

Management of the Government Petroleum Fund

Report for the third quarter 2001

Summary

The return on the Government Petroleum Fund in the third quarter of 2001 was -5.29 per cent measured by the currency basket corresponding to the composition of the Fund's benchmark portfolio. This is the weakest quarterly return since management of the Petroleum Fund commenced in 1996. The overall return for the first three quarters of 2001 was -6.9 per cent. Measured in NOK, the return in the third quarter was -6.34 per cent, and for the three quarters combined, -8.46 per cent.

The weak result is due to a sharp fall in international equity markets. The return for the third quarter on the ordinary equity portfolio (excluding the Environmental Fund) was -18.18 per cent measured by the benchmark portfolio's currency basket. Equity prices fell further during the quarter than in any other quarter since the invasion of Kuwait in 1990. There were sharp falls in all the three main markets: the US, Europe and Japan.

The fixed income portfolio had an abnormally high return for the quarter of 3.41 per cent, measured by the currency basket. The large share of fixed income instruments in the Petroleum Fund served to dampen the effect of the price fall in equity markets on the overall return on the fund. This is an example of the risk reduction achieved by investing in more than one asset class.

The return on the Petroleum Fund's ordinary portfolio in the third quarter of 2001 was 0.12 percentage point lower than the return on the benchmark portfolio defined by the Ministry of Finance. Overall in the first three quarters, the Petroleum Fund underperformed the benchmark by 0.14 percentage point.

The return on Environmental Fund in the third quarter was -18.92 per cent measured in terms of the benchmark portfolio currency basket, and -19.82 per cent measured in NOK. The return since the portfolio's inception, measured against the currency basket, has been -27.15 per cent.

On 31 August, NOK 20 billion was transferred to the Petroleum Fund's international equity and fixed income portfolios, and a further NOK 38 billion was transferred on 28 September 2001, bringing the market value of the combined portfolio to NOK 547.0 billion at the end of the third quarter.

Main figures

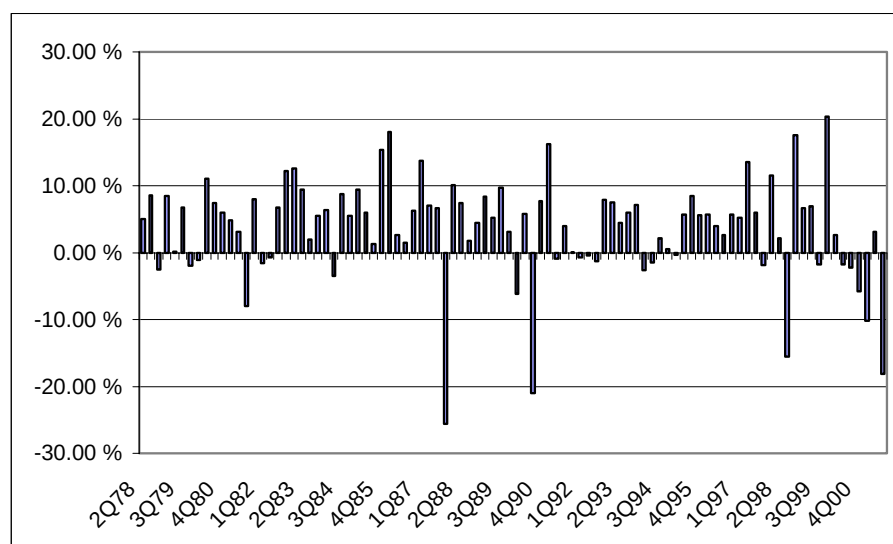
The Petroleum Fund's average real annual return since 1 January 1998 has been 2.8 per cent. Table I shows the real return up to the end of the third quarter of 2001, calculated as an annualised rate from 1 January 2000, 1 January 1999 and 1 January 1998 respectively. Price inflation is a weighted average of the price inflation rates in the countries in the benchmark portfolio defined by the Ministry of Finance. The right-hand column shows the excess return. This is the difference between the return on the actual portfolio and the return on the benchmark portfolio. Excess returns are calculated as arithmetic differentials, and then converted into annualised rates.

