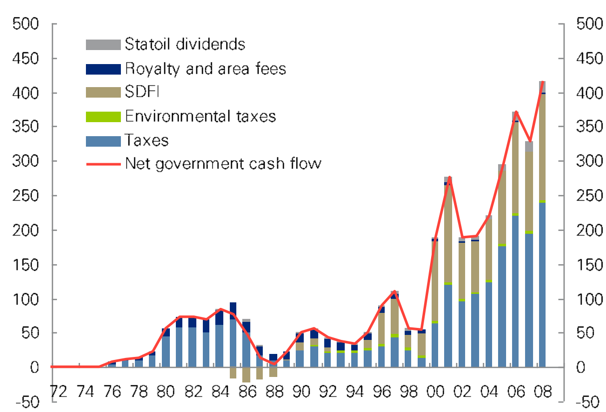
From oil and gas to financial wealth

The story of Norwegian oil and gas effectively began with the discovery of the Ekofisk field on 23 December 1969. Today, some 60 fields are in production on the Norwegian continental shelf. Almost 40 years of petroleum production have generated net government revenues of around 4 000 billion kroner in 2009 prices. According to the Ministry of Finance, around 40 percent of the government's net cash flow from petroleum production has so far been spent through the public budgets.[1] Since 1996, the remainder has been transferred to the Government Pension Fund Global and invested in global equity and fixed income instruments.

The Norwegian Petroleum Directorate estimates that around 40 percent of total reserves on the Norwegian continental shelf have been recovered.[2] Future production levels will among other things depend on new discoveries and their size, as well as the recoverable resources on existing fields. The government's share of the remaining petroleum wealth is estimated in the National Budget 2010 at 4 089 billion 2010 kroner. There is considerable uncertainty about the size of the government's net cash flow from petroleum activities and transfers to the Government Pension Fund Global in the years ahead. Estimates suggest that both the production on the Norwegian continental shelf and the government's annual petroleum revenues have peaked.[3]

Chart 11-1 Net government cash flow from petroleum activities by source 1971 – 2008. Billions of NOK, at 2008 values



Source: Ministry of Petroleum and Energy, Norwegian Petroleum Directorate

The creation of the Government Pension Fund Global

The Government Pension Fund Global was formally established by act of parliament in 1990 under the name of the Government Petroleum Fund, and the first transfers of capital to the fund took place in 1996. The fund is an important instrument of economic policy in Norway, intended to underpin long-term considerations in the use of government petroleum revenues and support government saving to finance public pension expenditure.

Oil and gas are non-renewable resources. By transferring revenues from petroleum activities to the fund, wealth from oil and gas resources on the continental shelf is converted into a diversified portfolio of global financial assets.

In spring 2001, the government introduced a fiscal rule for the spending of petroleum revenues over the central government budget. Under this rule, annual spending over time is to correspond to the expected real return on the Government Pension Fund Global, estimated at 4 percent of assets under management.

Norges Bank manages the fund on behalf of the Ministry of Finance. In 1998, the Bank established a separate investment management unit, Norges Bank Investment Management (NBIM), which manages the fund.

The government's net cash flow from petroleum activities

Petroleum activities have generated a positive net cash flow for the government since 1971. Chart 11-1 shows

1 Source: How much oil money have we spent so far?], Ministry of Finance web site.
2 Source: The shelf in 2009 – Resources overview (provisional figures as at 31 December 2009), Norwegian Petroleum Directorate.
3 Source: National Budget 2010, Ministry of Finance.

the cash flow in the period 1971-2008 in 2008 kroner, broken down into the various sources of revenue. Around 50 percent of the total cash flow in 2008 kroner was generated in the last six years of the period. The government's net cash flow peaked in 2008 at NOK 416 billion in 2008 kroner.

Over the whole period from 1971 to 2008, taxes contributed most to government petroleum revenues, accounting for almost 60 percent of the total net cash flow. Revenue from the State's Direct Financial Interest (SDFI) in petroleum activities was the second largest source of revenue, contributing around 30 percent of the total net cash flow. The main contributions from the SDFI have come since the year 2000. Production and area fees were the government's sole source of petroleum revenues during the first five years. Revenues from these sources accounted for almost 10 percent of the total net cash flow in 1971-2008 but have been of limited significance in recent years. Environmental taxes and dividends from the oil company Statoil each contributed 2-3 percent of the government's total net cash flow during the period.

