 2011 and 2012, when the annual rise in the CPI-ATE was barely one per cent. The depreciation of the krone over the past two years has led CPI-ATE inflation close to Norges Bank's inflation target.

Box 6 Effects of the rise in unemployment

According to our projections, wage growth will be very low for the next few years. Average wage growth in 2015 is projected to be lower than for 20 years, at 2.9 per cent. Growth in real wages is likely to be halved in relation to last year. The decline in wage growth from 2014 to 2015 must be viewed in conjunction with the fact that unemployment is forecast to increase. An increase in unemployment will constrain the demands in the centralised wage negotiations and reduce wage growth in the local negotiations. At the same time, immigration to Norway will be reduced and thereby slow down the rise in unemployment.

In this box we take a closer look at the effects of the expected increase in unemployment. This is done by comparing the projection scenario with an alternative, in which unemployment is maintained at the 2014 level going forward. In the model this is done by changing short-term inward labour migration as much as is necessary to keep unemployment at this 2014 level in the near future. Other immigration remains unaffected. It is also assumed that the orientation of monetary and fiscal policy would remain unaffected. The table shows that, given these assumptions, the increased unemployment in our projection scenario has contributed to reducing wage growth by 0.3 per cent and inflation by 0.1 per cent in 2015 as a result of a less tight labour market. In order to reduce unemployment to the 2014 level, short-term inward labour migration would have to be reduced much more than the decline in the number of unemployed. The reason is that a slacker labour market in the projection scenario reduces the labour supply, both because unemployment is higher and because real wages are lower. The effect is relatively moderate the first year, but in 2016 and 2017 the labour supply is reduced by around 20 000 persons. A lower wage level also means a change in demand for factor inputs, with the consequence that companies substitute

other factor inputs such that employment increases and productivity is reduced.

The increase in unemployment has little effect on mainland GDP. Lower wage growth results in weaker developments in household real disposable income and hence lower consumption. Household assets are also negatively impacted by the fact that house prices are lower than they would otherwise have been, and hence also contribute to lowering consumption. The strengthening of cost competitiveness through lower wage growth will push up exports and reduce imports. Thus the consumer real wage is reduced by about one percentage point in the projection scenario as a result of the increased unemployment. As a result of the improved competitiveness, export revenue excluding petroleum increases and imports fall, so the current account surplus improves by NOK 6.4 billion in 2018 compared with a scenario where unemployment remains at the 2014 level. The government budget balance is also improved by higher unemployment, since the bulk of public expenses are associated with wages, whereas income is not linked to the same extent.

Effects of higher unemployment Percentage deviation from the baseline scenario unless otherwise specified

	2015	2016	2017	2018
Annual wages	-0.3	-0.9	-1.0	-1.3
Consumer price index	-0.1	-0.1	-0.2	-0.2
Employed, 1000s of persons	3	7	7	8
Labour supply excluding short-term inward labour migrants, 1000s of persons	-3	-17	-21	-13
Memo:				
Short term migrants, 1 000s of persons	18	40	37	29
Unemployment rate, percentage points	0.4	0.6	0.4	0.3

At the beginning of 2015 the inflation rate, measured by the 12-month rise in the CPI-ATE, shows stable development compared with the end of 2014. The rise in both January and February was 2.4 per cent, in line with the annual average for 2014. CPI inflation dipped to 1.9 per cent in February. Real tax changes did not contribute to CPI inflation, and electricity prices, including grid charges, were slightly higher on average for January and February compared with the previous year. Low diesel and petrol prices as a result of the fall in crude oil prices were the main reason that year-on-year CPI inflation is still lower than CPI-ATE inflation in early 2015. Overall, fuel prices were just over 9 per cent lower in February than at the same time in 2014.

Table 5 presents developments in the CPI by consumption group for the past four years and the first months of 2015. This past year, prices for food and non-alcoholic beverages have risen more than in the previous three years and are fuelling CPI inflation. The group furniture and household articles has a large import content and a weak krone is pushing up prices for this group. The same might be expected for the group clothing and footwear, but so far this year sales activity has pushed

down prices for this group on a year-on-year basis. With prospects of slowing wage growth and low global inflation, developments in the krone exchange rate will be a key factor in further inflation developments. Following a turbulent period around the turn of the year, exchange rates measured in terms of the import-weighted krone exchange rate have stabilised and strengthened slightly recently. The import-weighted exchange rate has nonetheless weakened by over 16 per cent over the two-year period from February 2013 to the present.

The impact of the weaker kroner on Norwegian prices is dampened through the shift over time of some import demand to countries whose competitiveness in relations with Norway has improved. Although we assume that the krone will appreciate somewhat through the year, we consider it likely that the weakening of the krone will cause the inflation rate to edge up through 2015. As a result of imported goods drawn from stocks and various types of currency hedging, prices paid by Norway for import goods may not be very vulnerable to exchange rate fluctuations in the short term. In the battle for market shares, price increases will be postponed, so mark-ups will tend to be the first to be reduced.

Table 5. Consumer price index. Goods and services by consumption group

	Weights ¹	Percent change from previous year					
		2011	2012	2013	2014	Jan.15	Feb.15
Total	1 000	1.2	0.8	2.1	2.0	2.0	1.9
Food and non-alcoholic beverages	127.9	-0.1	1.2	1.1	3.0	2.4	3.1
Alcoholic beverages and tobacco	40.3	6.4	3.2	4.3	3.4	3.1	3.3
Clothing and footwear	50.8	-3.0	-1.3	-2.0	-0.6	-2.7	-2.9
Housing, lighting and fuel	230.4	0.9	-1.8	5.3	1.3	2.0	2.1
Of which: Electricity, fuel oil and other fuels	42.4	-4.0	-17.5	14.7	-5.7	-1.0	0.3
Furniture and household appliances, etc.	65.6	-0.6	0.1	0.4	3.2	3.0	2.5
Healthcare	30.2	2.3	3.0	2.6	2.5	2.3	2.4
Transport	162.8	2.4	2.5	1.4	2.3	2.0	0.7
Postal and telecom services	26.0	-1.8	-5.9	-2.1	-0.8	0.3	-0.9
Recreation and culture	113.1	-0.1	0.3	0.9	2.1	2.5	3.0
Education	5.6	2.9	5.4	7.5	3.3	1.9	1.9
Hotel and restaurant services	54.4	2.9	3.2	2.9	2.5	2.2	2.3
Miscellaneous goods and services	93.0	2.8	3.3	1.9	2.5	2.3	2.3

¹ The weights apply from January 2015 to December 2015.

Source: Statistics Norway.

Table 6. Consumer price index adjust for tax changes and excluding energy products (CPI-ATE) by to delivery sector

	Weights ¹	Percent change from previous year					
		2011	2012	2013	2014	Jan.15	Feb.15
Agricultural products	1 000	0.9	1.2	1.6	2.4	2.4	2.4
Fish products	59.9	-2.3	0.0	0.6	2.7	2.0	2.2
Other consumer goods produced in Norway	6.9	3.7	0.9	0.5	5.2	5.4	4.4
Imported consumer goods	104.8	2.1	1.6	3.1	3.3	3.2	4.4
Rent, including holiday homes	318.1	-0.8	-0.7	-0.2	1.4	1.3	1.3
Other services	206.5	2.1	1.8	3.0	2.8	2.6	2.6
- with wages as the dominant price factor	303.7	2.0	2.7	2.3	2.8	3.0	2.4
- also including other important price components	69.5	3.8	3.1	3.4	3.6	3.5	3.3
- også med andre viktige priskomponenter	234.2	1.4	2.5	2.0	2.6	2.9	2.2

¹ The weights apply from January 2015 to December 2015.

