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# ECONOMIC OUTLOOK

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JANUARY 2014

GDP. Per cent change from preceding year							
Country/region	Weight	2012	2013	2014	2015	2016	2017
<b>World</b>	100.0	3.3	2.9	3.6	3.7	3.7	3.7
<b>USA</b>	19.5	2.8	1.9	3.2	3.0	2.7	2.4
<b>Canada</b>	1.8	1.7	1.7	2.5	2.8	2.7	2.5
<b>Brazil</b>	2.8	0.9	2.5	2.5	3.0	3.5	3.5
<b>Eurozone</b>	13.5	-0.6	-0.4	1.3	1.5	1.3	1.3
<b>Germany</b>	3.8	0.9	0.5	1.8	1.5	1.0	0.8
<b>France</b>	2.7	0.0	0.2	1.0	1.2	1.2	1.2
<b>Italy</b>	2.2	-2.6	-1.8	0.7	1.2	1.1	1.0
<b>Spain</b>	1.7	-1.6	-1.2	1.0	0.7	0.8	1.0
<b>Finland</b>	0.2	-0.8	-1.3	1.5	1.8	1.8	2.0
<b>Estonia</b>	0.0	3.2	1.0	3.0	4.0	3.5	3.5
<b>Latvia</b>	0.0	5.6	4.0	5.0	4.0	4.0	3.5
<b>UK</b>	2.8	0.3	1.8	2.3	2.0	2.3	2.4
<b>Sweden</b>	0.5	1.3	0.9	2.0	2.4	2.3	2.3
<b>Denmark</b>	0.3	-0.4	0.4	1.4	1.9	2.0	2.0
<b>Poland</b>	1.0	1.9	1.5	2.5	3.0	3.0	3.2
<b>Lithuania</b>	0.1	3.7	2.5	3.5	4.0	4.0	3.5
<b>Mainl.-Norway</b>	0.3	3.4	1.9	2.0	1.8	2.1	2.4
<b>Switzerland</b>	0.4	1.0	1.9	2.1	2.0	1.9	1.8
<b>Russia</b>	3.0	3.4	1.5	2.0	2.5	3.5	4.0
<b>China</b>	14.7	7.7	7.7	7.3	7.0	6.5	6.5
<b>India</b>	5.7	3.2	4.5	5.0	6.5	6.5	6.5
<b>Japan</b>	5.5	1.4	1.7	1.4	0.7	0.9	1.1
<b>South Korea</b>	1.9	2.0	2.8	3.0	3.5	3.5	3.5
<b>Others</b>	26.2	4.1	3.5	4.1	4.3	4.5	4.6
<b>Industrialized economies</b>	50.4	1.3	1.1	2.1	2.0	1.9	1.8
<b>Emerging economies</b>	49.6	5.2	4.8	5.2	5.4	5.5	5.6
<b>Norway's trade partners</b>		0.3	0.5	1.7	1.9	1.8	1.7

Source: DNB Markets

Inflation. Per cent change						
Country/region	2012	2013	2014	2015	2016	2017
<b>USA</b>	2.1	1.5	1.9	2.0	2.0	2.5
<b>Canada</b>	1.5	1.0	1.5	2.0	2.0	2.0
<b>Brazil</b>	5.4	6.2	6.0	6.0	5.5	5.0
<b>Eurozone</b>	2.5	1.3	1.2	1.5	1.6	1.7
<b>UK</b>	2.8	2.6	2.2	2.0	2.0	2.0
<b>Sweden</b>	0.9	0.0	0.6	1.4	1.6	1.7
<b>Denmark</b>	2.4	0.8	1.5	1.7	2.0	2.0
<b>Norway</b>	0.7	2.1	2.0	2.1	2.1	2.0
<b>Switzerland</b>	-0.7	-0.2	0.5	0.7	1.1	1.4
<b>Poland</b>	3.7	1.0	2.0	2.5	3.0	2.5
<b>Estonia</b>	4.2	3.0	3.0	3.0	3.0	2.5
<b>Latvia</b>	2.3	0.0	2.0	2.5	3.0	2.5
<b>Lithuania</b>	3.2	1.2	1.5	2.5	3.0	2.5
<b>Russia</b>	6.6	6.5	6.0	5.0	4.5	4.0
<b>China</b>	2.7	2.7	3.0	3.5	3.5	3.5
<b>India</b>	10.4	10.9	9.0	7.5	7.0	7.0
<b>Japan</b>	0.0	0.3	2.4	1.6	1.7	1.5
<b>South Korea</b>	2.2	1.4	2.5	3.0	3.0	3.0
<b>Industrialized economies</b>	1.9	1.3	1.7	1.8	1.9	2.1

Source: DNB Markets

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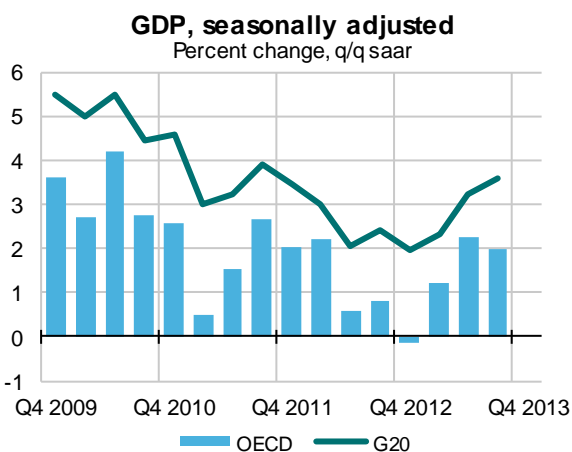
Original Report concluded 14 January 2014  
This report concluded 28 January 2014

# 1 Summary

The global economy grew by just over 3 per cent last year, almost ½ percentage point less than we predicted at the beginning of the year. Growth in the USA, the Eurozone, India and Russia, among others, was disappointing. Meanwhile, economic growth in countries like the UK and Japan exceeded our expectations. The disappointments are mostly history. In the second half of last year, growth in both the industrial and emerging economies rose to 2 and just over 5 per cent, respectively, which we believe to be "cruising speed". We expect the growth rate to be about the same this year. On the one hand, it is natural to expect a broader increase in private consumption in the industrial countries. On the other hand, high debt, budget cuts and excess capacity will continue to dampen growth in these countries. In the EMEs, lower growth in China is being offset by a slight upturn in the other BRIC countries. The US Federal Reserve has started easing up on the gas pedal, but neither the Fed nor other central banks in the West plan any rate hikes till next year at the earliest. This means that long-term interest rates will also remain at the current low levels for the rest of the year.

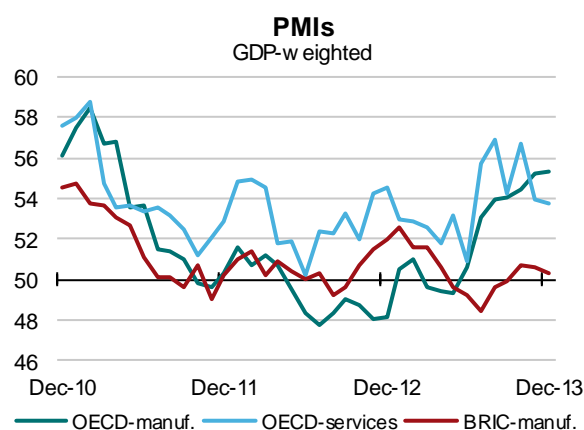
## Industrialised countries on the way out of the quagmire

Growth in the industrialised countries braked sharply in 2012, and at the end of the year the activity level fell for the first time since the great recession in the winter of 2008/2009. It picked up again last year and in the second and third quarters GDP growth rose by 2 per cent p.a., see figure below. If we include the largest growth economies (G20) the growth rate comes to 3½ per cent. Economic growth picked up in these countries, too, last year, but mostly due to stronger growth in the industrial countries.



Source Thomson Datastream/DNB Markets

According to a number of sentiment and activity indicators, including the important purchasing manager indices (PMI), (see figure below), economic recovery appears to have continued at roughly the same pace in the final quarter of last year. With the same growth rate in the fourth quarter as in the third, GDP growth for the year as a whole came to about 1.2 per cent, a few tenths of a percentage point less than what we predicted at the beginning of last year. The reason why the growth rate is not higher is because of the low pace at the end of 2012, see figure above. Manufacturing PMIs in the four largest EMEs: Brazil, Russia, India and China (the BRIC countries), have basically moved sideways at almost neutral levels. But the figures are misleading. While the fairly brisk PMIs in the industrial countries are consistent with a growth rate of around 2 per cent, the more modest BRIC PMIs go hand in hand with growth that is three times as high.



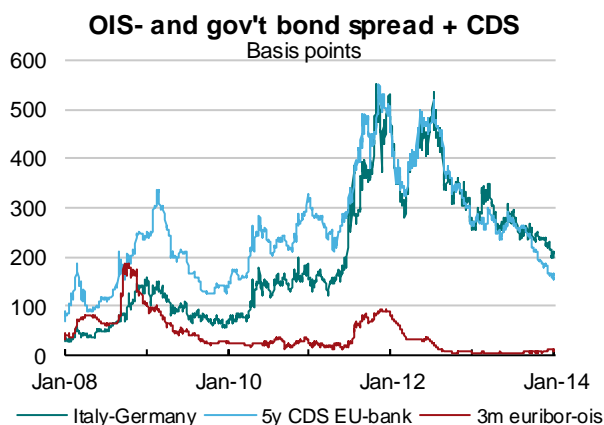
Source: Thomson Datastream / DNB Markets

## Fuelled by fundamental drivers

Recovery in the industrialised countries is attributable to several factors. These include a still very expansive monetary policy combined with gradual reduction of the imbalances that followed after the boom years in the middle of the last decade. With a few exceptions, interest rates in the industrialised countries have been kept at record-low levels for the last five years. At the same time, central banks in the largest industrialised countries have used extensive quantitative easing ("money printing") to both inject sufficient liquidity into the markets and to keep longer term interest rates down. As shown in the figure below, this aspect of the policy has been quite aggressive. Measured in per cent of GDP, the balance sheets of the central banks in the US and UK are four times as large as they were prior to the financial crisis. The Bank of Japan's balance sheet has "only" doubled but with a quantitative easing programme that now corresponds to one percent of GDP per month,

Japan's expansion is unparalleled in the other major countries.

The second factor is that the European sovereign debt crisis has been resolved, at least for now. Most of the credit for this goes to the European Central Bank (ECB), which established the *Outright Monetary Transactions* (OMT) programme as a "fire wall" for deeply indebted European countries. Through the OMT, the ECB guaranteed that, if necessary, it would buy unlimited amounts of short-term debt issued by debt-ridden Eurozone countries that were unable to raise funding in the market, applied for emergency loans from the EU's permanent crisis fund (ESM) and both met and observed the conditions for such loans. The fire wall bolstered the market's confidence that Eurozone member countries would not be left without funding and thus be ejected from the monetary union. A vicious circle was thereby finally broken. Reducing the risk of sovereign bankruptcy and a collapse of the Euro gave European banks and companies easier access to capital. Risk premiums have shrunk, as illustrated by the figure below which shows the difference between Italian and German five-year government bond yields, the difference between the three-month money market rate and the overnight rate, and the credit insurance premium on a five-year loan to an average EU bank. Businesses and households have become more confident about the future. The turnaround in demand further strengthened this confidence.

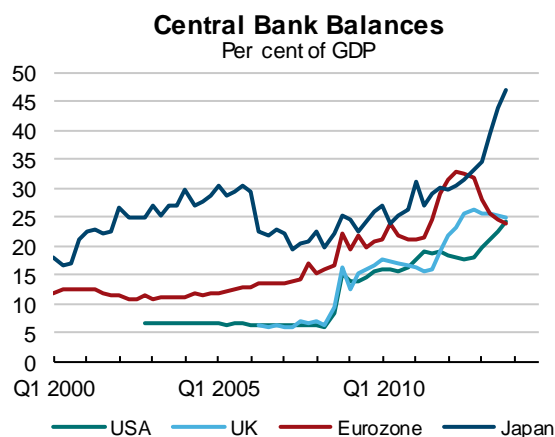


Source: Thomson Datastream/DNB Markets

The ECB needs to share the credit for these positive developments with European politicians who have done a lot on both the national and supranational levels. Budget deficits have been reduced by means of spending cuts and increased income. Many countries have carried out structural reforms. In the most debt-burdened countries, problems in the banking sector have been addressed, albeit not fully solved. The adoption of a budgetary discipline pact will ensure

stronger supranational control of budget deficits in member countries. The first building blocks of a banking union with a common banking supervisor, deposit guarantee and crisis resolution mechanisms have been laid. Though the aim may be more to avert a new crisis than to deal with the current one, work on a banking union is also helpful with respect to establishing guidelines for how to best resolve the remaining elements of the current crisis.

Private lending rates are declining. We believe that the consolidation phase in the USA is drawing to an end. It also seems to have come a long way in the UK. In the Eurozone, businesses have made good progress with regard to reducing debt, but the households still have a long way to go. A lower debt burden means that households do not have to maintain such high savings rates, while businesses can, to a greater extent, use profits to expand rather than reduce debt further.



Source: Thomson Datastream/DNB Markets

Another factor is that, as time passes, excess capacity after the boom years is declining. Years of low growth and poor earnings necessitate shutdowns that reduce capacity. Population growth gradually absorbs the supply of available housing and leads to a need for building more. In the household sector, the car population has aged and possibly even declined due to years of low car sales. This leads to so-called pent-up demand, which is why investments often increase especially sharply in periods of economic recovery. Housing investments in the USA, for example, have increased by a hefty 36 per cent in the last three years.

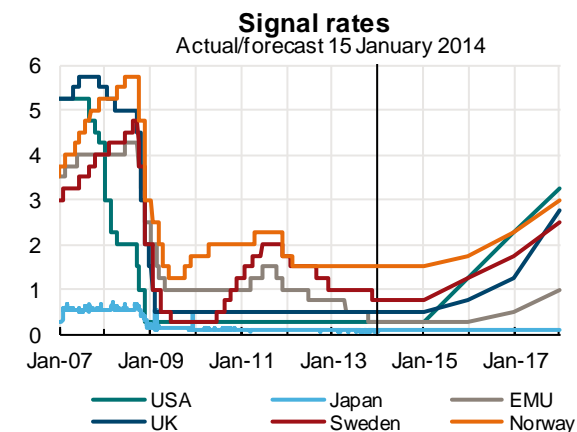
A general economic turnaround helps increase businesses' future earnings estimates. This, together with low risk-free interest rates, increased risk willingness and lower pricing of risk largely explains the rise in stock markets. Higher share prices give companies better access to capital and thereby provide

a basis for increased investments. The result for households is to increase their wealth, which has had a small but positive effect on consumption.

A third factor that mostly applies to some of the hardest hit countries, is that low growth and high unemployment have suppressed wage growth, not least compared to other countries. Better competitive strength has helped boost the contribution from net exports by increasing market shares.

A fourth – not insignificant – factor is that the world economy was spared from major shocks last year. There were no significant upheavals in oil markets, no new sovereign debt crises, no major acts of war or earthquakes. There were a few minor shocks and surprises, like the Italian election in February, the Cyprus crisis, the markets' reactions to the US central bank's announcement that it would start tapering its bond purchases and the government shutdown in the USA in October. Under different circumstances these events might have triggered new crises in financial markets, but due to faith in the ECB's "firewall" and the Fed's clear commitment to follow a sufficiently expansive policy, they only led to minor ripples. This was not the case, however, for emerging economies with trade deficits and a need for foreign capital, which experienced a drop in confidence, capital flight and currency depreciation. But these economies, with India in the forefront, are of too little importance on a global level to derail the world economy.

A fifth factor, of a non-general nature, was the launch of *Abenomics* in the autumn of 2012 – a three-stage rocket involving a more expansive budgetary policy, massive money printing and structural reforms. A year ago we predicted 0.6 per cent GDP growth in Japan in 2013. It now looks like it will be three times as high. This difference alone accounted for almost one tenth higher growth in the developed countries last year.

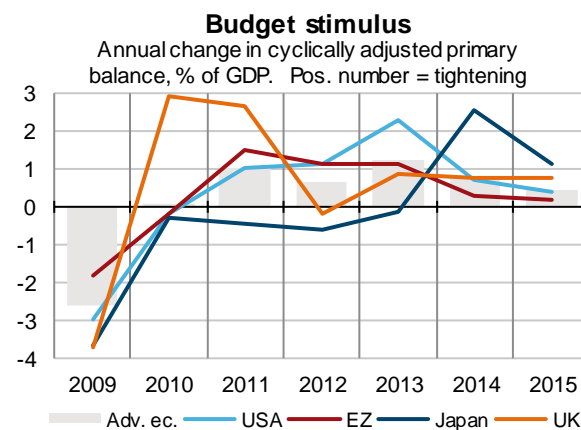


Source: Thomson Datastream/DNB Markets

## Recovery will continue this year

Upturns normally stop because after a few years of higher than normal economic growth, economies hit the capacity ceiling. Central banks consequently need to remove the "punch bowl" and start tightening up their monetary policies at the same time as higher capacity utilisation pushes up wages and other costs and dampens the demand for investments. We have not reached that point yet. The developed countries still have considerable excess capacity and unusually high jobless rates. For the time being, there is no inflation pressure. Quite the contrary, the problem for a number of central banks is that the inflation rate is much too low.

Interest rates will thus remain low this year, too. None of the central banks in the industrialised countries are expected to raise their key policy rates this year. When the time comes, however, the US Fed, which has already started scaling down its bond purchases, is likely to take the lead. After spending USD 85 bn. a month on bond purchases since September of 2012, in December the Fed decided to reduce the purchases to USD 75 bn. a month. The purchases are expected to be reduced to zero well before the end of this year, and we expect the Fed to start raising the interest rate early in 2015. The other central banks will follow the Fed's example in 2015 and 2016 but the rise in interest rates will be very gradual. The exception is in Japan, where the central bank will continue its zero interest-rate policy and extensive bond purchases for some years to come.



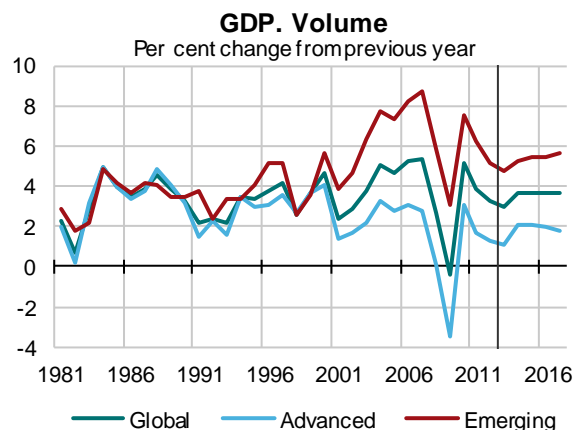
Source: IMF Fiscal Monitor/DNB Markets

Many of the other drivers of economic trends will have an impact this year, too. Assuming there are no new shocks, risk pricing is likely to decline further. The debt burden will continue to decrease. More people with jobs means higher income, increased demand and ripple effects on companies' earnings and investment demand. In addition, there is expected to be less budget tightening this year than last year, cf. the figure above

which shows the change of cyclically adjusted budget balances minus net interest payments. Negative figures (increase of the adjusted deficit) entail stimuli to increase demand while the opposite applies to positive figures. In 2009, budget policies in the industrialised countries were very expansive. The year after, they were neutral and as of 2011 they switched to a contractive direction. Last year, the industrialised nations tightened up their budgets by the equivalent of 1.3 per cent of GDP. The tightening this year will correspond to 0.9 per cent of GDP, but this is largely due to the increase of Japan's value-added tax. Budget cuts in both the USA and the Eurozone will be lower this year than they were last year. There will be even less negative drag from tighter budgets in 2015. In addition, by managing to agree on the budget in December, the US Congress gave itself a two-year breathing space, which means that there is little likelihood of new rounds of unrest due to deadlocked discussions about the budget and/or the debt ceiling.

Growth this year is expected to come to an entire 3¼ per cent in the USA and about 2½ per cent in the UK. Growth in Japan and the Eurozone, however, is unlikely to exceed 1½ per cent. In Japan, this is mostly because of the increase of the value-added tax (which is discussed below). In the Eurozone it is due to the effects of continued high debt, tight credit and considerable excess capacity. Even if the budget cuts are lower, the budget policy will continue to reduce aggregate demand. This means that aggregate economic growth in the industrialised countries will come to 2.1 per cent this year. As in our last semi-annual report in August, we predict that GDP in the industrialised countries will continue to grow at a fairly moderate pace of around 2 per cent per year, even after the end of the forecast period.

The growth rate in the **EMEs** fell from 7½ per cent in the recovery year 2010 to 5 per cent last year. The four BRIC countries account for most of this slowdown but for slightly different reasons. Last year economic growth in these countries was steady at about 6 per cent. Though we anticipate a slight slowdown in China, we expect growth in activity to pick up somewhat in the other EMEs, and that growth in the emerging half of the global economy will consequently come to 5 per cent this year, and probably somewhat more than that in following years.



Source: IMF WEO/Thomson Datastream/DNB Markets, January 2014

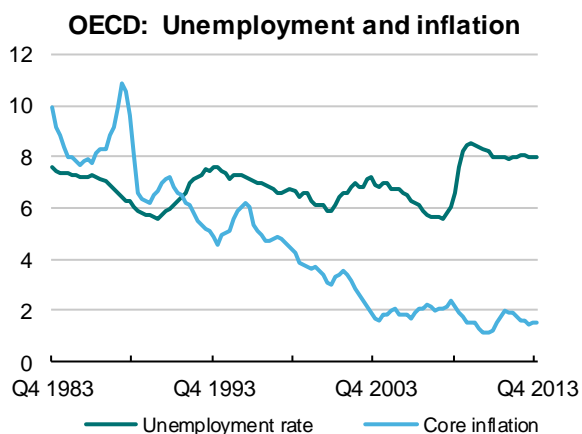
### Some upside in the developed countries...

In the years 1980 to 2007, economic growth in the developed countries came to average of 2¼ per cent per year and a good deal more than that in boom years. In that context, 2 per cent growth in a recovery phase is unimpressive, especially in light of the depth of the preceding slump and thereby the extent of excess resources. Capacity constraints are unlikely to stop this upturn in the immediate future.

