Svein Gjedrem: A diversified economy

Speech by Mr Svein Gjedrem, Governor and Chairman of the Norges Bank (Central Bank of Norway), at the seminar "Oil in the economy" at the Norwegian Oil Museum, Stavanger, 8 June 2010.

The text below may differ from the actual presentation. This speech does not contain assessments of the economic situation or current interest rate setting.

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> "Look what I found!" shouted Askeladden (the Ash Lad) in the Norwegian folktale "The Princess Who Always Had to Have the Last Word". He found a dead magpie, a willow hank, a bit of broken saucer, two ram's horns, a wedge and a worn-out shoe sole, which he managed to transform into a princess and half a kingdom.

Askeladden is often perceived as the embodiment of sound Norwegian values such as a sense of adventure, courage and helpfulness. Askeladden is nevertheless someone who succeeds by pure chance.

Like Askeladden, we also found wealth, but under the sea floor. We were lucky.

An abundance of natural resources is in principle of benefit to a country's economy. The production of petroleum and other natural resources generate gains that exceed the normal return on invested capital, economic rent. But oil is also associated with challenges. As early as in 1974, the Storting[1] deliberated the economic challenges relating to oil production.

We were able to learn from the experience of other countries. The concept Dutch disease stems from the negative effects on the Dutch economy of the spending of revenues from the substantial gas resources of the Groningen field. From the end of the 1960s, these revenues financed strong growth in public expenditure, which led to higher costs and a decline in manufacturing. The situation went too far, resulting in large balance of trade and government deficits which required tightening measures. This in turn led to a sharp rise in unemployment in the first half of the 1980s.

But the Netherlands is not the first example of a nation that failed in this respect, and far from it[2]. A very clear example is provided by Spain as early as in the 17th century when the colonisation of South and Central America provided the country with access to vast natural resources and gold. The historian David Landes describes the effects on Spanish society in his book "The Wealth and Poverty of Nations" where he cites a happy Spaniard who proclaimed the following in 1675:

> *"Let London manufacture those fabrics of hers to her heart's content; Holland her chambrays; Florence her cloth; the Indies their beaver and vicuna; Milan her brocades: Italy and Flanders their linen, so long as our capital can enjoy them. The only thing it proves is that all nations train journeymen for Madrid and that Madrid is the queen of Parliaments, for the world serves her and she serves nobody."*

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[1] See Report no. 25 (1973–74) to the Storting: "Petroleumsvirksomhetens plass i det norske samfunn" [The role of petroleum activity in Norwegian society].

[2] *The Paradox of Plenty. Oil Booms and Petro-States* by Terry Lynn Karl (1997) provides a good overview of oil nations' problems.

From time to time, I meet representatives of the diplomatic corps in Norway. They seldom fail to mention the high cost level in Norway and their bewilderment over aspects of our way of life. A 17th century Moroccan ambassador was even more critical in his account of the wealthiest nation at that time:

> *"…the Spanish nation today possesses the greatest wealth and the largest income of all Christians. But the love of luxury and the comforts of civilization have overcome them, and you will rarely find one of this nation who engages in trade or travels abroad for commerce as do the other Christian nations […]. Similarly, the handicrafts practiced by the lower classes and common people are despised by this nation, which regards itself as superior to other Christian nations. Most of those who practice these crafts in Spain are Frenchmen [who] flock to Spain to look for work … [and] in a short time make great fortunes."*

See chart "Petroleum production" at the end of the speech.

The oil age in Norway has now spanned about 40 years and there are prospects that it will continue for some time ahead. We will most likely still be producing petroleum in 40 years' time, but oil production has declined in recent years after peaking in 2000. Gas production is rising, but not at a pace sufficient to sustain overall petroleum production.

The idea of an oil fund was raised in the beginning of the 1980s[3]. It was intended to be a buffer fund to smooth variations in government oil revenues.

The Act relating to the Government Petroleum Fund was adopted in 1990 in the midst of the deepest economic downturn in Norway since the Second World War. Those at the Ministry of Finance working on the law at the time were probably in doubt as to whether any savings would ever be accumulated in the fund.