Source: Statistics Norway.

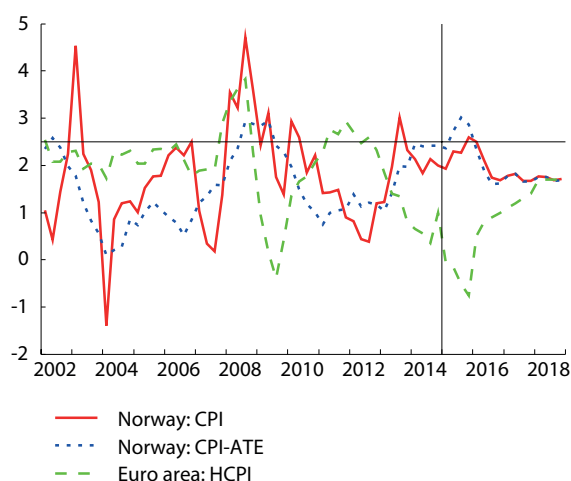
After a while, however, increased import prices will compel enterprises to pass on some of the costs to the consumers in the interests of ensuring satisfactory earnings. Imported goods and services also make up a significant share of the intermediate inputs of Norwegian producers of goods and services for consumption. Thus all consumer categories are affected to a greater or lesser extent through the ripple effects of the depreciation of the krone. Because of the time lag, it takes a while before all the effects of increased import prices are exhausted.

Table 6 shows developments in the CPI-ATE by supplier sector, and the sub-index for imported consumer goods displays moderate growth last year and continuing into early 2015. The 12-month rise in prices for other consumer goods produced in Norway has picked up appreciably, and according to the underlying data, particularly the sub-group of goods produced in Norway with a high import content. The rise in rents slowed through 2014 and is increasing moderately in early 2015. Actual rents paid are obtained by means of a sample survey and are intended to capture changes in both established and new rentals. Prices for existing rentals are normally adjusted in pace with CPI

inflation. For owner-occupiers, the value of housing consumption is termed «imputed rent» in the CPI, and is derived by applying the rental-equivalence principle. This is based on the assumption that the value of the service that their dwelling supplies to owner-occupiers is equivalent to the rent for similar dwellings in the rental market. Developments in the sub-index for imputed rent therefore do not normally deviate very much from developments in the sub-index for actual rentals.

According to the CPI, electricity prices including grid charges fell by 6.9 per cent from 2013 to 2014, from an already low level. The electricity price on the Nordic power exchange, measured as a monthly average exclusive of all taxes and grid charges, has largely remained below 30 øre/kWh as far back as the summer of 2011. Prices for forward contracts in the Nord Pool area indicate that electricity prices will remain low in the years immediately ahead. One reason for this is the ongoing development of production capacity in the Nordic countries through the green certificate subsidy scheme for renewable energy. Grid charges and electricity taxes account for over half of household electricity prices. According to figures obtained by the Norwegian Water Resources and Energy Directorate (NVE) from the grid

Figure 17. Consumer price indices. Percentage growth from the same quarter previous year



Source: Statistics Norway.

companies, calculated grid charges for an average household will increase from 46.4 øre/kWh in 2014 to 48.3 øre/kWh this year, including all taxes, i.e. an increase of 4 per cent. On the basis of the forward prices, we expect the price of electricity, including grid charges, to fall by about 1 per cent as an annual average from 2014 to 2015. Electricity prices pushed inflation down last year. Our projection indicates that CPI inflation will end up markedly lower than CPI-ATE inflation this year again, primarily as a result of the fall in crude oil prices.

Underlying inflation is driven largely by labour costs, productivity growth and import prices. Although wage growth has slowed, our calculations show that moderate productivity growth and the ripple effects of the krone's depreciation over the last couple of years will push up underlying inflation through 2015. According to our calculations, CPI inflation for 2015 will be an annual average of 2.7 per cent. Productivity growth normally picks up when the activity level increases. Given our assumptions regarding developments in import prices, wages and productivity growth, underlying inflation, measured in relation to the same quarter last year, will again dip below 2 per cent in the first half of 2016. Even assuming somewhat higher global inflation, the rise in the CPI-ATE will then fall to 1.9 per cent in 2016 and subsequently rise by 1.7 per cent in 2017 and 2018. On the basis of our assumptions regarding movements in energy prices and taxes, CPI inflation will lie 0.4 percentage point under CPI-ATE inflation this year, and then in the period 2016–2018 is expected largely to shadow movements in the CPI-ATE.

Uncertainty surrounding the projections

Statistics Norway presented its first quantified projections for the Norwegian economy in 1988, and since 1990 has with few exceptions published projections for at least two years ahead in February/March, May/June, September and November/December each year in the publication *Økonomiske analyser* and the English language version *Economic Survey*. The following is an

evaluation of our forecasting activities. The evaluation considers three important macroeconomic variables: growth in mainland gross domestic product (mainland GDP), inflation measured by the consumer price index (CPI), and unemployment as a percentage of the labour force (LFS unemployment). The focus is on whether the projections have deviated systematically from the ex post outcome, and on the spread of the deviations. The analysis is also used to say something about the uncertainty surrounding Statistics Norway's projections for 2015 and 2016.

There are often differences between the preliminary GDP figures published in February the year after the accounting year and the final figures, which are normally only available almost two years later. The «final» figures may also be revised in connection with periodic revisions when new statistics are incorporated or when calculation principles are changed. We nevertheless use preliminary GDP figures from the preliminary accounts as «actual outcome» for three reasons: First, the final accounts figures are not available for the years following 2012. The projections for these years must therefore be compared with preliminary accounts figures regardless. Second, the projections are made on the basis of preliminary – not final – accounts figures for the recent past. Third, changes were made in definitions in connection with the main revisions in 1995, 2002, 2006 and 2014, which means that projections and final figures are not associated with the same measuring system¹. For example, our projections for mainland GDP in 2013 made before the main revision in 2014 would have been different if we had used the new definition at the times of making the projections. Final figures for the CPI and for LFS unemployment are available shortly after the end of the year.

How accurate have our projections been?

Figures 18, 19 and 20 show developments over time in the absolute deviations between projections and preliminary accounts figures for mainland GDP growth, the rise in the CPI and LFS unemployment. The CPI projections made in the year to which the projections apply and the projections for LFS unemployment made the year prior to the projection year have improved over time. Similarly, we see a falling linear trend in error associated with projections for GDP growth one year ahead, despite the considerable underestimation of GDP growth in 2006 and 2007 and the overestimation in 2009. This is thus partly attributable to a change in the method of calculating GDP in 2006.

Figures 21, 22 and 23 show the average deviations between projections made at different times and accounts figures for growth in mainland GDP, the change in the CPI and unemployment. The figures also provide an indication of the spread in the deviations by including three intervals around the average. These intervals

¹ The main revision in 2011 did not result in major changes in macro figures.