Table I: Annual rates of return up to the end of the third quarter of 2001, measured against the benchmark portfolio's currency basket. Per cent

	Nominal annualised rate of return	Annualised price inflation	Real annualised rate of return	Annualised excess return
Since 01.01.2000	-2.64	1.97	-4.61	0.03
Since 01.01.1999	2.59	1.77	0.83	0.43
Since 01.01.1998	4.33	1.56	2.77	0.36

The real return has been negative for the past six quarters. Over a longer period, however, the return has been positive. As might be expected when equities were included in the portfolio with a weight of around 40 per cent from 1998, there have been substantial fluctuations in the return from quarter to quarter and also from year to year. The average over long periods should be considered when the results are evaluated.

Chart I: Quarterly return on equities since 1978, measured in terms of the Petroleum Fund's current benchmark portfolio



The third quarter of 2001 has strongly influenced the averages shown in Table I. The negative result is attributable to the equity portfolio. Chart I shows the return since 1978 on a hypothetical portfolio identical to the current benchmark portfolio for the Petroleum Fund. The return on equities in the third quarter of 2001 is seen to be the

lowest since the Petroleum Fund began investing in equities. There has not been such a weak return on equities since the third quarter of 1990, and it has only occurred twice since 1978.

Chart II shows cumulative rates of return from 1 January 1998 for the fixed income and equity portfolios. In these 15 quarters, there has been a cumulative nominal return on equity investments of 10 per cent and on fixed income investments of 23 per cent.

Chart II: Index for cumulative return on subportfolios in the Petroleum Fund 1998-2001. The Fund's currency basket as at 31 December 1997 = 100

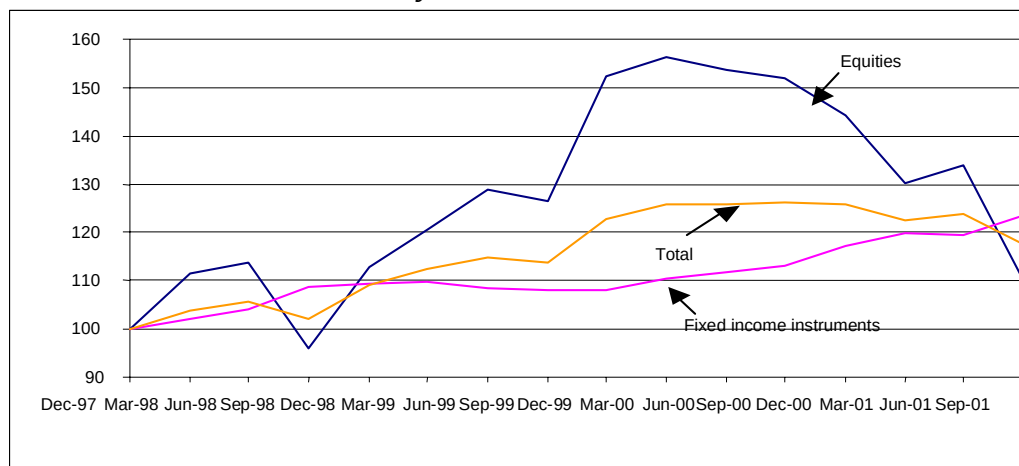


Chart III shows cumulative rates of return for the whole Petroleum Fund since the beginning of 1998. The return up to the end of the third quarter of 2001 was 17.2 per cent. During the same period, the return on the benchmark portfolio was 15.7 per cent. The difference between the actual return and the return on the benchmark portfolio is the excess return achieved by Norges Bank. The cumulative excess return since 1998 has been 1.5 percentage points.

Chart III: Index for cumulative return on the actual portfolio and on the benchmark portfolio, 1998-2001. The Fund's currency basket as at 31 December 1997 = 100