And initially the fund structure was only an exercise in accounting. Government petroleum revenues were deposited in the fund, but the entire amount was transferred back to the central government budget to cover some of the non-oil deficit. But the Norwegian economy rebounded.

See chart "First deposit in the fund" at the end of the speech.

It took a generation from the discovery of the first oil field in the North Sea until it became possible for the government to set aside a portion of the economic rent. The first net transfer to the fund of close to NOK 2 billion was made in 1996. Every year since then, as a savings plan, the government has let a substantial share of current income from oil and gas remain as deposits in the fund. At the end of the first quarter of this year, the fund's market value stood at NOK 2 763 billion.

See chart "The fund's market value" at the end of the speech.

As the fund increased, the need for a plan for the phasing in of oil revenues became evident. In 2001, the Government and the Storting adopted the fiscal rule, which is based on the deposit of government petroleum revenues in the oil fund. An amount equivalent to the expected real return on the fund, or 4 per cent, as an annual average over time, is transferred back to the central government budget to cover current expenditure. The transfers increase as the fund rises in value.

Along the way, the name of the fund has been changed from the Government Petroleum Fund to the Government Pension fund Global.

There are prospects that new annual transfers to the fund may be made over the next 10 years or so. This implies further growth in the fund, perhaps up to twice the size of today's

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[3] See NOU (Official Norwegian Report) 1983:27 "Petroleumsvirksomhetens framtid" [The future of petroleum activity].

fund, which corresponds to one and half to two times annual GDP for Norway. Public expenditure accounts for about half of GDP. Withdrawals from the fund at 4 per cent can therefore finance 15 per cent of public spending in 10 years' time. This can continue on a permanent basis without reducing the capital in the fund. The fund will therefore lead to smaller cuts in government welfare spending than would have been the case without the fund as the costs related to the ageing of the population have an impact on government budgets.

The actual building up of the fund may span a short generation.

A fund with investment abroad enables Norway to separate the revenues generated by oil and gas production from petroleum revenue spending. An alternative could have been to regulate the production rate, keeping our wealth under the sea bed for a longer period, as was attempted in the 1970s when the production ceiling was set at 90 million standard cubic metres per year. Oil companies currently produce 240 million standard cubic metres per year.

The fund acts as a buffer between widely fluctuating oil revenues and domestic expenditure. The annual spending decision can be made independently of the size of the revenues. Thus, the fluctuations in government oil revenues do not have an automatic impact on the Norwegian economy. The fund also has a stabilising effect on the krone exchange rate as capital outflows increase when Norway's petroleum revenues rise.

As a savings plan, the fund enables petroleum revenues to be used by not only the current generation but also future generations. The fiscal rule ensures that this is the case.

International capital markets play an important role for Norway. We drew on borrowing opportunities abroad when the petroleum industry was under development. We did the same in order to expand welfare schemes and to finance the countercyclical policy of the mid-1970s and the early 1990s. In the past 15 years, international financial markets have enabled us to convert national oil and gas resources into foreign equities and bonds.

See chart "Real return on the fund" at the end of the speech.

Since its establishment in 1998, the fund's average annual real return after costs has been 2.9 per cent, or somewhat lower than the expected long-term return. This figure is marked by the challenging character of the financial crisis. The fund lost NOK 633 billion[4] in 2008, but a market reversal in 2009 has resulted in a positive return of NOK 716 billion over the past five quarters. So far, the fund seems to have fared relatively well through the most severe financial crisis for many decades.

We still consider a real return of 4 per cent as realistic over time. This is based on the assumption that investment in sound government securities in the market can provide a reliable real return of about 2½ per cent. At the same time, the fund can reap a return of 2 to 2½ per cent in the long term from the three-fifths equity portion, some gains on corporate bonds and returns from active management.

See chart "Real exchange rate against Norway's trading partners" at the end of the speech.

Substantial oil revenues are now being ploughed into the Norwegian economy. Since the turn of the millennium, annual petroleum revenue spending has increased by a good NOK 100 billion. According to uncertain forecasts in government documents[5], another NOK 40 billion or so will be phased in over the next ten years.