Figure 18. Forecasts for percentage change in GDP Mainland. Absolute deviations from preliminary figures

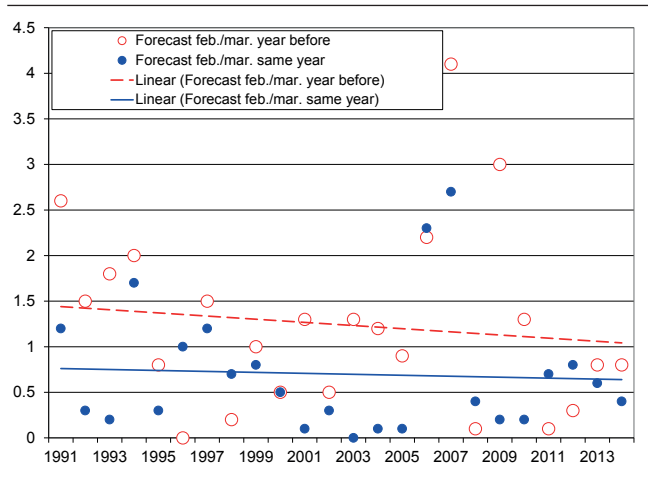


Figure 21. Forecast for percentage change in GDP Mainland. Absolute deviations from preliminary figures. The forecast ranges represent 50, 80 and 90 percent confidence intervals, respectively

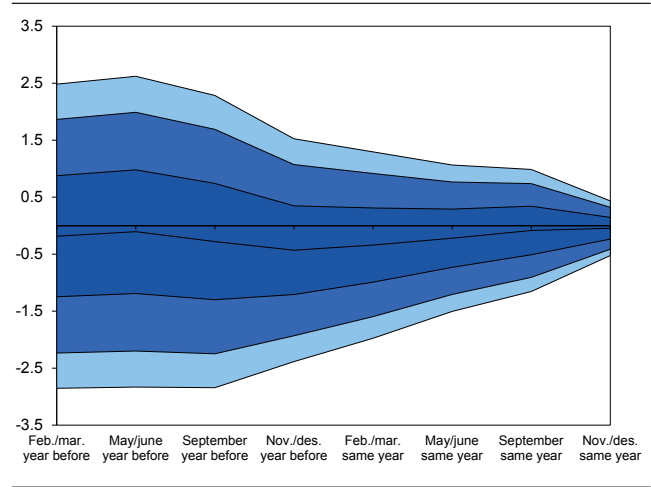


Figure 19. Forecasts for percentage change in CPI. Absolute deviations from annual accounts

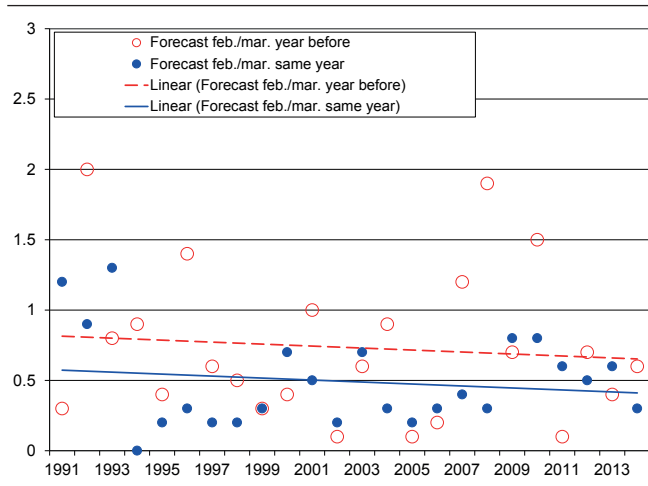


Figure 22. Forecast for percentage change in CPI. Absolute deviations from annual accounts. The forecast ranges represent 50, 80 and 90 percent confidence intervals, respectively

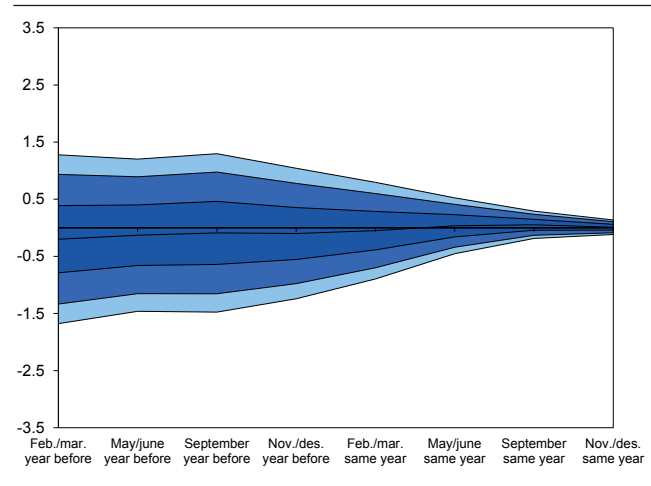


Figure 20. Forecasts for unemployment (LFS). Absolute deviations from annual accounts

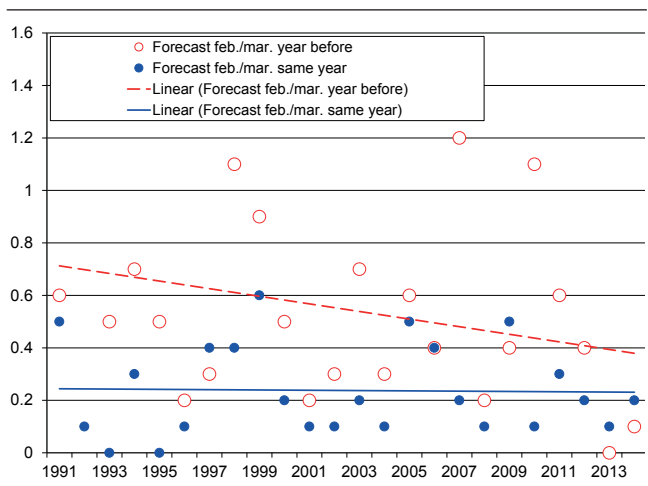


Figure 23. Forecast for percentage change in unemployment (LFS). Absolute deviations from annual accounts. The forecast ranges represent 50, 80 and 90 percent confidence intervals, respectively

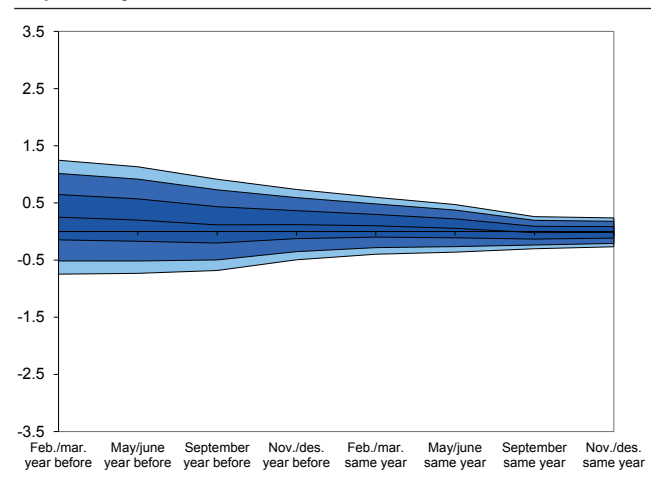


Figure 24. Forecast for percentage change in GDP Mainland. The forecast ranges represent 50, 80 and 90 percent confidence intervals, respectively

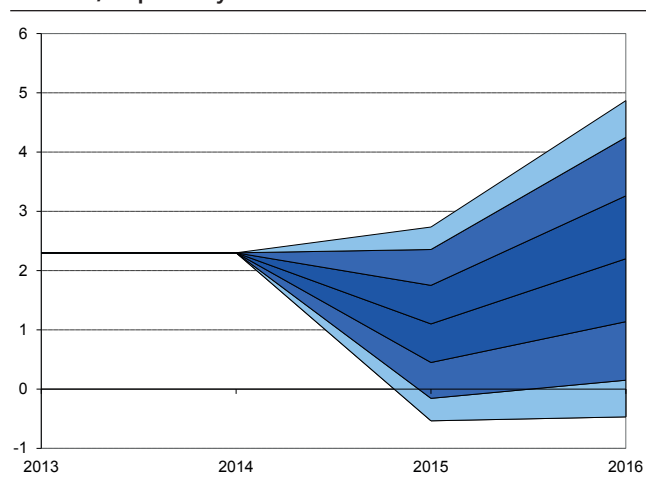


Figure 25. Forecast for percentage change in CPI. The forecast ranges represent 50, 80 and 90 percent confidence intervals, respectively

