Øystein Olsen: Economic perspectives

Annual address by Mr Øystein Olsen, Governor of the Norges Bank (Central Bank of Norway), to the Supervisory Council of Norges Bank and invited guests, Oslo, 14 February 2013.

The underlying data series can be found on the Norges Bank's website.

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Introduction

Life was blessed for these people, living in a small capital in a small country, geographically outside the world; geographically, but not economically. The bright springs bubbled up as never before (...). They were sent sparkling to the sky by popping corks over tables set for a feast (...) But all those who lived by the banks of the bright springs knew that they could not spring eternal.[1]

Johan Borgen's portrayal of Norway as it was almost a hundred years ago could also serve as an apt description of today's Norway, even though the environment was entirely different at that time.

Five years after the financial crisis started in earnest, growth is weak and unemployment high in many countries. The economic situation in Norway stands in stark contrast to developments abroad. Norway's economy is still growing and unemployment remains low. There is a tendency to see ourselves as a country apart.

Norway's oil and gas resources provide an economic base that few other countries enjoy. Income levels are among the highest in the world and the people of Norway are generally highly educated. Our access to natural resources makes a significant contribution to our prosperity. At the same time, our increasing dependence on oil and gas increases the vulnerability of the Norwegian economy. We know that neither of these sources will spring eternal.

The theme of my speech this evening is how to enhance the resilience of the Norwegian economy.

Continued weak growth prospects, but less fear

When the financial crisis washed over the Norwegian banking sector in autumn 2008, we were reminded of how dependent we are on the world around us. Nonetheless, the Norwegian economy weathered the crisis well. After about a year, the downturn in Norway was over.

Chart 1: Emerging economies are driving oil demand

One of the main reasons is that there is strong demand for Norwegian goods in countries where economic growth remains robust. The centre of gravity in the world economy is shifting. In the course of the next few decades, China will most likely be the largest economy in the world. Emerging economies – with China at the forefront – are the main driving force behind the increase in demand for crude oil and other commodities. As a result, prices for Norwegian export goods have remained high, even in the context of declining growth among our traditional trading partners.

Chart 2: Strong improvement in terms of trade

[1] From Johan Borgen's novel "De mørke kilder" [The Dark Springs], first published in 1956, Gyldendal Norsk Forlag.

The emergence of newly industrialised economies has also led to lower import prices in Norway. The improvement in Norway's terms of trade is without parallel in our recent history. We have to go back to the boom period at the time of World War I – a period portrayed so vividly by Johan Borgen in his novel "The Dark Springs" – to find anything similar.

Developments in other countries have been less favourable. What started as a banking crisis in the US and the UK has developed into a sovereign debt crisis, with Europe at the epicentre. Austerity measures and economic contraction are now going hand in hand. Social unrest is spreading.

Unemployment in many countries has risen to alarming levels. Economic growth is weak, particularly in Europe, constrained by uncertainty and fear of new setbacks. Both the public and private sectors are focusing efforts on reining in debt. Banks are consolidating their balance sheets and reducing lending to businesses and households. In the US, the formulation of fiscal policy has yet to be clarified. There too, households and businesses are hesitant to increase spending on consumption and investment owing to the uncertainty.

Chart 3: Public debt to GDP ratio

Total sovereign debt in advanced economies is almost as high as it was after World War II, following a period of soaring, debt-financed military spending. The long post-war boom helped to reduce debt.

Experience shows that it is difficult to restore growth after a financial crisis. Necessary austerity measures can amplify an economic downturn, with falling tax revenues and rising spending on benefits and measures, trapping both public finances and economic activity in a downward spiral. This is what we have seen in Europe.

Structural reforms are often crucial to creating a basis for renewed growth. One case in point is the Nordic countries in the 1990s.

Charts 4a and 4b: Public debt to GDP ratio and GDP

A less successful case is Japan. The Japanese authorities hesitated for a long time before reforms were implemented, including financial sector reform. Government debt increased sharply after several unsuccessful attempts to kickstart the economy through deficit spending. The pace of growth in the Japanese economy has never regained its pre-1990 levels.

Today, economic growth is low in virtually the entire OECD area. Many countries must implement fiscal consolidation measures, while there is also a need to stimulate the economy and create jobs. That is a difficult balancing act. Global growth is being supported by the expansion in emerging economies. This is generating positive growth impulses to advanced economies.

Chart 5: Euro area crisis – less fear

The European crisis was acute about a year ago, at the beginning of 2012. Spanish and Italian government bond yields had risen markedly. The reason was not only the uncertainty related to sovereign debt problems in those countries. Markets also reflected fears that the construction – European monetary union – might crumble. The question of the fate of the euro was on the table.

Through 2012, the European Central Bank (ECB) intervened with resolute measures to calm the markets. The banking system was offered large amounts of long-term funding. In summer 2012, the ECB declared that it was prepared to make unlimited purchases of debt securities from governments which fulfil the conditions for borrowing from the European Stability Fund.

These measures seem to be working.

Borrowing rates for debt-burdened countries have fallen markedly. Other risk premiums have also decreased. Fears of a euro-area breakup and the collapse of the European economy are no longer dominant.

The European monetary union – after being established – cannot be dissolved without serious consequences for Europe and the world economy. There is little point in discussing whether the original idea was a good one or not. The child was born and is now a teenager. As expected, puberty has presented problems. These problems must now be dealt with by the European authorities.

Budget deficits in Europe are being reduced, despite strong headwinds from the slowdown that follows in the footsteps of austerity. Structural reforms are being implemented to increase growth capacity over time. Business sector costs are falling and competitiveness is improving in the countries hardest hit by the crisis. Steps have been taken in the direction of closer cooperation and coordination of economic policy.

However, the path ahead is long. We may have to wait until the next decade before growth gains a firm footing in Europe.

Nonetheless, we have seen a clear shift in financial market sentiment. This shift is reflected in the fall in European government bond yields. The clearest indication of optimism can be found in equity markets.

Chart 6: Government Pension Fund Global

With the upswing in equity markets, the value of Norway's financial wealth is increasing. Close to 60 percent of the capital in the Government Pension Fund Global – Norway's sovereign wealth fund – is invested in global equity markets. When times are good in the global economy and optimism is on the rise, the return on the Fund increases. Conversely, turbulence and low risk willingness in the market have a negative effect on the Fund's assets. This is a risk we have to live with to achieve solid returns over time.

Because of the Fund's long-term horizon, short-term risk tolerance is high. We can exploit this by sitting tight and engaging in countercyclical investment. The Fund's size also allows us to reduce risk by spreading our investments across many countries. Norway has become a global financial investor. Through the Fund's investments, Norway increasingly takes part in value added generated in other countries.

Over the past hundred years, growing global trade and cross-border flows of capital and labour have been important factors driving economic progress. At times, the principles of free trade and capital movements have been set out of play. Walls have been erected between countries in the form of trade barriers and restrictions on capital flows. This has not been successful. Countries that have attempted to shield their economies from the rest of the world have fallen back into stagnation.

Nascent signs of increased protectionism are again giving cause for concern. If this tendency intensifies, international trade and prosperity will be undermined. With its open economy, Norway would be severely affected. It is in our own interest to make an active effort to counteract such a development.

Monetary policy – a nominal anchor

Against the background of an economic downturn and low interest rates among Norway's trading partners, the conduct of monetary policy in Norway is challenging. A higher key policy rate might have curbed debt growth and demand pressures in the Norwegian economy. But in an environment of persistently low external interest rates, such a policy would likely have led to a sharp appreciation of the krone, resulting in too low levels of inflation and economic activity. Thus, the crisis in Europe and weak growth in the US are also contributing to keeping interest rates in Norway at a low level.

The main objective of monetary policy in Norway is low and stable inflation. This objective provides the economy with a nominal anchor. With firmly anchored inflation expectations, monetary policy can contribute to stable developments in the real economy.

Chart 7: Rise in consumer prices

The operational target of monetary policy is annual consumer price inflation of close to 2.5 percent over time. Over the past ten years, average inflation has been somewhat below, but close to, 2.5 percent. Inflation targeting has served us well.