The cost level in Norway is a thermometer indicating how much the Norwegian economy can sustain without developing a serious case of Dutch disease. The temperature is now high.

[4] Measured in international currency at the exchange rate prevailing on 31 December 2008.

[5] See Table 3.6 in Report No. 2 (2009–2010) to the Storting: Revised National Budget 2010.

Measured against Norway's trading partners, the cost level is now almost 20 per cent higher than the average for the oil age. Norwegian labour has never been as costly as today. Norwegian businesses will often lose contracts given the current high level of spare capacity in other countries. And it has never been more profitable to relocate activities abroad.

The economic geography of Norway will change over the next 10–15 years. Norway's cost level and low growth in Europe will bring pressure to bear on jobs and businesses in manufacturing communities. Job losses will have the most severe effects in areas where manufacturing is the most important industry. Entire manufacturing sectors may be lost.

We can also ask whether investment in Norway could be an alternative to our investments in international financial markets. It is important to emphasise that the oil fund does not stand in the way of corporate investment. The government can choose the composition, required rate of return and risk profile for its investments without considering the funding requirements of Norwegian enterprises. By the same token, Norwegian companies can choose their debt and equity structure independently of the government's financial investments. There is a capital market between the government as investor and corporate capital needs. The government's foreign savings plans do not therefore affect Norwegian companies' access to capital and required rate of return on their investments.

There are sound arguments for investing in infrastructure, better schools and state-of-the-art research. But this should be possible anyway given the increase in expenditure that is provided for by the fiscal rule.

The profitability of government investments is based on a discount rate of 4 per cent. This secures about the same required rate of return as the government can expect to achieve on its oil fund investments over time.[6] A question that might be raised is whether there is a queue of sound and profitable projects that have to wait because of an excessively tight fiscal policy.

It is difficult to find support for this.[7]

In the National Transport Plan for 2010–2019, which can perhaps be considered representative of government spending, spending on road investments is set at around NOK 140 billion. The profitability of about two-thirds of the investments has been evaluated. The calculations capture time saved and reduced costs related to accidents and the environment. Investment costs and future operating costs are deducted. The projects show a total loss of NOK 20 billion.

There seems to be few road projects that are economically profitable. A rare example is the Finnfast tunnel project that connects the mainland to the beautiful island group here in Ryfylke.

When projects cannot be expected to increase the future revenue base in society, it is important that the investments are financed from current government revenues within a long-term and sustainable framework. Alternatively, projects that involve a large number of users can be financed by user fees. A road, infrastructure or research reports for that matter can provide benefits and satisfaction over time, but they are not liquid and do not generate a flow of returns that can be used for spending. If the investments are made at the expense of the savings plan for the sovereign wealth fund, future generations will have to bear the cost.

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6 Professor Thore Johnsen has brought to my attention that the government discount rate is calculated using an arithmetic mean, while the return on the oil fund is measured as a geometric mean. If the fund's return had been calculated using arithmetic mean, the return would have been about 0.7 percentage point higher for the period 1998–2009.

7 Recent research indicates that a discount rate of 4 per cent may be somewhat high for investments with a very long horizon, see Kåre P. Hagen and Karl R. Pedersen's newspaper article "Lønnsom infrastruktur (Profitable infrastructure)" in *Dagens Næringsliv*, 3 June 2010.

Let me conclude.

The adventures of Askeladden are often tales of success. Askeladden embraces every challenge and always comes out ahead.