Our modest estimates are consistent with what we have maintained for the last five years, i.e. that the upturn will be restrained and slow. There are good reasons for assuming that this will be case in 2014, as well. We may, however, have underestimated the dynamics in the private sector when the pace of the upturn picks up. Historically low housing construction, and a low level of corporate investments relative to earnings, pent-up household demand and second-round effects of stronger growth in activity, employment and income could result in a healthier upturn than we currently envision. This applies to the USA, and perhaps a number of European countries, including the UK.

Less budget tightening in the form of postponing the implementation of budget cuts, for instance due to political opposition, will boost growth, at least on the short term, but could also lead to renewed turbulence in financial markets and lower growth in the long run.

Lower private saving in surplus countries like Germany is less likely but nonetheless a possibility.



Source: OECD/Thomson Datastream/DNB Markets

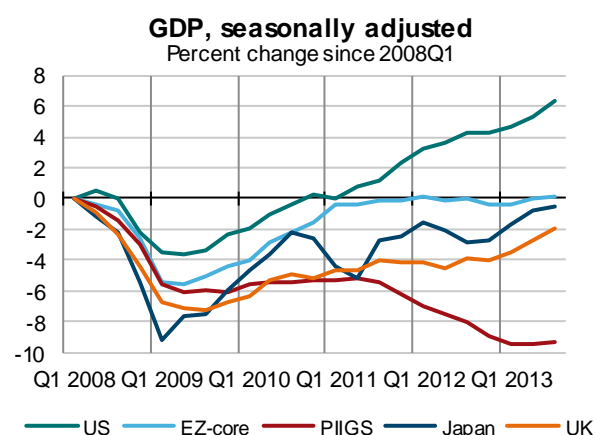
### ...but still most risk on the down side

The biggest risk factor is still the possibility of **hard landing in China**, after several years of very high growth in lending, housing prices and investments. This was discussed in detail in our previous semi-annual report and the analysis is still relevant.

We have one particular concern when it comes to the USA. This is **the possibility that the US is closer to the capacity ceiling** than the statistics currently indicate. The unemployment rate could decline faster than previously assumed if population aging results in faster reduction of the labour force. Mismatches in the labour market because new businesses and areas of expertise are growing while others are being downscaled or are not growing much, could result in a squeeze at a higher unemployment level than in previous upturns. In such event, wage and price growth might increase earlier than expected and the Fed might be compelled to raise the interest rate faster than planned. This would be a genuine shock that could have a major impact on asset prices and thereby activity.

**The downside risk in the Eurozone is linked to a number of related factors.** Renewed lack of confidence in budget policy, for instance as the result of a political crisis in an important EU country (such as Italy or France) could send government bond yields back up like what happened in the autumn of 2011 and the summer of 2012. In such event, banks would be under pressure again, lending policies would be tightened and confidence would be weakened. The crisis could also flare up again if defaults and losses in the peripheral countries' banks continue to increase and in the event of uncertainty as to whether the national authorities are willing or able to deal with such a situation. If, in addition, an open dispute arises between the Eurozone countries regarding the extent of the ECB's authority, it will not take much to trigger a full crisis.

Almost five years after the end of the "Great Recession", activity in the core countries in the Eurozone is not higher than it was prior to the slump. Activity in the peripheral countries is 10 per cent lower, as shown in the figure below. On the somewhat longer term, it is still uncertain whether Eurozone can survive another extended period of low growth, high unemployment, weak earnings trends and welfare benefit cutbacks without **political stability being threatened**. The road to sustainable government finances might, in such event, call for a period of higher inflation rates than today, or that more countries follow Greece's example and restructure their sovereign debt. This too, would make waves in financial markets. The alternative could be major political upheaval, possibly in combination with increased protectionism and isolation.



Source: Thomson Datastream/DNB Markets

The biggest worry when it comes to Japan is what happens if **Abenomics is not successful**. The two first of three pillars - a more expansive budget policy and a more expansive monetary policy – are in place. But, so far, the third pillar - structural reforms aimed at boosting the economy's capacity for long-term growth has only been concretised to a limited extent. The central bank is currently buying more than all of the increase of government debt. In practise, the budget deficit is being financed by the printing of money. This cannot be seen as stable equilibrium. Unless the growth rate increases, there is a risk that confidence in Japan's economic policy will wane. This could lead to capital flight, depreciation of the yen, higher government bond yields and a sovereign debt crisis. As the world's second largest borrower, Japan has the potential to trigger major disturbances of financial markets and thereby of the global economy.

## USA locomotive picking up steam

**GDP growth in the USA** came to just under 2 per cent last year, a bit less than the 2 ½ per cent we predicted last January. The main reason for the lower growth rate was that the budget cuts last year were much larger than we had anticipated. According to the IMF's estimates, total tightening corresponded to 2.4 per cent of GDP. The stage is set for a much higher pace in the economy this year. This is due to a number of factors. Household consumption seems to be on the rise, well helped by stronger growth in income and rising household wealth. The housing market is still improving, with a further increase in housing prices and investments. Businesses are beginning to loosen up on the reins a bit when it comes to investments and things are starting to look up for the export sector. Overall growth is thus getting a good boost from private demand. In addition, there will be much less tightening of government budgets this year than last year. We thus predict that GDP growth will come to 3¼ per cent this year.

### **The upturn has finally reached the Eurozone, too.**

GDP increased in both the second and third quarters of last year, and most likely in the fourth quarter as well. All in all, however, GDP fell by 0.4 per cent last year, and though growth is picking up, it is likely to be modest as a result of high debt, tight budgets, considerable excess capacity and tight credit. We thus predict that GDP growth will come to 1.3 per cent this year and, on the average, a bit less than that in following years. The unemployment rate is expected to decline, albeit very slowly, and wage and price growth are likely to remain low. The ECB will consequently maintain its very expansive monetary policy for a long time to come. The first rate hike will take place in the summer of 2016 at the earliest. Extremely high government debt means that a new sovereign debt crisis cannot be ruled out, but there is far less likelihood of this occurring than was the case 1-2 years ago.

**The British economy surprised to the upside last year**, with strong GDP growth, falling unemployment and inflation quickly dropping down towards the target. The improvement of the economy appears to be broad based, which indicates that it is likely to continue this year. We are nonetheless sceptical for a number of reasons. Real household income is falling and government tightening will continue. In addition, exports could be affected by a stronger GBP. We thus predict continued moderate GDP growth of around 2½ per cent for this year. The Bank of England has linked its interest rate policy closely to unemployment trends. Even if the jobless rate drops below 7 per cent much earlier than

expected, we believe the central bank will wait till the second half of 2015 before carrying out its first rate hike.

**The pace of economic growth in Sweden slowed further last year** as a result of inventory destocking and declining exports and investments. The global upturn is expected to pull growth back up again in the course of the next four years, but probably not up to the pre-crisis level. Due to brighter economic prospects, tax cuts and continued low interest rates, consumers are expected to make a greater contribution to growth going forward. Rising housing prices and persistently high growth in household debt will probably keep the Swedish central bank, Riksbanken, from carrying out any rate hikes. The interest rate is thus expected to remain at the present level till the summer of 2015.

**Switzerland showed surprisingly strong economic growth last year.** Private demand was the most important driver of growth. Now that the prospects for some of Switzerland's most important partners in trade have improved, net exports are expected to rise. This, and private consumption are expected to be the most important drivers of economic growth in 2014. Though price inflation is still low, it is back in positive territory. Despite solid economic growth and fewer concerns with respect to inflation trends, there is reason to believe that the central bank will continue its current expansive monetary policy, at least for the next year.

**Growth in the Baltics declined in 2013** as a result of negative effects from the world economy. Private consumption has increased, however, and has bolstered economic growth. GDP growth in Estonia is estimated to have come to a mere 1 per cent last year. GDP growth came to about 2.5 per cent in Lithuania and 4 per cent in Latvia. The upturn in the domestic market is clearly not enough to counteract the decline in export markets. A lasting economic upturn calls for a combination of strong growth in exports and further growth in the domestic market. Gradually increasing international demand will help bring the growth rate up to 3-5 per cent in 2014-2015. The risk with respect to growth still seems to be on the downside and is the result of uncertainty about economic trends in important export markets.

**The pace of the Russian economy has slowed and manufacturing industry has stagnated.** This is due to a lower investment level. Inflation is still well above the target, and the structural challenges are far from resolved. There are indications that the economy might come in for "hard landing", even though it is still operating at close to full capacity. We predict that economic growth will rise from 1.5 per cent in 2013 to a

still paltry 2.0 per cent this year. Improved economic growth in other countries, a weaker Russian rouble and possible support from the national reserve fund could lead to an improvement of the risk picture.

After two years of deflation, low growth and increased public sector debt, **Japan aims to restart its economy**. Growth in activity and inflation will be increased by means of expansive monetary and fiscal policies, combined with structural reforms. This policy seems to have worked so far and there is little doubt that the economic expectations have changed. Nikkei rose 57 per cent in 2013, almost twice as much as stock markets in the USA. Consumer confidence and corporate sentiment have improved markedly. Growth is still weak, however. We estimate that GDP growth came to 1.7 per cent in 2013, of which public sector demand accounted for 0.9 percentage points. We predict that increasing the value-added tax will bring the growth rate down to 1.4 per cent.

### Oil boom is on the wane in Norway

Limited propensity to invest in the business sector, virtual stagnation of the consumption of goods and low export demand pulled **growth in mainland GDP last year down to the lowest level since 2010**. We expect growth to be under par for the next three years as the spill-over effects from the oil sector turn from strongly positive to negative. Higher growth in imports and an expansive fiscal policy will help limit the downturn. Unemployment is expected to continue rising until the end of 2015, and cost growth will not be high enough to keep inflation on target for the next three years either. The housing market has cooled down considerably in the last half year and we predict that housing prices will continue to decline until the end of next year. In other words, Norges Bank has good reason to delay any rate hikes till the autumn of 2015.

**Housing prices in Norway** fell throughout the second half of last year after several years of strong growth. The rise in prices has been accompanied by a strong upsurge in household debt. In many other countries that have experienced the same trend, housing prices subsequently plummeted. A number of experts have thus warned of the possibility of a housing bubble in Norway, including former Nobel prize winner, Paul Krugman, who recently visited the country. However, the Norwegian economy and housing market differ substantially from those in countries where the housing market has recently collapsed. We are consequently of the opinion that Norwegian housing prices are not evidence of a housing bubble. Nevertheless, both prices and debt levels are high, and some of the drivers of

housing prices have changed direction. We expect housing prices to decline moderately this year and next year before levelling off.

Last year, **changes of risk sentiment were replaced by fundamental factors as drivers of FX market trends**. The degree to which different countries were affected by the crisis and how far the recovery has come, varies. The central banks are thus beginning to go separate ways. The central banks in the USA and Japan represent the extremes. The Fed is in the process of normalising its monetary policy while the Bank of Japan has committed itself to strong stimuli for a long time to come. Even though we are unlikely to see any rate hikes for quite some time, we expect monetary policy to be decisive for trends in FX markets going forward. The currencies of most of the countries where recovery has gained a foothold have strengthened. While the British economy has surprised on the upside and the GBP has strengthened, the trends in both the Swedish and Norwegian economies have been disappointing. The Swedish krone has held up well, however and is still relatively strong. The Norwegian krone, on the other hand, was one of the "losers" last year and weakened substantially. This weakening can, however, only be partially explained by fundamental factors and we thus expect the Norwegian krone to strengthen again.

[oystein.dorum@dnb.no](mailto:oystein.dorum@dnb.no)

## 2 Norway

**The Norwegian economy cooled down last year. We expect growth to be under par for the next three years as the ripple effects from the oil sector turn from strongly positive to slightly negative. Higher growth in exports and an expansive fiscal policy will help limit the downturn. Unemployment is expected to continue rising until the end of 2015, and cost growth will not be high enough to keep inflation on target for the next three years either. The housing market has cooled down considerably in the last half year and we expect housing prices to keep on declining until the end of next year. In other words, Norges Bank has good reason to put off any rate hikes till the autumn of 2015.**

### 2.1 State of the economy

The mainland economy is estimated to have grown by 1.9 per cent in 2013, just over half as much as in 2012. Last autumn, a scant 30 per cent of the companies in Norges Bank's regional network reported that they would have problems meeting increased demand. Only 18 per cent of them had problems getting hold of qualified labour. These percentages are lower than normal. Unemployment has been gradually rising for more than a year. As we enter 2014, the Norwegian economy is in a mild slowdown.

The sentiment has changed in most industries and this became increasingly evident last year. Consumers have become more restrained and housing prices started falling after the summer. Norges Bank's survey of companies in its regional network shows a pronounced slowdown in the building and construction and retail sectors towards the end of last year. In the same survey, the oil supplier industry is still in the lead but with clearly lower growth in activity than in the preceding year.

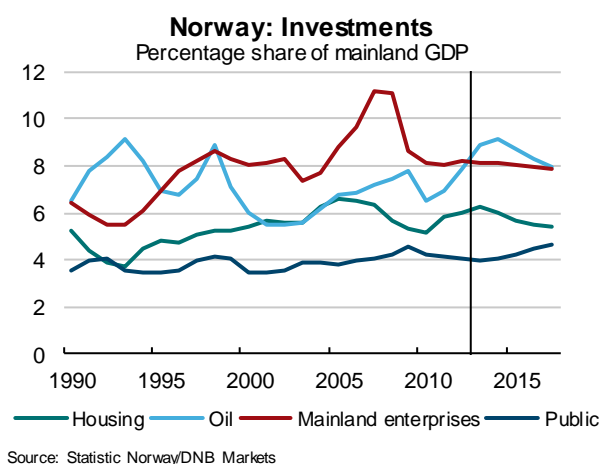
With the oil boom fading, the slowdown could continue for the next three years. We predict average annual growth in the region of 2 per cent. 2015 is expected to be the weakest year, with declines in both oil and housing investments and low growth in corporate investments. Persistent low interest rates and an expansive fiscal policy will contribute to increasing public sector demand and private consumption. In 2017, we expect growth in the mainland economic to rise back up to 2.4 per cent.

#### Investments are expected to decline

Investment in oil and gas activity was also a major driver of the mainland economy in 2013 and affected a broad range of Norwegian companies both directly and

indirectly through ripple effects. Norway saw double-digit growth in petroleum investments for the third year in a row. Last year it came to 15 per cent. Statistics Norway's investment survey points to a further rise in investments this year and the level may reach NOK 223 billion. This is record-high, but still amounts to only 5 per cent growth in volume terms, which is one third as much as last year.

In the period as of next year and until 2017, we expect oil investments to decline by a total of 8 per cent. There are two reasons for this. First of all, the current investment level is so high that it limits the potential for further growth. Secondly, we expect the oil price to gradually drop to USD 80 /barrel (in today's prices) between now and 2020. This will reduce the profitability of investment projects on the continental shelf.



Ever since the financial crisis, mainland businesses have had little propensity to invest. For the last five years, business investments have amounted to 8 per cent of mainland GDP. This is 3 percentage points below the peak level prior to the financial crisis. This peak was reached after a surge in investments starting in 2005, and the current investment rate is on a level with those in the ten preceding years.

Failing a period of strong expansion, we expect the investment rate to remain fairly stable for the next four years. On the one hand, higher growth in exports will help increase businesses' propensity to invest. Poorer demand from the domestic oil sector has the opposite effect. In addition, the survey of the regional network indicates that companies have some excess capacity. We believe that mainland businesses' investments will only grow marginally in the years when oil investments decline. The investment level in the manufacturing sector, the most oil-intensive portion of the business sector, is expected to decline.

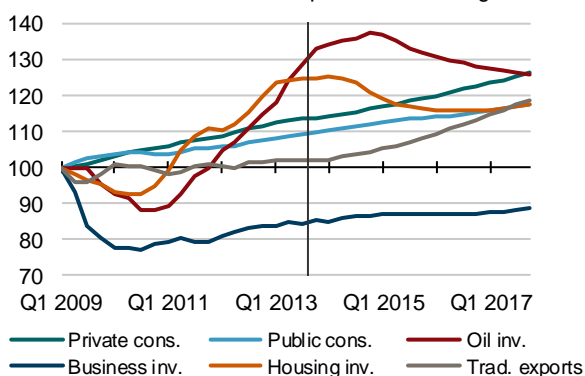
After increasing strongly for the last three years, housing investments in per cent of mainland GDP have risen to 6¼ per cent. That is quite high and just barely below the peak level of 6.6 per cent in 2005. Housing construction stagnated in the second half of last year due to the decline in housing prices. We predict that housing investments will decline by about 7 per cent over the next three years, before rising again modestly in 2017. This will help improve the balance in the housing market.

### Light at the end of the tunnel for exporters

2013 was yet another lean year for non-oil exporters. Growth in traditional exports came to a paltry 0.7 per cent. Now that the global economy is on the mend, including in Europe, better times may lie ahead. This is supported by the economic barometers for industry and commerce, where most of the export companies were optimistic about the market situation at the end of 2013.

We predict that growth in traditional exports will come to 2 per cent this year and thereafter gradually rise to 5 per cent in 2017. This is almost as high as the average growth rate in the five years preceding the financial crisis and is partly due to a weaker NOK exchange rate than in the last three years. Relatively moderate collective wage settlements and increased productivity will help counter a further deterioration of competitive strength. The labour market is expected to be less tight, which will make it easier to get hold of qualified labour.

**Norway: Demand components**  
Index. Q1 2009=100. 3 quarter mov. average



Source: Thomson Datastream/DNB Markets

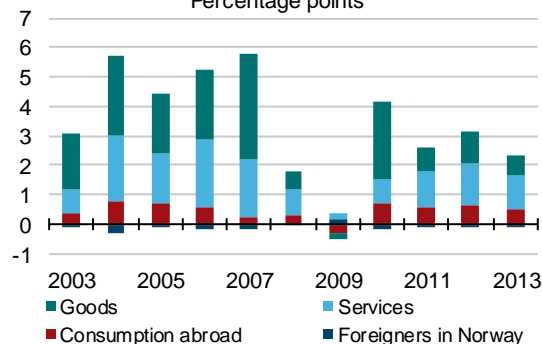
### Rise in consumption and saving next year

After the spending spree in the years 2004-2007, Norwegian households have been more restrained. Last year growth in consumption slowed further to around 2.2 per cent. The growth rate has not been this low since the crisis year 2009, when it was flat.

This mostly affects the retail trade sector. The trend for households' purchases of services is more normal.

Norwegian spending abroad, which accounts for almost 7 per cent of total consumption, continued to grow briskly and it was more than 40 per cent higher in the third quarter of 2013 than in 2008.

**Norway: Private consumption, contribution to growth**  
Percentage points



Source: Statistics Norway/DNB Markets

The propensity to save, as measured by TNS Gallup's trend indicator, has not been higher since the banking crisis in the beginning of the 1990s. Even so, there are few signs of any sense of panic among Norwegian consumers. TNS Gallup's confidence indicator has been on the decline for the last half year, but the level is still good. Car sales remained at high levels last year, too, which also does not give the impression that the households are unduly concerned.

**Norway: Consumption and expectations**

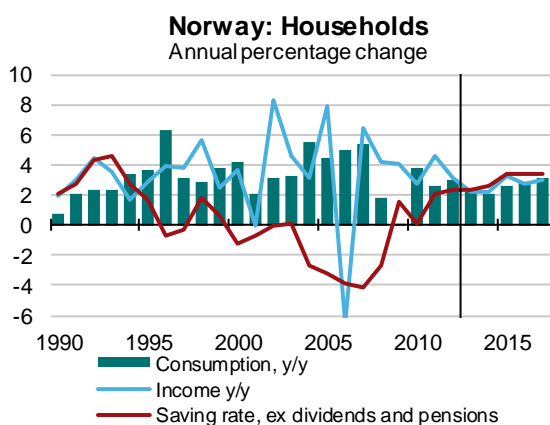


Source: Thomson Datastream/DNB Markets

We believe that lower growth in consumption is attributable to a number of factors. Growth in the households' real disposable income waned last year. The saving rate is being kept up by increased pension saving. Higher debt may have increased the desire to have a financial buffer. As debt increases, so does the size of loan payments. Changes of the composition of the population may also have played a role. The same applies to the recent decline in housing prices.

The households' real purchasing power increased by 2.2 per cent last year, a scant 1 percentage point less than in 2012. This decrease is partly due to slightly lower job and wage growth, combined with higher consumer prices and somewhat higher interest expenses. The trend was especially weak last autumn when disposable real income declined from the second to the third quarter. This was the first quarterly decline since 2011.

We predict that growth in income this year will be on a level with last year, and that growth in consumption will stay at 2 per cent. In 2015-2017 we expect growth in income to pick up again. This is partly because tax cuts and higher pensions and national insurance benefits will compensate for sluggish job growth and relatively moderate collective wage settlements. Low growth in consumer prices will also help increase purchasing power. Growth in consumption may consequently rise while the savings rate remains high.



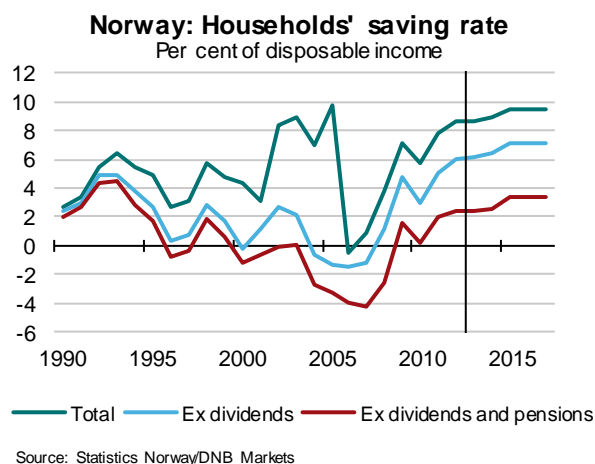
Saving, calculated as the difference between household income and consumption, is historically high. In 2013, Norwegian households saved 6 per cent of their disposable income, adjusted for dividends. This can give the impression that households have dramatically changed their savings behaviour. This impression is lessened by the fact that the proportion of pension savings has increased markedly since the mid-2000s.

There are several forms of pension saving. Tax deductions help finance the National Insurance scheme. Saving under work-sponsored pension schemes is an element of salaries. In addition, households save under private pension saving schemes. The common denominator is that this type of saving represents more of a long-term trend than a sudden change in households' behaviour. The population is aging, which in itself prompts an increase in total saving. The rules have also been changed substantially. Occupational pension

was made obligatory in the private sector in 2006. The pension reform entered into effect in 2011.