Monetary policy is the first line of defence in demand management. When the impact of the crisis was felt in the Norwegian economy in autumn 2008, the key policy rate was sharply reduced. This contributed to counteracting the negative effects on output and employment in Norway. A credible and firmly anchored monetary policy can curb the impact of external shocks. This increases the resilience of the Norwegian economy.

Owing to substantial cross-border labour flows, changes in the competitive environment and new trade patterns, consumer price inflation has in periods deviated from the target. In such a situation, monetary policy must be oriented towards bringing inflation towards the target over time, while preventing excessive swings in output and employment. The appropriate amount of time that should be taken to reach the inflation target will depend on the shocks to which the economy is exposed and their duration.

Chart 8: Rise in consumer prices and producer prices

In today's situation, it is appropriate to use a few years to bring up inflation. Prices for Norwegian goods have increased considerably more than consumer prices, reflecting the improvement in Norway's terms of trade. Incomes, output and employment are rising at a solid pace. Household debt and house prices are still moving up. These are the key reasons why the key policy rate has not been lowered further.

We will not lose sight of the inflation target. As the economic situation abroad normalises, and pressures on the Norwegian krone ease, cost inflation and high activity in Norway will result in higher consumer price inflation. The key policy rate will then gradually be raised and approach a normal level.

But developments could take another course. A pronounced weakening of growth prospects or a krone that is too strong may over time lead to inflation that is too low. Such developments would be counteracted by monetary policy measures. We still have room for manoeuvre in interest rate setting – in both directions.

More resilient banking sector

The financial crisis provided us with some important insights. First, the crisis illustrated that low and stable inflation is not sufficient to secure financial stability. Second, the crisis revealed severe shortcomings in banking regulation. Banking and financial sector regulation is now being reformed in many countries. New liquidity buffer and capital adequacy requirements are due for implementation in line with the changes to the EEA rules. The regulatory reform will make the banking industry more resilient to periods of rising losses and financial market turbulence.

Norwegian banks have become more solid in recent years, which is a positive development. Banks' capital, in particular that of the largest banks, should be increased further in order to satisfy the new requirements due for implementation.

Chart 9: Bank lending margins have increased

Banks' lending rates have remained fairly high over the past year, despite a fall in their borrowing costs. The increase in margins may reflect banks' efforts to build up their capital. Household debt is rising in Norway, but household income is growing at a solid pace. Given the present economic situation, households can tolerate higher interest rate margins in the banking system. Banks' owners must also make a contribution, which they can do by participating in equity issues or by accepting that a smaller share of profits is distributed as dividends.

In addition to raising more capital, banks must base their lending on more stable funding sources. Improved capital adequacy and more stable funding will be an advantage for banks, and not a disadvantage, in an environment of intensified global competition.

Although growth in our part of the world is weak and real interest rates are low, many banks are still operating with high return targets, which could lead to excessive short-term risk taking. Banks and their owners should accept that return on equity will be lower, but also safer, in the years ahead. A more robust financial system will benefit us all.

The forthcoming regulatory framework for banks in the EEA includes a countercyclical buffer – a capital requirement that can be increased in upturns and turned off in downturns. When banks are required to build up an additional buffer, they are better equipped to cope with periods of rising losses. Banks will be less likely to reduce lending in order to comply with the minimum capital requirements. The capital buffer will hence contribute to enhancing economic stability.

Later this year, Norges Bank will publish analyses and provide advice on the size of the countercyclical buffer in conjunction with its monetary policy analyses. The aim is to ensure that the analytical basis is consistent with the formulation of monetary policy.

The countercyclical buffer will be one of many factors that influence economic prospects, banking sector behaviour and lending rates facing households and businesses. If risk builds up in the banking system, the buffer requirement will be increased. In a downturn, the buffer requirement can be lowered. Norges Bank will assume that the countercyclical buffer comes in addition to the other core capital requirements, which are set at 9 percent today. During the phase-in period, banks should be prepared for a gradual increase in equity capital requirements.

The government authorities are responsible for drawing up the laws and regulations governing the financial industry. This also applies to the decisions relating to the countercyclical buffer. The countercyclical buffer should be determined on the basis of an assessment of overall risk in the banking system. The authorities can assume that the response pattern of monetary policy is stable.

The Norwegian economy is also vulnerable

Structural adjustments in the business sector are the key to economic progress. Over the past 40 years, the oil and gas industry has been an engine of innovation and growth in Norway. In the beginning phases of the Norwegian oil age, the impulses to other economic sectors were modest. Over the years, we have developed an internationally competitive petroleum supply industry of considerable scope.

While the companies operating on the Norwegian continental shelf had to import virtually all their equipment in the 1970s, the import share has now dropped to just below 40 percent. The Norwegian engineering industry has flourished. The supply industry has become a major export industry. Almost two-thirds of total Norwegian exports are now linked to the petroleum industry.

Chart 10: A manufacturing sector divided

Vigorous activity in the oil and gas industry also helped Norwegian manufacturing fare better than manufacturing in other OECD countries during the financial crisis. The petroleum industry is a buffer against the current downturn in advanced economies. In that respect, the Norwegian economy has become more robust. The flip side of the coin is that our economic future is becoming increasingly dependent on oil and gas activities. The substantial petroleum revenues and the spillover effects from oil and gas production are reflected in the labour market and are driving up house prices and debt. In those respects, the Norwegian economy is also vulnerable.

In the mid-1980s, the Norwegian economy was shaken by a sharp and long-lasting fall in oil prices. Today's situation is quite different. Oil prices are persistently high, primarily reflecting the emergence of newly industrialised countries. But it is risky business to take today's oil price levels for granted. New energy production technologies are being developed. Climate challenges will not disappear. If oil prices were to fall again, a number of off-shore investment projects would become unprofitable, with considerable spillover effects on other sectors of the economy. Unemployment would probably rise. We cannot eliminate that risk. Curbing the exploitation of oil and gas resources is not a feasible alternative. The abiding question is how to limit the vulnerability associated with increased oil dependence.

Our main defence is to keep our own house in order. Norway must be poised to resist shocks to its economy.

The fiscal rule for petroleum revenue spending is one defence mechanism. The petroleum fund mechanism and moderate and predictable spending of petroleum revenues over the central government budget contributes to enhancing economic stability. Reserves accumulated in the Government Pension Fund Global provide fiscal leeway in the event of an economic setback, as observed in 2008 and 2009.

By limiting petroleum revenue spending to the expected real return on the Fund, we ensure that our petroleum wealth will benefit future generations. A balanced approach to revenue spending will allow future generations to share in the wealth also through the part that is spent on public investments domestically.

Chart 11: Norwegian labour is expensive

The spending of petroleum revenues also has another facet. It increases the cost of Norwegian labour. During upturns Norwegian companies have fared well, in spite of rapidly rising costs, thanks to efficiency gains and the rise in producer prices for their goods and services. Some other countries in Europe allowed costs to rise at broadly the same pace over a number of years. Now that these countries are in a downturn with a high level of spare capacity, they are improving competitiveness. If the Norwegian economy enters a downturn, the high level of costs in our country may become a hindrance in the competition for tenders and market shares.

A floating exchange rate is a buffer against economic shocks. The experience of 1998 and 2008, for example, indicates that the krone will depreciate in the event of a sharp drop in oil prices. When inflation is firmly anchored, the rise in consumer prices will not accelerate even if the krone weakens. Norges Bank can then allow the krone to fall in value without having to implement a large degree of monetary policy tightening. This will dampen the downturn in the mainland economy, hence facilitating restructuring in the business sector.

Should the outlook for the petroleum industry show a significant shift, Norway will have to start down the hard path of economic adjustment. What we need above all is a profitable and efficient business sector that can adapt to new times. In that respect, there are some aspects of the Norwegian economy that give cause for reflection.

Chart 12: Mainland GDP – stable nominal growth

On the surface, developments are positive. Nominal mainland GDP growth at current prices has been almost surprisingly stable. Over the past 20 years, nominal mainland GDP has increased by around 6 percent annually, and growth is still hovering around that trend. There were some tendencies towards overheating in the years prior to the financial crisis. Price and cost inflation in the Norwegian economy picked up markedly. But the correction that followed during and after the crisis has brought growth back to trend. There is little in this chart to indicate that the world economy has recently been through the most severe economic downturn in post-war history.