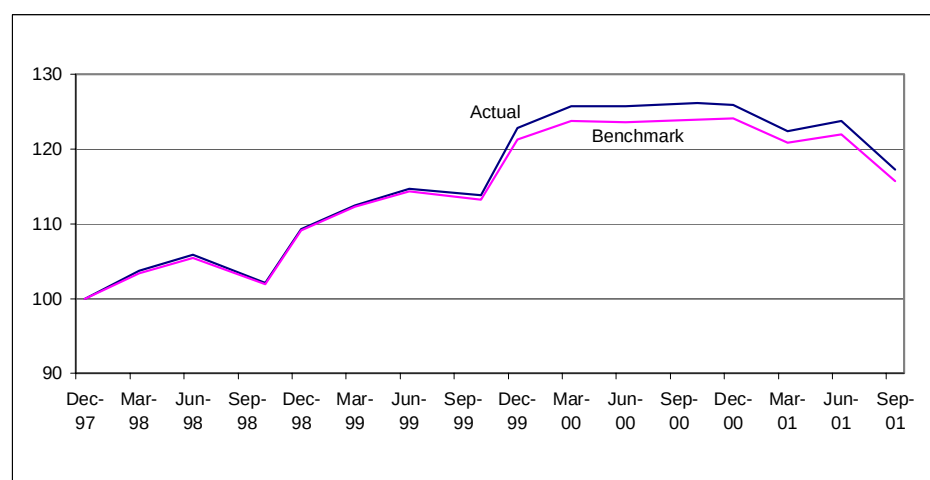


Chart IV: Relative market risk at the end of each month, measured by expected tracking error and the standard deviation of the return differential for the past 12 months. In basis points (hundredths of a percentage point)

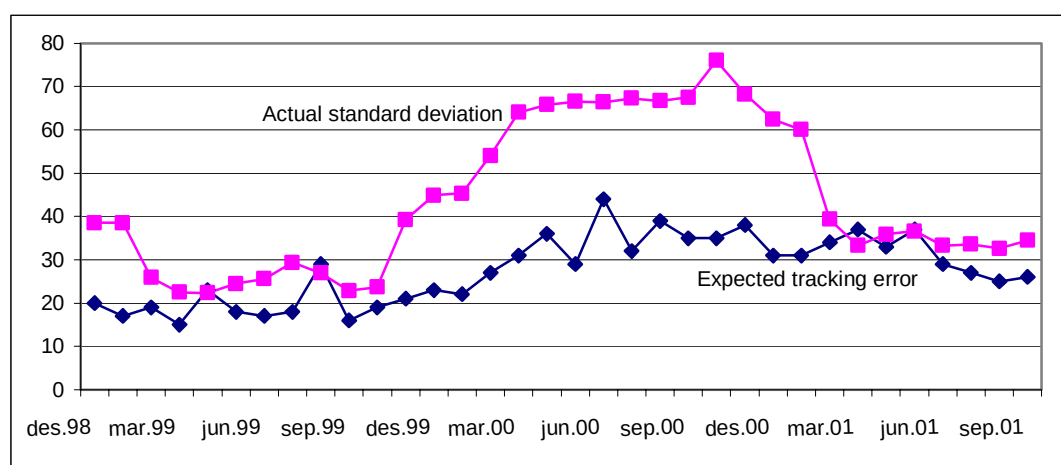


Chart IV shows developments in relative market risk from December 1998, measured in two different ways. In the guidelines from the Ministry of Finance, ‘expected tracking error’ (which is explained in Chapter 5 below) is used as a measure of market risk. In retrospect we can use the variation in the difference between the returns on the actual and benchmark portfolios (the return differential) as a measure of actual market risk in the period. In Chart IV, this standard deviation is calculated as an annualised rate using 12-month moving windows. The actual variation in the monthly return differential has as a rule been somewhat higher than the figures for expected tracking error. In recent months, however, the figures have been very similar.

The increase in expected tracking error over time reflects the fact that Norges Bank has gradually increased the proportion of active management, with the objective of outperforming the benchmark portfolio. Both expected tracking error and standard deviation fluctuate considerably, because they are influenced by various aspects of market developments, such as changes in correlations between the various asset classes and securities.

The information ratio is a widely used measure of the skill of operational managers. It is the ratio between the excess return for the year and relative market risk (measured here as the actual standard deviation of the return differential over the past 12 months). The average information ratio for the Fund from the third quarter of 1998 to the third quarter of 2001 has been 0.75, measured as an annualised ratio. A ratio of 0.2-0.3 is normally regarded as good, and it cannot be expected that the high level the Petroleum Fund has had up to now will persist.