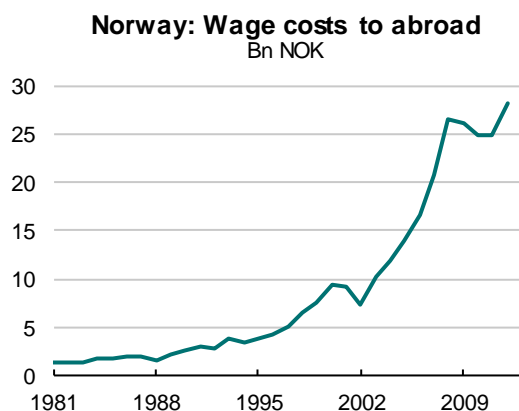
If private pension saving is left out, the figures are not quite as impressive. The savings rate of 2.4 per cent in 2013 is 2 percentage points lower than the peak level after the banking crisis in the beginning of the 1990s.

In our opinion, there is thus still room for increased saving, seeing as the debt level among Norwegian households is currently historically high. On the average, household debt is twice as high as the households' disposable income and the liquidity buffers are modest.



We cannot exclude the possibility that changes of population patterns may have contributed to increased saving. For the last seven years, annual population growth has come to a record-high average of 60 000 persons. Two thirds of this is due to increased net immigration, especially from Sweden and EU countries in Eastern Europe. These immigrants account for the growth in employment since the financial crisis (see separate discussion) and their share of total household income has increased.

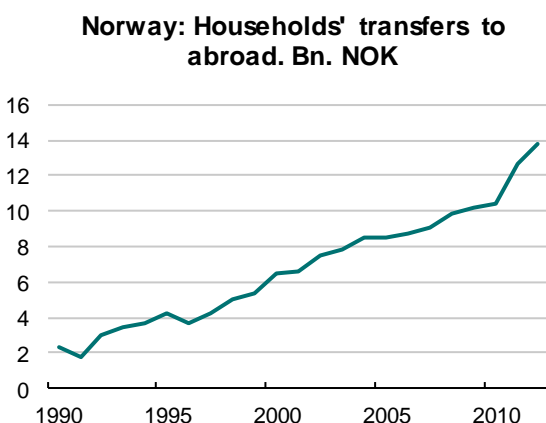
The above is supported by the item «cross-border wage costs» in the balance of payments. This item relates to employed individuals who live and work in Norway for short periods (less than 6 consecutive months). Since they have not been residents of Norway for at least one year they are not included in the household figures in the national accounts. This item trebled in the period 2000-2012 to NOK 28 billion. In the same period, total household income "only" doubled.



Source: Thomson Datastream/DNB Markets

Norway is a country with relatively high wages, especially in low-paid professions, and a high cost of living. Labour immigrants are a highly varied group. Some have a strong desire to work hard and save money to send back home, either for their families or to spend there later. Others come to Norway in search of a higher standard of living. Saving and consumption patterns are consequently quite varied. If the average labour immigrant has a higher propensity to save than the rest of the population, this could partly explain why total savings have increased over the last five years.

If this is the case, increased propensity to save would manifest itself in low consumption or transfers of part of wage income to other countries. These transfers are registered as expenses in the household's accounts and reduce disposable income. All else being equal, this contributes to increasing the savings rate. Money transfers to other countries have doubled in the last decade and have risen especially steeply in the last couple of years. Even so, the total of NOK 14 billion in 2012 only corresponded to 1 per cent of the households' total disposable income, which is too little to have any real explanatory power.



Source: Statistics Norway/DNB Markets

It should be noted that these statistics are uncertain. Until 2005 they were based on the foreign currency statistics published by Norges Bank, which had access to information about transfers debited from bank accounts. Ever since these statistics were discontinued, the volume of outgoing cross-border transfers has been estimated using the 2005 level as the point of departure and extrapolating on the basis of the change in the households' primary income. In 2008, Statistics Norway evaluated this approach by examining data from the foreign exchange register, money transfer institutions like Western Union and Forex, and the standard of living survey for immigrants. The conclusion was that the level in the external transaction accounts seemed reasonable. In 2012, the figures were nonetheless adjusted upwards due to the strong increase in the immigrant population.

Assuming that changes of the population pattern have contributed to higher saving, we do not expect this contribution to increase further in coming years. This is because we expect net immigration to decline in connection with the economic slowdown in Norway.

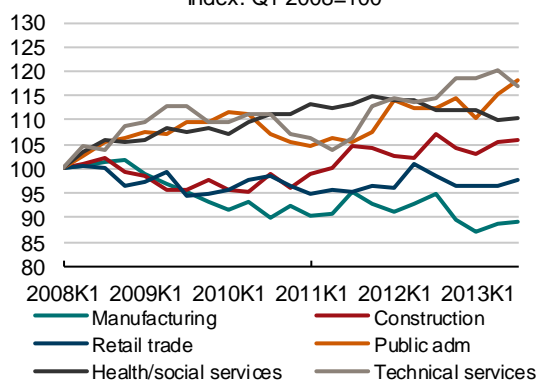
Finally: The increasing propensity to save may be partly due to Norwegians' desire to compensate for the (anticipated) decline in the price of their most valuable asset: their home. Since we expect housing prices to keep falling this year and next, this effect could last for some time.

### Unevenly distributed job growth

Job growth since the financial crisis has been unevenly distributed among the different sectors and different parts of the population.

According to Statistics Norway's Labour Force Survey (LFS) the number of blue-collar jobs has been on a downward trend and this continued in 2013. The number of jobs in the retail trade sector has remained fairly stable. The number of jobs in the healthcare and welfare sectors, on the other hand, soared in the period from 2008 to 2011 and thereafter declined somewhat. The building and construction sector was hit hard by the financial crisis, but has been improving markedly since 2011. The strongest growth has been in the areas of public administration and technical service. Many jobs in the latter segment are linked to the oil sector.

**Norway: Employment**  
Index. Q1 2008=100

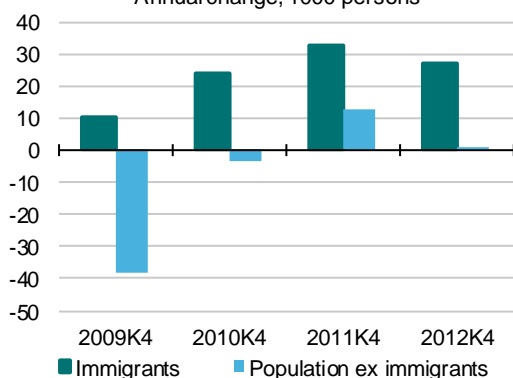


Source: Statistics Norway/DNB Markets

According to the LFS, the number of employed persons increased by 64,000 from the fourth quarter of 2008 to the fourth quarter of 2012. The number of immigrants rose by 93,000 individuals, while the number of employed Norwegians *dropped* by 29,000 in the same period.

The contribution to total growth in employment is even greater. The LFS only includes employed individuals who are residents of Norway according to the National Population Register. In addition to the aforementioned 334,000 immigrants registered as employed in the fourth quarter of 2012, there were 83,000 wage earners living in Norway for short periods. These include commuters who spend less than six months at a time in Norway.

**Norway: Employment**  
Annual change, 1000 persons

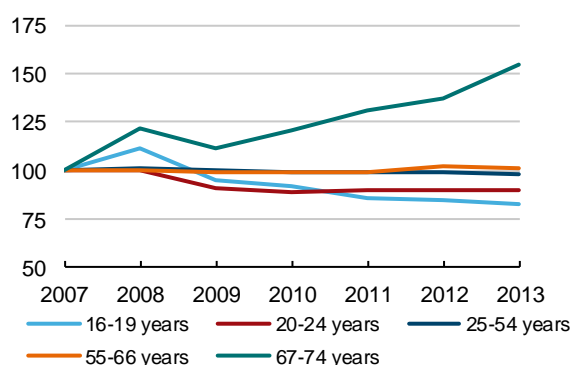


Source: Statistics Norway/DNB Markets

The employment data in the national accounts also includes people who live in the country for short periods to work in or perform services for a company in Norway. Jobs done by employees of a foreign company who have been sent to Norway for assignments lasting less than 12 months, are classified as imported services.

Even though employment in the non-immigrant population has declined, the unemployment rate for this group has not risen. Quite the contrary, it has dropped more than for immigrants. This is probably because young Norwegians are dropping out of the labour force, mostly to continue their education.

**Norway: Labour force participation**  
Index. 2007=100. 2013: Estimate

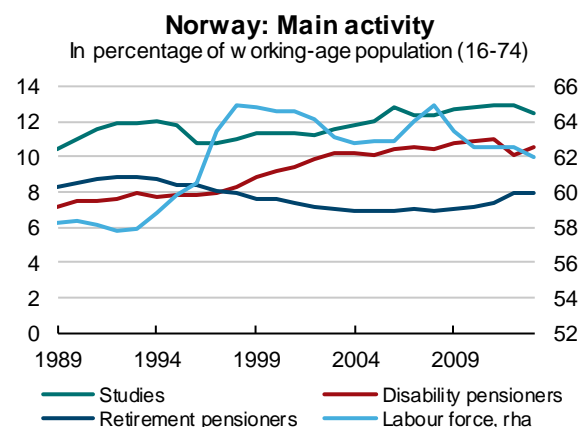


Source: Statistics Norway/DNB Markets

63 per cent of the population between the ages of 16 and 74 participated in the labour force in the third quarter of 2013. That is 2 percentage points less than five years ago. The biggest decline has been in the youngest age groups. The proportion of labour participation between the ages of 20 and 25 has dropped 5.5 percentage points to 49 per cent. Note that immigration rate is clearly highest and has risen the most in the younger age groups. This has led to increased competition for typical student jobs in shops, hotels and restaurants and has put a damper on wage growth in these industries, where 19 per cent of Nordic immigrants are employed.

The pension reform has led to the opposite trend for older age groups. Labour force participation in the population between the ages of 55 and 66 rose by 0.8 percentage points from the third quarter of 2007 to 61.9 per cent in the third quarter of 2013. Correspondingly, the percentage in the age group 67-74 increased by 2.2 percentage points to 7.5 per cent in the same period.

Despite increased labour participation, because the population is aging, a larger proportion of the population that is of working age receives retirement pension benefits, as shown in the graph below. The proportion of disabled individuals has, however, hovered fairly steadily at around 10 since 2003, after rising markedly as of the late 1990s.



## Unemployment to rise

After rising briskly for two years, growth in both employment and the labour force slowed in 2013. According to the Labour Force Survey (LFS) 0.7 per cent more jobs were created and in the same period the number of persons who joined the labour force increased by 1 per cent. The unemployment rate rose by three tenths to 3.5 per cent.

Due to lower growth in the mainland economy and a slight rise in productivity, we expect the job market to be weak till the end of 2015. The unemployment rate will rise to a peak of 4.3 per cent in 2015, the highest level since 2005. This means that 120 000 individuals, about 30 000 more than today, will be without jobs. When growth picks up again, especially in 2017, unemployment will fall again.

Changes of the population and labour force will be key determinants of future unemployment trends. If net immigration increases further, the rise in unemployment will exceed our current estimates. We believe, however, that net immigration will fall slightly from the present high level due to the somewhat weaker job market. We already see signs of lower population growth.

Net immigration is unlikely to be substantial. There is reason to believe that many labour immigrants have put down roots and become a more permanent part of the population. In 2008, a majority (67 per cent) of workers from Eastern Europe had been in Norway for no more than 2 years. In 2012, a scant majority (52 per cent) had lived in Norway for 5 years or more.

## 2.2 The housing market

Norwegian housing prices declined throughout the second half of last year after several years of, at times, strong growth. The turnaround in the housing market

happened sooner and was more pronounced than we predicted a year ago.

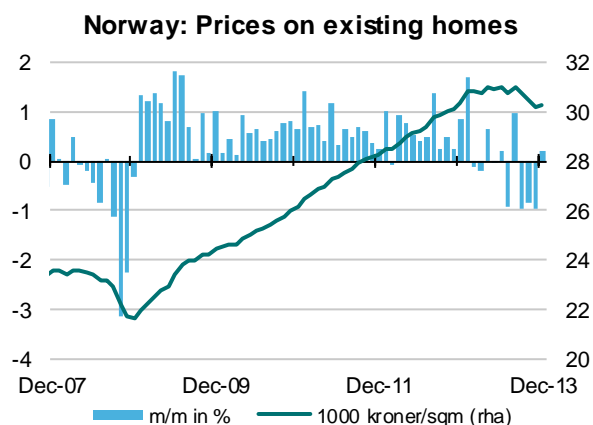
The rise in prices has been accompanied by a strong increase of household debt and increased risk of financial instability. Hence, the authorities seem to want the housing market to cool down a bit. In this year's government budget the tax on second homes has been increased further by increasing the value for tax purposes to 60 per cent of the estimated market value. The rules in the government budget for those who have access to reasonable loans through their jobs, including customers of the Norwegian Public Service Pension Fund, have also been tightened. The norm rate is the lowest interest rate at which an employer can offer an employee a loan without the employee being taxed for the advantage. It equals the interest rate on short-term exchequer bills plus a spread. Effective as of March of this year, the spread will be increased by  $\frac{3}{4}$  percentage point. The 15 per cent down-payment requirement in connection with taking out a loan to buy a home will be maintained, although the minister of finance has sent a letter to the Financial Supervisory Authority requesting more lenient practice with respect to this requirement.

Many other countries have experienced a strong, loan-financed rise in housing prices, which subsequently plunged. There have thus been a number of warnings of possible housing bubble in Norway. However, the Norwegian economy and housing market are very different from those in most of the countries where the housing market has crashed recently. The biggest difference is linked to a broad, solid increase in household income. Low, stable unemployment and declining borrowing costs have contributed to the rise in prices. In our opinion, Norwegian housing prices are not an indication of a housing bubble. Nevertheless, both prices and debt are high and some of the drivers of housing prices have changed direction. Housing prices will fall a bit more this year and next as a result of rising unemployment. We predict that prices will decline by a total of 7.5 per cent before bottoming out. The reason why the decline will not be greater is that interest rates will remain low for a long time to come and growth in income is expected to pick up again as of next year. The anticipated decline in housing construction will also help reduce the downside potential for housing prices.

## Recent price trends

According to Eiendomsmeglerforetaketenes Forening (the Association of Estate Agency Firms - EFF), the prices of resale homes rose by 4.9 per cent from 2012 to 2013. This was the lowest annual price growth since 2009. On the average, housing prices have risen from the trough

in 1992 at a rate of 8.7 per cent per year. There were only three years in this period when price growth was lower than last year, and 2008 is the only year when prices declined for the year as a whole. The strongest growth was in 2006, when prices rose 15.3 per cent.



Source: EFF/FINN/Eiendomsverdi/DNB Markets

The price trend changed clearly in the early part of last year. Adjusted for seasonal variation, prices rose markedly in January, and then hardly changed until August. In the period from August to December the prices fell by 2.6 per cent. In December, housing prices were 0.6 per cent lower than in the same month one year earlier. The last time 12-month growth was below zero was in May 2009.

1.4 per cent fewer homes were sold last year than the year before. Sales in 2012 declined by a total of 1 per cent after increasing by 2.1 per cent in the first half year. Though sales declined, the number of homes for sale increased last year. The average number of unsold homes was consequently 8.8 per cent higher last year than the year before. 12-month growth in unsold homes has largely been negative since April 2009 but started increasing in April of last year. The number of unsold homes in December of last year was an entire 43 per cent higher than the year before.

The turnaround in the housing market is also evidenced by sales of new homes. According to the Norwegian Home Builders' Association, there were 39 per cent fewer sales of new homes in November of last year than in November of the preceding year, and sales in the first 11 months were 9 per cent lower than in the same period the year before. The association also estimated that there were a total of 26 000 new housing-starts last year as compared to 30 000 the year before. According to Statistics Norway, the prices of new homes continued to grow throughout last year but price growth fell to about one per cent in the second and third quarters,

which are the last observations. The prices of new homes rose by around 5.5 per cent in 2011 and 2012.

The turnaround in the housing market last autumn led to a number of reports in the media filled with bleak predictions about housing prices in the future. It was thus a bit of a surprise when the seasonally-adjusted price increased by 0.2 per cent in December. In addition, sales were higher than in December the year before. This could indicate that the housing market is not quite as weak as many believe.

The housing market is important for the Norwegian economy. Housing prices can have direct effects on consumption and saving. Changes in the residential construction sector affect activity. The housing market is also affected by economic trends. As a result of the surge in housing prices in recent years, turnarounds of housing markets in a number of countries and signs of changes in the Norwegian housing market, speculations that housing prices will plummet have increased. This could impact the economy significantly.

There are a number of situations that could trigger a plunge in housing prices. If the preceding rise in prices is a bubble, the turnaround can be sudden and intense when the bubble bursts. Prices can decline for other reasons, too. Fundamental factors can push prices way up. If these drivers turn around, housing prices can fall correspondingly. As an example, if the rise in the price of oil was an important underlying factor for growth in housing prices, a drop in the price of oil could result in lower housing prices. Other factors can be linked to long-term housing price levels. If the supply side in the housing market reacts slowly to increased demand, increased demand resulting for instance from higher income will be manifested as higher prices. Higher prices increase the profitability of building homes and the supply of housing units will gradually increase. If demand subsequently declines, the rise in prices may be fully or partially reversed.

In future assessments of housing prices it will be important to determine what drove the prices up.

### About housing prices

The price per square meter varies considerably, partly due to factors like location and the type of housing. The table below shows the average prices for different types of housing. The price per square meter is clearly higher for flats than for one-family houses. The max and min in the table show the highest and lowest prices, respectively based on EFF's geographic distribution of housing prices where Oslo is seen as a whole. The price

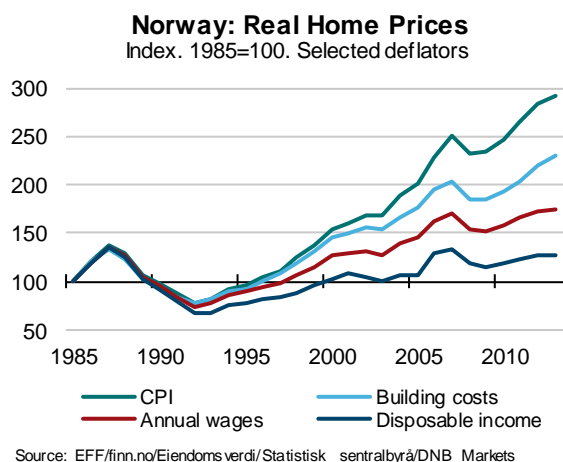
per square meter for a single-family house in Hedmark, aside from Hamar, was NOK 12 300, while the equivalent price in Oslo was NOK 42 300. There are also major variations within Oslo. The price per square meter for flats in Oslo ranged from NOK 32 100 in Stovner to NOK 59 900 in Frogner.

**Norwegian home prices, average 2013**  
1000 NOK per square meter

	Average	Max	Min
Detached house	20.6	42.3	12.3
Semi-detached	26.9	41.7	15.3
Flat	38.2	46.9	21.8
Total	31.4	44.9	18

Source: EFF/finn.no/Eiendomsverdi/DNB Markets

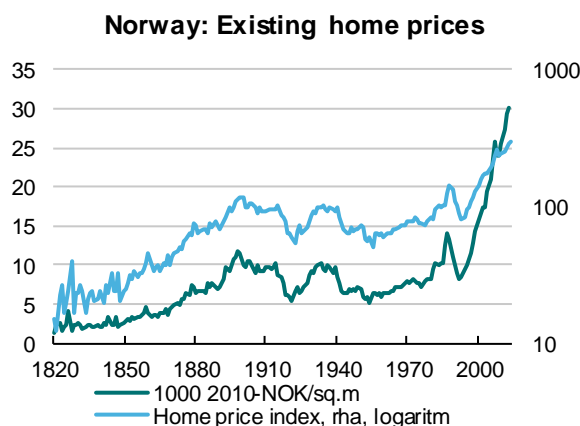
The housing price statistics published by Eiendomsmeglerforetakenes Forening in cooperation with Finn.no and Eiendomsverdi, go back to 1985. Housing prices were more than five times higher in 2013 than in 1985. Adjusted for the rise in consumer prices, housing prices climbed 191 per cent in the period from 1985 to 2013.



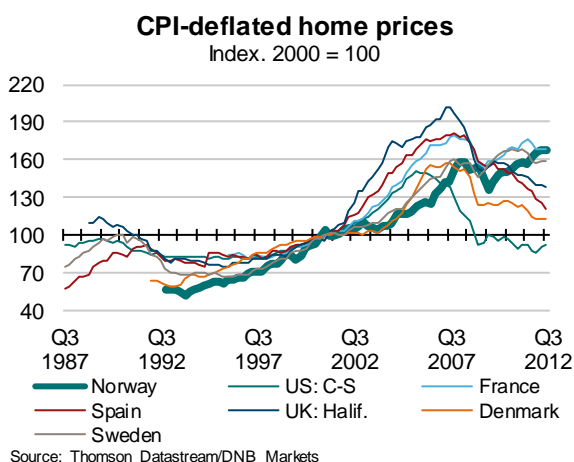
Housing prices in 2013 were 22 per cent higher in relation to household income than the average for the period 1985-2013. The corresponding increase in relation to a normal annual salary was 40 per cent. Both the figure above and the average figures indicate that housing prices are high.

Norges Bank has published housing price data going back to 1819. The figures for the years prior to 1985 are based on a variety of sources, mostly from the five largest cities. The figures are based on information about average price changes in repeat sales of the same properties, a so-called repeat-sales index. The figures after 1985 are based on statistics from EFF, and are no longer linked to a repeat-sales index. The long-

term change in real prices is shown in the figure below. From a long-term perspective, prices are very high now.



Housing prices in Norway increased more than those in other countries in the second half of the 1990s, and a bit less from 2000 to 2005. Housing prices plummeted in a number of countries after 2005, but continued to rise in Norway. Such a comparison raises the question as to whether Norway, too, has a housing bubble.



### What is meant by a housing bubble?

Strong growth in housing prices and a high price level have led to speculations that the increase in housing prices is a bubble. The danger of a bubble is that it can burst. A strong, unexpected decline in housing prices can have a major impact on the rest of the economy.

There is no single unambiguous, universal definition of bubble. There are, however, two common variants. One describes a situation of persistent high price growth for which there is no fundamental explanation. In some cases all the drivers of the increase have not been identified and the observed phenomenon is not actually a bubble. Another possibility is that prices are lifted by

structural changes of underlying factors. One example of this could be relaxation of lending policies that enables households to borrow more, which in turn increases purchasing power and growth in housing prices.