The picture changes when growth is broken down into price and volume. The high prices for domestically produced goods are the main factor that has supported our country's income. Since 2005, producer prices have increased considerably faster than trend. This illustrates that mainland businesses have also benefited from the substantial improvement in Norway's terms of trade.

Chart 13: Mainland GDP – slump in economic activity

Economic activity, on the other hand, slumped during the financial crisis. Although economic growth has picked up in the past few years, the level is still clearly below the pre-crisis trend. This would indicate that the financial crisis and the debt crisis have had lasting effects on the Norwegian economy as well.

Chart 14: Mainland GDP – per capita

The picture becomes even clearer when population growth is factored in. Measured per capita, we do not generate more value today than we did five years ago. This picture is similar to that of other advanced economies. The break from the years prior to the financial crisis is clear. Growth is being supported by immigration and employment growth, and not by increased productivity.

There are two factors that determine value added in a population. One is labour input and the other is labour productivity. I will look at some aspects of each of these factors.

Chart 15: Employment ratio is high, but hours worked are low

The employment ratio is high in Norway. Labour force participation is high and most job-seekers find work.

Employment has increased rapidly since the mid-1990s. An expansionary monetary policy and additional government expenditure of oil money buoyed activity and employment through the financial crisis. Measured by hours worked, labour input has also risen, albeit not to the same extent. On average, the working day is shrinking.

The employment ratio adjusted for working hours provides an expression of average labour input per hour worked among the active population. In this chart, hourly labour input is measured in relation to usual hours of work per year of 1 750 hours. In 2011, the average number of hours worked in Norway came to about 60 percent of usual hours of work per year. By this measure, the employment ratio was higher in Greece than in Norway up to the time when Greece was fully hit by the crisis. Total labour input is considerably higher in Sweden, Finland and the US than in Norway. We work less than the OECD average.

When income growth is high, it is natural that some of the increased wealth will be reflected in a greater preference for leisure. It is nevertheless telling that the number of hours actually worked is considerably lower in Norway than among our main trading partners, despite very low unemployment in Norway. Generous transfer schemes and other aspects of our welfare system induce many to exit the labour force – wholly or partially. In recent years, the high level of labour immigration has compensated for this. Nonetheless, this situation does not seem sustainable. Reforms that provide stronger work incentives are needed and should be implemented in anticipation of an ageing population. The pension reform was an important step in the right direction.

Chart 16: Productivity growth has declined

What about the other factor that is crucial to growth? Mainland productivity increased markedly in the 1990s, partly owing to a number of structural reforms. The banking sector was rationalised after the crisis. The tax reform set the stage for profitable investments and business sector restructuring. Improved competitiveness and the development of the oil industry facilitated the rapid integration of new technology by firms. Productivity growth remained relatively high up to around 2005. But since then it has declined. The decline has been more pronounced than among our trading partners.

Chart 17: Growth in real capital

Productivity is closely linked to capital stock per worker. Growth in real total fixed capital formation for mainland Norway fell during the financial crisis. It has since picked up again.

When population growth is taken into account, this picture also changes. Growth in fixed capital per capita has declined and is close to zero, even after three years of low interest rates and solid growth in the economy. Investment in the mainland economy has been at a low level in the years following the financial crisis. Thus, our overall value added per capita has increasingly been spent on consumption and on replacing existing fixed capital.

Chart 18: High growth in labour-intensive sectors

The phasing-in of a highly profitable oil industry and higher petroleum revenue spending via the central government budget has amplified the structural shifts in the Norwegian economy. Services production has increased. When the financial crisis hit, industries that do not benefit from oil sector demand or public spending stagnated. The differences in growth across industries has thus widened since 2008.

Labour-intensive sectors with relatively low productivity have accounted for a large share of employment growth in recent years. Employment has shown only moderate growth in industries with a high share of fixed capital per employee and a high productivity level, such as manufacturing and technical activities.

Chart 19: Public purchases of goods and services

Budget spending priorities have pushed in the same direction. In the past 40 years, public consumption as a share of mainland GDP has increased considerably from 18 percent in 1970 to 28 percent in 2011. In the same period, the share of investment has remained virtually unchanged.

Productivity growth has stagnated in most OECD countries. Goods production has declined, while services production has increased, as in Norway. But this shift was based on borrowing rather than increased earnings in many countries. After the financial crisis, funding sources dried up and these countries were faced with a debt crisis. Fundamental structural problems with eroded competitiveness came into evidence. These countries must not only reduce their debt levels, but also engage in a painful process of adjustment and rationalisation. Only then can these economies find the path to renewed growth.

The Norwegian economy has experienced virtually 20 consecutive years of growth. We have invested in a hugely profitable oil industry and found a balance between spending petroleum revenues domestically and saving petroleum revenues in the form of foreign investment. On the other hand, it seems that both the public and private sectors are having difficulties finding profitable mainland investment projects. Taking a longer view, this is a source of concern. Should petroleum revenues shrink, we need more pillars to stand on. Otherwise, we would have to embark on the path of adjustment towards renewed growth, the path that other countries are already going down.

Conclusion

Let me return to Johan Borgen. For Wilfred Sagen and his peers, the festive times did not last long. The war came to end and freight earnings declined. The boom period was followed by hard times. Banking crises, parity policy and protectionism led to prolonged and deep recessions in the world economy.

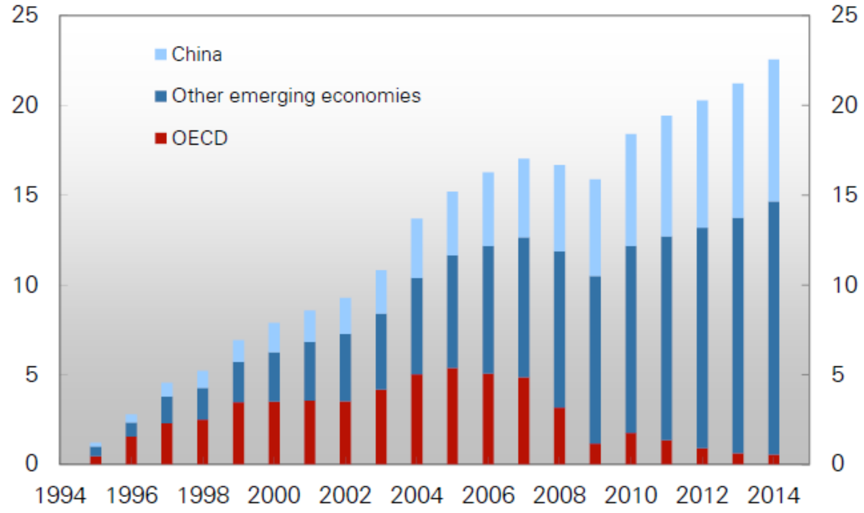
The environment is entirely different today. From a global viewpoint, there is reason to believe that the worst of the crisis is over. The Norwegian economy is in a unique position. The wealth in our time is not a short-term asset. We are likely to benefit from revenues and positive impulses from oil activities for many decades ahead. But that source will not spring eternal. If we are to maintain our prosperity over time and reduce the vulnerability to a fall in petroleum revenues, we must generate a larger number of profitable investments in the mainland economy – both in the public and the private sector. We must also provide stronger incentives for participating in the labour market and generating value added.

Perhaps Norway is not so much an economy apart after all. There will be new times. Come what may.

Thank you for your attention.