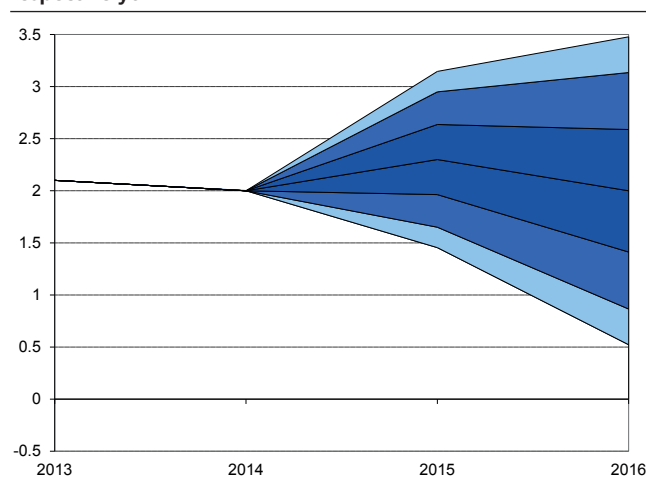
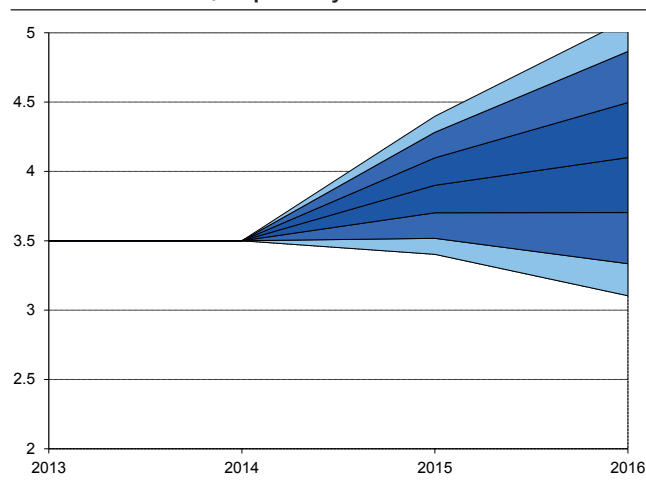


Figure 26. Forecast for percentage change in unemployment (LFS). The forecast ranges represent 50, 80 and 90 percent confidence intervals, respectively



are calculated against the background of the historical spread. They do not say anything about how many of the deviations actually lie within these intervals. Under given conditions,² the probabilities that the difference between forward projections and accounts figures lies within these intervals are 50, 80 and 90 per cent, respectively. We have only used the projections for the years since 1995 when calculating the intervals.

Have there been systematic deviations?

The projections for GDP growth have often been a little too low. On average, the GDP growth projections published in the first half of the year prior to the projection year lie around 0.2 percentage point below the actual outcomes. The projections made in September and November/December the year before the projection year are on average 0.3 and 0.4 percentage point, respectively, lower than the outcome. The difference for the last three projections published in the projection year is reduced to around 0.1 percentage point.

The average projection error for CPI inflation is close to zero at all projection times with the exception of the projection made in February/March the year before the projection year, when the average projection for CPI inflation has been 0.2 percentage point too low on average.

In line with our overly low GDP projections, we find that our unemployment projections have tended systematically to be somewhat too high. The projections made in February/March and May/June before the projection year are both between 0.2 and 0.3 percentage point too high on average. Thereafter, the average deviation is approximately 0.1 percentage point up to and including May/June the same year. After this the deviations are virtually zero on average. Bearing in mind the large spread in these projections, the results indicate that there are no large systematic errors in our projections for the three main variables.

The spread in the projections

There has been a relatively large spread in the deviations between the projections for GDP growth made in the first three analyses the year prior to the projection year and the preliminary accounts figure. Of the 19 projections we have made up to the present, from and including the 1995 projection, 8 deviate more than 1 percentage point from the preliminary accounts figure. Once the projection was absolutely accurate – in 1996. The projections in 1998, 2008, 2011 and 2012 were also fairly accurate, with deviations of only 0.1–0.3 percentage point. The variation in the deviations is considerably less, on average, in the projections made in December the previous year, but 6 out of 19 projections are still more than 1 percentage point off the mark. Despite the acquisition of increasing information about

² All deviations belong to a given statistical distribution (Student's *t* distribution with the same expectation and spread) and are independent.

economic developments in the year for which projections are made, the spread in deviations therefore only decreases slightly right up to and including the projections in September the same year. One important reason for this is that the quarterly GDP figures have often been revised quite considerably through the projection year. Only the last projection we make before the actual outcome is available again shows a distinct decline in the spread of the deviations.

We find a similar pattern in the projections for the annual change in the CPI. There is substantial variation between the first three projections and the outcome, then the spread decreases gradually. The variation in the preceding projections is 3-4 times as large. As the CPI is not revised, this reflects the fact that uncertainty lessens through the year as the actual movement of the CPI gradually emerges.

The spread in the deviation between the unemployment projection and the outcome shows a steadier decline as the projection horizon shortens. The average absolute deviation is 0.6 percentage point in February/March the preceding year and 0.3 percentage point in February/March of the same year. After that the spread narrows gradually. The projection error for unemployment decreases considerably in the last two projections before the outcome is available. As in the case of the CPI, this is because the figure is not revised but gradually emerges in the course of the year.

Projections for 2015 and 2016 uncertain

The uncertainty associated with our projections for 2015 and 2016 is presented in Figures 24, 25 and 26. Mainland GDP growth is now projected at 1.1 per cent in 2015 and 2.2 per cent in 2016. In light of the above analysis, there is a 50 per cent probability that mainland GDP growth will be between 0.4 and 1.8 per cent in 2015 and between 1.1 and 3.3 per cent in 2016. An interval of a total of 3.3 percentage points in 2015 and 5.3 percentage points in 2016 covers the percentage growth with 90 per cent probability. The intervals serve to illustrate that it is difficult to make an accurate projection for mainland GDP growth, as it changes quite considerably from year to year.

CPI inflation was 2.0 per cent in 2014. In 2015 and 2016 it is projected to rise to 2.3 and 2.0 per cent, respectively. There is an 80 per cent probability that the projections for 2015 and 2016 will not be more than 0.6 and 1.1 percentage point, respectively, off the mark.

The unemployment level is projected to rise from 3.5 per cent in 2014 to 3.9 per cent in 2015 and then further to 4.1 per cent in 2016. Whereas historical forecast errors indicate that the projection for 2015 can be regarded as relatively certain, there is more uncertainty attached to the projection for the following year. For example, there is an 80 per cent probability that the accounts figure will not differ more than 0.4 percentage point from our projection for 2015. Thus it is highly

likely that unemployment will increase from 2014 to 2015. In 2016, on the other hand, there is an 80 per cent probability that unemployment will lie within an interval of 0.8 percentage point above or below the projection.

How accurate were Statistics Norway's projections for 2014?

The first time we published projections for 2014 as part of our ongoing monitoring of the business cycle was at the beginning of 2011. The table shows the projections made then, one year later, and thereafter all the projections published through 2013 and 2014.

In the projections published early in 2011, the Norwegian economy was forecast to have a continuous upturn until the end of 2014 at least. Developments were largely driven by high growth in mainland demand growth, moderately positive impulses from the petroleum sector and a moderate global economic upturn from early 2013. Viewed in retrospect, projected growth for the years 2011–2014 was too high, while projections for the strong positive demand impulses from the petroleum industry were far too low, with the exception of 2014. However, other demand impulses were consistently overestimated, which resulted in an overly optimistic picture. Unemployment was then projected to be as low as 2.6 per cent in 2014, and wage growth as high as 5.8 per cent.