The other definition of a bubble is that the price growth is based on expectations of further price growth. If the expectations change from a rise to a decline in prices, housing prices may fall even though other economic factors have not changed significantly. It is hard to tell if price growth is due to expectations of further price growth or other factors. Increased sales of housing units for purposes of investment as compared to buying a place to live can indicate that more weight is being attached to price expectations. This type of investment activity has not been prevalent in recent years, but was more common in 2005, 2006 and the beginning of 2007.

A fall in housing prices does not necessarily mean there was a bubble. A dramatic change of the drivers can lead to a bubble-like housing price trend. As an example, it is possible that the strong increase in the price of oil has contributed to raising the activity level in the economy and households' income as well as reinforcing optimism about future economic trends. If the price of oil were to collapse, activity would decline, the households' income would fall and optimism would fade. In such event, much of the increase in housing prices would be reversed.

### Fundamental drivers of housing prices

A number of factors have implications for housing price trends, and there are often major differences between what different buyers consider to be most important when purchasing a home. From a macroeconomic perspective population growth, changes of household income and expectations, the situation in the job market, interest rates, access to credit and housing prices significantly affect demand for housing. The supply of available housing tends to be linked to price trends, construction costs and financing. We have developed our own housing price model. The purpose of the model is to link housing price prognoses to our other economic estimates. We have thus placed emphasis on having explanatory factors for which we can make prognoses. The model is estimated for the period 1985-2011 and gives a reasonable explanation of price growth based on household income trends, the banks' lending rates, unemployment and the housing stock. According to this model, there is little to indicate that the rise in housing prices is a bubble. The price increase appears to be closely related to high growth in income, declining interest rates and low unemployment. This is in line with the outcome for a number of other, similar models.

Statistics Norway has developed a similar model, but with two major differences compared to ours. First of all, household confidence is included as an important explanatory variable. Data on this is taken from TNS Gallup's quarterly confidence survey. Secondly the model includes a dual correlation with credit growth. Higher housing prices increase the need for borrowing but also increase borrowing capacity because the value of the mortgaged property increases. Increased borrowing capacity can lead to increased demand for housing, which in turn causes prices to rise. This mechanism is called a financial accelerator. It may have contributed to intensifying the price rise and could contribute to intensifying a price decline.

This model does not indicate that the rise in housing prices is a bubble either. Statistics Norway predicts that housing prices will decline this year, mostly because the households are less optimistic. The model calls for estimates of household confidence levels. Statistics Norway expects the decline in optimism to be short-lived and that housing prices will rise again next year.

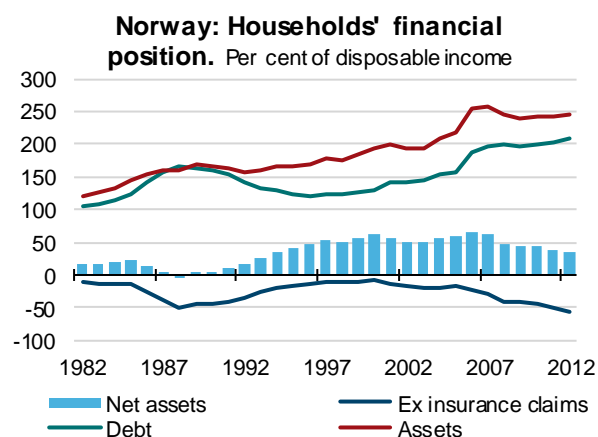
Debt financing has been crucial for the households' investments in housing. In Norway, the ratio of gross household debt to disposable income has increased markedly in the last 20 years and is currently estimated to be 212 per cent. This is historically high for Norway, and is also one of the highest household debt-to-income ratios in the industrial countries. The household debt-to-income ratios are much higher in Denmark and the Netherlands, however. It is thus not clear what the "right" debt-to-income ratio should be. It is a bit lower in Sweden than in Norway but comparisons between different countries can be problematic. Institutional differences between pension schemes, for example, can affect how the income level is calculated. Another, more concrete example is the handling of joint debt in housing cooperatives. In Sweden housing cooperative debt is classified as business sector debt, whereas in Norway it is classified as part of household debt. Corrected for this, the difference between the debt-to-income ratios of Norwegian and Swedish households is much smaller. The treatment of joint debt also has implications for how housing prices are measured and the banks' security interest requirements.

The high household debt-to-income ratio in Norway should also be seen in light of the fact that a large proportion of the households own their own homes. The debt-to-income ratio is naturally lower in countries where it is less common for people to own the homes in which they live. Adjusted for the proportion of home ownership, Norwegian household debt does not seem excessive compared to that of other countries. Good social benefits

also help give Norwegian households greater tolerance for high gross debt compared with households in countries with fewer benefits. The government's saving in the oil fund pulls in the same direction. At the same time, seen in isolation, a high tax level leaves households with less of their income than is the case in countries with lower tax levels. This is one reason for the high debt-to-income ratios in the Nordic countries.

Though Norwegian households have a high debt-to-income ratio, their regular interest expenses are moderate because interest rates are fairly low. Most of the debt is in the form of floating-rate loans. A rise in interest rates could thus greatly increase households' interest payments. When interest rates fell in 2009, interest expenses declined correspondingly. This gave household confidence a good boost, and consumption picked up again quickly after the financial crisis hit. The ratio of interest expenses to disposable income has risen over the last three years and is almost up to the average for the last 20 years (8 per cent). This increase is due to both high growth in borrowing and higher borrowing rates. So far, the higher ratio of interest expenses to disposable income has not had a major impact on credit growth. Higher interest rates on loans from the Norwegian State Housing Bank and the Norwegian Public Service Pension Fund could contribute to braking growth in loans from these institutions.

All in all, Norwegian households have net wealth, but a large portion of their wealth is housing wealth, which means that they are exposed to house price deflation. The households also have net financial wealth corresponding to 34 per cent of their disposable income. 38 per cent of the financial wealth consists of so-called insurance technical reserves. These are relatively illiquid and do not serve as a financial buffer. Net financial wealth, not counting insurance claims, is negative and has declined in the last decade.



Source: Statistics Norway/DNB Markets

### Are real prices flat in the long run?

Since 2000, a number of countries have experienced a surge in housing prices, followed by a steep decline. According to the Case-Shiller index, the fall in house prices in the USA from the peak level in 2006 to the trough in 2011 came to 35 per cent nominally and 42.5 per cent in real terms. Real prices in 2011 were on the same level as in 1999. In Ireland, Spain and the UK, too, steep growth in housing prices was replaced by declines. Long-term price indices, e.g. in the USA, UK and Amsterdam indicate that periods of rising prices are followed by periods of falling prices and that the change in real prices over time tends to be flat. Further evidence of this is that on the long term real housing prices are determined by the cost of building homes, while fluctuations in the demand for housing result in more short-term price changes. In places where there is not a shortage of building plots, construction costs over time should be flat. Increases of real wages pull costs up over time but increased productivity has the opposite effect, and growth in real wages should reflect growth in productivity. If this also applies to the Norwegian housing market, we should be prepared for a steep decline in real prices in coming years.

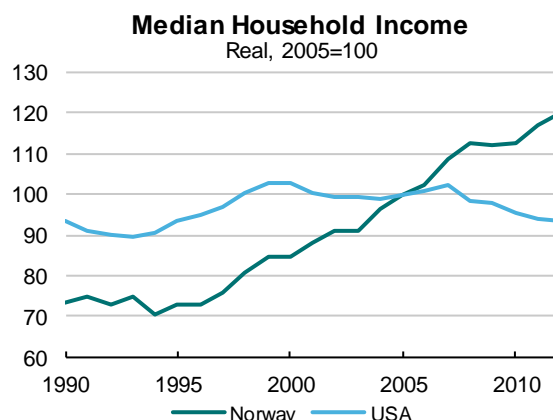
A number of factors indicate, however, that the above line of reasoning does not necessarily apply to Norway. First of all, housing prices in a number of countries, such as Sweden and France, have not declined much after rising strongly in the first half of the 2000s. Prices in Australia have been rising for a long time, although the possibility of a housing bubble there cannot be precluded. Price trends in the USA are also different from those in Europe. In 2012, real prices in the USA were 7.6 per cent above the level from 20 years earlier. Housing prices have risen close to 50 per cent in Spain, 64 per cent in the UK, 80 per cent in Denmark and 100 per cent in Sweden. In France, house prices rose 99 per cent from 1996 to 2012. Despite major price corrections in several countries, real prices are still way above the level they were on 20 years ago.

Secondly, the long-term indices are encumbered by considerable uncertainty and errors. As mentioned above, Norwegian price statistics from before 1985 are based on observations of repeat sales of the same homes. The prices after 1985 are the observed market prices of all sold homes. If the housing standard has improved as a result of new construction this should be reflected as stronger price growth than in previous periods.

Norwegian housing price indices go all the way back to 1819. In the years from then to 1898 prices were on a

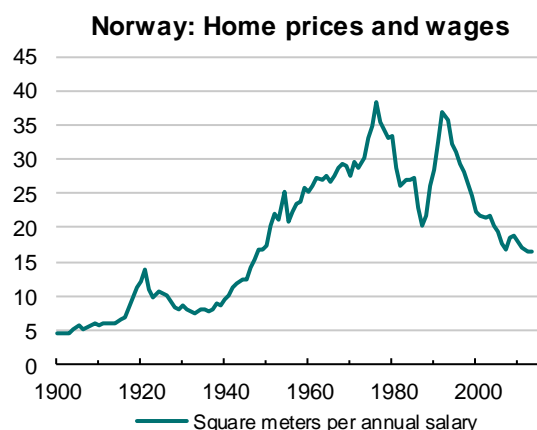
steep upward trend. Real prices peaked in 1898 and this level was not exceeded until 1986 – 88 years later. Housing prices were quite volatile in this period, in which there were also two world wars, a major depression and substantial price adjustments. Nominal housing prices declined by 18 per cent from 1920 to 1927. But these were the years of the "par policy" and deflation, when wages declined by 38 per cent. Real housing prices rose by 31 per cent. From the time of the outbreak of World War I to 1920, real housing prices declined by 42 per cent even though nominal prices rose 72 per cent. These examples show how hard it is to use the 1900s as a reference for "natural" price trends. In the USA, Shiller's long-term home prices index has been criticised due to indications that the growth has been underestimated.

Thirdly, growth in household income in Norway is different than in other countries, especially the USA. While the trends in households' disposable income were not that dissimilar on the overall level, there are major differences in income growth for median households. In the USA, 90 per cent of the households (i.e. most of them) are in the lowest income groups, and have not had any significant growth in real income in 40 years. The income of households in the top ten per cent, on the other hand, has grown substantially. The total number of households that have contributed to growth in household income has increased, too. The change in total income in the household sector could thus point to increased demand for housing. In actual fact, however, growth in the incomes of most home buyers has not been strong enough to trigger a rise in housing prices. This is why housing price trends were relatively flat in the 1970s, 80s and 90s. There were changes in financial markets at the end of the 1990s. Growth in the richest households' incomes was channelled, through new loan programmes, to the rest of the households, which were thereby able to bid up home prices. Higher home prices resulted in higher mortgage values, which made it possible to borrow larger sums. This, in turn, led to increased housing construction and thereby increased economic activity (higher GDP growth). Deferral of principal payments and refinancing strengthened the spiral, but it eventually grew abundantly clear that the households did not have a sufficient income base. In Norway, on the other hand, growth in housing prices has been based to a greater extent on growth in income for the majority of the households. Lending requirements were not relaxed as much as they were in the USA and have since been tightened. There is thus less, if any, reason to expect housing prices to collapse like they did in the USA.



Source: Thomson Datastream/Statistics Norway/DNB Markets

Last year, in Norway, a normal annual salary would buy you a 16.4 square meters of living space. When housing prices were at the highest, in 1987, one year's salary would buy you 20 square meters. In 1992 a year's salary bought 37 square meters. An annual salary bought the most space in 1976: 38 square meters. These figures indicate that housing prices are high in relation to salaries. The question is nevertheless if there is an equilibrium level for this. If we look farther back in time - to the first 40 years of the 1900s, the average annual salary would not buy you very much space.



Source: Norges Bank/Statistics Norway/DNB Markets

Both wage and price statistics that far back are very uncertain. The figure nonetheless illustrates that there are few grounds for concluding that housing prices are presently unreasonably high in relation to income.

The number of housing starts in the post-war period and up to the 1990s was high. The housing market was highly regulated and housing construction was subsidised. Credit markets were regulated, too. In the 1980s, rules were relaxed in both housing and credit markets. This resulted in the so-called "yuppie era" at the end of the 1990s, which was replaced by a house price crash and limited housing construction. Housing

construction did not really pick up again until after 2004. In the period 2004-2013 an average of 28 000 homes were built per year, as compared with the average of 35 300 in the years 1960 to 1985. According to Statistics Norway's statistics, there were around 30 000 housing starts last year. The Norwegian Home Builders' Association reported that the actual number was 26 000, which is 4 000 less than the year before. A number of reports give the impression that, due to current market trends and the financing situation, builders have decided to wait before starting new projects. Right now, housing prices are not so much higher than construction costs that construction activity is likely to pick up.

Furthermore, real construction costs are not necessarily constant over time. Since 2000, growth in real wages in Norway has exceeded growth in productivity. At the same time, the wage share has barely changed. This means that product prices have increased more than consumer prices and that wage-earners have taken out their share of this. It is reasonable to assume that the same has happened in the building and construction industry. In addition, wage trends for different groups of wage-earners are relatively steady over time. Failing a reversal of the real increase in the prices of Norwegian products, there is little reason to expect construction costs to decline going forward. There thus seems to be insufficient evidence to support the claim that the long term supply curve in the housing market is relatively flat.

### Price expectations

In this report, we predict where unemployment is expected to rise in the next years. Banks will raise their lending rates a bit this year as a result of the rate hike for loans from the Norwegian State Housing Bank and the Norwegian Public Service Pension Fund. Seen in isolation, this could push prices downward. Real wage growth will be lower than in preceding years but due to tax cuts there will be little change in households' disposable income. Income trends support further price growth. The strong growth in housing investments in the last few years has a lagged effect on prices and will, seen in isolation, pull them down for the next few years. Our housing price trend model indicates that housing prices will decline moderately this year and more steeply in 2015 and 2016, before levelling off. In light of recent developments, the fall in prices may happen sooner than predicted by the model.

We predict that the prices of resale homes will fall 4 per cent this year, 2.5 per cent next year and that nominal prices will level off in 2016.

## 2.3 Wages and prices

Wage growth in 2013 is estimated to have come to just over 3½ per cent, which means it was a bit lower last year than in 2012. Meanwhile, the inflation rate has risen slightly and real wage growth consequently waned further. Slower wage growth should be viewed in light of the problems a high cost level has caused for many traditional companies and the fact that employment growth is lower.

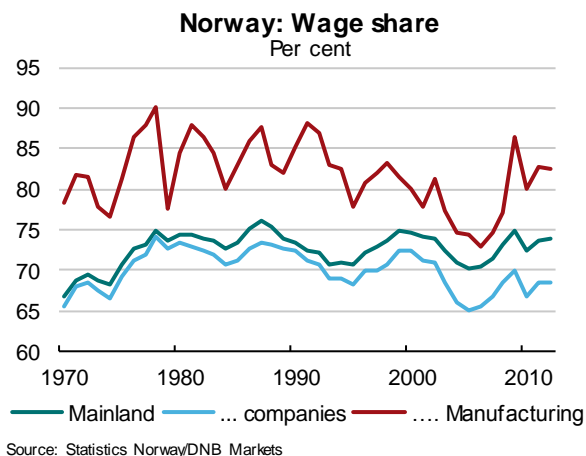
Wage growth from one year to the next can be seen as the sum of contributions from wage carry-over, the increase resulting from the collective bargaining agreements and wage drift. The wage carry-over is the difference between the wage level at the end of a year and the average for the same year. This year's collective bargaining involves renegotiation of the master agreement. The carry-over to such years is generally lower than the carry-over to intermediate settlement years, but the contributions from the collective bargaining outcome tend to be higher. Based on the estimated wage development in 2013, we expect that the wage carry-over to 2014 to be a scant 0.9 per cent. The carry-over to 2014 will thus be a bit lower than the carry-over to 2012, which was also a master agreement bargaining year. The contribution from the collective bargaining settlement is the increase of the average annual salary that is attributable to wage increases negotiated on the local or central level. Wage drift is a residual item that refers to the portion of wage growth that is not due to carry-over or collective-bargaining increases. Locally negotiated wage increases are an element of wage drift. We expect the contribution to wage growth from the collective bargaining to be greater and wage drift to be a bit lower in 2014 than in 2012.

Annual Wage Growth	2011	2012	2013	2014
<b>Contribution from:</b>				
- Carry over	1.9	1.0	1.8	0.9
- Tariff increases	0.8	1.5	0.6	1.2
- Wage drift	1.5	1.5	1.2	1.4
<b>Annual wage increase</b>	<b>4.2</b>	<b>4.0</b>	<b>3.6</b>	<b>3.5</b>

Source: TBU/DNB Markets

The wage share measures labour costs in per cent of the sum of labour costs and operating profits, and gives an indication of companies' wage-paying ability. In 2009, lower operating profits caused the wage share to rise markedly in several industries and indicated a poor wage-paying ability prior to the collective wage negotiations in 2010. Wage growth subsided in 2010 at the same time as operating profits improved. The wage share consequently declined. In 2011 and 2012, it rose

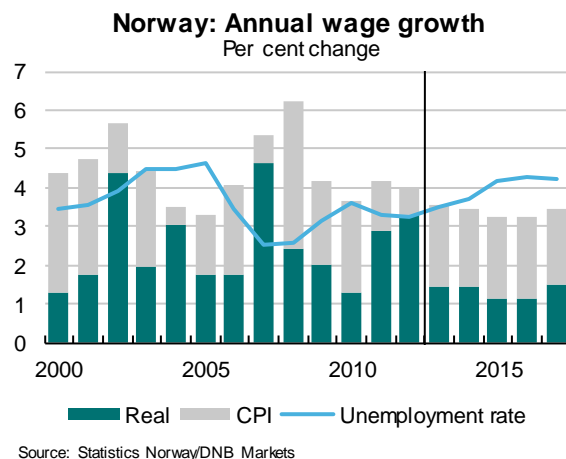
slightly for mainland companies, but fell for manufacturing companies. The shares in 2012, the last year for which data is currently available, were about the same as the average for the last 20 years.



According to our estimates of wage development and value creation in 2013, wage shares will not change much this year. All in all, they are slightly lower than the average for the last 20 years. This indicates that the wage-paying ability is relatively normal. Depreciation of the Norwegian krone in 2013 has increased many export companies' wage-paying ability. On the other hand, a strong NOK has caused the most problems for these companies and short-term movements of the NOK are unlikely to significantly affect the outcome of the collective bargaining. Good corporate profits can nonetheless have implications for local wage settlements and thereby wage drift.

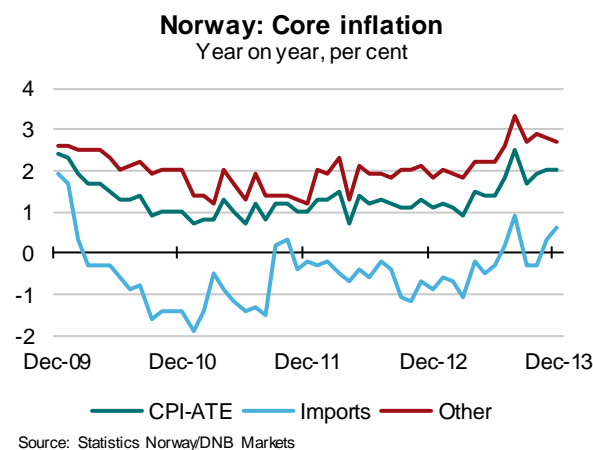
In our assessment of wage growth in the time to come, we have placed emphasis on the fact that Norwegian wage costs are high compared to those of our partners in trade and that wage growth in Europe and the USA will be low. In addition, we expect growth in activity here in Norway to be weaker than in recent years, which means that the unemployment rate will start rising gradually. The price of oil is expected to be lower. A decline in oil companies' profits will put more pressure on suppliers to cut costs, which would reduce their wage-paying ability. On the other hand, the unemployment rate is still low and inflation is expected to be a bit higher than in the last couple of years. We thus estimate that wage growth will come to around 3.5 per cent this year, which is about the same as last year. Economic growth may be even lower in 2015, and the unemployment rate is expected to keep on rising. These factors will contribute to dampening wage growth. At the same time, real wage growth has clearly declined in relation to the average for the last 20 years and growth in productivity is expected to pick up a bit. All in all, we

thus predict nominal wage growth of 3.3 per cent in 2015 and 2016. In 2017, partly due to somewhat stronger economic growth, wage growth is expected to rise to 3.5 per cent. If our wage trend predictions hold true, the business sector's ability to compete on costs will not change much but depreciation of the NOK last year has helped increase competitive strength.



### Low inflation

Core inflation measured as CPI-ATE (CPI adjusted for tax changes and excluding energy products) came to 1.6 per cent last year, up from 1.2 per cent the year before. In 2013, the inflation rate unexpectedly jumped in July and August, but subsequently fell again. Core inflation in the first half-year came to average of 1.2 per cent and fluctuated between 0.9 per cent in March and 1.5 per cent in April. The average inflation rate in the second half of the year came to 2.0 per cent. It rose from 1.4 per cent to 1.8 per cent in July and further to 2.5 per cent in, and then dropped to 1.7 per cent. The inflation rate in the fourth quarter was steady at 2.0 per cent.

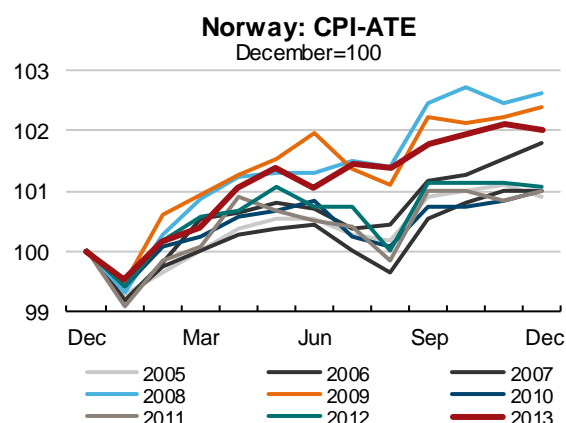


The weak core inflation trend in the first quarter gave rise to increased concern that inflation might decline

further like it did to a certain extent in other countries. This concern was more or less eliminated by the increases in April, July and August. The rise in inflation is due to a number of factors. Some of it is the result of a change in the method for calculating rent. The new method picks up on changes in rent in connection with changes of tenants to a greater extent and this probably largely explains why annual growth in rent increased by 1.6 percentage points last year.