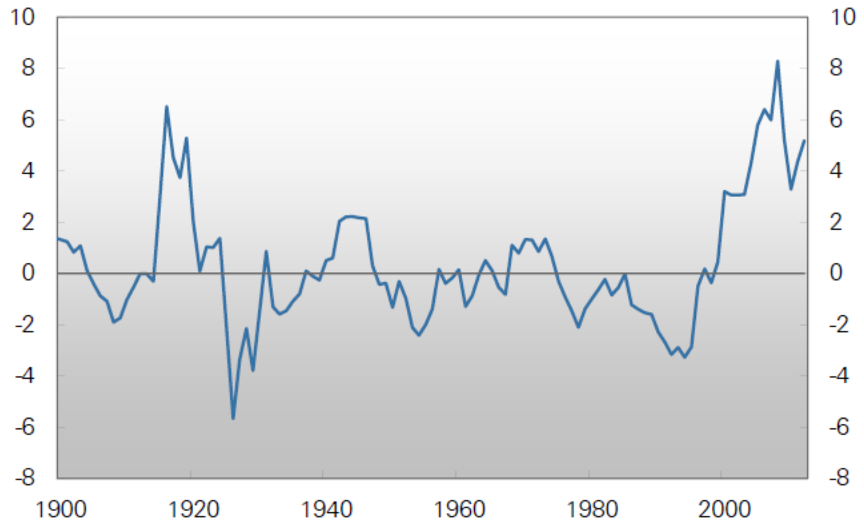
Charts

Chart 1 Emerging economies are driving oil demand
Cumulative growth since 1994.[1)] Millions of barrels per day. 1994 – 2014



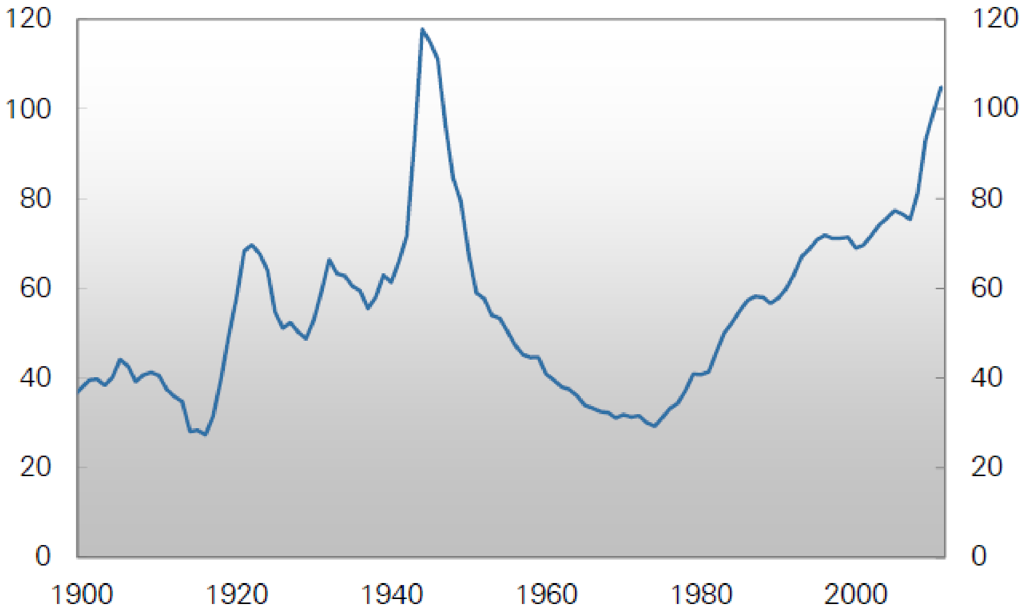
[1)] Forecasts for 2013 and 2014
Sources: EIA and Norges Bank

Chart 2 Strong improvement in terms of trade
10-year moving average. Annual change. Percent. 1900 – 2012



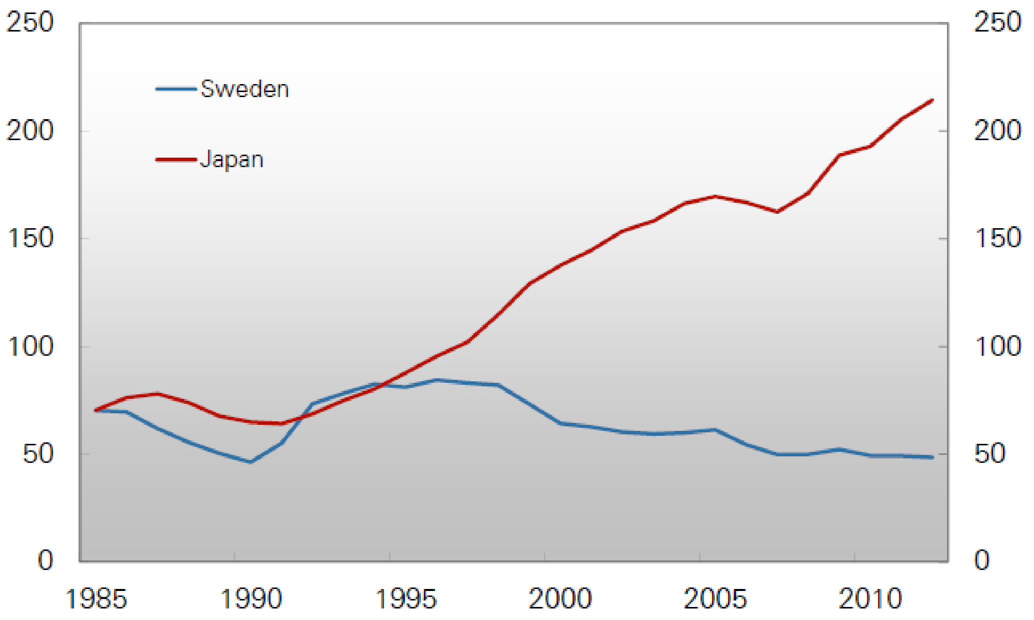
Sources: Statistics Norway and Norges Bank

Chart 3 Public debt – highest since WWII
Advanced economies. Debt to GDP ratio.[1] 1900 – 2011



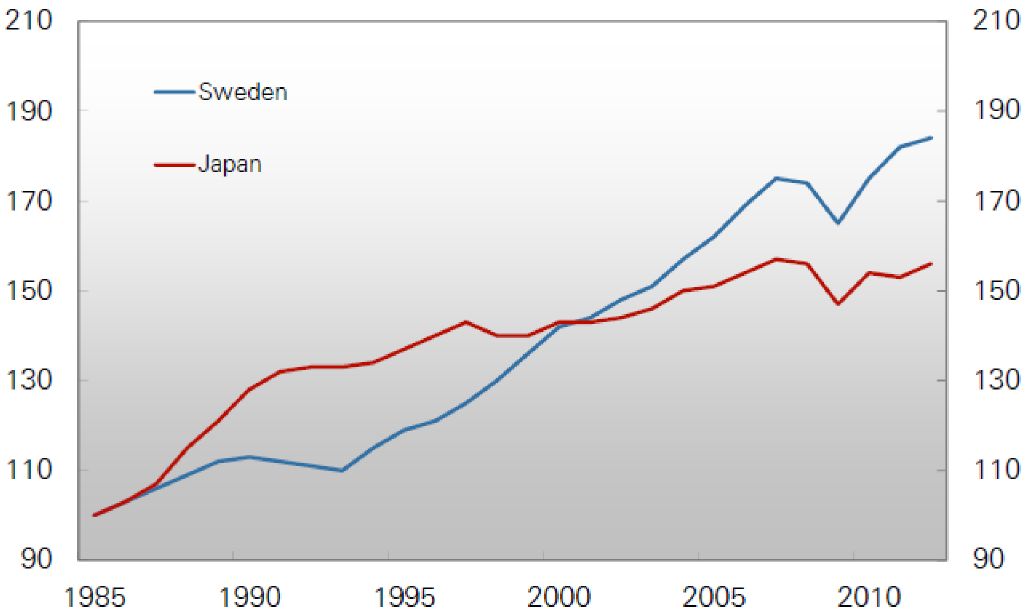
[1] 2011 USD GDP-weighted average
Source: IMF