Transfers to the Government Pension Fund Global 1996 – 2009

The first transfer to what was then called the Government Petroleum Fund took place in May 1996. Inflows into the fund since 1996 have totalled around NOK 2 300 billion not adjusted for inflation. Around 65 percent of these inflows have been channelled into the equity portfolio, and the remainder into the fixed income portfolio.

Chart 11-2 shows the annual inflows into the fund not adjusted for inflation, broken down between the equity and fixed income portfolios. There have been substantial transfers to the fund and they have varied considerably in size. There have also been a number of changes to the strategic benchmark portfolio. For example, the allocation to equities was increased from 40 to 60 percent, resulting in the sale of part of the fixed income portfolio. This is the reason why inflows into the fixed income portfolio in 2008 and 2009 are negative in the chart. Large inflows and changes to the benchmark portfolio present challenges to the fund management, and NBIM puts considerable resources into this aspect of its management. One of NBIM's most important goals is to ensure prudent and cost-effective implementation of the owner's management strategy.

Capital is normally transferred to the fund monthly, with the exception of December. The Ministry of Finance informs Norges Bank of how much is to be transferred, and the inflows are distributed between the equity and fixed income portfolios on the basis of rules laid down by the ministry.

NBIM allocates the inflows to individual portfolios which are managed either internally or by external managers with mandates from NBIM. The portfolio managers are informed of the inflows and decide which securities they wish to purchase. The transactions are then executed by a central trading team.

Chart 11-2 Annual inflows into the fund by asset class. Billions of NOK, current pricesInflows into fixed income portfolio

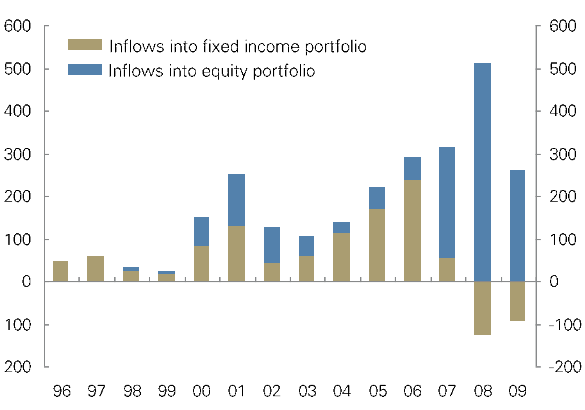


Chart 11-3 Development in oil prices, share values and the fund's equity purchases. Monthly numbers

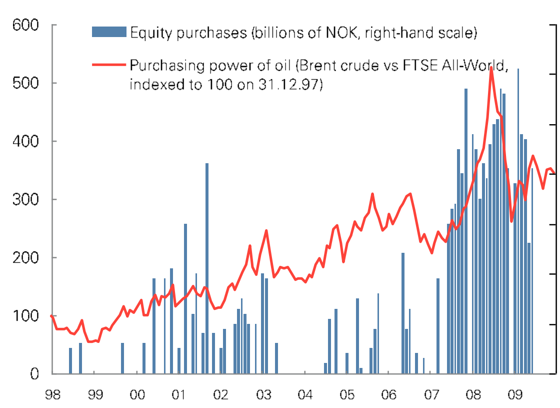


Chart 11-4 Net government cash flow from petroleum activities 1970 – 2030. NOK per barrel and billions of NOK, at 2010 values