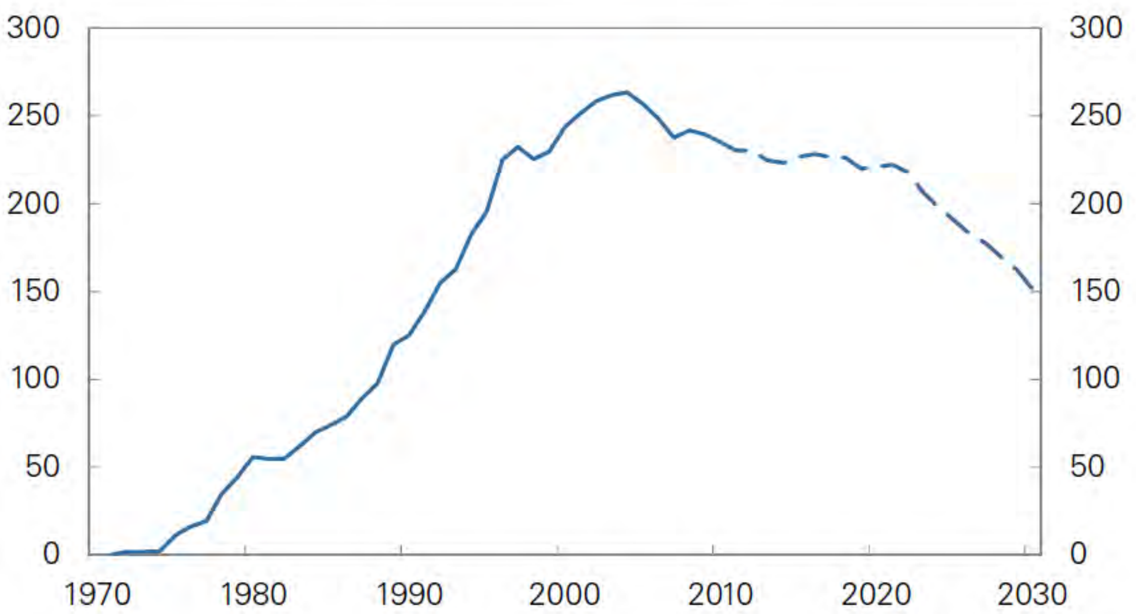
It is too early to draw conclusions as to how successful Norway has been in managing its oil wealth. In ten years or so, when petroleum production falls markedly and the oil fund is no longer increasing in size, the cost level in Norway will have to be reduced relative to other countries. This process may be painful, even though Norway has its own currency and a floating exchange rate. Our welfare state may also have become too large and the adjustment required here may also prove to be very demanding.

Nonetheless, there are aspects of our oil wealth management that have served us well.

Thank you for your attention.

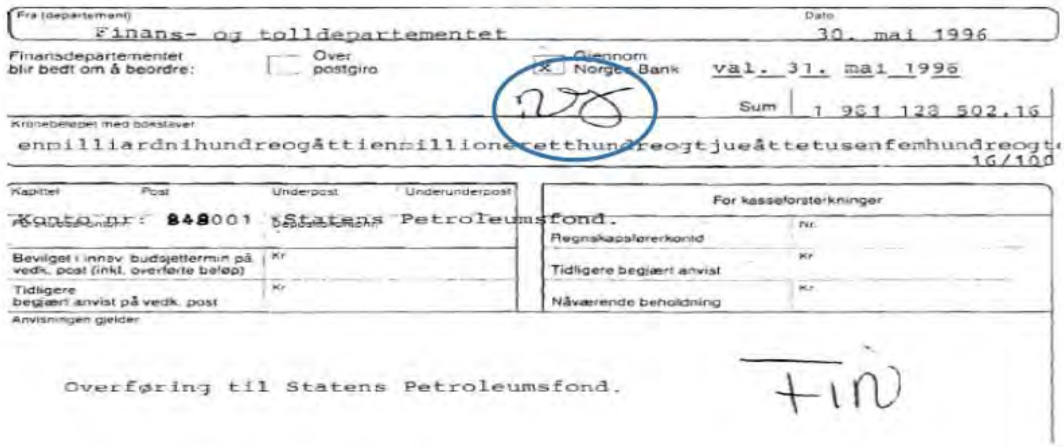
Petroleum production

In millions of Sm^3 oil equivalences. 1971–2030. Projections from 2010



Sources: Ministry of Petroleum and Energy and Ministry of Finance

First deposit in the Fund


Fra (departement) Finans- og tolldepartementet Dato 30. mai 1996

Finansdepartementet blir bedt om å beordre: Over postgiro | X Gjennom Norges Bank val. 31. mai 1996