Chart V: Market value of the Government Petroleum Fund under internal and external management, 1996-2001. In billions of NOK

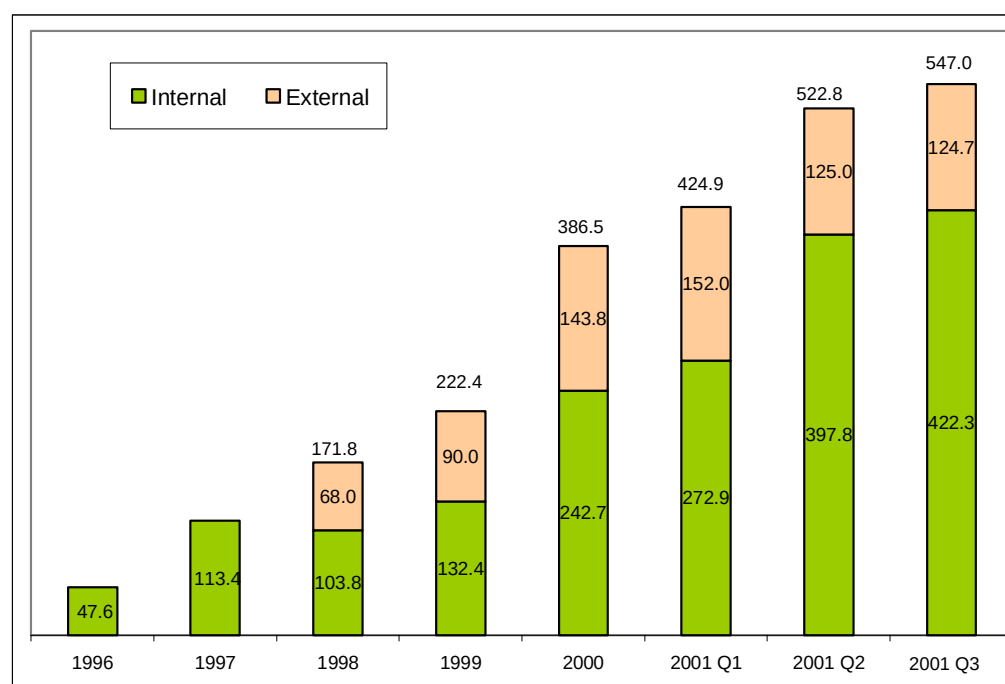
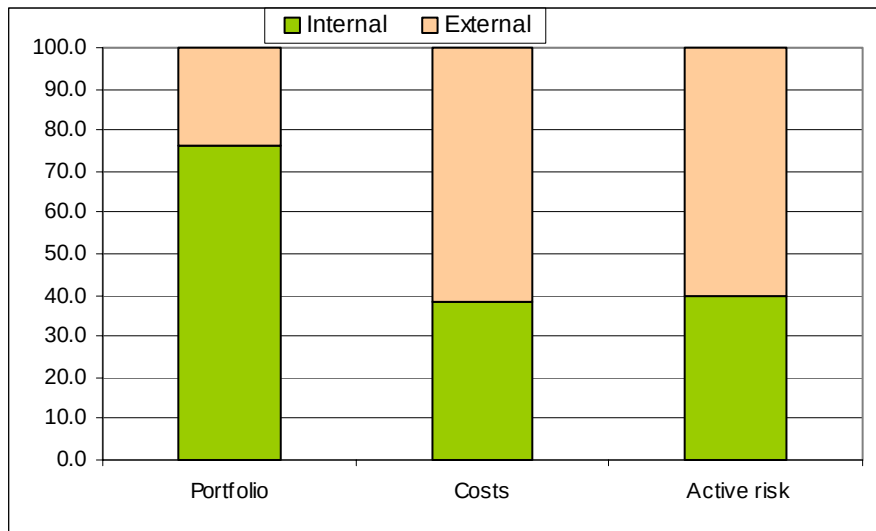


Chart V shows how the market value of the Petroleum Fund's international portfolio has increased since the end of 1996. In the third quarter of 2001, the Fund increased from NOK 522.8 billion at the beginning of the quarter to NOK 547.0 billion at the end of the quarter. The chart also shows that more than half of the portfolio has been managed internally throughout, and that this proportion has increased appreciably in 2001. This is largely because portfolios were transferred from external index management to a type of internal enhanced indexing.