Chart 4a Public debt to GDP ratio
1985 – 2012



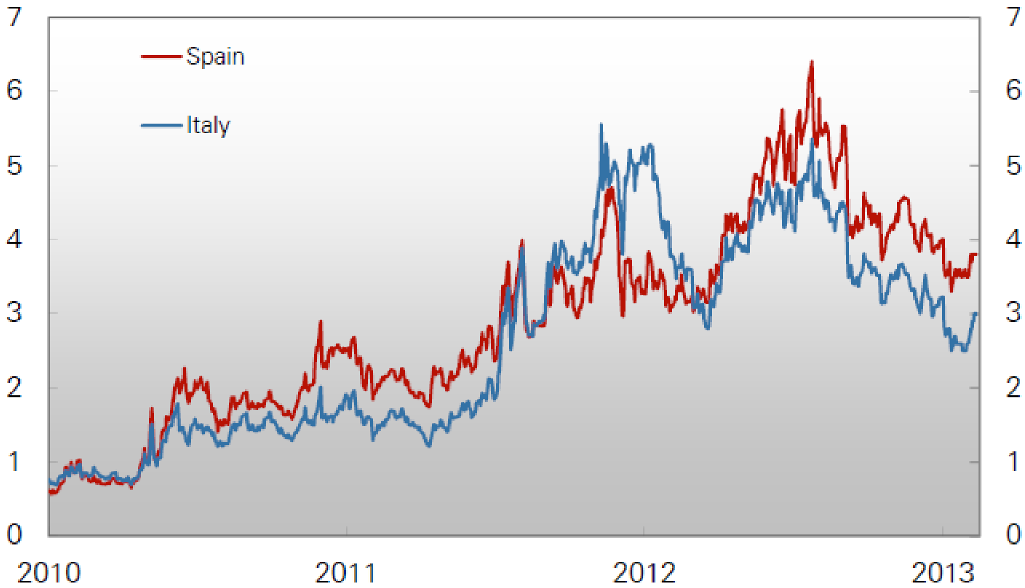
Source: OECD

Chart 4b GDP
Index. 1985 =100. 1985 – 2012



Source: OECD

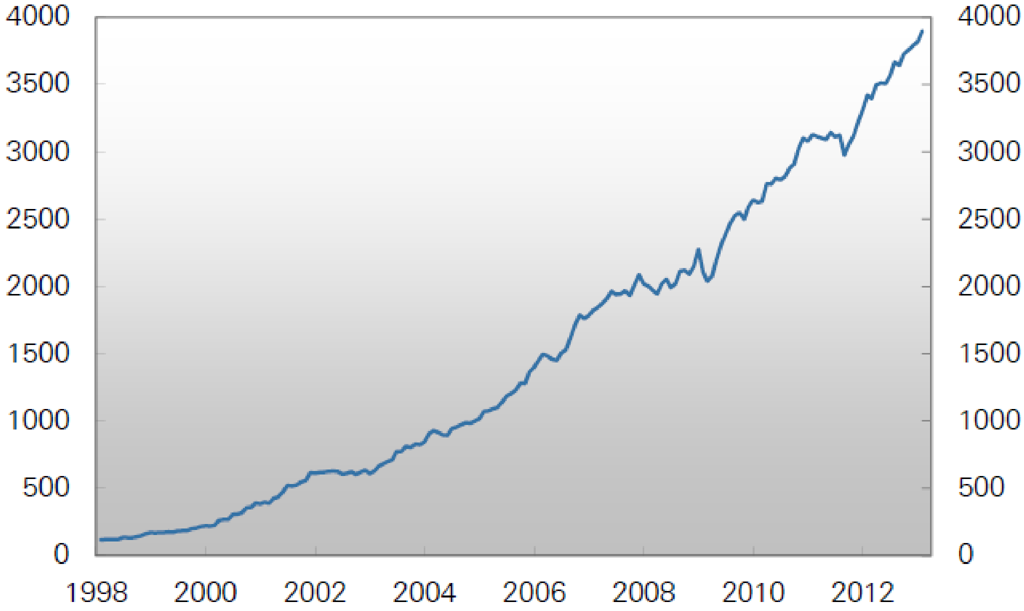
Chart 5 Euro area crisis – less fear
Yield spreads against Germany. 10-year government bonds. Percentage points.
1 January 2010 – 11 February 2013



Source: Thomson Reuters

Chart 6 Government Pension Fund Global

Market value at end of month. In billions of NOK. January 1998 – January 2013[1)]