In early 2012, the picture underwent a substantial downward revision, but was still too optimistic. Unemployment in 2014 was quite correctly forecast, however. The wage growth projection was still too high, but the overestimation was considerably smaller. The forecasts for the underlying economic situation in both Norway and the euro zone were too optimistic, which is reflected in the fact that the money market rate projection was substantially higher than the ex post outcome. Mainland GDP growth in 2014 was overestimated by just over one percentage point.

Up until spring 2013, the improvements in the projections for 2014 were very modest. Growth in household consumption and mainland investment were still overestimated. Income growth was overestimated, and the increase in the saving ratio³ was not captured. Stabilising effects in the labour market in the form of slightly too high employment growth projections being offset by overestimation of the labour supply resulted in unemployment projection very close to the outcome level.

From the December 2013 projections onwards, most of the driving forces behind the development in 2014 were in place. From then on, both household and general government consumption were almost correctly forecast, and the same can largely be said about

³ Box 2 in *Economic Survey 1/2014* provides a more detailed account of developments in consumption and saving after the financial crisis.

Table 7. SN forecasts for 2014. Growth rates in per cent

	ES 1/11	ES 1/12	ES 1/13	ES 3/13	ES 5/13	ES 1/14	ES 3/14	ES 4/14	ES 6/14	ES 1/15
Demand and output										
Consumption in households etc.	3.4	3.9	4.2	4.3	2.3	2.1	2.1	2.1	2.1	2.1
General government consumption	2.8	3.1	2.4	2.4	2.4	2.3	2.3	2.3	3.1	2.5
Gross fixed investment	4.8	5.2	5.3	4.0	2.5	1.2	0.2	-0.4	1.3	1.2
Extraction and transport via pipelines	3.2	2.9	5.1	4.2	4.8	2.5	3.5	-1.3	-0.7	0.0
Mainland Norway	5.5	6.2	5.1	3.9	1.7	0.9	-0.5	0.8	2.2	1.8
Housing	5.2	6.1	4.7	2.2	-2.5	-2.2	-4.8	-2.6	-0.3	-1.6
Exports	2.3	1.0	1.1	2.1	2.3	2.9	2.6	1.6	1.0	1.7
Crude oil and natural gas	-0.4	-1.1	0.9	1.9	2.3	3.1	2.7	0.1	-0.8	0.9
Traditional goods	4.7	2.5	1.8	1.5	1.2	1.3	1.8	2.6	2.9	2.7
Imports	5.2	5.3	3.8	4.5	2.9	3.5	2.0	1.8	2.8	1.6
Traditional goods	6.3	5.8	5.3	4.6	1.4	1.5	2.4	1.2	0.8	0.0
Gross domestic product	2.4	2.4	2.6	2.7	2.1	2.1	2.2	1.9	2.2	2.2
Mainland Norway	3.2	3.4	3.1	3.0	2.1	1.9	2.0	2.2	2.6	2.3
Labour market										
Employed persons	1.6	1.3	1.4	1.5	0.9	0.7	0.8	1.2	1.1	1.1
Unemployment rate (level)	2.6	3.5	3.4	3.5	3.6	3.7	3.6	3.4	3.5	3.5
Prices, wages and income										
Wages per standard man-year	5.8	4.4	3.9	3.8	3.6	3.8	3.6	3.5	3.3	3.1
Household real income	3.8	3.7	3.9	3.9	2.6	2.6	3.1	3.3	3.7	2.5
Consumer price index (CPI)	2.6	2.1	1.4	1.9	2.0	2.3	2.0	2.1	2.1	2.0
CPI-ATE	2.5	2.1	1.6	1.9	2.1	2.5	2.3	2.5	2.5	2.4
Export prices, traditional goods	3.7	2.4	1.3	2.1	2.0	2.3	3.5	3.6	3.4	4.1
Import prices, traditional goods	2.5	1.3	0.1	1.6	2.9	4.3	3.7	4.8	4.8	5.5
Housing prices	5.8	5.8	6.1	4.3	-2.2	-0.9	0.7	2.5	2.3	2.7
MEMO:										
Money market rate (level)	5.8	3.8	2.5	2.0	1.7	1.7	1.7	1.7	1.7	1.7
Lending rate, credit loans(level)	7.1	4.6	4.1	3.9	4.1	4.1	4.0	4.0	3.9	3.9
Importweighted krone exchange rate (44 countries)	0.6	0.0	-1.1	1.1	2.1	3.5	2.8	3.8	4.9	5.3
Current balance (bill. NOK)	352	381	293	275	330	340	344	321	279	267
Export markets indicator	7.5	4.5	3.3	3.3	3.3	3.8	3.6	3.6	3.1	4.3
Crude oil price NOK (level)	609	627	560	588	593	633	630	650	625	619

Source: Statistics Norway.

mainland investment. However, investment in the petroleum industry was somewhat overestimated right up until the spring of 2014. Apart from the fact that the rise in house prices was clearly underestimated and the wage growth forecast was too high, the nominal picture in 2014, including the interest rate level, was accurately captured from December 2013.

Tabelle 8. National accounts: Final expenditure and gross domestic product. At constant 2012 prices. Million kroner