Chart VI shows some key figures associated with the distribution of external and internal management. The chart shows that at the end of the third quarter, 76 per cent of the Petroleum Fund was managed internally by Norges Bank, whereas the costs of internal management amounted to only 38 per cent of overall management costs. Moreover, the active risk associated with internal management represented about 40 per cent of the total risk associated with active management.

As the chart shows, most of the risk associated with active management is assumed by external managers. Active management is appreciably more expensive than index management, which is one reason why the costs of external management are far higher than the costs of internal management, although the internally managed portfolio is far larger. A supplementary explanation is that economies of scale in capital management can make internal management of large portfolios cost-effective compared with buying management services in the market. Norges Bank's strategy is to allow external managers with specialist expertise to be responsible for a significant proportion of the overall active management. See also the article on this subject published on Norges Bank's website, and the Bank's submission of 5 September 2000 to the Ministry of Finance.

Chart VI: Distribution of portfolio, management costs and active risk* between internal and external management. Per cent



* There is no absolutely correct way to calculate the distributon of active risk. The distribution in the chart is based on a summation of the risk (VaR) associated with each mandate, irrespective of the correlation between the mandates.

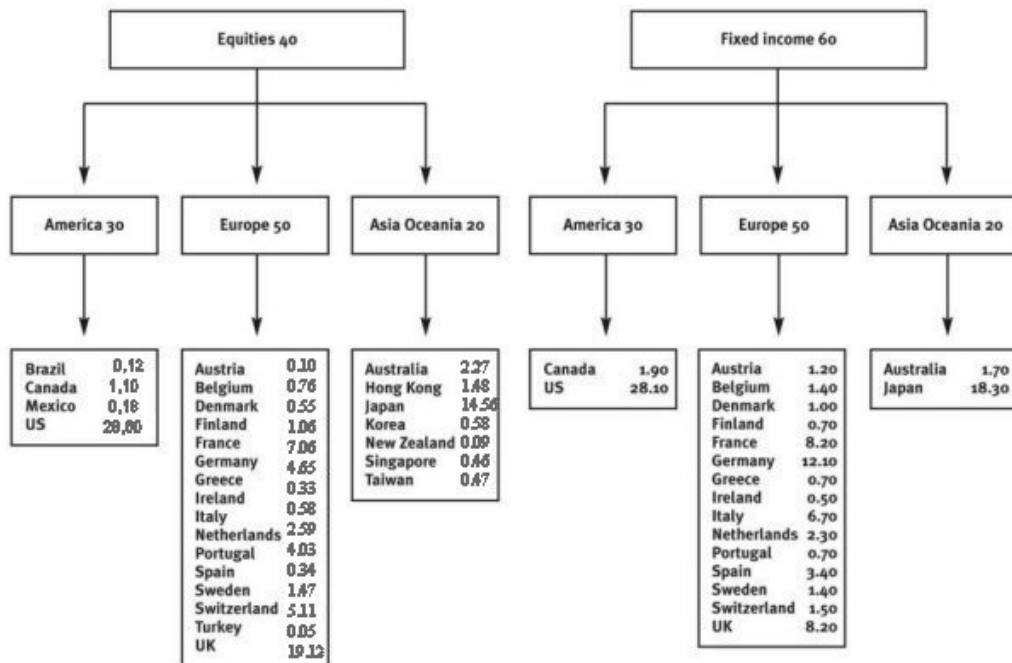
1. Mandate

Norges Bank manages the Government Petroleum Fund pursuant to a regulation issued by the Ministry of Finance on 3 October 1997, last amended on 28 September 2001. This last amendment means that the Ministry may change the Fund's investment options by excluding financial instruments from specified issuers if investment in such instruments may be in conflict with Norway's commitments under international law. The amendment has not yet taken effect.

The Ministry of Finance has defined a benchmark portfolio for the Petroleum Fund pursuant to the Petroleum Fund Regulation. The benchmark portfolio is composed of FTSE equity indexes in 27 countries, and of Schroder Salomon Smith Barney government bond indices in 19 countries.

Equities account for 40 per cent of the benchmark portfolio for the Petroleum Fund excluding the Environmental Fund, and fixed income instruments for 60 per cent. Securities listed in Europe make up 50 per cent, in the Americas 30 per cent and in Asia/Oceania 20 per cent. The benchmark portfolio constitutes the basis for managing the risk associated with the Petroleum Fund and for measuring the performance of Norges Bank's management of the Fund.