Sum 1 981 128 502.16

Krønebeløpet med bokstaver: enmilliardnihundreogåttienmillioneretthundreogtjueåttetusenfemhundreogt 16/100

Kapittel	Post	Underpost	Underunderpost	For kasseforsterkninger	
Konto nr: 848001 Statens Petroleumsfond.				Regnskapsførerkonto	Nr.
Bevilget i innev. budsjettermin på vedk. post (inkl. overførte beløp)	Kr			Tidligere begjært anvist	Kr
Tidligere begjært anvist på vedk. post	Kr			Nåværende beholdning	Kr

Anvisningen gjelder

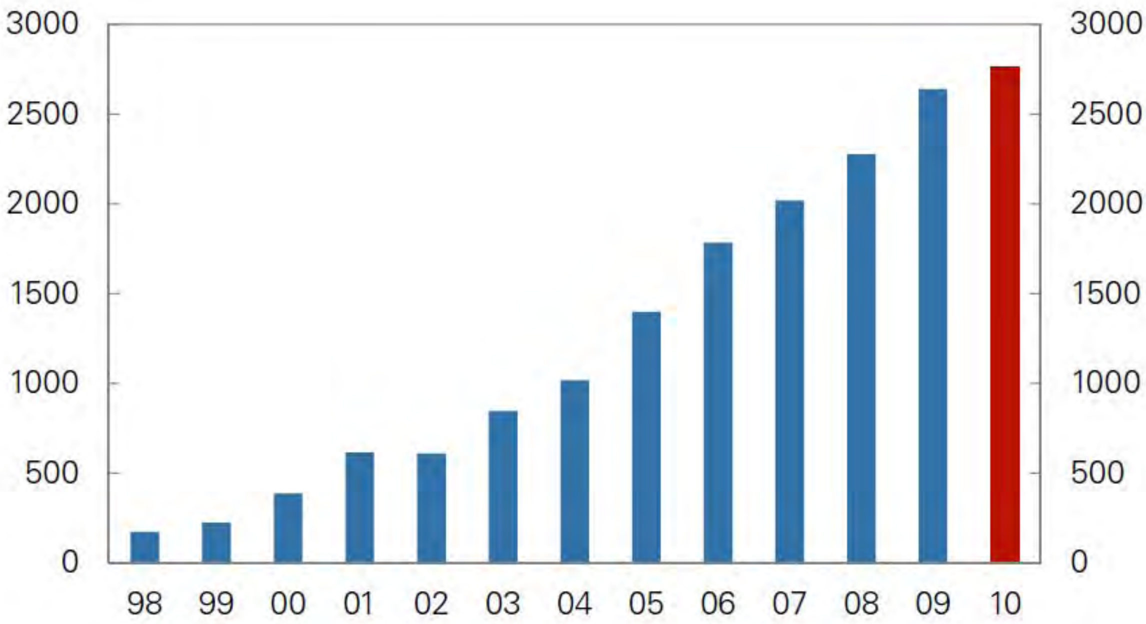
Overføring til Statens Petroleumsfond.

Fin

Approved for payment to the oil fund by the Minister of Finance on 30 May 1996

The Fund's market value

In billions of NOK. 1998–2010[1)]