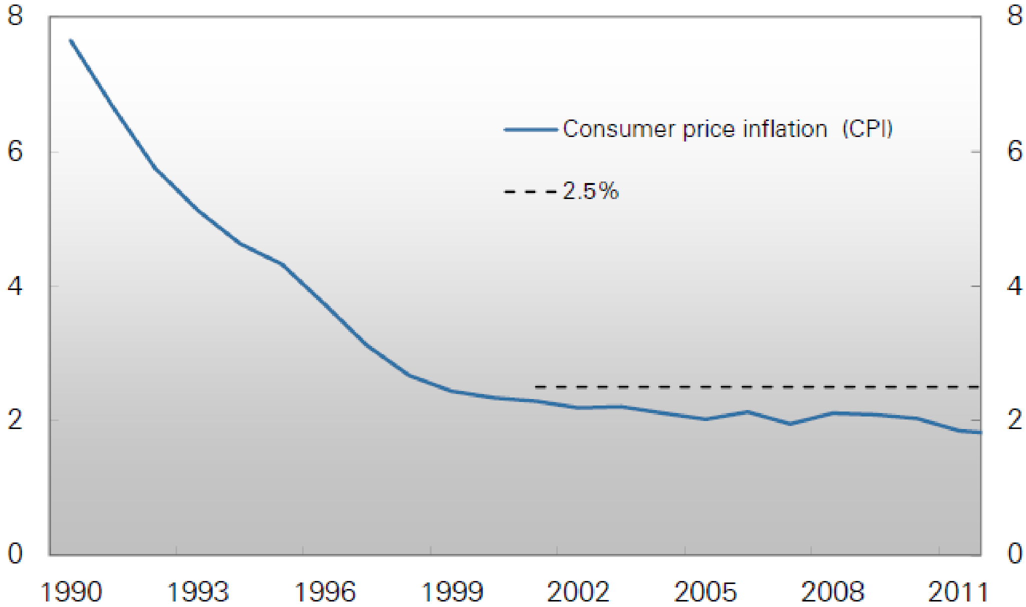


1) Figures for October 2012 - January 2013 unrevised

Source: Norges Bank

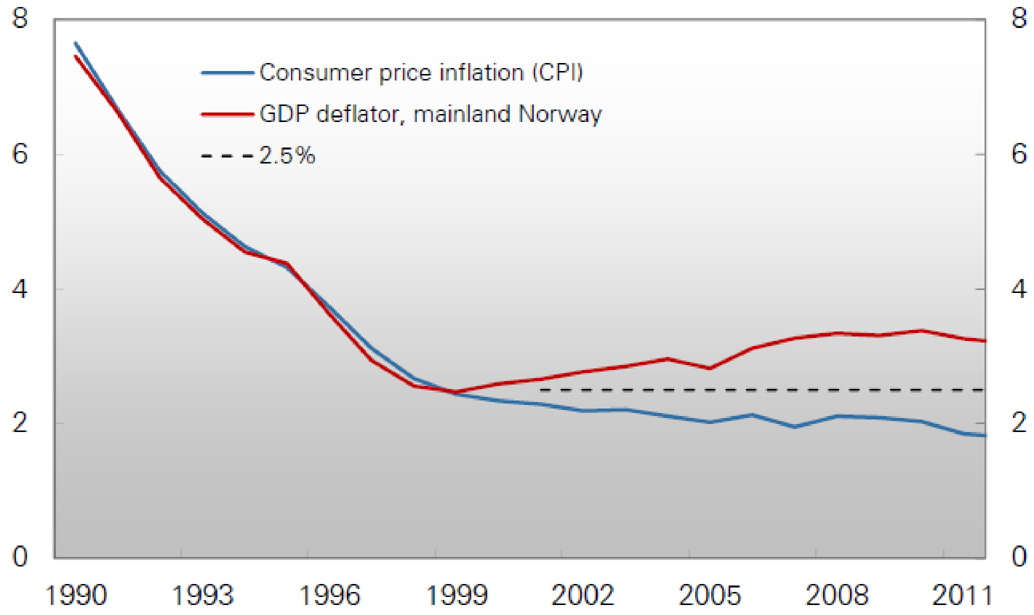
Chart 7 Rise in consumer prices

10-year moving average. Percent. 1990 – 2012



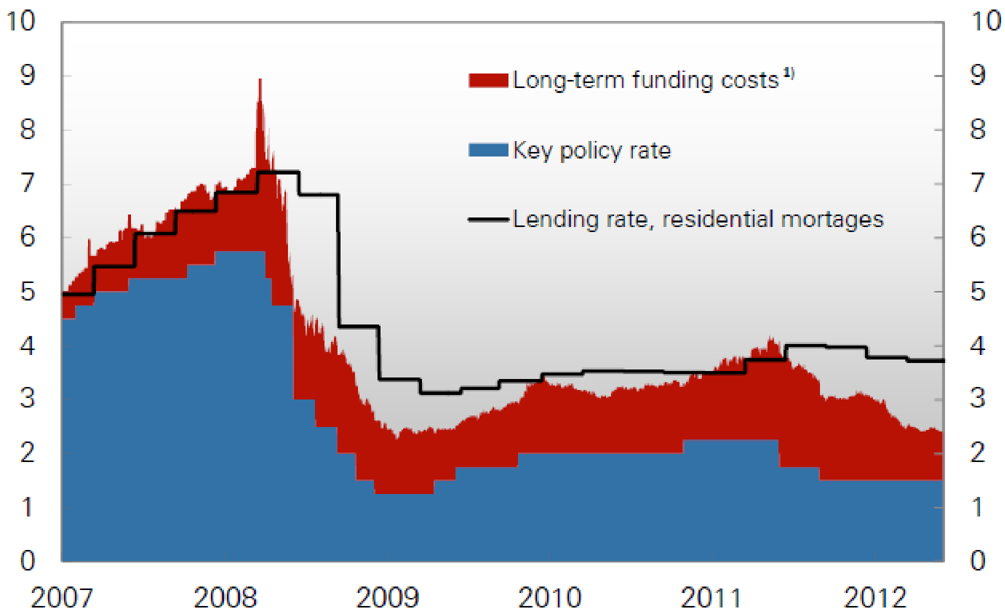
Source: Statistics Norway

Chart 8 Rise in consumer prices and producer prices
10-year moving average. Percent. 1990 - 2012



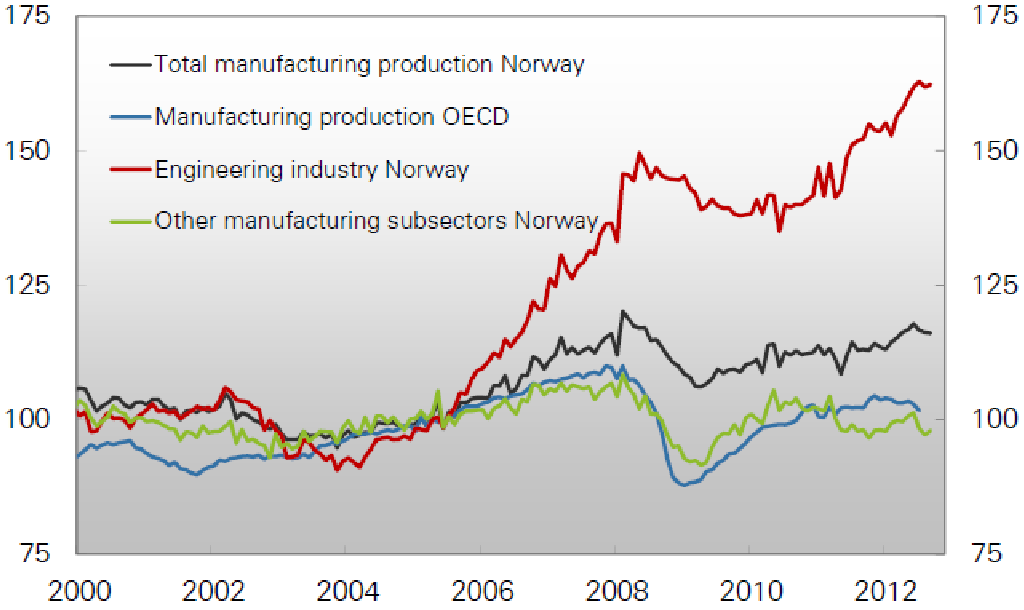
Source: Statistics Norway

Chart 9 Bank lending margins have increased
Percent. 2007 – 2012



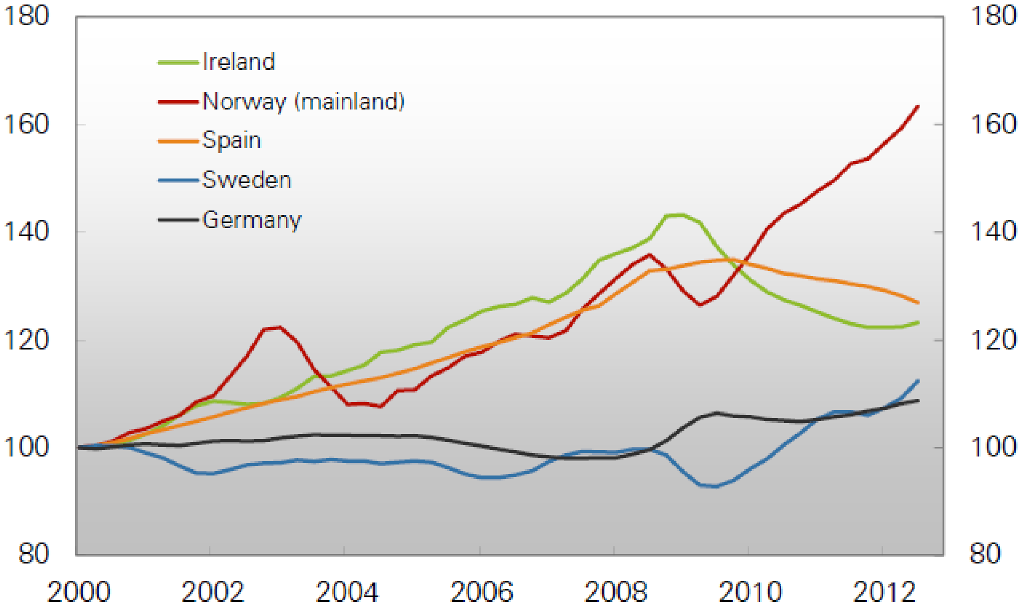
1) Money market premium and risk premium on 5-year covered bonds
Sources: Statistics Norway, DNB Markets and Norges Bank

Chart 10 A manufacturing sector divided
Production. 2005 =100. January 2000 – November 2012



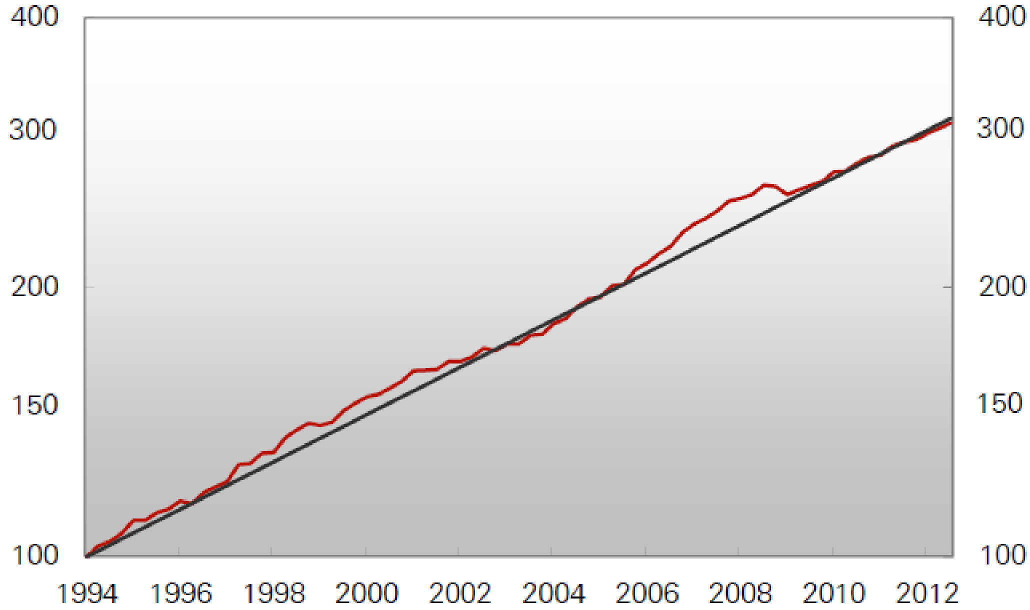
Sources: Statistics Norway and OECD

Chart 11 Norwegian labour is expensive
Unit labour costs in a common currency. 2000 Q1 = 100. 2000 Q1 – 2012 Q3