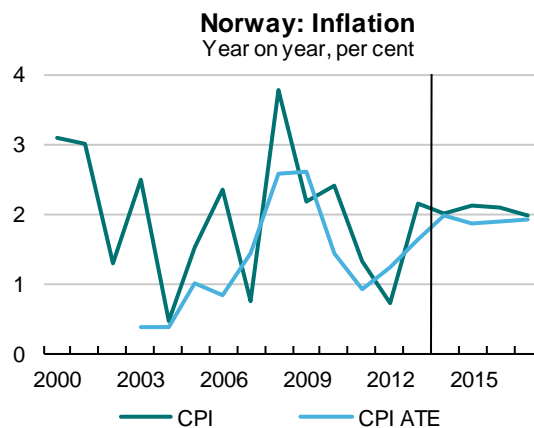
Food prices rose in both April and July and this contributed to boosting inflation. Food prices have not risen as much as they did in April and July of last year since the 1980s. This happened after several years of unusually weak price trends. In the period from July 2010 to December 2011, food prices fell by an average of 1.1 per cent year-on-year. The average increase in the period from January 2012 to March of this year came to 0.4 per cent, and in the period from April to July the annual growth rate rose to 0.9 per cent. Price inflation in the period from August to the end of the year came to 2.4 per cent. The agricultural settlement may have contributed to the price increases in July, but only to a limited extent. At any rate, the prices of other foodstuffs that are not covered by the aforementioned settlement rose substantially and, in this connection, there was no clear difference between domestically produced and imported food.

Clothing prices provided the biggest surprise in August. The usual seasonal clothing sales impacted prices much less than usual. On the other hand, clothing prices did not increase as much as usual in September, and growth in core inflation thereby waned again.



A number of other price components naturally also contributed to price fluctuations last year. For example, price growth in July for furniture, household goods, furnishing fabrics, carpets and repairs was the highest ever measured for these groups. There was a general

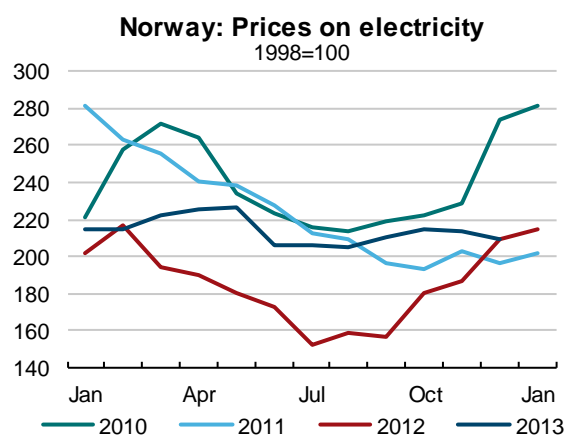
rise in prices last year. Domestic core inflation, not counting rent, came to an average of 1.9 per cent in the first half-year, which was roughly the same as in preceding half-year, but rose to 2.6 per cent in the second half of the year. Prices of imported consumer goods were down 0.6 per cent year-on-year in the first half of the year but increased by 0.2 per cent in the second half-year. The inflation rate for services (aside from rent) did not change from the first to the second half-year. This group accounts for about 30 per cent of the price index and there was little difference between wage-heavy services and other services. The service price indices only include imports to a very limited extent but the indices for domestically produced goods are also affected by import prices. This could indicate that depreciation of the NOK last year had a greater impact on core inflation than might be inferred on the sole basis of the import index.



Total inflation, measured as the annual change of the CPI, came to 2.1 per cent last year. Electricity prices hardly changed last year, but due to major fluctuations in 2012, electricity prices contributed to relatively large differences between core inflation and total inflation. At the end of last year, electricity prices were at the same level as one year before. On the somewhat longer term, we expect energy prices to make a small, but positive price contribution, and predict that total inflation will thus be slightly higher than core inflation.

When estimating future price trends we placed emphasis on the possibility that depreciation of the NOK in 2013 could lead to imported price impulses. One of the underlying assumptions in our current projections, however, is that the NOK will strengthen somewhat, rather than depreciate further. The price impulses from a weaker NOK will thus be transitory. There is normally a time lag between fluctuations in the NOK exchange rate and changes in the retail prices of imported goods. By

the beginning of 2015 we believe export prices to have largely been adapted to a weaker NOK level, but that consumer prices will still be impacted by second-round price formation effects. We have also assumed that cost impulses will be weaker because wage growth is subsiding and growth in productivity is expected to rise. Even if import prices rise and pull up the inflation rate, this will not be enough to increase wage growth. However, this is also one of the reasons why wage growth has not declined more. A somewhat weak growth picture limits the potential for higher profit margins. We thus predict that the inflation rate will be 2.0 per cent this year, and that the inflation rate will be a bit higher in the first half of the year than the second half-year. We predict that inflation rate will be just below 2 per cent in 2015 and 2016.



Source: Statistics Norway/DNB Markets

## 2.4 Budgetary policy

In its supplementary proposal for the 2014 government budget, the government proposed a structural, oil-corrected deficit of NOK 137.5 billion this year. The deficit was estimated to equal 2.9 per cent of the oil fund capital and the difference between that and the four per cent limit entailed by the fiscal rule was estimated to be NOK 55.5 billion. Measured in relation to trend mainland GDP, the proposed deficit comes to 5.7 per cent, which is 0.5 percentage points higher than the year before. This indicated an expansive budgetary stance. The budget was also on the expansive side in 2012 and 2013. The ratio of the deficit to the Norwegian pension fund is lower in the 2014 budget. The reason for this decrease, despite the expansive budget stance, is strong growth in the pension fund in 2013 measured in NOK. Much of this growth was due to weakening of the NOK last year.

In connection with rebalancing of the 2013 budget, the structural, oil-corrected deficit for 2013 was trimmed by

NOK 1.7 bn. and the expansive impulse was estimated to be 0.4 per cent, one tenth lower than in the supplementary proposal. However, NOK 500 million was allocated to redeeming toll money debt. These are funds that, in isolation, increase the deficit for 2013, but which will have an expansive effect in 2014.

A very expansive fiscal policy was adopted in 2009 to deal with the effects of the financial crisis. The policy subsequently turned out to be less expansive than expected. The structural, oil-corrected deficit was lower than what was initially proposed. It corresponded to well under limit of 4 per cent of the pension fund stipulated in the long-term fiscal rule for phasing in oil money. Though the fiscal policy was somewhat expansive, it was far less so than it could have been on the sole basis of the four-per cent rule. This allowed for an expansive monetary policy. Strong economic growth in 2011 and 2012 considerably strengthened the NOK. It was partly because the fiscal policy was restrained in relation to the four per cent rule that the NOK did not appreciate more in those years and that it weakened last year.

The government has assumed that growth in the mainland economy this year will come to 2.5 per cent. We expect it to be a bit lower and do not anticipate any significant change in the growth picture for 2015. With a deficit that is clearly below the upper limit entailed by the fiscal rule, there is room for a somewhat more expansive fiscal policy next year. There are, however, two important factors here. Firstly, the big distance from the fiscal rule limit is partly due to depreciation of the NOK. The fact that the Norwegian krone is weakening and that this is increasing the value of the pension fund measured in NOK should not lead to a more expansive fiscal policy. Secondly, it should be kept in mind that a more expansive fiscal policy can result in a stronger NOK. The NOK strengthened somewhat more in 2012 than many companies could live with in the long run.

The current ruling parties have clear intentions of reducing the tax level and increasing public expenditures. This must be done within the confines of the fiscal rule and responsible limits. Based on the growth assumptions we have used in this report, it seems reasonable that the structural, oil-corrected budget deficit might increase more than the pension fund, thereby reducing the distance to the limit entailed by the fiscal rule. A total of NOK 7.9 billion in tax cuts has already been included in the 2014 budget, which the new government only had a short time to revise. We believe that the tax cuts in the 2015 budget could be in the region NOK 15 bn. and that the cuts in following years will be smaller. Public spending is expected to

increase less than usual and less than GDP growth, while growth in public investments is expected to rise. Payments of public benefits to households are largely determined by prevailing rules. Growth in these expenditures will increase as a result of changing demographics.

All in all, we estimate that the structural, oil-corrected budget deficit will rise by NOK 28 billion in 2015 and the ratio of the deficit to the pension fund will rise to 3.1 per cent. This is, however, well within the limit stipulated in the fiscal rule.

## 2.5 Monetary policy

2013 was yet another year of very expansive monetary policies. Last summer the Bank of England (BoE) and the European Central bank (ECB) introduced «forward guidance» to keep the market's expectations with respect to short-term interest rates in check. The US Federal Reserve carried out the same tactic half a year earlier. The ECB cut the key policy rates in May and November by a total of 0.5 percentage points. In Sweden, Riksbanken cut the repo rate to 0.75 per cent in December, one year after its previous rate cut. In the USA, on the other hand, the Fed has started reducing its bond purchases. The key policy rates of our most important partners in trade were trimmed a bit last year. The central banks have indicated that they to keep their key policy rates at the current level (or lower) at least throughout 2014.

### Developments since the last report

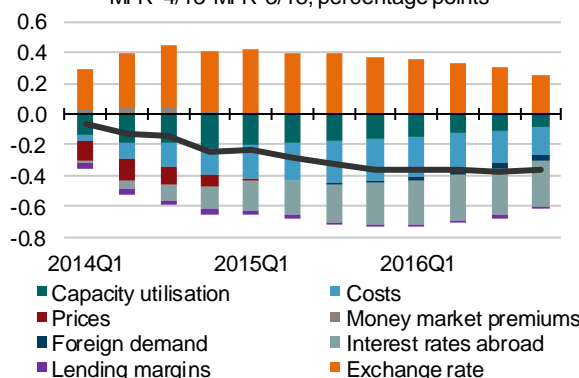
In Norway, the central bank left the key policy rate untouched last year. As mentioned in our previous report, Norges Bank lowered the interest rate path in both March and June. Norges Bank was faced with some difficult choices prior to the monetary policy meeting in September. Inflation had risen markedly and according to the latest statistics, the core inflation rate was 2.5 per cent. At the same time, the NOK had weakened noticeably since the previous monetary policy report. These two factors, which tend to carry considerable weight in the committee's assessments, would normally call for a higher interest rate path and an earlier rate hike. But the key economic indicators had weakened and interest rates outside Norway had fallen. One of the underlying assumptions in the interest rate path the central bank published in June was that no rate hikes would be carried out until early in 2015. The interest rate path showed that the rate was more likely to be cut than raised. The new interest rate path gave a more balanced estimate and involved leaving the key policy rate unchanged until the summer of 2014. In its

assessments, Norges Bank placed major emphasis on weaker growth prospects for the Norwegian economy and the decline in interest rates outside the country. In addition, the central bank assumed that the rise in inflation was transitory and the estimated inflation rates in two to three years' time were thus only increased moderately. Nevertheless, partly due higher real inflation and depreciation of the NOK, Norges Bank slightly raised the interest rate path for the next two years.

October's monetary policy meeting was held just five weeks after the meeting in September. Inflation in September was lower than Norges Bank had anticipated but the NOK depreciated more than expected. Norges Bank also pointed out that the rise in interest rates outside Norway had been pushed a bit back in time and that household demand appeared to be a bit weaker than had previously been assumed. In addition, Norges Bank pointed out that housing prices had levelled out but the unemployment rate had remained relatively stable. The executive board thus found no grounds for changing the key policy rate and since this was an intermediary meeting that did not entail the preparation of a report, it was not necessary to take a stand with respect to future interest rate trends.

A new monetary policy report, with a new interest rate path was presented in the December meeting. The NOK had weakened further in the autumn, and clearly more than Norges Bank had anticipated. Seen in isolation, this seemed to call for an even higher interest rate path, as did slightly lower money market premiums, although in this case it was a matter of a few basis points.

**Changes in the interest rate path**  
MPR 4/13-MPR 3/13, percentage points

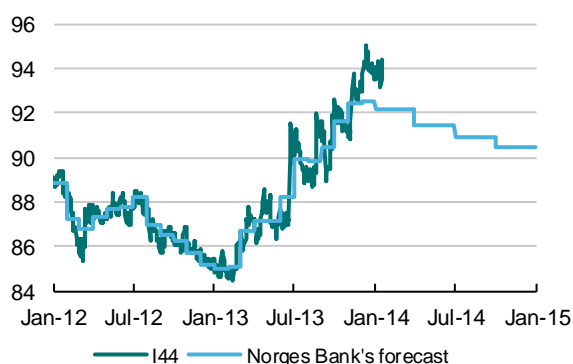


Source: Norges Bank/DNB Markets

On the other hand, a number of factors favoured a lower interest rate path. Norges Bank pointed out that the inflation rate was lower than expected, the economic growth outlook had weakened further and wage growth would be lower than had previously been assumed. The

banks' loan spreads had increased a bit. International interest rate expectations had declined further and the activity level outside Norway was a bit lower than anticipated. Norges Bank thus came to the following conclusion: "The analyses imply that the key policy rate should be held at the current level in the period to summer 2015 and be increased gradually thereafter. The increase in the key policy rate is now forecast to occur one year later than projected in September". In the interest rate path, the key policy rate was unchanged at 1.50 per cent until the first quarter of 2015 and was not raised above 1.75 per cent until the fourth quarter of the same year. Norges Bank was of the opinion that the depreciation of the NOK was temporary and thus expected it to strengthen going forward.

Norway: Trade weighted NOK (I-44)



Source: Thomson Datastream/Norges Bank/DNB Markets

In the monetary policy meeting in December, Norges Bank also gave the Ministry of Finance advice on the countercyclical capital buffer. Even though the advice itself was not disclosed to the public, the analyses were presented in the monetary policy report along the same lines as in earlier reports. On 12 December, the Ministry of Finance set the countercyclical buffer at one per cent as recommended by Norges Banks and endorsed by the Financial Supervisory Authority. But, while Norges Bank recommended that the requirement should enter into effect as of 1 January 2015, the Ministry of Finance determined that effective date will be 30 June 2015. «Both Norges Bank and the Financial Supervisory Authority assume that the banks are well under way with their preparations to adapt to higher capital adequacy requirements. I do, too." said Minister of Finance, Siv Jensen, when the buffer requirement was presented.

### Monetary policy in the time ahead

We expect our most important partners in trade to leave their key policy rates unchanged in 2014. We predict that the US Fed will carry out a rate hike in the first quarter of 2015 and that Riksbanken will follow early in

the second half of the year. In the UK, we predict that the BoE will raise its key policy rate in the second half of 2015, while the ECB is not expected to carry out a rate hike until early in 2016. This means that Norwegian interest rates are unlikely to increase due to interest rate hikes in other countries in 2014 and will only do so to a limited extent in 2015.

Growth seems to be picking up in the Eurozone, but we still do not anticipate impressive growth there. All in all, our trading partners are experiencing rising growth which increases the demand effects on the Norwegian economy.

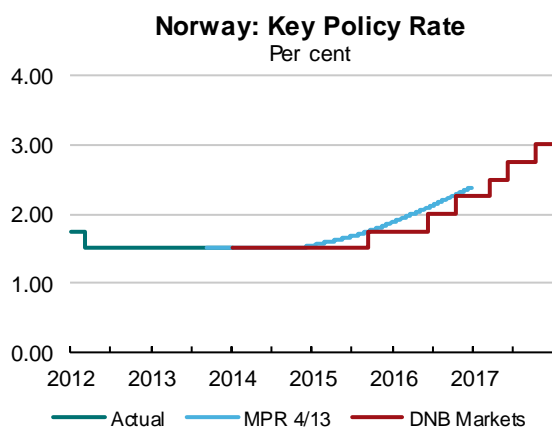
In this report, we have assumed that growth in the mainland economy will be a bit lower than normal and that the economic trend will be a bit weaker in 2015 than this year. Wage growth is expected slow down a bit at the same time as productivity increases. This will offset the impact of a weaker NOK on consumer prices. All in all, we expect inflation to remain relatively stable and slightly below Norges Bank's target.

Prices in the housing market fell in the second half of last year. We expect them to fall farther this year and going into 2015. We believe that this decline will be accompanied by lower credit growth. Norges Bank is worried that high growth in housing prices and credit could lead to financial instability, and has consequently left the interest rate higher than it would have otherwise. If the interest rate were lower, inflation would quickly rise to the targeted level, and the negative production gap would be closed faster. Norges Bank fears, however, that lower interest rates could lead to increased build-up of debt and the risk of an ensuing major slump. In the monetary policy report from December of last year, Norges Bank estimated that the interest rate path going forward would have been as much as 54 basis points lower if the central bank had not placed as much emphasis on having a robust monetary policy and reducing the danger of financial imbalances. Falling house prices and lower credit growth would have made this a less urgent issue for the central bank.

With a key policy rate of 1.50 per cent, the real interest rate is negative. The real interest rates on loans to households and businesses are still positive, however, partly due to increases of the banks' lending spreads and risk premiums in the markets. These may shrink over time and this can be countered by a higher key policy rate. Under normal circumstances, the real key policy rate should be positive. This means that the key policy rate will probably be hiked within the next four years.

Norwegian three-month forward rates declined by 4-5 basis points from March to June and September to a level that is around 10 basis points under three-month NIBOR at the time of writing. They then rise 5-10 basis points for the next contracts. Three-month forward rates do not exceed the current three-month NIBOR until March 2015. The liquid forward market for USD against NOK has also priced in a 10 basis-point lower key policy rate in the first half of this year. This can be interpreted as a sign that the market is pricing in a 40 per cent probability of a rate cut in the course of the next half year and that this probability subsequently lessens. The markets do not appear to be fully pricing in a 25 basis point rate hike until the autumn of 2015.

We predict that Norges Bank will leave the key policy rate as is until the autumn of 2015, and that it will thereafter be raised very cautiously. Our economic projections are based on that assumption, and are pretty much in line with the markets' expectations. This means that the interest rate differential against the Eurozone will increase.



[kjersti.haugland@dnb.no](mailto:kjersti.haugland@dnb.no)

[kyrre.aamdal@dnb.no](mailto:kyrre.aamdal@dnb.no)

### 3 Sweden

Swedish economic growth slowed further last year as a result of destocking and declines in exports and investments. The global upturn will cause growth to rise again in the course of the next four years, but probably not to the pre-crisis level. As a result of a brighter economic outlook, tax cuts and continued low interest rates, consumers are expected to make a greater contribution to growth in the time ahead. Rising house prices and persistent high growth in household debt will probably keep Riksbanken from carrying out more rate cuts. We expect the repo rate to remain at the present level until the summer of 2015.

Sweden. Per cent change from preceding year	2012	2013	2014	2015
Private consumption	1.7	1.9	2.5	3.1
Public consumption	0.8	1.2	1.1	1.1
Investments	3.8	-0.7	4.0	3.9
Exports	1.1	-1.4	2.7	3.8
Imports	-0.1	-2.0	3.1	4.7
GDP	1.3	0.9	2.0	2.4
Unemployment	8.0	8.0	8.1	7.7
CPI	0.9	0.0	0.6	1.4
Wages	3.0	2.2	2.6	3.0
3m money market rate	2.0	1.2	1.0	1.2
10-year swap rate	2.3	2.5	2.8	2.8
EUR/SEK	8.71	8.65	8.94	8.94

Source: DNB Markets

#### Growth to pick up this year

We estimate that economic growth in Sweden came to 0.9 per cent last year. This is even weaker than the year before. Growth picked up towards the end of last year and both businesses and households are increasingly optimistic. We expect GDP growth to rise to 2 per cent this year and further up to 2½ per cent in 2015.

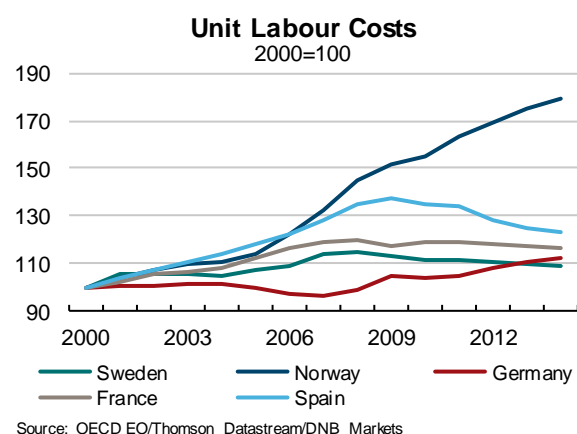
It is mostly the manufacturing industry, which accounts for 13 per cent of GDP in Sweden that is struggling. The sector has been on a downward trend since the autumn of 2011. Output in November was an entire 20 per cent lower than the peak level in December 2007. The order volume was 30 per cent lower. Exports, which account for half of the demand in the Swedish economy, declined by roughly 1½ per cent last year. With the exception of the crisis year, 2009, when exports fell more than 12 per cent, 2013 was the weakest year for the export industry in 20 years.

One important reason for this decline is that, Europe, which is the largest market for Swedish exports, has been in a recession. Another important reason is of a

more structural nature. Market shares for important export goods such as motor vehicles, electronics and telecommunication equipment shrank in the latter half of the 2000s, and especially after the onset of the financial crisis. Price competition has been fierce since the mid-2000s. The terms of trade, which measure the value of exports relative to that of imports, have deteriorated.



Meanwhile, the Swedish cost level is fairly high. In 2012, the hourly wages of Swedish factory workers, measured in the common currency, were 10-20 per cent higher than in France, Germany and Italy and 60 per cent higher than in Poland. This, despite the fact that wage costs per produced unit have risen far less in Sweden than in other European countries in the last decade.



A stronger Swedish krone has contributed to reducing competitive strength in recent years. After depreciating substantially towards the end of 2008, the trade-weighted SEK appreciated close to 40 per cent in the period from February 2009 to March 2013, when it was 9 per cent stronger than it had been prior to the crisis.