Chart 1: Benchmark portfolio at 30 September 2001 for the Petroleum Fund's ordinary portfolio (excluding the Environmental Fund). Per cent



On 31 January 2001 the Ministry of Finance allocated NOK 1 billion for the establishment of a separate portfolio of equities from enterprises that have been evaluated and found to fulfil environmental criteria – the Environmental Fund. This portfolio has the same regional distribution as the ordinary equity portfolio, and may be invested in the same countries, with the exception of the emerging markets of Brazil, South Korea, Mexico, Taiwan and Turkey.

The Environmental Fund may be invested in those enterprises in the FTSE index that fulfil certain requirements with respect to environmental reporting or certification. Companies that are considered to have little negative impact on the environment are also included, even if they do not fulfil the reporting and certification requirements. The British consulting company Ethical Investment Research Service (EIRIS) has been assigned by the Ministry of Finance to make a quarterly evaluation of the companies in the benchmark index in relation to these criteria.

At the time of establishment, the Environmental Fund's benchmark portfolio had the same distribution over the main regions of Europe, America and Asia/Oceania as the ordinary portfolio. Over time, these regional weights will vary with developments in market values and the weights will not be restored to the original regional weights in Chart 1. In this respect the Environmental Fund differs from the ordinary portfolio, where the regional weights of the benchmark are restored to the original distribution each quarter.

The Ministry of Finance has set an upper limit for how far the Petroleum Fund's actual portfolio may deviate from the benchmark portfolio. In the ordinary portfolio, relative market risk, measured as expected tracking error in the BARRA risk management system, shall always be less than 1.5 percentage point. The limit for the Environmental Fund is 1 percentage point. Tracking error is explained in Chapter 5 below.

2. Market developments

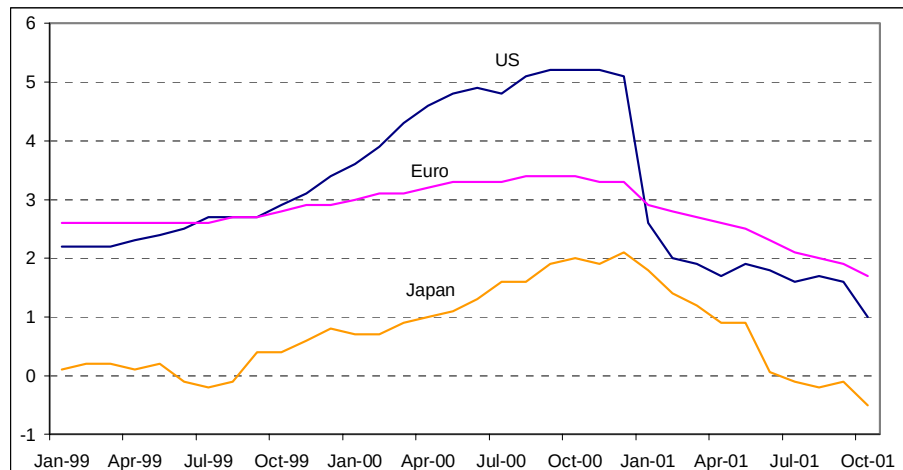
2.1. Main features

The third quarter of 2001 will be associated in the future with the terrorist attacks in the US on 11 September, and their economic repercussions. However, the US economy had already been slowing, with growth of only 0.2 per cent in the second quarter and negative growth of –0.4 per cent in the third quarter. The sluggish growth was mainly due to a decline in investment and to inventory run-downs. Private consumption showed positive growth in both the second and the third quarter, at 2.5 per cent and 1.2 per cent respectively, thereby moderating the decline in the activity level. However, indicators show that consumers are becoming less optimistic about the future. At the same time, there are persistent fundamental imbalances in the US economy, including a high level of household debt. The growth rate in the US economy is expected to remain negative in the fourth quarter, and there is growing fear of a more prolonged economic downturn.

Developments in the other main markets have been very similar to those in the US. In Europe and Japan the decline in investment and reduction of inventories have been

the key factors behind weak growth rates. Consumer demand has exhibited a falling trend. The negative developments in the global economy appear to have intensified after 11 September. Travel and tourism were initially hardest hit, but general consumer confidence regarding the future has also been undermined. Economic growth projections for the current year and for 2002 have been revised downwards in all three main markets (see Chart 2).