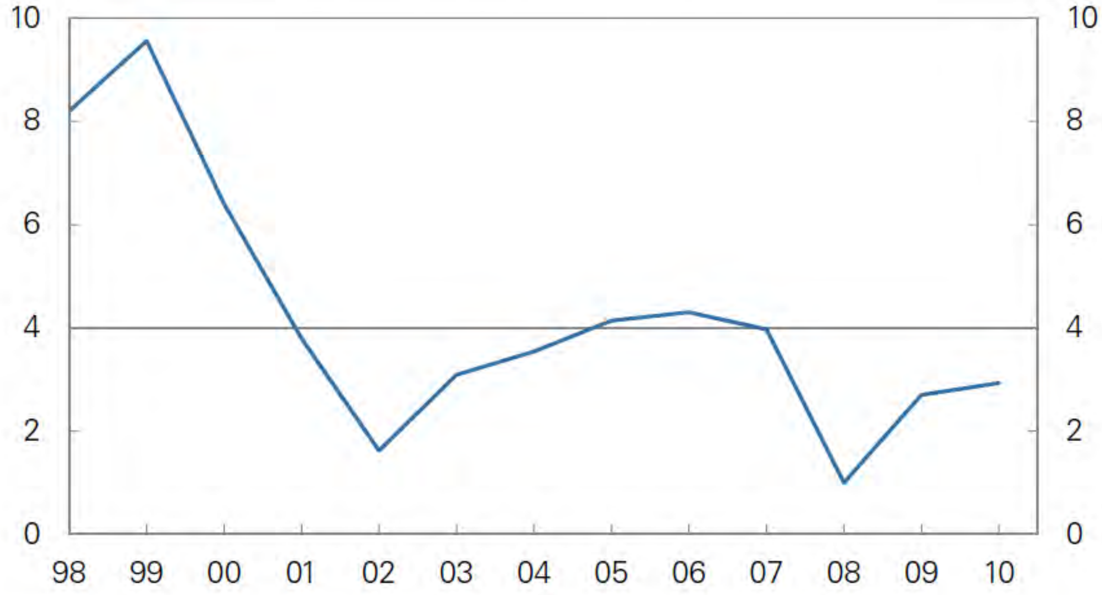


1) To the end of 2010 Q1

Source: Government Pension Fund Global

Real return on the fund[1)]

Per cent. Accumulated annualised average. 1998–2010[2)]

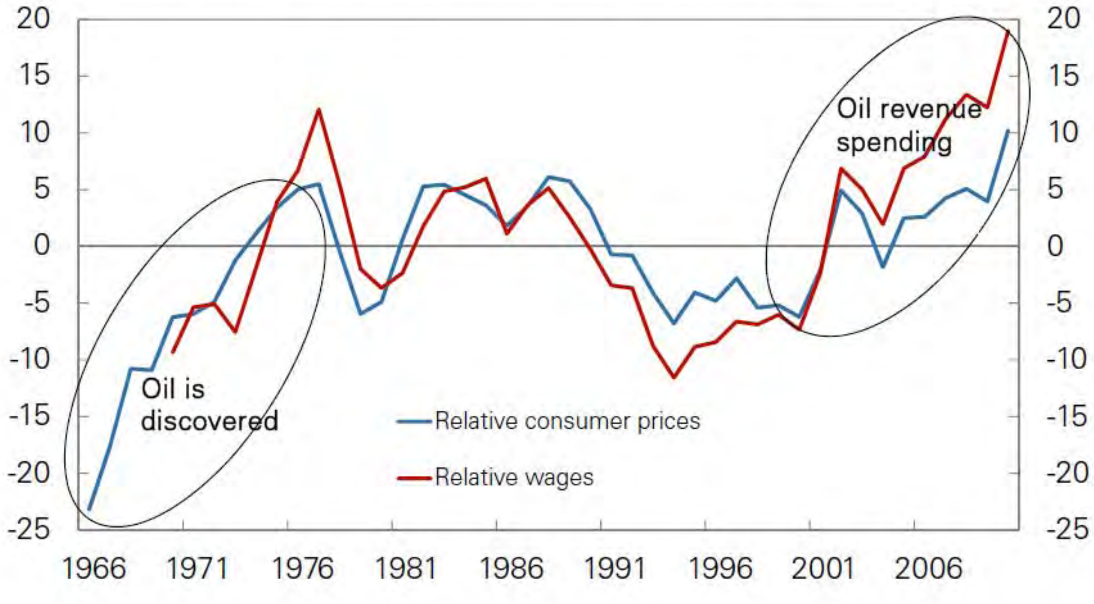


1) Nominal return adjusted for price inflation and management costs
2) To the end of 2010 Q1

Source: Government Pension Fund Global

Real exchange rate

Deviation from mean over the period 1970–2008. Per cent. 1966–2010[1)]



1)Average of the developments until mid-March 2010. A rising curve indicates weaker competitiveness

Sources: Statistics Norway, Technical Reporting Committee on Income Settlements, OECD, Ministry of Finance and Norges Bank