	Unadjusted		Seasonally adjusted							
	2013	2014	13.1	13.2	13.3	13.4	14.1	14.2	14.3	14.4
Final consumption expenditure of households and NPISHs	1 201 060	1 226 596	299 151	299 832	300 472	301 278	304 230	306 356	306 585	309 577
Household final consumption expenditure	1 144 644	1 169 432	285 190	285 623	286 341	287 143	289 998	292 101	292 247	295 212
Goods	554 754	560 128	139 918	138 986	137 677	137 686	139 218	140 370	139 666	140 855
Services	540 065	557 066	133 121	134 528	135 952	136 553	137 684	138 693	139 584	141 251
Direct purchases abroad by resident households	82 559	86 223	20 112	20 233	20 921	21 329	21 314	21 529	21 648	21 723
Direct purchases by non-residents	-32 734	-33 985	-7 960	-8 124	-8 209	-8 425	-8 218	-8 490	-8 651	-8 617
Final consumption expenditure of NPISHs	56 416	57 164	13 961	14 209	14 131	14 135	14 232	14 256	14 338	14 365
Final consumption expenditure of general government	629 119	644 630	156 100	156 602	157 553	159 110	159 423	160 646	161 677	163 113
Final consumption expenditure of central government	314 723	323 747	78 553	78 264	78 607	79 569	79 771	80 724	81 407	82 059
Central government, civilian	275 637	284 659	68 760	68 475	68 768	69 906	70 045	70 950	71 626	72 254
Central government, defence	39 087	39 088	9 793	9 789	9 839	9 663	9 726	9 774	9 781	9 805
Final consumption expenditure of local government	314 395	320 883	77 547	78 338	78 946	79 540	79 653	79 922	80 270	81 054
Gross fixed capital formation	704 846	713 138	170 788	178 109	177 871	178 070	179 353	181 444	178 712	173 907
Extraction and transport via pipelines	204 477	204 551	46 751	50 664	54 118	52 854	51 676	52 010	50 730	50 068
Ocean transport	8 125	7 654	2 345	2 407	1 851	1 493	1 717	1 972	2 193	1 756
Mainland Norway	492 244	500 933	121 692	125 039	121 903	123 722	125 960	127 462	125 790	122 083
Industries	220 588	221 212	53 552	58 024	53 910	54 739	54 794	55 532	56 148	54 788
Service activities incidental to extraction	3 244	2 610	-318	1 381	920	1 261	551	749	673	637
Other services	132 497	132 462	33 169	34 712	32 397	32 146	32 130	33 178	34 324	32 786
Manufacturing and mining	34 591	36 410	8 470	9 106	8 364	8 532	9 115	8 826	9 000	9 451
Production of other goods	50 255	49 729	12 231	12 824	12 229	12 800	12 997	12 779	12 152	11 914
Dwellings (households)	149 206	146 886	37 323	37 106	37 195	37 703	37 548	37 138	36 761	35 627
General government	122 450	132 836	30 816	29 908	30 797	31 280	33 619	34 792	32 880	31 668
Changes in stocks and statistical discrepancies	140 216	150 991	35 431	30 310	34 911	39 350	32 072	38 484	45 555	34 419
Gross capital formation	845 062	864 129	206 219	208 420	212 782	217 419	211 425	219 928	224 268	208 325
Final domestic use of goods and services	2 675 241	2 735 355	661 470	664 854	670 807	677 807	675 079	686 930	692 530	681 016
Final demand from Mainland Norway	2 322 423	2 372 159	576 943	581 473	579 928	584 110	589 614	594 464	594 052	594 774
Final demand from general government	751 568	777 466	186 916	186 510	188 351	190 390	193 042	195 438	194 557	194 782
Total exports	1 168 538	1 188 947	288 920	296 264	295 889	287 334	293 501	292 005	296 075	306 274
Traditional goods	312 541	320 844	78 562	79 055	77 289	77 020	77 972	80 277	80 674	81 901
Crude oil and natural gas	564 225	569 417	139 997	144 729	144 390	135 915	141 328	136 405	142 065	148 932
Ships, oil platforms and planes	8 512	7 997	1 884	1 623	2 388	2 587	3 526	1 561	1 071	1 811
Services	283 260	290 689	68 477	70 858	71 823	71 812	70 676	73 762	72 265	73 632
Total use of goods and services	3 843 779	3 924 302	950 390	961 118	966 697	965 141	968 580	978 936	988 605	987 291
Total imports	856 565	870 331	211 703	213 773	214 359	215 574	214 970	217 180	223 278	214 964
Traditional goods	508 128	508 175	127 373	126 526	126 951	126 974	127 869	127 771	126 699	125 937
Crude oil and natural gas	16 437	14 580	3 784	3 950	4 777	3 300	3 645	3 349	3 727	3 994
Ships, oil platforms and planes	25 211	27 309	6 683	6 578	6 649	5 248	5 179	5 680	12 231	4 142
Services	306 790	320 267	73 863	76 719	75 982	80 052	78 276	80 380	80 620	80 891
Gross domestic product (market prices)	2 987 214	3 053 970	738 687	747 345	752 338	749 567	753 610	761 755	765 327	772 327
Gross domestic product Mainland Norway (market prices)	2 347 170	2 401 501	582 063	585 207	588 449	591 727	594 066	600 954	601 636	604 525
Petroleum activities and ocean transport	640 044	652 470	156 624	162 139	163 889	157 840	159 544	160 802	163 691	167 802
Mainland Norway (basic prices)	2 030 965	2 079 710	503 475	506 559	509 125	512 261	514 400	520 016	521 564	523 980
Mainland Norway excluding general government	1 541 130	1 581 116	382 046	384 452	386 433	388 639	390 326	395 636	396 850	398 573
Manufacturing and mining	207 747	215 083	50 652	52 167	52 798	51 954	52 357	53 765	54 262	54 415
Production of other goods	246 140	256 688	61 568	60 965	60 908	62 648	62 879	65 289	64 333	64 459
Services incl. dwellings (households)	1 087 243	1 109 345	269 825	271 320	272 727	274 037	275 090	276 582	278 255	279 698
General government	489 835	498 594	121 429	122 108	122 692	123 621	124 074	124 381	124 715	125 408
Taxes and subsidies products	316 205	321 790	78 588	78 647	79 325	79 466	79 666	80 938	80 071	80 545

Source: Statistics Norway.

Table 9. National accounts: Final expenditure and gross domestic product. At constant 2012 prices. Percentage change from the previous period

	Unadjusted		Seasonally adjusted							
	2012	2013	12.1	12.2	12.3	12.4	13.1	13.2	13.3	13.4
Final consumption expenditure of households and NPISHs	2.1	2.1	0.9	0.2	0.2	0.3	1.0	0.7	0.1	1.0
Household final consumption expenditure	2.1	2.2	0.9	0.2	0.3	0.3	1.0	0.7	0.1	1.0
Goods	1.1	1.0	1.1	-0.7	-0.9	0.0	1.1	0.8	-0.5	0.9
Services	2.4	3.1	0.5	1.1	1.1	0.4	0.8	0.7	0.6	1.2
Direct purchases abroad by resident households	7.8	4.4	2.5	0.6	3.4	2.0	-0.1	1.0	0.6	0.3
Direct purchases by non-residents	3.4	3.8	0.7	2.1	1.0	2.6	-2.4	3.3	1.9	-0.4
Final consumption expenditure of NPISHs	2.0	1.3	1.2	1.8	-0.6	0.0	0.7	0.2	0.6	0.2
Final consumption expenditure of general government	1.7	2.5	0.7	0.3	0.6	1.0	0.2	0.8	0.6	0.9
Final consumption expenditure of central government	1.4	2.9	1.0	-0.4	0.4	1.2	0.3	1.2	0.8	0.8
Central government, civilian	1.8	3.3	1.1	-0.4	0.4	1.7	0.2	1.3	1.0	0.9
Central government, defence	-0.9	0.0	-0.2	0.0	0.5	-1.8	0.6	0.5	0.1	0.3
Final consumption expenditure of local government	1.9	2.1	0.3	1.0	0.8	0.8	0.1	0.3	0.4	1.0
Gross fixed capital formation	6.8	1.2	-1.8	4.3	-0.1	0.1	0.7	1.2	-1.5	-2.7
Extraction and transport via pipelines	17.1	0.0	-0.2	8.4	6.8	-2.3	-2.2	0.6	-2.5	-1.3
Ocean transport	18.2	-5.8	40.9	2.6	-23.1	-19.3	15.0	14.8	11.2	-19.9
Mainland Norway	2.9	1.8	-2.9	2.8	-2.5	1.5	1.8	1.2	-1.3	-2.9
Industries	-1.1	0.3	-7.9	8.4	-7.1	1.5	0.1	1.3	1.1	-2.4
Service activities incidental to extraction	-69.3	-19.5	-108.1	-534.1	-33.4	37.1	-56.3	35.9	-10.2	-5.3
Other services	0.1	0.0	-0.9	4.7	-6.7	-0.8	-0.1	3.3	3.5	-4.5
Manufacturing and mining	5.6	5.3	0.7	7.5	-8.2	2.0	6.8	-3.2	2.0	5.0
Production of other goods	6.2	-1.0	-0.8	4.8	-4.6	4.7	1.5	-1.7	-4.9	-2.0
Dwellings (households)	6.4	-1.6	1.2	-0.6	0.2	1.4	-0.4	-1.1	-1.0	-3.1
General government	6.5	8.5	1.7	-2.9	3.0	1.6	7.5	3.5	-5.5	-3.7
Changes in stocks and statistical discrepancies	10.6	7.7	43.4	-14.5	15.2	12.7	-18.5	20.0	18.4	-24.4
Gross capital formation	7.4	2.3	3.9	1.1	2.1	2.2	-2.8	4.0	2.0	-7.1
Final domestic use of goods and services	3.6	2.2	1.8	0.5	0.9	1.0	-0.4	1.8	0.8	-1.7
Final demand from Mainland Norway	2.1	2.1	0.0	0.8	-0.3	0.7	0.9	0.8	-0.1	0.1
Final demand from general government	2.4	3.4	0.8	-0.2	1.0	1.1	1.4	1.2	-0.5	0.1
Total exports	-3.0	1.7	-1.5	2.5	-0.1	-2.9	2.1	-0.5	1.4	3.4
Traditional goods	1.0	2.7	0.3	0.6	-2.2	-0.3	1.2	3.0	0.5	1.5
Crude oil and natural gas	-7.6	0.9	-4.2	3.4	-0.2	-5.9	4.0	-3.5	4.1	4.8
Ships, oil platforms and planes	-1.5	-6.1	33.7	-13.8	47.1	8.4	36.3	-55.7	-31.4	69.1
Services	2.9	2.6	1.5	3.5	1.4	0.0	-1.6	4.4	-2.0	1.9
Total use of goods and services	1.5	2.1	0.7	1.1	0.6	-0.2	0.4	1.1	1.0	-0.1
Total imports	4.3	1.6	4.3	1.0	0.3	0.6	-0.3	1.0	2.8	-3.7
Traditional goods	3.2	0.0	3.2	-0.7	0.3	0.0	0.7	-0.1	-0.8	-0.6
Crude oil and natural gas	11.2	-11.3	19.1	4.4	20.9	-30.9	10.5	-8.1	11.3	7.2
Ships, oil platforms and planes	23.0	8.3	23.6	-1.6	1.1	-21.1	-1.3	9.7	115.3	-66.1
Services	4.5	4.4	4.0	3.9	-1.0	5.4	-2.2	2.7	0.3	0.3
Gross domestic product (market prices)	0.7	2.2	-0.2	1.2	0.7	-0.4	0.5	1.1	0.5	0.9
Gross domestic product Mainland Norway (market prices)	2.3	2.3	0.5	0.5	0.6	0.6	0.4	1.2	0.1	0.5
Petroleum activities and ocean transport Mainland Norway (basic prices)	-4.4	1.9	-2.8	3.5	1.1	-3.7	1.1	0.8	1.8	2.5
Mainland Norway excluding general government	2.2	2.4	0.4	0.6	0.5	0.6	0.4	1.1	0.3	0.5
Manufacturing and mining	2.5	2.6	0.5	0.6	0.5	0.6	0.4	1.4	0.3	0.4
Production of other goods	3.2	3.5	0.1	3.0	1.2	-1.6	0.8	2.7	0.9	0.3
Services incl. dwellings (households)	2.5	4.3	1.7	-1.0	-0.1	2.9	0.4	3.8	-1.5	0.2
General government	2.3	2.0	0.4	0.6	0.5	0.5	0.4	0.5	0.6	0.5
Taxes and subsidies products	1.4	1.8	0.1	0.6	0.5	0.8	0.4	0.2	0.3	0.6
Taxes and subsidies products	2.5	1.8	0.8	0.1	0.9	0.2	0.3	1.6	-1.1	0.6