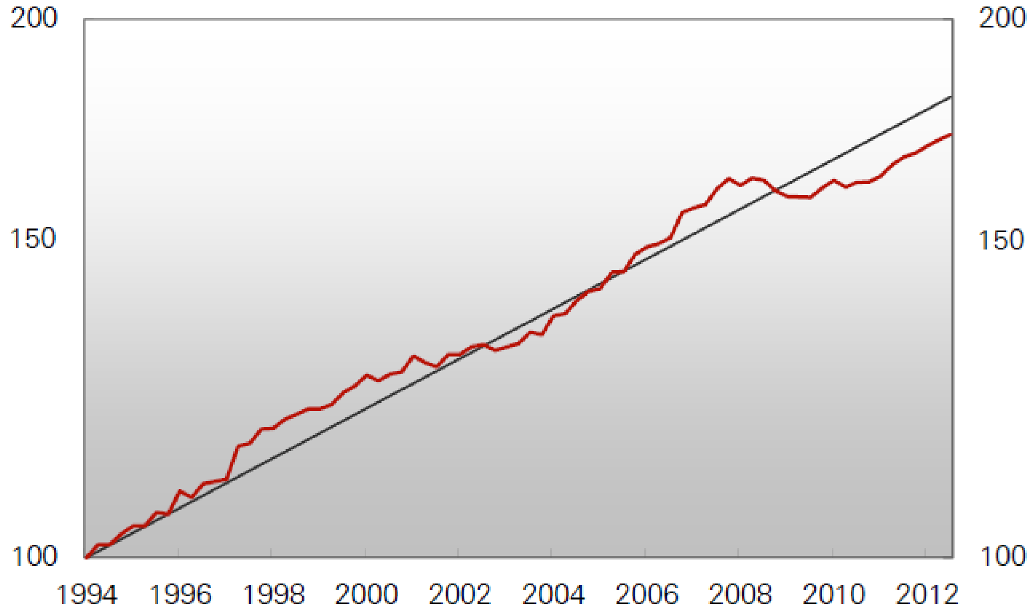
Sources: OECD, Statistics Norway and Norges Bank

Chart 12 Mainland GDP – stable nominal growth
1994 = 100. Linear trend 1990 – 2006. Logarithmic scale. 1994 Q1 – 2012 Q3



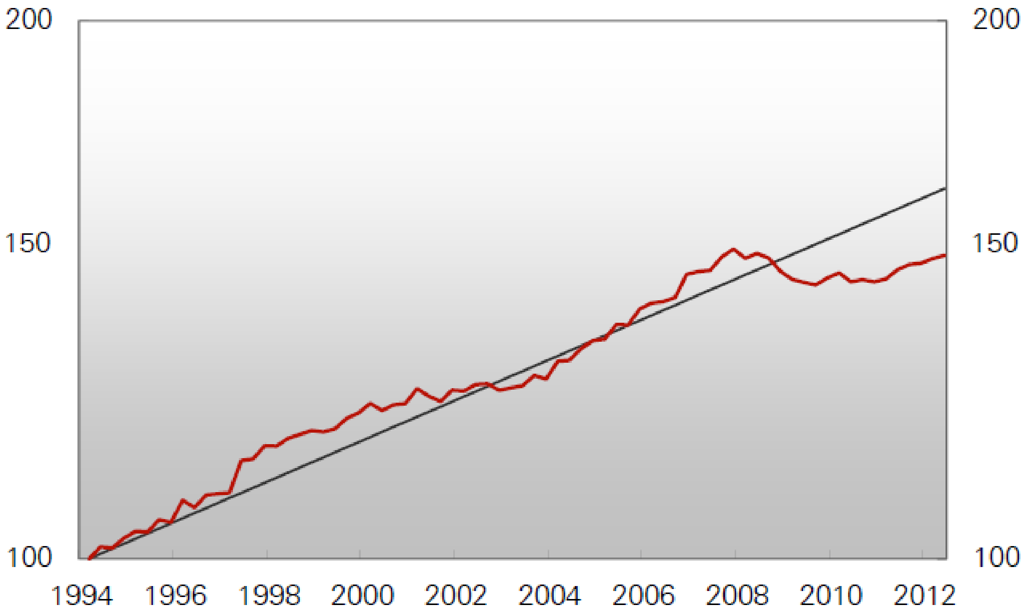
Sources: Statistics Norway and Norges Bank

Chart 13 Mainland GDP – slump in economic activity
Volume.1994 =100. Linear trend 1990 – 2006. Logarithmic scale. 1994 Q1– 2012 Q3



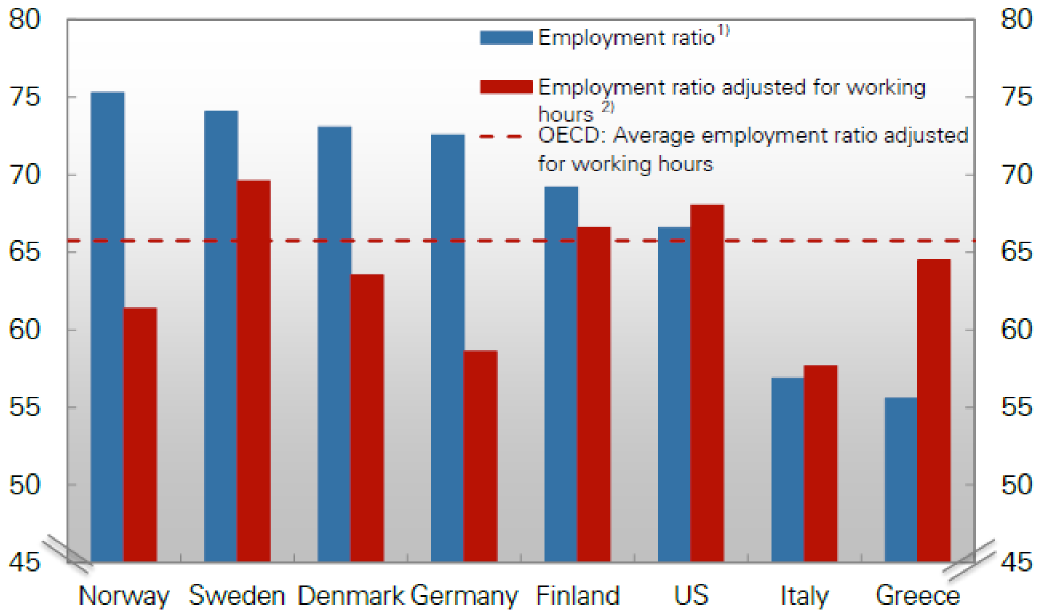
Sources: Statistics Norway and Norges Bank

Chart 14 Mainland GDP – per capita
Volume. 1994=100. Linear trend 1990 – 2006. Logarithmic scale. 1994 Q1 – 2012 Q2[1)]



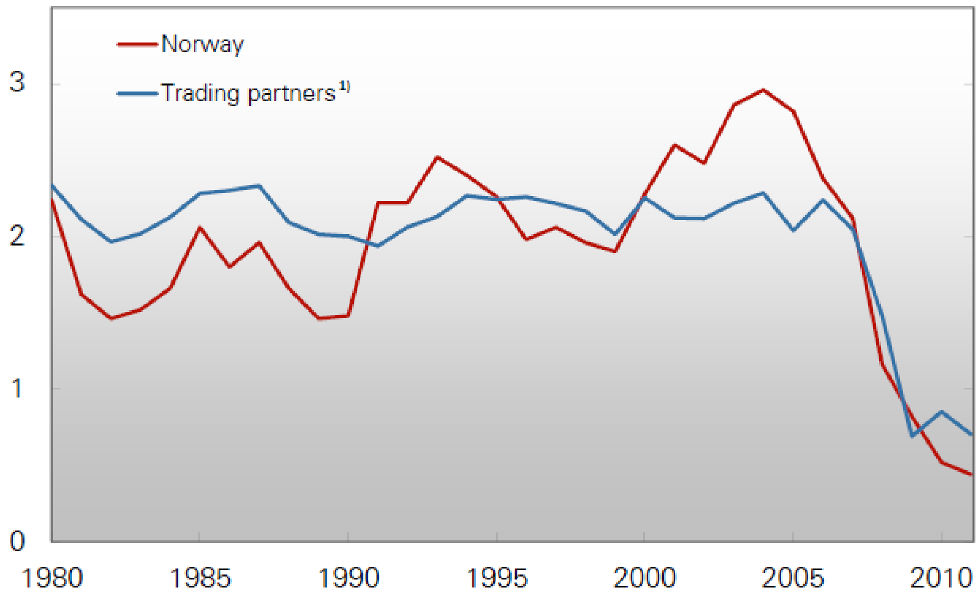
1) Pre-1997 population figures are based on a quarterisation of annual figures
Sources: Statistics Norway and Norges Bank