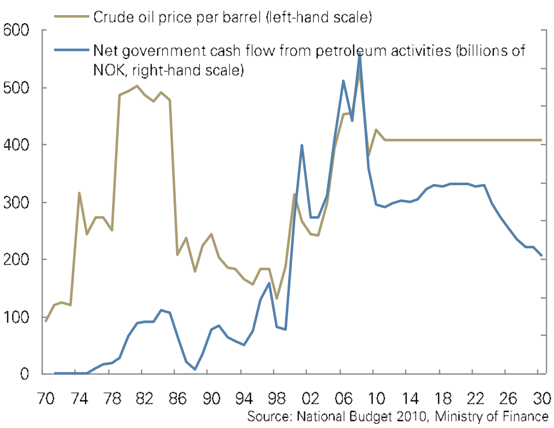
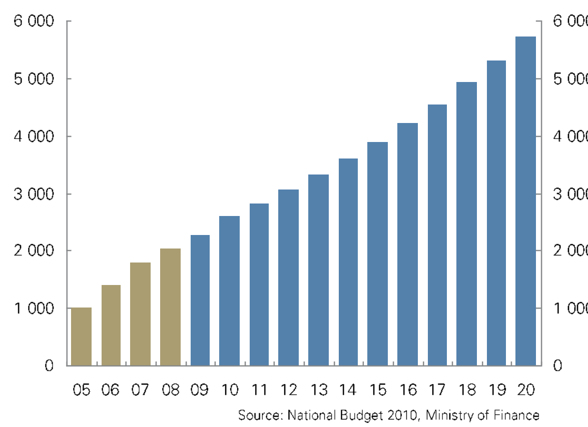


Chart 11-5 Projected fund market value. Billions of NOK, current prices



One characteristic of the Government Pension Fund Global that sets it apart from most other funds is its long investment horizon. Due to the long-term perspective, is too early to assess the profitability of the decision to convert petroleum revenues into global securities. Other things being equal, the government will secure the greatest overall wealth from saving where the real rate of return is highest, whether this means leaving the oil in the ground or investing in global securities markets. In practice, however, many other considerations will influence the pace and level of petroleum production.

Chart 11-3 provides a simplified illustration of the relative value of oil and equities, measured as the price of Brent crude oil relative to the FTSE All-World equity index. In basic terms, the higher this ratio, the more equities a barrel of oil will buy. Around 70 percent of the inflows into the equity portfolio since the fund was started up have come in the past three years (2007-2009). Equities were relatively cheap in relation to oil during this period in comparison with earlier years.

What can we expect from the future?

In the National Budget 2010, total petroleum wealth – defined as the present value of future annual cash flows from petroleum activities from 2010 onwards – is estimated at 4 744 billion 2010 kroner. The government's share of this wealth is estimated at NOK 4 089 billion kroner.[4] This is roughly equivalent to the government's total net cash flow from petroleum activities from 1971 to 2009, in 2010 kroner. In other words, we have recovered around 50 percent of the petroleum wealth on the continental shelf if we compare the real value of the government's net cash flow to date with the estimated present value of future net cash flows. However, estimates of future petroleum production and revenues are associated with considerable uncertainty.

The Norwegian Petroleum Directorate estimates that around 40 percent of total reserves on the Norwegian continental shelf have been recovered. Relatively stable petroleum production is expected in the coming years, with falling oil production and rising gas exports.[5] In the longer term, production levels will depend on the number

4 The government's share of total wealth is defined as the present value of the government's net cash flow from petroleum activities.
5 Source: Facts 2009, Ministry of Petroleum and Energy and Norwegian Petroleum Directorate.

> Estimates in the National Budget 2010 indicate that both production and the government's net revenues from petroleum activities have peaked

of new discoveries and their size. Estimates in the National Budget 2010 indicate that both production and the government's net revenues from petroleum activities have peaked.

Future revenues from oil and gas production depend partly on production levels, oil and gas prices in Norwegian currency, and production costs. There is considerable uncertainty about these variables, and the further ahead one looks, the greater the uncertainty in the estimates. As indicated in Chart 11-4, there have been substantial fluctuations in oil prices with a strong impact on revenues.

The size of the Government Pension Fund Global and transfers to the fund are also dependent on government spending of petroleum revenue. The size of the fund further depends on developments in global securities markets.

Summary

The Norwegian Petroleum Directorate estimates that around 40 percent of total oil and gas reserves on the Norwegian continental shelf have now been recovered. According to the Ministry of Finance, around 40 percent of government petroleum revenues have been spent through public budgets. The remainder has mainly been transferred to the Government Pension Fund Global. Estimates of the government's future net cash flow from petroleum activities and future transfers to the Government Pension Fund Global are associated with considerable uncertainty. This uncertainty relates partly to remaining reserves and future production, the cost of production, and oil and gas prices.

NBIM attaches great importance to phasing new capital into the fund, making changes in the benchmark portfolio, and ensuring prudent and cost-effective implementation of the owner's management strategy. These will continue to be important tasks in the management of the Government Pension Fund Global.