Source: Statistics Norway.

Table 10. **National accounts: Final expenditure and gross domestic product. Price indices. 2012=100**

	Unadjusted		Seasonally adjusted							
	2013	2014	13.1	13.2	13.3	13.4	14.1	14.2	14.3	14.4
Final consumption expenditure of households and NPISHs	102.8	105.2	101.6	102.5	103.4	103.8	104.5	104.8	105.6	106.0
Final consumption expenditure of general government	103.9	106.8	103.3	103.2	104.2	104.7	105.8	106.6	106.9	107.9
Gross fixed capital formation	103.0	105.6	102.2	102.6	102.9	104.0	104.8	104.9	105.5	107.2
Mainland Norway	102.6	104.7	101.7	102.3	102.6	103.6	104.0	104.1	104.6	106.4
Final domestic use of goods and services	103.0	105.5	102.5	102.1	103.4	103.9	104.8	105.4	106.0	106.4
Final demand from Mainland Norway	103.0	105.6	102.1	102.6	103.5	104.0	104.7	105.2	105.7	106.6
Total exports	101.9	100.7	98.2	100.2	103.3	106.0	104.4	101.2	99.8	97.0
Traditional goods	103.1	107.2	99.9	102.1	103.8	106.0	107.0	105.9	106.5	108.9
Total use of goods and services	102.7	104.1	101.2	101.5	103.3	104.5	104.7	104.2	104.1	103.5
Total imports	102.5	107.1	100.2	101.6	103.9	104.4	107.5	105.9	108.1	107.8
Traditional goods	102.1	107.7	99.8	101.2	103.0	104.4	106.7	106.8	107.8	109.3
Gross domestic product (market prices)	102.7	103.2	101.5	101.5	103.2	104.6	103.9	103.6	103.0	102.3
Gross domestic product Mainland Norway (market prices)	103.2	105.3	102.2	102.9	103.6	104.0	104.1	104.9	105.7	106.6

Source: Statistics Norway

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

	Unadjusted		Seasonally adjusted							
	2013	2014	13.1	13.2	13.3	13.4	14.1	14.2	14.3	14.4
Final consumption expenditure of households and NPISHs	2.8	2.4	0.7	0.9	0.9	0.3	0.6	0.4	0.7	0.4
Final consumption expenditure of general government	3.9	2.8	2.0	-0.1	1.0	0.4	1.1	0.8	0.2	1.0
Gross fixed capital formation	3.0	2.6	1.7	0.4	0.3	1.1	0.8	0.1	0.6	1.6
Mainland Norway	2.6	2.1	1.0	0.6	0.3	1.0	0.3	0.1	0.5	1.8
Final domestic use of goods and services	3.0	2.4	1.8	-0.4	1.2	0.5	0.9	0.6	0.5	0.3
Final demand from Mainland Norway	3.0	2.4	1.1	0.5	0.8	0.5	0.7	0.4	0.5	0.8
Total exports	1.9	-1.2	-0.8	2.1	3.0	2.6	-1.5	-3.1	-1.4	-2.8
Traditional goods	3.1	4.1	1.0	2.2	1.7	2.1	1.0	-1.0	0.5	2.3
Total use of goods and services	2.7	1.3	1.0	0.3	1.8	1.2	0.2	-0.5	0.0	-0.6
Total imports	2.5	4.5	0.5	1.4	2.3	0.5	2.9	-1.4	2.0	-0.3
Traditional goods	2.1	5.5	-0.1	1.5	1.7	1.4	2.2	0.1	1.0	1.4
Gross domestic product (market prices)	2.7	0.4	1.2	0.0	1.6	1.3	-0.6	-0.2	-0.7	-0.7
Gross domestic product Mainland Norway (market prices)	3.2	2.1	1.2	0.6	0.7	0.3	0.1	0.7	0.8	0.9

Source: Statistics Norway

Table 13. Main economic indicators 2003-2018. Accounts and forecasts. Percentage change from previous year unless otherwise noted