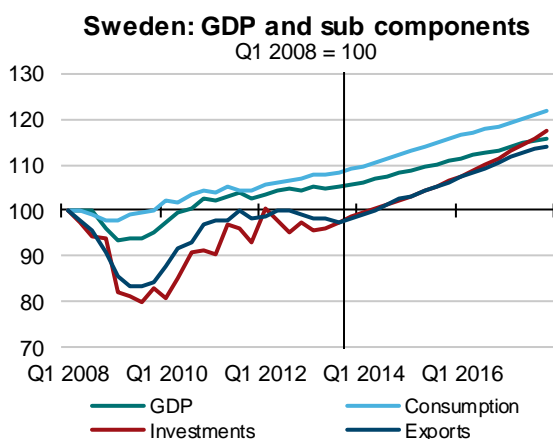
The fight to hold on to market shares will also be tough for the next four years. When growth in exports picks up

again in coming years, we believe that it will be to a lower rate than before. In 2015 - 2017, exports are expected to increase by about 4 per cent, which is 2 percentage points lower than the average for the last twenty years.

### Increased contribution from consumers

Estimated growth in private consumption came to a modest 1.9 per cent last year, about the same as in the year before. Meanwhile, disposable income rose by a scant 4 per cent, and saving is still on the rise. Housing prices increased by roughly 6 per cent last year.

We expect growth in consumption to be higher this year. Consumer confidence has increased markedly since last autumn to above the historic average. The trend in the retail sector strengthened at the end of last year. The rate cut in December and additional income tax cuts, will contribute to increasing consumption further.



Source: Thomson Datastream/DNB Markets

Business investments have traditionally been closely linked to export sector trends and should start increasing again this year. Housing investments have also picked up in the last year. In the years 2014-2017, we expect investments to increase by 4-5 per cent per year.

The unemployment rate is likely to stay at 8 per cent this year and then gradually decline as economic growth increases. The economic upturn will not be strong enough to bring unemployment down to the pre-crisis level but it is expected to drop to the upper part of the range Riksbanken considers to be "normal" (between 5 and 7.5 per cent) in 2016. We predict annual growth in real wages in the region of 1¼ per cent. Inflation is unlikely to rise to the target level before the end of 2017.

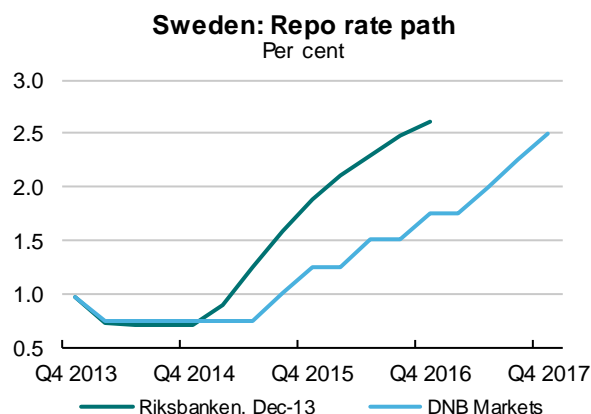
### Riksbanken gave in to cut pressure

The inflation rate has been persistently lower than expected and in December Riksbanken finally decided

to slash the repo rate to 0.75 per cent. At the same time, the central bank presented a lower interest rate path in which the first rate hike had been pushed back one quarter to the beginning of 2015. The interest rate path still has a "negative bias", entailing a higher probability of another rate cut in the next year than a rate hike.

For the first time since April 2012, the monetary policy committee's decision was unanimous, and for the first time since February 2009 the executive board agreed on the interest rate path. According to the minutes of the meeting, two of the members, Ekholm and Flodén, are prepared to cut the interest rate further. The majority of the committee members, especially central bank governor, Ingves, continue to worry that, in the long run, low interest rates are likely to contribute to financial imbalances and economic instability.

Last year, the Financial Supervisory Authority was given formal responsibility for introducing more measures aimed at reducing the risk of financial imbalances, so-called macroprudential tools. Among other things, the FSA recommends increasing the banks' risk weighting for housing loans. Riksbanken does not appear to be convinced that the proposed measures are sufficient. We believe that the aim of financial stability will still be a major decisive element for the central bank.



Source: Riksbanken/DNB Markets

Though there is a clear risk of rate cuts on the short term, we believe that Riksbanken will leave the interest rate at the current level. Based on the assumption of more modest economic growth in Sweden than Riksbanken estimates, we predict that the first rate cut will be pushed back another half a year till the summer 2015. This will mark the beginning a gradual rise in interest rates, up to 2.5 per cent at the end of 2017.

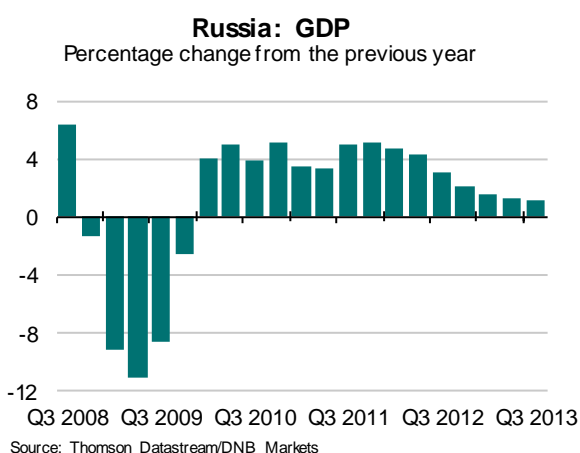
[kjersti.haugland@dnb.no](mailto:kjersti.haugland@dnb.no)

## 4 Russia

**Russia's economic growth has decelerated, reflecting a sharp slowdown in investment expansion and stagnation in manufacturing. Meanwhile, inflation remains far above the target and structural imbalances persist. The economy shows signs of a "hard landing", while operating close to full-capacity. Real GDP is estimated to have expanded by meagre 1.5 per cent in 2013 and to pick up slightly to 2 per cent this year on the back of rising investment. We do not expect a strong rebound, but the gradual improvements in the external environment, the weaker rouble and the support from the Reserve fund may skew the risks to the growth outlook to the upside.**

### From slowdown to stagnation

Buoyant oil revenues in the past allowed the Russian government to stimulate domestic demand markedly, through increasing spending on public investment projects, rising public wages and social benefits. However, the investment growth stalled in 2013, as state-owned companies sharply reduced their spending and private investment remained poor due to limited access to financing and shrinking corporate profits. Domestic consumption remained fairly vivid, but it was not enough to compensate a marked deterioration of other growth components. Russia's real GDP growth has been on a downward trend for three consecutive years. In 2012 the economy grew by 3.4 per cent, then its real GDP expansion sharply slowed down to 1.6 per cent y/y in the first quarter of 2013, and weakened further both in the second and the third quarters to only 1.2 per cent.



### Lacklustre start of 2014

The Winter Olympics in Sochi this year, so far the most

expensive Games in history, are unlikely to give a sizeable boost to the economy. Originally estimated at some USD12bn, the final costs soared close to USD51bn, i.e. three times the cost of Athens or London Games. The long-term investment into roads, tunnels, railways and ski facilities will not vanish. However, the level of public investments will be difficult to beat in 2014. Moreover, aiming to tackle the capital flight, the Government took some efforts to "de-offshore" the economy, promising no investment into the companies registered in tax havens. The result of the measure could be twofold – some of the companies may return to Russia, however it could also prolong the capital investment hunger.

Private consumption developments were supported broadly by historically low unemployment rate (5.4 per cent in November 2013) and solid growth in real wages. Also, household spending continued to expand due to buoyant growth in consumer loans, which stood at 30 per cent y/y in October 2013. However the Bank of Russia aims at curbing expansion of unsecured consumer credit through stricter regulation to reduce households' vulnerability..

### Inflation is declining slowly

Inflation remained at elevated levels – above 7 percent in the first half of 2013, and slowed down marginally to 6.5 percent by the end of the year.. In recent months, inflation was higher than anticipated, due to import restrictions on dairy products and higher prices for imported goods due to depreciation of the national currency. Inflation is expected to decline gradually closer to the central bank's target of 5 percent for 2014. The Bank of Russia also showed firm commitment to move to a full free float of the rouble in 2015, by introducing more flexibility to the rouble band. Moderating inflation should provide more freedom for policy makers to loosen monetary conditions. This will support domestic industries through 2014.

### Structural reforms essential

Oil prices in 2013 were on average higher than planned in the budget keeping oil and gas revenues well above weak non-energy income. Nonetheless, budget revenues fell short of the plan against the backdrop of slowing economy. Lower than expected privatisation receipts, due to a number of delays and withdrawals, also added to deteriorating budget stance. The Federal government reacted by exercising higher control over budget spending in 2013 and cutting revenues forecast for 2014-2015. The budget balance is expected to be slightly negative in 2013 and below -1 per cent in 2014, if there is no abrupt fall in oil prices. Pension reform puts

additional pressure on the budget, while keeping the election promises could require extra support from the Reserve fund buffer.

The growth outlook for Russia is highly dependent on the speed of structural reforms that will be, or will not be undertaken in upcoming years. The key measure to prevent the economy from falling into recession is enhancing productivity, especially in the natural monopolies and state-owned companies. Slow progress on structural reforms hampers domestic firms' competitiveness, business climate and confidence. Thus, some of the Putin's promises, i.e. for Russia to rise 100 places in the World Bank's Ease of Doing Business rankings, from 120th to 20th (currently 92nd already) would contribute to robust growth of the economy in the long term.

[jekaterina.rojaka@dnb.lt](mailto:jekaterina.rojaka@dnb.lt)

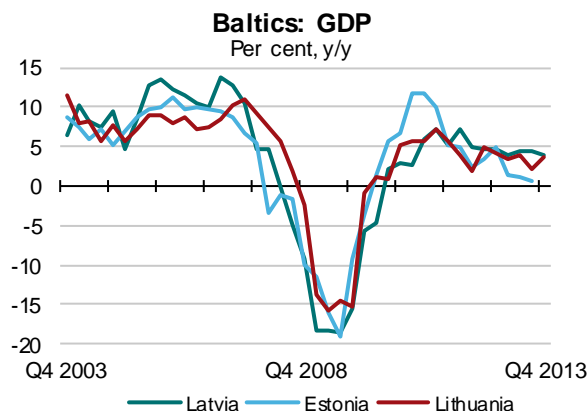
## 5 Baltics

The growth in the Baltic economies slowed down in 2013 due to adverse external environment. However private consumption growth has accelerated and supports the economic development. Estonia's growth was probably just 1 per cent last year. In Lithuania GDP grew by around 2.5 per cent and in Latvia's by around 4 per cent. It is clear that the domestic demand recovery is not sufficient to offset the losses incurred in the export markets. A combination of strong growth in exports and supportive expansion of the domestic market is needed for a sustainable recovery. Gradually improving external demand will contribute to lift growth to the range of 3–5 per cent in 2014-2015. Risks are still mainly on the downside and mainly related to the development in leading exports markets.

### Rapid growth to resume in 2014

Disappointing growth in Estonia is linked with weakening exports to its main trading partners – the Nordic countries. In Finland and Sweden, which account for about a third of Estonia's total exports, growth has slowed. Latvia and Lithuania have also suffered from the weaker external demand but to a lesser extent than for Estonia. Redirection of the oil-related transit from the Baltic countries to Russian ports added to deteriorating service exports, especially in Latvia and Estonia. In Lithuania, exports also slowed in the second half of the year as a result of a tightening of Russia's customs checks and an import ban of dairy products of Lithuanian origin.

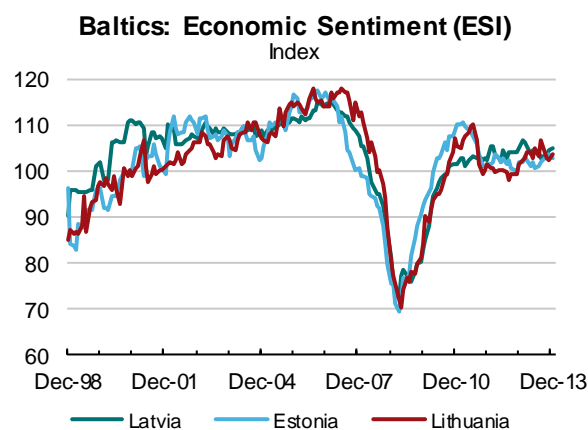
The gradual global recovery will likely brighten the export prospects for the three Baltic countries, which are strongly exposed to foreign trade. Goods and services exports counted in 2012 for 91 per cent of GDP in Estonia, for 84 per cent in Lithuania and for 62 per cent in Latvia, while the corresponding EU average was only 43 percent. The rapid growth of exports is one of the key factors that will return Lithuanian and Estonian real GDP to the pre-crisis level this year, and the Latvian in 2015. According to Eurostat, the Lithuanian, Latvian and Estonian shares in world exports have increased at the most rapid pace among European Union members since 2007.



Source: EIU/Thomson Datastream/DNB Markets

### Investments and consumption will support growth

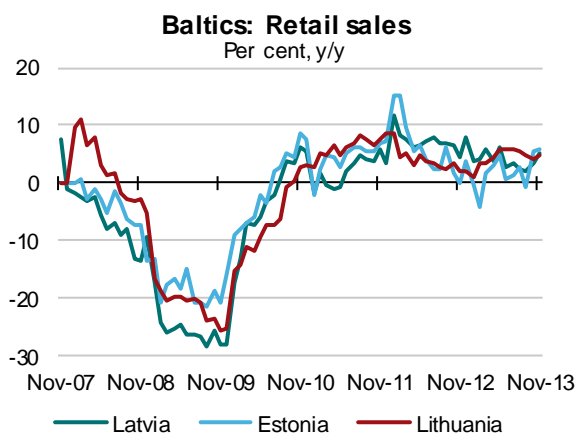
Investments put a drag on Estonian and Latvian growth last year while Lithuania enjoyed a long-awaited rebound in gross fixed capital formation, thanks to a rebound in construction and a number of strategic projects financed by the government. In the first three quarters of 2013 capital investment rose by 12.2 per cent y/y in Lithuania, increased by 2 per cent in Estonia and dropped by 1.8 per cent in Latvia. The slowdown in public investment in Latvia and Estonia is likely to be temporary and is expected to resume in 2014-15 on the back of higher capacity utilization, a new wave of EU co-funded projects and diminishing external uncertainty.



Source: Thomson Datastream/DNB Markets

Private consumption has strengthened in both Latvia and Lithuania and remained strong in Estonia during 2013, supported by rising wages, falling unemployment, lower inflation and improved confidence. The labour market situation is continuously improving, with the unemployment rate falling sharply to about 9 per cent in Estonia and 11-12 percent in Lithuania and Latvia. The tighter labour market combined with emerging skill

mismatches and a series of the minimum wage increases pushed the average wages up in all three countries. In the third quarter of 2013, annual nominal wage growth accelerated to almost 9 per cent in Estonia, 6 per cent in Lithuania and 5 per cent in Latvia. This year the minimum monthly wage was lifted to EUR350 in Estonia and EUR320 in Latvia, while it was increased a year ago to EUR290 in Lithuania. The governments are considering further rises as the economies strengthen.



Source: Thomson Datastream/DNB Markets

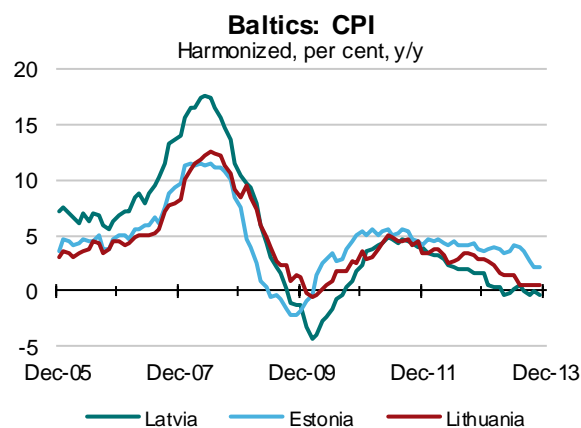
### Emigration slows down

One of the most notable positive changes in the Latvian and Lithuanian economies is a remarkable improvement in the migration balance. Even if both countries are still suffering from the labour force flight abroad, predominantly to the United Kingdom and the Nordic countries, it is running out of steam, and the number of come-backs has been on a rise. As a result, net migration has improved significantly and is at the lowest (in case of Latvia) or second-lowest (in Lithuania) since 2004, when the countries joined the EU.

### Inflation is set to increase in Latvia and Lithuania

Inflation eased significantly in 2013 in all three countries, with the average HICP sliding down to below 3 per cent in Estonia, 1 per cent in Lithuania while in Latvia consumer prices showed no increase. However, inflation is expected to rise to 2-3 per cent in Latvia and Lithuania, and stabilize at the same level in Estonia in the coming years. The key reasons behind elevated inflation expectations are liberalisation of the electricity market (in Latvia), introduction of the excise tax on natural gas, which is used as heating fuel (Lithuania), foreseen hikes in alcohol and tobacco excise duties (in Lithuania, Estonia) and higher wage growth. The euro

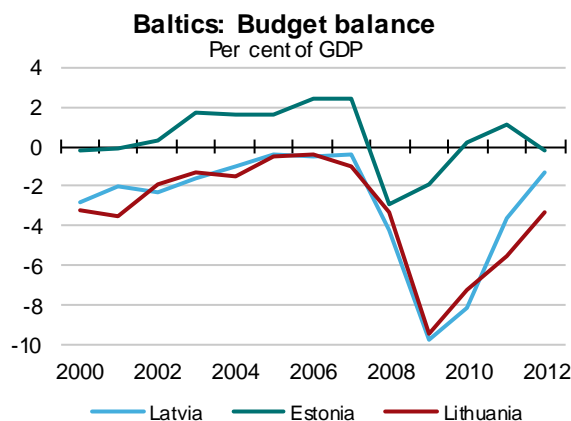
changeover effect on inflation in Latvia is forecast to be minor (below 0.3 pp.).



Source: Thomson Datastream/DNB Markets

### Fiscal position is slowly improving

Despite the economic slowdown, a fiscal consolidation is under way. The general government deficit is estimated to reach 0.5 per cent of GDP in Estonia in 2013, 1.5 per cent in Latvia and 3 per cent in Lithuania. For the latter there is no room for further fiscal slippages bearing in mind the government's goal of euro adoption in 2015. With faster economic growth and limited increases of spending, the Baltics are expected to improve their fiscal positions over the forecast horizon.



Source: Thomson Datastream/DNB Markets

[jekaterina.rojaka@dnb.lt](mailto:jekaterina.rojaka@dnb.lt)

## 6 Poland

**After a period of stagnation at the beginning of last year, the Polish economy now shows signs of increasing growth momentum. Gradual improvement of private consumption and sizeable expansion of investment stemming from the absorption of the EU funds will contribute to robust economic recovery. However, unemployment remains high and capacity utilisation in the manufacturing sector is below its pre-2009 levels. Therefore, the economic developments are seen to be below the potential over the forecast horizon.**

### Economic activity picks up gradually

In the first half of 2013, Poland's growth had dropped to an annual rate of 0.8 per cent, due to falls in investment and consumption. Economic activity subsequently picked up in the third quarter, with the economy growing by 2 per cent y/y as domestic demand gathered steam. Overall, in 2013 the economy is expected to grow by 1.5 per cent, and from this year is forecast to accelerate following a recovery in both external and domestic demand. This trend is confirmed by various short-time indicators, including improving consumer and business confidence. Currently, the main contributor to growth has been net exports. In line with the early indicators however, the 2014 economic development is set to be more balanced, based on positive external trade as euro area's recovery continues, moderate pick-up in gross fixed capital formation and stronger private consumption. The latter is expected to grow due to the gradually improving labour market, higher real wages and the deteriorating debt service burden.

### The new EU financing cycle to boost investments

The 2014-2020 Cohesion Policy is expected to boost strongly Poland's fixed capital formation, which saw a significant contraction in 2012-2013 due to reduced public spending and investments. According to the new financing framework, Poland is allocated about 2.5 per cent of GDP per year for a seven-year period. Thus, the funds together with domestic co-financing are expected to give a generous enhancement to growth.

### Inflation to remain subdued

With a weak economic trend inflation has been on a downward trend during last year dropping from 3.7 per cent in 2012 to around 1 per cent in 2013. The abrupt deceleration is largely linked to lower commodity prices and weak domestic demand. We expect inflation to pick up gradually in upcoming quarters due to lower base

effect and improving consumption, but to remain below the National Bank's 2.5 per cent target in 2014-2015. Thus, moderate inflation will leave policy-makers hands untied to keep monetary conditions relatively loose. Poland's policy rate was cut in total by 225 bps from November 2012, when the economy slowed until July 2013, when the central bank indicated that the cycle of interest-rate reductions was over, and borrowing costs would remain unchanged until at least mid-2014.

### Fiscal balance set to improve

The fiscal deficit in Poland is expected to widen from 3.9 per cent of GDP in 2012 to around 4.5 per cent in 2013, due to larger than anticipated revenue shortfalls from both direct and indirect taxes. In August, the government was forced to introduce expenditure cut of 0.5 per cent of GDP. The government continues struggling between the need to stimulate the economy further and to seek fiscal consolidation. Despite the revenues are forecasted to improve in upcoming years, the fiscal consolidation will go on. It will primarily benefit from the planned changes to the pension system, mainly one-off transfer of assets from the second pillar to the budget. The transfer of about 8.5 per cent of GDP will result in a short-lived fiscal surplus in 2014, which will turn negative again in 2015. Poland had not yet succeeded in exiting EU Excessive Deficit Procedure. However it was qualified for extending the deadline for correcting its deficit by two years, until 2015. With the help of the pension fund assets transfer and implemented structural measures, such as wage freeze for government employees and gradual increase in retirement age, the general government deficit is expected to shrink to about 3 per cent of GDP by the end of 2015. Also, the transfer from the open pension funds will result in a sizeable reduction of sovereign debt, from about 58 per cent of GDP in 2013 to 51 per cent in 2014, bringing down debt service costs.

### Outlook is improving

Overall, Polish outlook has improved: gradual recovery in the euro zone should support export-led industry, and domestic developments have been on a rise. The risks to the baseline scenario are balanced. On the upside, consumer confidence and domestic demand could recover more quickly than forecasted. Moreover, weaker currency may additionally result in stronger net exports, boosting higher growth than expected. Downside risks are mainly attributed to the prolonged weakness of the euro area and a more pronounced rise in inflation that may put a drag on domestic demand recovery.