Chart 15 Employment ratio is high, but hours worked are low
Employment rate as percentage of working-age population. Percent. 2011



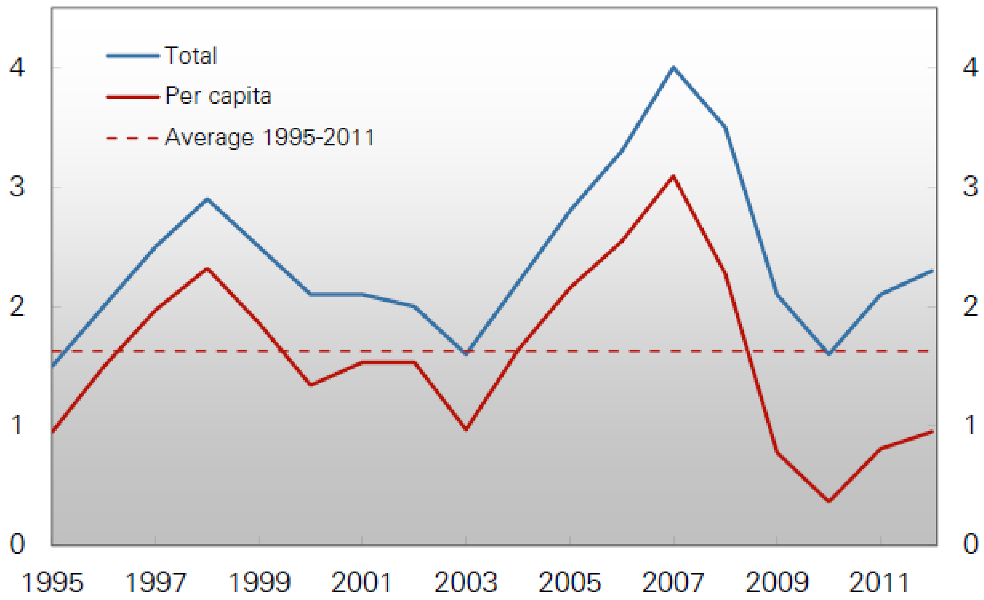
1) Proportion of working-age population (15-64 years) that is employed
2) Hours worked per person (15-64 years), as share of a normal working year of 1750 hours
Sources: OECD and Norges Bank

Chart 16 Productivity growth has declined
Change in gross value added per unit of labour. Constant prices. 5-year moving average. 1980 – 2011



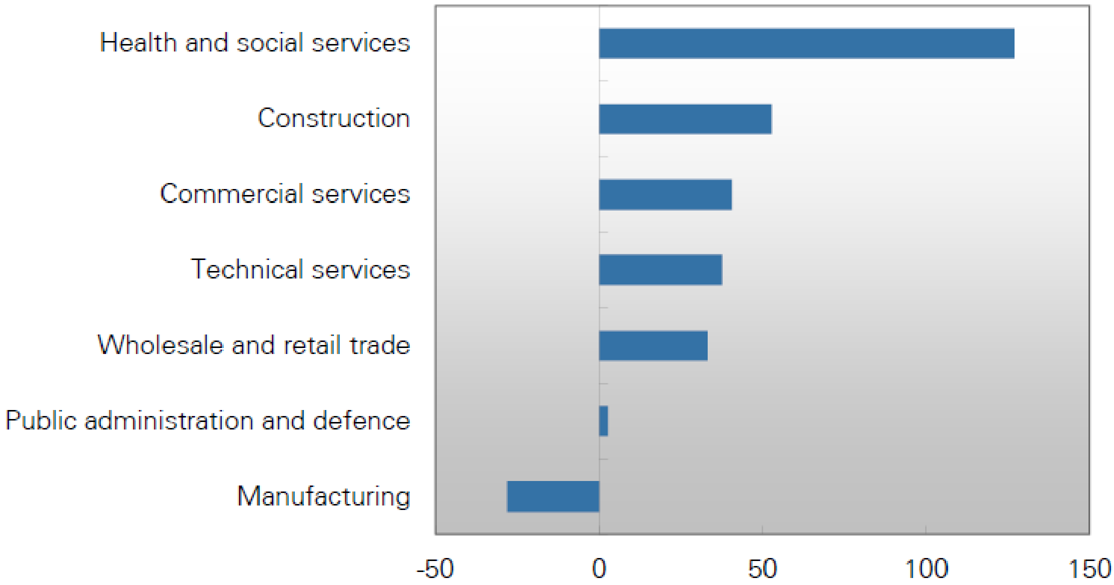
1) The numbers for trading partners are calculated as weighted geometric averages, cf. NOU 2012:11
Sources: Statistics Norway, TBU, OECD and Norges Bank

Chart 17 Growth in real capital
Mainland Norway. Volume. Percent. 1995 – 2012[1)]



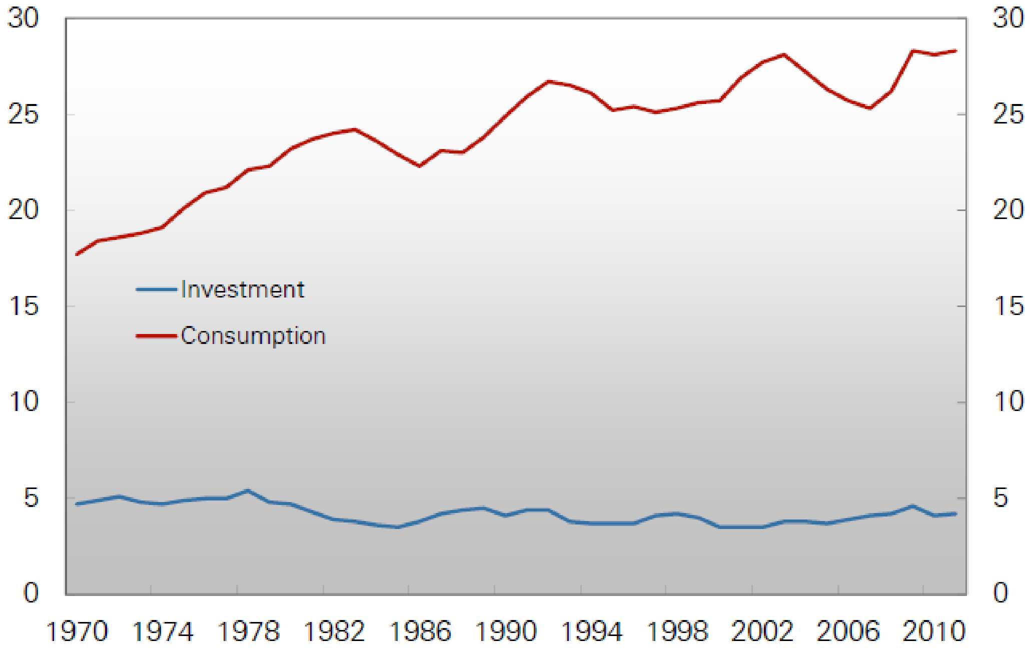
1) Forecast for 2012
Source: Statistics Norway

Chart 18 High growth in labour-intensive sectors
Growth. 1000 person years. 2000 – 2011



Source: Statistics Norway

Chart 19 Public purchases of goods and services
Share of mainland GDP. Percent. 1970 – 2011



Source: Statistics Norway