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012*	2013*	Forecasts				
												2014*	2015	2016	2017	2018
Demand and output																
Consumption in households etc.	3,2	5,4	4,4	5,0	5,3	1,7	0,0	3,8	2,3	3,5	2,1	2,1	2,1	2,2	2,4	2,3
General government consumption	1,3	1,3	1,9	1,9	2,0	2,4	4,1	2,2	1,0	1,6	1,7	2,5	2,5	2,4	1,8	2,5
Gross fixed investment	0,4	10,0	12,0	9,1	11,7	0,9	-6,8	-6,6	7,4	7,6	6,8	1,2	-3,6	1,1	3,5	3,2
Extraction and transport via pipelines	13,8	10,5	19,7	3,2	6,9	4,7	3,3	-8,9	11,3	15,1	17,1	0,0	-15,9	-8,1	-2,3	-0,1
mainland Norway	-4,9	10,7	11,1	9,3	14,2	0,9	-10,4	-6,4	5,0	7,4	2,9	1,8	1,4	4,2	5,3	3,9
Industries	-14,2	12,5	18,1	12,7	22,7	3,1	-18,4	-9,5	1,1	10,5	-1,1	0,3	1,5	4,8	4,5	4,8
Housing	1,8	16,3	9,7	4,0	2,7	-9,0	-8,1	-1,6	17,0	10,9	6,4	-1,6	-2,2	3,2	4,1	1,9
General government	9,9	2,6	-0,6	8,4	8,7	7,2	7,7	-4,8	1,1	-1,8	6,5	8,5	5,1	4,3	7,9	4,4
Demand from Mainland Norway ¹	1,6	5,1	5,1	5,0	6,2	1,6	-1,4	1,6	2,6	3,2	2,1	2,1	2,1	2,7	2,9	2,7
Stockbuilding ²	-1,2	2,4	-0,1	1,4	0,2	-0,1	-2,5	2,9	-0,3	-0,3	0,5	0,4	0,2	0,2	-0,5	0,0
Exports	-0,1	1,0	0,5	-0,8	1,4	0,1	-4,1	0,7	-0,8	1,4	-3,0	1,7	1,7	1,7	1,6	2,0
Crude oil and natural gas	-0,8	-0,7	-5,0	-6,6	-2,4	-1,3	-1,6	-6,9	-5,6	0,5	-7,6	0,9	-0,5	-0,1	-0,2	0,3
Traditional goods	3,7	3,6	5,3	6,1	9,2	3,5	-8,0	3,3	-0,1	-0,2	1,0	2,7	5,1	3,8	3,8	3,9
Imports	1,2	9,0	7,9	9,1	10,0	3,2	-10,0	8,3	4,0	3,1	4,3	1,6	1,8	2,8	1,3	2,6
Traditional goods	5,7	11,7	8,4	11,6	7,2	1,2	-12,1	9,2	4,6	2,6	3,2	0,0	1,3	2,8	4,0	3,9
Gross domestic product	0,9	4,0	2,6	2,4	2,9	0,4	-1,6	0,6	1,0	2,7	0,7	2,2	0,9	1,7	1,9	2,2
Mainland Norway	1,2	5,0	4,7	5,0	5,7	1,7	-1,6	1,8	1,9	3,8	2,3	2,3	1,1	2,2	2,4	2,7
Manufacturing	2,8	4,6	3,6	2,6	3,8	2,7	-7,8	2,1	1,7	2,0	3,2	3,5	2,5	3,5	3,4	3,4
Labour market																
Total hours worked, Mainland Norway	-2,0	2,2	1,6	3,5	4,8	3,6	-2,0	0,2	1,7	1,8	0,7	1,6	0,5	0,6	0,5	0,9
Employed persons	-1,2	0,6	1,3	3,4	4,1	3,2	-0,5	-0,5	1,5	2,1	1,2	1,1	0,2	0,3	1,0	1,0
Labor force ³	-0,1	0,3	0,8	1,6	2,5	3,4	0,0	0,5	1,0	1,8	1,0	1,1	0,8	0,6	0,9	1,0
Participation rate (level) ³	72,9	72,6	72,4	72,0	72,8	73,9	72,8	71,9	71,4	71,5	71,2	71,0	70,3	70,0	70,0	70,2
Unemployment rate (level) ³	4,5	4,5	4,6	3,4	2,5	2,6	3,2	3,6	3,3	3,2	3,5	3,5	3,9	4,1	3,9	3,8
Prices and wages																
Wages per standard man-year	4,5	3,5	3,3	4,1	5,4	6,3	4,2	3,7	4,2	4,0	3,9	3,1	2,9	3,1	3,1	3,4
Consumer price index (CPI)	2,5	0,4	1,6	2,3	0,8	3,8	2,1	2,5	1,2	0,8	2,1	2,0	2,3	2,0	1,7	1,7
CPI-ATE ⁴	..	0,4	1,0	0,8	1,4	2,6	2,6	1,4	0,9	1,2	1,6	2,4	2,7	1,9	1,7	1,7
Export prices, traditional goods	-1,0	8,4	4,0	11,3	2,4	2,8	-6,0	4,5	5,8	-1,9	3,1	4,1	2,6	1,7	1,8	2,0
Import prices, traditional goods	0,0	3,7	0,3	4,0	3,7	3,9	-1,5	0,0	4,0	0,3	2,1	5,5	3,4	1,0	1,4	1,5
Housing prices ⁵	1,7	10,1	8,2	13,7	12,6	-1,1	1,9	8,3	8,0	6,7	4,1	2,7	3,6	1,2	1,9	0,4
Income, interest rates and exchange rate																
Household real income	4,6	3,4	8,3	-6,5	6,1	3,5	3,2	2,3	4,1	4,5	2,8	2,5	2,1	2,8	2,6	2,5
Household saving ratio (level)	8,8	6,9	9,6	-0,3	1,1	3,9	5,5	4,3	6,2	7,6	7,5	8,3	8,5	8,9	9,0	9,2
Money market rate (level)	4,1	2,0	2,2	3,1	5,0	6,2	2,5	2,5	2,9	2,2	1,8	1,7	1,1	1,0	1,2	1,5
Lending rate, credit loans(level) ⁶	6,5	4,2	3,9	4,3	5,0	6,8	4,0	3,4	3,6	3,9	4,0	3,9	3,3	3,0	3,1	3,3
Real after-tax lending rate, banks (level)	2,2	2,5	1,3	0,7	2,9	1,1	0,7	0,1	1,3	2,1	0,7	0,8	0,1	0,2	0,5	0,7
Importweighted krone exchange rate (44 countries) ⁷	1,3	3,0	-3,9	0,7	-1,8	0,0	3,3	-3,7	-2,4	-1,2	2,2	5,3	4,7	-2,3	-0,2	0,0
NOK per euro (level)	8,0	8,4	8,0	8,1	8,0	8,2	8,7	8,0	7,8	7,5	7,8	8,4	8,5	8,3	8,3	8,3
Current account																
Current balance (bill. NOK)	195,2	220,6	322,8	357,7	287,4	408,3	258,2	284,4	344,9	368,9	299,6	266,7	162,3	171,5	200,8	210,0
Current balance (per cent of GDP)	12,1	12,4	16,2	16,1	12,2	15,6	10,7	11,2	12,7	13,9	10,5	8,7	5,2	5,3	5,9	6,0
International indicators																
Exports markets indicator	4,0	8,0	6,9	9,7	6,6	1,7	-10,1	11,2	6,2	1,3	1,8	4,2	4,2	4,8	5,6	6,2
Consumer price index, euro-area	2,1	2,1	2,2	2,2	2,2	3,3	0,3	1,7	2,7	2,5	1,3	0,6	-0,4	0,8	1,3	1,7
Money market rate, euro(level)	2,3	2,1	2,2	3,1	4,3	4,6	1,2	0,8	1,4	0,5	0,2	0,2	0,1	0,1	0,3	0,4
Crude oil price NOK (level) ⁸	201	255	356	423	423	536	388	484	621	649	639	621	460	502	525	540

¹ Consumption in households and non-profit organizations + general government consumption + gross fixed capital formation in mainland Norway.² Change in stockbuilding. Per cent of GDP.³ According to Statistics Norway's labour force survey(LFS). Break in data series in 2006.⁴ CPI adjusted for tax changes and excluding energy products.⁵ Break in data series in 2004.⁶ Yearly average. Lending rate, banks until 2006⁷ Increasing index implies depreciation.⁸ Average spot price Brent Blend.

Source: Statistics Norway. The cut-off date for information was 10 March