[jekaterina.rojaka@dnb.lt](mailto:jekaterina.rojaka@dnb.lt)

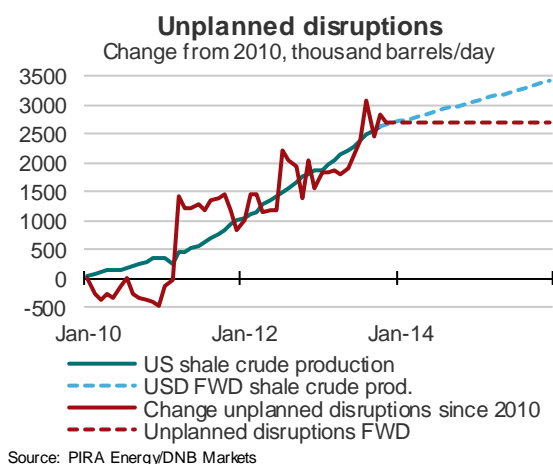
## 7 Oil market

We forecast that oil prices will continue to slide lower on average in 2014, just like they did in 2013. We are quite happy with our reading of the 2013-market, as in retrospect it seems that we timed our turning point from bullish to bearish quite well in the summer of 2012. We had been bullish to the oil market for more than 4 years when we made that U-turn. The average Brent price for 2013 was 108.7 \$/b, which implies a reduced oil price of about 3 \$/b from 2012, corresponding to a decline of 2.7 percent. An oil price drop of 3 \$/b does not seem like much, but becomes more significant when taking into account that this was only the third year with declining oil prices during the last 15 years. For 2014 we believe the price decrease will be about twice as large as in 2013, and we maintain our forecast of 102 \$/b.

### Unplanned outages needed

As already stated we are maintaining the average price forecast for 2014 at 102 \$/b and we would claim that the only reason why international oil prices have not already fallen below 100 \$/b is to be found in the very large increase in unplanned outages that has happened the last two years. The escalation in outages started with the “Arab Spring” in the winter of 2011. The first material outage came from Libya. Then as Libya came back into the market much quicker than anybody had expected during 2012, Iran fell out of the market with more than 1 million b/d of reduced production and exports due to the European oil embargo and the US/European financial sanctions. Now Libya has again fallen out with more than 1 million b/d reduced output since August, due to strikes and political unrest. Current estimates are that Libya is now producing about 500-600 kbd compared with about 1.35 million b/d during the first half of 2013.

Some have said during the last year that since the Brent price is still above 100 \$/b despite the large increase in US shale oil output, these barrels are not as important as we and others have claimed. We would instead turn this around. You could rather ask yourself the question on how high oil prices would have been without the 2.5 million b/d growth in US shale oil we have seen the last 2-3 years. The answer is that there would have been no spare capacity left in the global upstream production space and international oil prices could have been much higher than were they are right now. The shale oil revolution in the US has also already had large geopolitical consequences as the US would never have dared to push Iran as hard as they have through the very large tightening of sanctions had we not seen the massive increase in US shale oil output.



In fact the delta in shut out barrels out of the market has more than offset the increased shale oil output from the US the last two years. The key question to ask would be: will this continue in 2014 and 2015 as well? We have problems believing that this will happen as we are already at a historically high level of shut out barrels as we enter 2014. Shut out barrels right now are almost at par with what we saw during the Venezuelan strike in December 2002 and the war in Iraq that started in March 2003. Should we really expect the shut out barrels to increase from here to levels only seen since the break-up of the Soviet Union in the 1990's? We struggle to have that as a base case. Yes, we could lose some more barrels from Iraq, Venezuela and Nigeria, but we find it easier to believe some barrels will return to the market on the net.

### Global supply-demand balance

The supply-demand balance for 2014 is looking very weak in our opinion. We think global oil demand will increase by 1.2 million b/d while we have non-OPEC supply growth (including biofuels and OPEC NGL's) up 1.9 million b/d. We think the total oil demand growth will be similar to 2013, but the composition between OECD and non-OECD will be different. We think OECD oil demand will again grow in 2014. For many countries in the OECD, however, we are not talking about net oil demand growth, but rather that the delta in oil demand becomes less negative instead of turning positive.

We think we will continue to see some oil demand growth in the US in 2014, based on more positive macro-economic data, but there remains a large risk in how the expected FED tapering will affect the macroeconomic sentiment during the year. We expect OECD Europe to post a minor net oil demand growth but it can hardly be described as strong by any means. For

the third largest oil consumer in the world (Japan), we believe that the oil demand growth will continue to be negative, despite “Abenomics” and improving macro-economic numbers. Why is that? Well, the country has not started any nuclear facilities yet and if that happens, it should be negative for both direct burn of crude and residual fuel oil used for generating power. As far as we understand there are 12 applications to restart nuclear facilities in Japan and the central government wants to get these reactors back into operation. Local governments have the last word, however, but we expect that during 2014 the Japanese central government will be able to restart at least a handful of nuclear facilities.

In total we expect OECD oil demand growth of 0.2 million b/d for 2014. Now how about the emerging markets? Will these countries continue to grow as strongly as before? We think not. Non-OECD oil demand growth was 1.3 million b/d in 2011, 1.4 million b/d in 2012 and is on track to come in at 1.1 million b/d for 2013. For 2014 we believe oil demand growth in the non-OECD will continue to weaken to 1.0 million b/d on the back of lower total GDP-growth coupled with what looks to be more service oriented growth rather than the same growth in investments that we have seen for the last ten years. This means the content of the growth in emerging markets will on average be less energy intensive than during the last ten years. This change is already starting to become visible in oil data from Saudi Arabia, China, India and Latin America. The FED tapering could also be a further drag on some of these emerging economies as one would expect their currency to start weakening against the USD as the longer term US interest rates becomes pressured higher when FED scales back its massive buying of US bonds. If we were to evaluate the risks in our demand forecasts we could see some upside risk connected to OECD but there is similar downside risk connected to our non-OECD numbers.

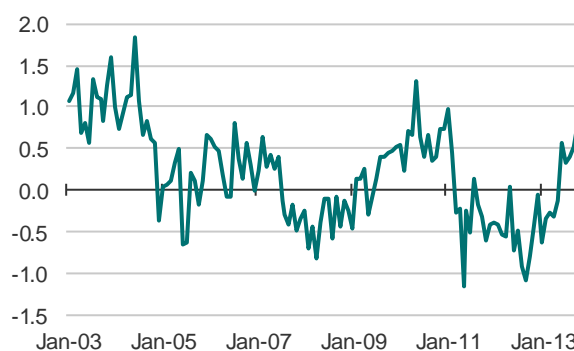
What does the most influential other analysts expect of supply-demand growth for oil in 2014? It is common to compare one’s own numbers with the ones posted from IEA, OPEC and EIA. The average of these agencies estimates of changes to “Call on OPEC” for 2014 is a decrease of 0.6 million b/d for 2014. IEA is the most pessimistic, while OPEC is the least pessimistic. EIA is in the middle. Looking at what has happened to the average oil price since the change of the millennium it has been common to see a drop in the oil price whenever the “Call on OPEC” drops significantly. That happened in the beginning of the 2000’s, it happened in

2009 and it happened in 2013. It is going to happen also in 2014 in our opinion.

## Global oil supply growth

The last 5 months we have seen acceleration in the year-on-year growth rates in production for countries outside of OPEC. Non-OPEC growth has in fact posted a sustainable period with growth above 1.5 million b/d for the first time during the last ten years. Most of this growth is of course coming from the shale oil revolution in the US, but the last 5 months the IEA data shows that we are also seeing meaningful growth in the other non-OPEC countries. There is even growth if we exclude Canada. We don’t think everyone is aware that suddenly we see some production growth even in the North Sea, and it does not seem to be due to material new fields starting up but rather better performance from existing fields. As an example we can mention that the loading programme for the last three months for Brent, Forties, Oseberg and Ekofisk (BFOE) in fact was 160 kbd higher than the prior year. We believe the mentioned trends will continue into 2014.

**Oil output ex. OPEC and USA**  
Million barrels/day, annual change



Source: IEA/DNB Markets

It is important to emphasize that in the oil industry there are normally significant lag times from investment to production and a drop in investments will not immediately lead to lower oil production growth unless the oil price drops to levels that make maintenance on existing oil fields un-economical to execute. According to IEA the break even costs of Enhanced Oil recovery projects span from 20 \$/b to 80 \$/b. In theory this means that the decline rates should be kept in check as long as the oil price stays above 80 \$/b. Some have claimed that if the oil price drops to 80 \$/b then the resulting drop in investments will quickly push the oil price back up as supply will suffer from these lower investments. The problem with this argument is that it is very difficult to time when the potentially lower investments lead to

potentially lower production. As an example, in 1980 the global CAPEX spending peaked and started falling, but it took 4-5 more years until that resulted in flattening non-OPEC output.

From 2002 to 2009 we saw an immense increase in E&P spending in the oil industry. In the same years there were no increases in non-OPEC production. In fact, non-OPEC production outside of the FSU started falling in this period, despite this large increase in spending. We still regularly meet players in the oil industry that claims this is still the best description of the industry. But note that non-OPEC production has now “turned the corner”, and again started growing. And as already mentioned, it is not only confined to onshore USA. It is striking that the large growth in E&P spending from 2002-2009 was mainly all inflation. There was little activity growth. Maybe it should not then be very surprising that production growth started suffering. The last 3-4 years have however been different as now the largest component of the CAPEX increase is related to activity growth and not inflation. Suddenly the last 3-4 years the oil industry has received more “bang for the buck” with respect to its investments. Maybe it should not then be unexpected that the next couple of years will pose better growth in production from non-OPEC?

The key growth in non-OPEC will however continue to come from the US/Canada also in 2014 and 2015 in our opinion. Onshore E&P spending will in 2014 be close to 500 billion USD according to IHS, this is up about 170 billion USD since 2009. In the same period the offshore E&P spending has increased by about 70 billion USD. These investments are about to pay off through increased production and based on the IEA estimates of US production growth compared to when the first assessment was released, the upside surprise to US production the last 2.5 years is so far a massive 1.9 million b/d. More than a new “Norway” has in other words entered the market the last couple of years that the IEA did not have in their estimates in the summer of 2011.

## Global oil demand growth

OECD oil demand growth peaked in 2005-06 and is since down about 10%. We think there could be some pockets of oil demand strength in parts of the OECD in periods where economic growth outpaces the improved efficiency and substitution but we believe these will only be pockets that may last at max 6-12 months. We are still convinced that during the next 5 years, the efficiency improvements in the US car fleet, coupled with substitution in particularly heavy duty trucking will

outweigh any positive effect of economic growth in the coming 5-year period. We suspect we will see a period of stronger oil demand growth in the US, but the growth in oil demand will not be larger than the weaker growth we expect from the non-OECD for 2014 on average.

Unfortunately (for those selling oil that is) we still see no meaningful evidence of stronger oil demand growth in the key European countries, except in UK. Oil demand is in the latest IEA figures still contracting in Germany, France, Spain and Italy. But based on some better sentiment in the macroeconomic indicators in Europe the last couple of months we choose to have a slightly positive bias to oil demand for 2014 in Europe.

When it comes to oil demand growth in the non-OECD, the delta in the growth rate is in fact looking less positive. After having seen non-OECD oil demand growth performing at 5-8% growth rates for large parts of the period from 2000-2010, the growth rate is now hovering more in the 3-4% range. The last couple of months the demand has in fact grown at only about a 2% rate compared with last year. We expect this kind of demand growth to continue also into 2014. A 1.0 million b/d demand growth rate for non-OECD equals about 2.2% oil demand growth for that region.

**Emerging markets: Oil demand**  
Percent change from year before



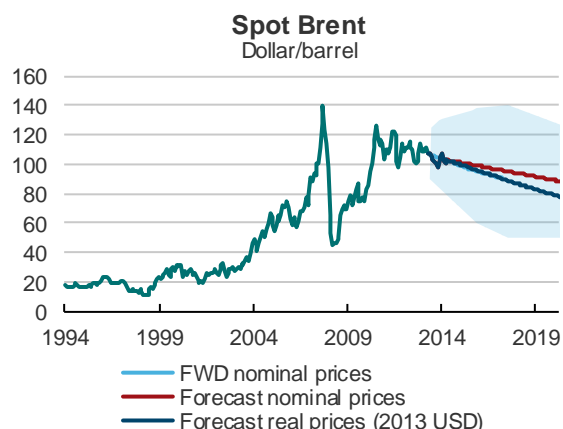
Source: IEA/DNB Markets

China will again be the key for non-OECD oil demand growth and we continue to expect a fairly weak growth rate in oil demand for China also for 2014. We have been used to seeing a yearly growth of 0.5 million b/d for China but we have argued many times the last two years that we believe this growth rate will drop to the 300-400 kbd range in the coming years. For 2013 the Chinese oil demand growth is set to come in somewhere between 200-250 kbd, while for 2014 we factor in demand growth of about 300 kbd. The key reason why we are no longer seeing 0.5 million b/d yearly growth in China is that diesel is no longer contributing to positive oil demand

growth. As total Chinese GDP growth has dropped to 7 percent instead of the 10 percent plus and as the growth becomes less energy intensive, this affects diesel demand negatively. Diesel is also meeting competition from natural gas in the transportation sector and wind, solar and nuclear in the stationary sector. We believe car sales and hence gasoline consumption will continue to perform strongly in China also in both 2014 and 2015, but this will not be enough to offset the fact that diesel is not performing anymore.

We would also like to highlight the fact that in some of the most populous countries in emerging Asia, the oil price has climbed to heights where several countries can no longer afford to subsidise petroleum products to their citizens to the same extent as before. The best example is Indonesia, which use 14.5% of their domestic budget on petroleum subsidies. On the 22nd of June the country removed parts of their subsidies on diesel and gasoline and the prices on these products jumped 20% to 40% for the end users. Then it will become possible to do some sensitivity analysis based on prices in such a country. India and Malaysia have also started scaling back petroleum subsidies in 2013. This will not hinder further demand growth for petroleum but the growth rate will most likely not be as strong as we have been used to. You can try to tell Indonesia, India and Malaysia that oil is cheap. They will not agree with you...

[torbjorn.kjus@dnb.no](mailto:torbjorn.kjus@dnb.no)



Source: Thomson Reuters/DNB Markets

Oil price, dollar/barrel		
	Nominal	Real
2011	111	114
2012	112	112
2013	109	109
2014	102	102
2015	100	99
2016	98	95
2017	96	91
2018	94	87
2019	92	84
2020	90	80

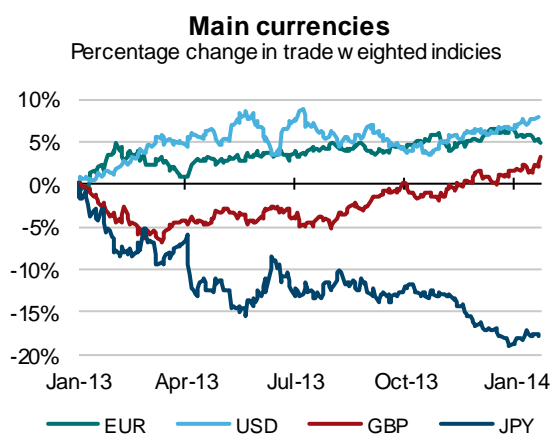
Source: Thomson Datastream/DNB Markets

## 8 Foreign exchange market

Last year, fundamental factors replaced risk sentiment as the most important drivers of currency markets. The degree to which different countries were affected by the crisis varies. As do how far their recovery has come. The central banks are thus beginning to go separate ways. The central banks in the USA and Japan represent the extremes. The Fed is in the process of normalising its monetary policy while the Bank of Japan has committed itself to strong stimuli for a long time to come. Though we are unlikely to see any rate hikes for quite some time, we expect monetary policy to be decisive for trends in FX markets going forward. The currencies of most of the countries where recovery has gained a foothold have strengthened. While the British economy has surprised on the upside and the GBP has appreciated, economic growth in both Sweden and Norway has been disappointing. The Swedish krone has held up well, however, and is still fairly strong. The Norwegian krone, on the other hand, was one of the "losers" last year and weakened substantially. We expect the NOK to regain strength in the time ahead.

### The currency market in 2013

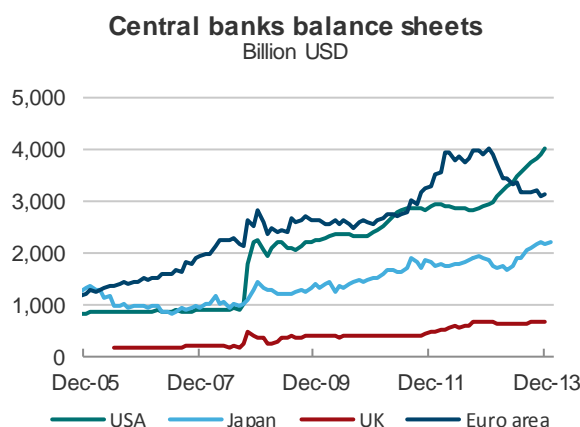
Steady improvement of risk sentiment has brought fundamental factors back into the forefront as drivers of currency market trends. Most of the central banks in the G10 countries have kept interest rates record-low for a long time and have also resorted to unconventional monetary policies. How far the recovery from the crisis has come varies from country to country. And because the economic conditions differ, the monetary policies of the countries are now diverging. Monetary policy has consequently been the most important driver of the currency market for the last year.



Source: Thomson Datastream/DNB Markets

Even though the European Central Bank (ECB) cut its key policy rate twice last year, the Euro has appreciated over the last year. The risk of renewed unrest in the Eurozone is decreasing day by day, and risk pricing in the Eurozone has continued to normalise. Due to brighter economic prospects, downsizing of balance sheets and better-functioning capital markets, banks have gradually started to repay large portions of the two three-year liquidity loans the ECB granted in the most intensive phase of the sovereign debt crisis. The ECB's balance sheet has thus shrunk close to 25 per cent in the last year, which partly explains the movements of the euro.

The exact opposite is happening in Japan. Bank of Japan intends to double the monetary base and the central bank's holdings of government bonds by April 2015. As a result of stimulant monetary policy and the very expansive fiscal policy, the Japanese yen has been under constant pressure. The trade-weighted yen has depreciated almost 20 per cent in the last year.

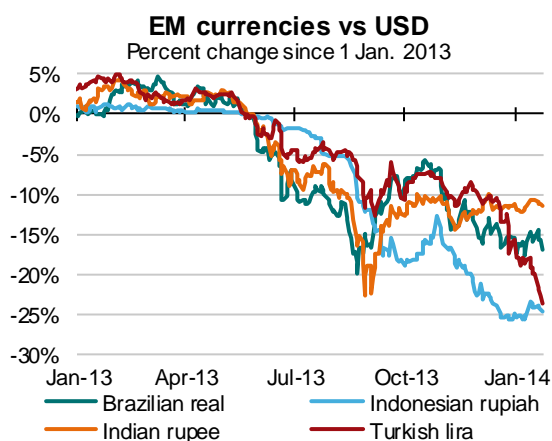


Source: Thomson Datastream/DNB Markets

Due to expectations of persistent weak economic growth, the GBP depreciated early in 2013. In the course of the year, however, the British economy performed surprisingly well. The rebound has gained such a good foothold that the Bank of England (BoE) decided last autumn to phase out one of the stimulant measures aimed at the housing market. And unemployment has fallen close to the BoE threshold of 7 percent. As a result of the economic recovery, the British pound gradually regained much of the strength it lost earlier in the year.

While both the ECB and the BoJ eased monetary policy further in 2013, the Federal Reserve was the first central bank among the G10 countries to move in the opposite direction. When the Federal Reserve (Fed) early last year announced its intention to start winding down the

bond purchases, this had a major effect on currency markets. While the USD only strengthened temporarily, the prices of emerging economies' currencies, in particular, moved dramatically. Countries with large current account deficits, and which are dependent on foreign capital were hit hardest. The following increase in interest rates was one of the main reasons why the Fed decided to wait until December before actually deciding to scale down its asset purchases. In contrast to what happened in the spring, this only had a modest effect on the USD.



Source: Thomson Datastream/DNB Markets

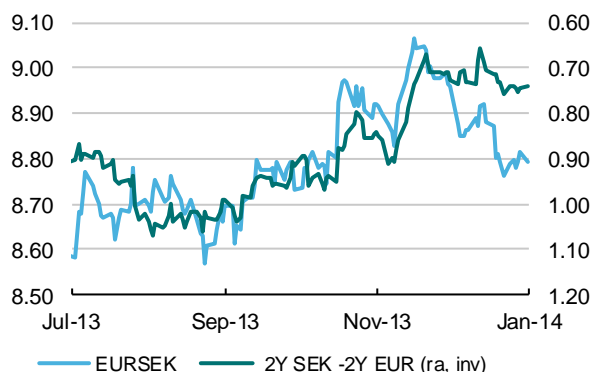
In light of the increasing differences in economic performance in the different G10 countries, we expect the central banks to play a decisive role with respect to currency market trends this year. In countries where the central bank has started to normalise monetary policy, we expect the currency to strengthen. In countries where the central bank still is maintaining a very expansive monetary policy, we expect the currency to weaken.

Market sentiment continues to improve. Markets were barely ruffled by a number of situations that would have had a major impact a few years ago. In August an old familiar worry rose to first place on the headache list: a hard landing in China. This would probably lead to a new round of searching for safe havens. The effect on the NOK would probably be dominated by an associated fall in the price of oil. Though a flare-up of unrest in the Eurozone is still a definite possibility, it is becoming less and less likely. With their backs against the wall, both politicians and the ECB have proven that they are willing and able to carry out the necessary measures. This should limit market fluctuation.

### Strong Swedish krone

The trade-weighted SEK has depreciated just over 1 per cent since our last report. The SEK has depreciated about 2.5 per cent against Euro.

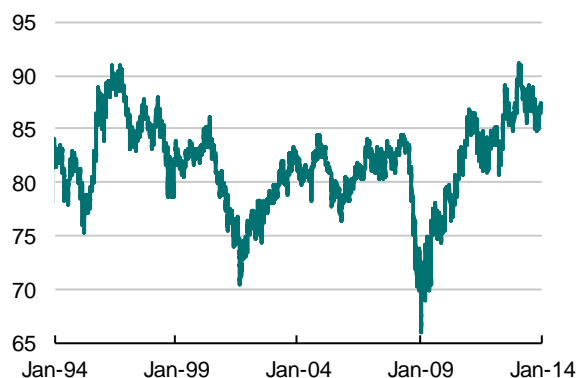
### Interest rate difference and EURSEK



Source: Thomson Datastream/DNB Markets

Disappointing growth and lower interest rate expectations are probably some of the main reasons why the SEK has retreated. This seemed especially true in advance of Riksbanken's monetary policy meeting in December. The market's risk appetite has improved and stock markets have risen, and this appears to have reduced demand for SEK. The possible explanation for this is that the SEK was seen as a safe haven during the financial crisis in Europe, due to Sweden's solid government finances and AAA rating. Now that the sovereign debt crisis is fading into memory and the market's risk appetite is growing, there is less need for such safe havens.

### Trade weighted SEK



Source: Thomson Datastream/DNB Markets

Even though the SEK depreciated somewhat last year, the currency is still strong. On the whole, in 2013 the Swedish krone (trade-weighted) was the strongest it has been since 1996. While other central banks have had a tendency to try to talk their own currencies down, the Swedish authorities have stated on numerous occasions that the strength of the SEK makes perfect sense given the strong economic fundamentals. We agree with this assessment. Both growth and productivity have been much higher in Sweden than in the Eurozone, for

example, since the mid-1990s. Furthermore, for the last decade price growth has been lower in the Eurozone than in Sweden and Swedish goods have consequently grown cheaper over time and thereby more attractive. Increased demand for Swedish goods leads to increased demand for Swedish krone and thereby a stronger currency exchange rate. These are some of the reasons why the Swedish krone should be relatively strong.

We are not quite as positive towards the SEK on the short term. Swedish economic growth has been disappointingly weak and inflation is well under the target. This is pulling interest rate expectations down. The central bank cut its key policy rate by 25 basis points in December because of the low inflation rate. The new interest rate path that was presented at that time indicates that there that another rate cut may be carried out, if necessary. Riksbanken has pushed back the timing of its first rate hike from the end of 2014 to the beginning of 2015. This is in line with current market pricing.

We still think that Riksbanken is too optimistic about the Swedish economy. Our growth estimates are lower than both Riksbanken's and the consensus. We therefore believe that the first rate hike will be pushed back till the summer of 2015. We also anticipate additional disappointments for the Swedish economy and further trimming of interest rate expectations going forward, and expect this to weaken the SEK. We believe that the SEK will depreciate against both NOK and USD in 2014. Seeing as we also expect the Euro to be a bit weaker, we predict that EURSEK will remain at basically the same level for the next year and be quoted at about 8.90 in twelve months.

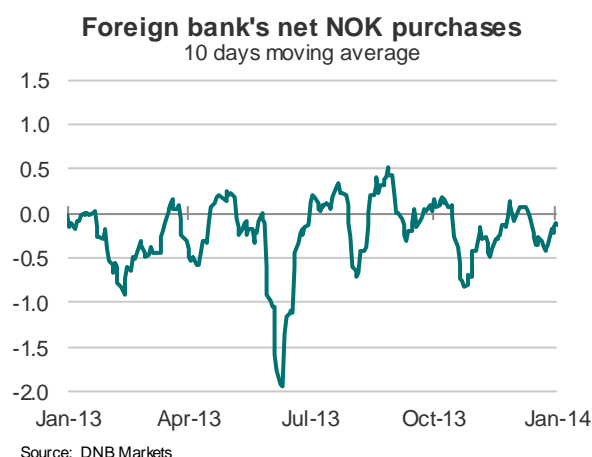
### The weak NOK sentiment will improve

The Norwegian krone was one of the losers among the major currencies in 2013. Measured by the import-weighted exchange rate (I-44) the NOK depreciated by 11 per cent last year. Against the euro and dollar, the krone ended the year 15 and 10 per cent weaker. The Norwegian krone is thus at the weakest it levels it has seen since the autumn of 2009 when the financial crisis led to limited interest in the NOK.

NOK exchange rate movements have for some time been driven by changes in the overall risk sentiment. The NOK has traditionally weakened when risk aversion have been rising, and vice versa. This changed last year, however. The NOK experienced "the perfect storm", where both fundamentals and sentiment turned

in disfavour of the NOK. During the course of last year, it became clear that the Norwegian economy was facing headwinds. Norges Bank lowered the path for its key policy rate in both March and June, and indicated that the interest rate was more likely to be cut than hiked. This is the main reason why interest rate differential between Norway and other countries fell steeply last year.

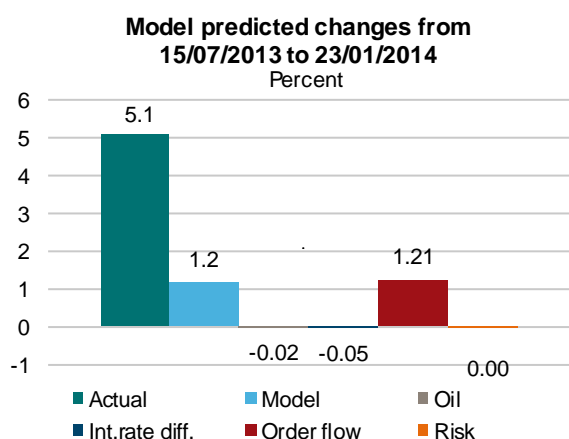
While risk sentiment in general has continued to improve, the appeal of the NOK has weakened. At the beginning of last year many regarded the Norwegian krone as a safe haven and it consequently hit record-high levels. Half a year later, it was once again seen as a small, peripheral currency.



Foreign banks, which had been increasing their Norwegian krone positions, sold the NOK last year. The bulk of these sales of NOK took place in the first half-year when the NOK depreciated from 7.30 to 8.00 against the euro. Foreign banks' sales were more moderate in the second half-year. Meanwhile the NOK depreciated further to over 8.50. Even though foreigners reduced their holdings of Norwegian securities in periods, there is little to indicate that the long-term investors have fled from NOK. Foreigners' holdings of Norwegian securities actually increased in 2013. This supports the assumption that it was mostly short-term accounts that sold Norwegian kroner.

More attention than usual has been paid to macroeconomic data, and the volatility connected to their release has for the last half year been considerably higher than usual. Poorer than expected data tended to weaken the NOK more than surprisingly good data strengthened it. During the course of the year, the liquidity of Norwegian krone gradually deteriorated and since last summer this has been one of the factors that has caused the NOK to weaken. The weak NOK-

sentiment thus seems to have overshadowed economic fundamentals in the second half of last year. This impression is confirmed by our models for EURNOK. While the depreciation of the NOK up to the summer can be explained by changes in interest rate differentials, the price of oil, risk aversion and foreign banks' net purchases of NOK, these factors do not explain the depreciation since the summer.



Source: Thomson Datastream/DNB Markets

As a result of high wage growth and a continuous strengthening of the NOK, Norwegian competitiveness has declined substantially in recent years. Some have maintained that competitive strength can and should be re-established through a depreciation of the NOK. However, while competitive strength has declined, Norwegian companies' labour cost<sup>1</sup> and the ratio of investments to GDP have remained relatively stable. Norwegian companies have thus had good wage-paying ability. A number of factors favour a relatively strong NOK. The terms of trade have vastly improved in recent years. At times, Norwegian economic growth has been higher than that of our trading partners, and the oil fund has accumulated considerable foreign assets. On the longer term, when we approach the end of the oil age and the Norwegian economy needs to find other legs to stand on, it is reasonable to assume that the NOK will weaken. It will, however, be a while till we get to that point.

The new government is budgeting on higher spending of oil revenues than the previous one. Seen in isolation, this could help strengthen the NOK somewhat. In the time to come, we expect the income from the petroleum sector to fall. All in all, this will contribute to reducing the need for Norges Bank to buy foreign currency in the market to build up the Government Pension Fund Global

<sup>1</sup> Labour costs in per cent of the sum of labour costs and operating profits.

(GPF). Even though, in the big picture, the amounts are limited, we expect the signal effect to be greater than the actual amounts.

The most important assumption with respect to our expectation of a stronger NOK, is that the weak NOK-sentiment will abate. Assuming that the depreciation is due to sales of NOK by short-term players, we believe that fundamental economic factors in combination with weak NOK levels will increase the appeal of buying the NOK. The macroeconomic picture we have painted is a bit under par, but not that much poorer than last year. We predict that mainland economic growth will stay at just under 2 per cent for the next few years and that the unemployment rate will rise to a scant 4 per cent in the same period. At the same time, we believe that Norges Bank will be one of the first central banks to start hiking rates, which will increase the interest rate differential between NOK and other currencies. The long-term estimates have not changed much since our last report in August, but given the trend in the last year, we now expect there to be less overall interest in the NOK than we have previously predicted.

[camilla.viland@dnb.no](mailto:camilla.viland@dnb.no)  
[magne.ostnor@dnb.no](mailto:magne.ostnor@dnb.no)

## Turnover and liquidity in Norwegian kroner

**There are few fully adequate measures of turnover or liquidity in foreign exchange markets. It is nonetheless useful to have some idea of both in order understand historical trends and make predictions about future movements. As the Norwegian krone is a small, peripheral currency, these factors are often decisive for movements of the NOK exchange rate.**

Because currencies are traded between two parties rather than through an exchange, there are few satisfactory measures of the actual turnover. Every three years, BIS (Bank for International Settlements), conducts a survey of turnover in the foreign exchange market. In connection with this survey, central banks gather one month's worth of turnover data from banks in their respective countries. The survey gives a good picture of the foreign exchange market over a longer period, but does not provide a basis for considerations of the short term changes in turnover.

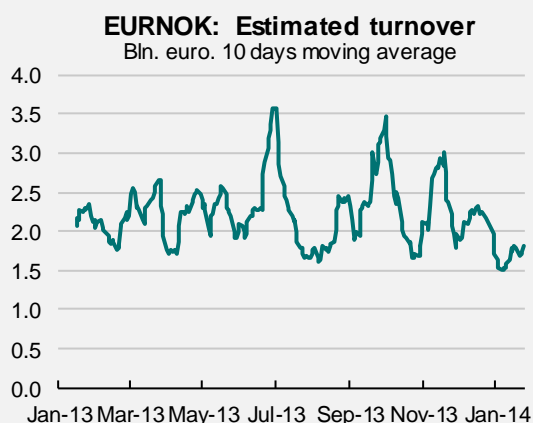
According to BIS, turnover of NOK accounts for 1.4 per cent of the global turnover, or roughly USD 77 billion per day<sup>2</sup>. The NOK is thus the world's 14<sup>th</sup> most traded currency. The gathered data includes all trades in which NOK was one of the currencies and covers a number of foreign exchange instruments<sup>3</sup>. Spot transactions (currency trades with settlement in two business days) accounted for approximately 13 per cent of all trades involving NOK in 2013.



Banks trade currencies on a number of electronic trading platforms. For a long time, most of the spot trades

involving NOK have been executed through Thomson Reuters' dealing platform, and have mostly been against the euro. Thomson Reuters does however not publish statistics on NOK turnover. But the turnover can be estimated by multiplying the number of transactions by an estimate of the average transaction size.

Our calculations indicate that spot turnover ranged from 0.8 to 6.3 billion euro per day last year. At several of its monetary policy meetings last year, Norges Bank surprised the market by presenting a lower interest rate path than anticipated. Turnover tended to increase steeply after these monetary policy meetings. During July and August, the turnover was low. This is however a common pattern in the NOK. From the below chart, it becomes evident that the volatility of turnover increased after last summer. But, as opposed to what many assumed, turnover did not decline as the NOK continued to weaken during the second half of the year. The average turnover in H1 and H2 were the same.



Although the foreign exchange market is considered to be the world's largest financial market based on turnover, the liquidity varies over time and between currencies. Good liquidity means that trades can be executed quickly and without noticeably affecting the price. In periods when risk-willingness is limited, market participants want to avoid a liquidity squeeze and thus set their sights on investing in markets that are as liquid as possible. Poor liquidity has therefore been one of the main objections to the NOK as a safe haven in recent years. The Norwegian krone is far more sensitive to changes of liquidity than other comparable currencies<sup>4</sup>. In periods of low liquidity, this can have a major effect on the exchange rate. The best example with respect to

<sup>2</sup> Since trades always involve two currencies, the sum of the turnover in all the different currencies equals 200 per cent.

<sup>3</sup> The data on the average daily turnover of NOK includes spot trades, forwards, currency swaps, basis swaps and options.

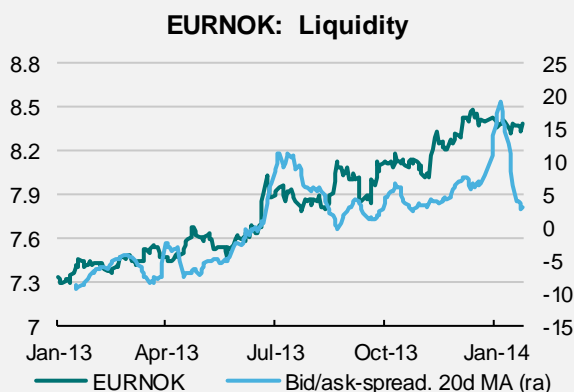
<sup>4</sup> See Lund, K. (2011): «Liquidity in the foreign exchange market for EUR/NOK» *Economic Commentaries 3/11*, Norges Bank

Norwegian krone was after the collapse of Lehman Brothers in 2008 when many wanted to sell NOK but there were virtually no buyers. The liquidity evaporated and the NOK depreciated more than 20 per cent in just over three months.

It is hard to find a satisfactory method for measuring liquidity. One of the better ones is the difference between the buying rate and the selling rate, or the bid/ask spread. If the difference between the buying and selling rates is small, this indicates that there is a good interest in buying and selling the currency in question. Individual trades will thus have less of an effect on the exchange rate. The opposite applies if the difference between the buying and selling rates is large. Unfortunately, this is not a fully adequate measure of liquidity either. The difference between the buying and selling rates does not give any indication of the size of the transactions that can be executed at those rates, or the depth of the market. As shown in the figure below, the increase in the difference between the buying and selling rates went hand in hand with depreciation of the NOK last year<sup>5</sup>. The market paid little attention to the liquidity of the NOK before the summer. It thus looks like it was partly due to weakening of the NOK that the liquidity deteriorated in the first half-year, while constantly poorer liquidity was one of the reasons why the NOK continued to depreciate in the second half-year. Meaning the causality shifted by mid-year.

stayed at more or less the same level throughout the year, while the weakening of the NOK was relatively trend-like. However, the trend this time around is different from what happened in 2008/09. Then, too, the liquidity of the NOK deteriorated while the NOK depreciated. Meanwhile, turnover plummeted. In other words, the two periods were quite different. Whereas the depreciation of the NOK in 2008/09 was the result of major shocks to the global economy, the depreciation this time around is attributable to gradual worsening of the outlook for the Norwegian economy.

[magne.ostnor@dnb.no](mailto:magne.ostnor@dnb.no)



\* The bid/ask-spread is calculated as the average spread in European opening hours, minus the average bid/ask-spread in 2013. Source: Thomson Reuters/DNB Markets

Given the fact that the liquidity gradually deteriorated throughout the year, it would be reasonable to assume that each individual trade contributed to a gradually larger move of the NOK exchange rate in the course of the year. This was not the case, however. The turnover

<sup>5</sup> The difference between the bid and ask price is calculated as the average difference in European opening hours minus the average difference in 2013.

## 9 Projections Norway

Norway: Main economic development Forecasts 2013 - 2017							
	2012	2012	2013	2014	2015	2016	2017
Demand & production (const.prices)	Bn NOK	Annual changes in per cent					
Private consumption	1164	3.0	2.2	2.1	2.6	2.8	3.1
Public consumption	603	1.8	2.0	2.3	1.6	1.2	1.9
Gross fixed capital formation	584	8.3	6.4	2.4	-0.8	0.1	1.0
- Petroleum activities	166	14.6	15.3	5.0	-3.0	-3.0	-2.0
- Mainland-Norway	391	4.5	2.7	1.3	0.2	1.6	2.5
- Private companies	176	4.9	1.2	2.3	0.6	0.3	1.3
- Dwelling services	129	7.3	6.4	-2.2	-4.5	-0.8	1.3
- General government	86	-0.4	0.0	4.6	6.7	7.4	6.1
Final demand from Mainland-Norway	2158	3.6	2.9	2.7	1.4	1.6	2.2
Total exports	1166	1.1	-2.7	1.5	1.7	2.2	2.4
- Crude oil and natural gas	572	0.7	-5.4	0.9	-0.5	-0.5	-0.5
- Traditional goods	322	1.7	0.7	2.0	3.5	4.6	4.9
Total imports	796	2.3	2.1	4.0	2.3	2.8	3.6
- Traditional goods	483	2.4	2.6	3.6	2.9	3.8	4.6
Gross domestic product (GDP)	2830	2.9	0.9	1.8	1.2	1.5	1.9
- Mainland-Norway	2146	3.4	1.9	2.0	1.8	2.1	2.4
<u>Labour market</u>							
Employment, 1000 persons	2582	2.1	1.5	0.7	0.3	0.7	0.9
Unemployment ratio, AKU *		3.2	3.5	3.7	4.2	4.3	4.2
<u>Prices and wages</u>							
Yearly wages		4.0	3.6	3.5	3.3	3.3	3.5
Hourly wage costs							
Consumer price index		0.7	2.1	2.0	2.1	2.1	2.0
Core inflation		1.2	1.6	2.0	1.9	1.9	1.9
Second-hand home prices		7.7	4.9	-4.0	-2.5	-1.0	1.0
Crude oil, NOK *		634	625	619	604	579	551
- USD *		109	106	102	100	98	96
<u>Memo:</u>							
Households saving ratio		8.6	8.7	8.9	9.5	9.5	9.4
3m NIBOR		2.2	1.8	1.7	1.8	2.2	3.0
10y Gov. Bonds		3.4	3.3	3.3	3.6	4.0	4.0
EUR/NOK *		7.5	7.8	8.2	8.1	8.0	8.0
USD/NOK *		5.8	5.9	6.1	6.0	5.9	5.7
*Levels							

Source: Statistics Norway and DNB Markets

## 10 Interest rate and FX Forecasts

Monetary policy interest rates						
Country	28-Jan-14	Apr-14	Jul-14	Jan-15	Jan-16	Jan-17
USA: Fed Funds	0.25	0.25	0.25	0.25	1.25	2.25
Japan: Overnight	0.10	0.10	0.10	0.10	0.10	0.10
EMU: Repo	0.25	0.25	0.25	0.25	0.25	0.50
UK: Bank rate	0.50	0.50	0.50	0.50	0.75	1.25
Sweden: Repo	0.75	0.75	0.75	0.75	1.25	1.75
Norway: Folio	1.50	1.50	1.50	1.50	1.75	2.25
Switzerland: 3M Libor	0.13	0.13	0.13	0.13	0.13	0.50

3 Month money market rates						
Country	28-Jan-14	Apr-14	Jul-14	Jan-15	Jan-16	Jan-17
USA	0.24	0.25	0.25	0.50	1.45	2.45
Japan	0.14	0.20	0.20	0.20	0.20	0.20
Euro area	0.30	0.30	0.30	0.30	0.30	0.70
UK	0.52	0.55	0.55	0.60	0.95	1.45
Sweden	0.95	0.95	0.95	1.00	1.50	2.00
Norway	1.65	1.65	1.65	1.70	2.00	2.50
Switzerland	0.02	0.13	0.13	0.13	0.13	0.50

10 Year swap rates						
Country	28-Jan-14	Apr-14	Jul-14	Jan-15	Jan-16	Jan-17
Euroland	2.90	3.00	3.00	3.50	3.75	4.00
Storbritannia	0.86	0.75	1.00	1.25	1.50	1.50
Euro area	2.00	2.00	2.00	2.00	2.25	2.50
UK	2.86	3.00	3.00	3.25	3.50	3.75
Sweden	2.71	2.75	2.75	2.75	3.00	3.25
Norway	3.18	3.25	3.25	3.50	3.75	4.00
Switzerland	1.46	1.50	1.50	1.50	1.75	2.00

FX rates						
FX forecast	28-Jan-14	Apr-14	Jul-14	Jan-15	Jan-16	Jan-17
USDJPY	103.16	104.00	105.00	107.00	108.34	110.78
EURUSD	1.36	1.36	1.35	1.33	1.35	1.37
EURGBP	0.82	0.84	0.83	0.80	0.81	0.81
EURSEK	8.81	9.00	8.90	8.90	9.01	9.12
EURNOK	8.40	8.20	8.15	8.10	8.05	8.00
EURCHF	1.23	1.24	1.24	1.26	1.31	1.36
USDCNY	6.05	6.04	6.01	5.95	5.80	5.66
SEKNOK	95.35	91.11	91.57	91.01	89.38	87.68
USDNOK	6.16	6.03	6.04	6.09	5.98	5.84
GBPNOK	10.21	9.76	9.82	10.13	10.00	9.86
JPYNOK	5.97	5.80	5.75	5.69	5.52	5.28
CHFNOK	684.27	661.29	657.26	642.86	614.32	587.02
NOK index (KKI)	101.50	98.43	98.25	98.17	96.99	95.68

FX forecast in 24 and 36 months are calculated from uncovered interest rate parity and forecasts for 3 months money market rates in Jan-15 and Jan-16. Exception is EURNOK, EURCHF and USDJPY.

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Head Office +47 03000

Dronning Eufemias gate 30  
N-0191 Oslo  
Norway

## International Offices

New York +1 212 681 2550  
London +44 207 283 0050  
Singapore +65 6220 6144  
Stockholm +46 84 73 48 50

## Sales

Equities +47 0 89 40  
Fixed Income +47 24 16 90 30  
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## Regional sales offices

Bergen +47 56 13 27 20  
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Tromsø +47 77 64 76 30  
Trondheim +47 73 87 49 73  
Tønsberg +47 33 01 73 80  
Ålesund +47 70 11 69 85

Research RMB  
Eirik Larsen +47 24 16 90 77  
Jan Magne Lauritzen +47 24 16 90 83

## Research Fixed Income, Currencies and Commodities

Macro, Fixed Income and Currencies Research  
Øystein Dørum +47 24 16 90 08  
Kjersti Haugland +47 24 16 90 03  
Ole André Kjennerud +47 24 16 90 07  
Knut A. Magnussen +47 24 16 90 04  
Camilla Viland +47 24 16 90 01  
Magne Østnor +47 24 16 90 06  
Kyrre Aamdal +47 24 16 90 02

Oil Market Research  
Torbjørn Kjus +47 24 16 91 66

Credit Research  
Ole Einar Stokstad +47 24 16 90 48  
Martin Børter +47 24 16 90 46  
Mikael L. Gjerding +47 24 16 90 47  
Rolv Kristian Heitmann +47 24 16 90 49  
Thomas Larsen +47 24 16 90 44  
Knut Olav Rønningen +47 24 16 90 45  
Kristina Solbakken +47 24 16 90 51  
Magnus Vie Sundal +47 24 16 91 23

## DNB Markets Baltics

Jekaterina Rojaka +370 52393590

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