Chart 2: Expected GDP growth in 2001 in the euro area, the US and Japan, measured at different times in 1999-2001. Per cent

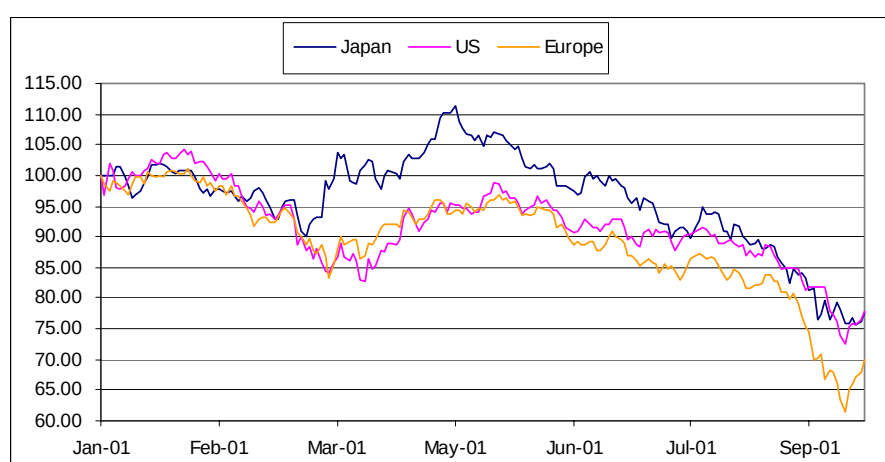


Source: Consensus Economics Inc.

2.2. Equity markets

In the third quarter of 2001, equity prices measured by the FTSE All-World Index fell more than in any other quarter since the Gulf War. Following the strong rise in equity prices for a number of years up to end-1999, markets have shown weak developments, and this tendency was intensified by an unusually strong decline in the third quarter of 2001. The decline in the quarter is nevertheless not unprecedented. Since 1970 there have been several quarters with equally weak or weaker developments.

Chart 3: Movements in the FTSE equity indices so far in 2001. 31.12.00 = 100



The decline continued through most of the quarter, and was particularly strong just after 11 September. Towards the end of September, prices rebounded to some extent. During the quarter as a whole there was an especially sharp decline in technology-based industry, in information technology and in cyclical consumer industries such as vehicles and travel and tourism (see Table 1). Other sectors, such as pharmaceuticals, food and tobacco are less affected by business cycles and showed more positive developments.

Chart 3 shows that the decline was particularly strong in the European and Japanese equity markets, with a fall in the FTSE index of over 22 per cent during the quarter. In the US, the FTSE index dropped a good 15 per cent. The more limited fall in the US may be related to the fact that equity prices there had previously shown a weaker tendency than prices in Europe.

Table 1: Return on the FTSE All-World Index in the third quarter of 2001. As percentages, measured against local currency

	Third quarter
Basic industries	-15.91
Cyclical consumer goods	-30.32
Cyclical services	-21.27
Financials	-15.14
General industrials	-23.83
Information technology	-34.47
Non-cyclical consumer goods	-0.18
Non-cyclical services	-10.64
Utilities	-11.91
Resources	-10.05
Total	-16.84

Source: Datastream

2.3. Fixed income markets

Fixed income markets in the US and Europe showed a solid return in the third quarter of 2001. Both the Federal Reserve and the European Central Bank reduced their key rates several times during the quarter, by a total of 1.25 and 0.75 percentage points

respectively. The largest reductions took place after 11 September, and were aimed at dampening the economic impact of the terrorist attacks in the US. The yield on long government bonds has fallen approximately in pace with key rates (see Chart 4). Another factor contributing to the fall is that investors expect lower price inflation in the next few years.

The yield on Japanese government bonds was weakly negative in the third quarter. Japan has been experiencing a prolonged period of economic stagnation, and interest rates are very low. It is therefore difficult to envisage any substantial decline in interest rates in this market. Nor does the economic situation imply that interest rates cannot increase very much.

Chart 4: Developments in bond markets in the US, Europe and Japan so far in 2001. Yields on 10-year government bonds. Per cent p.a.

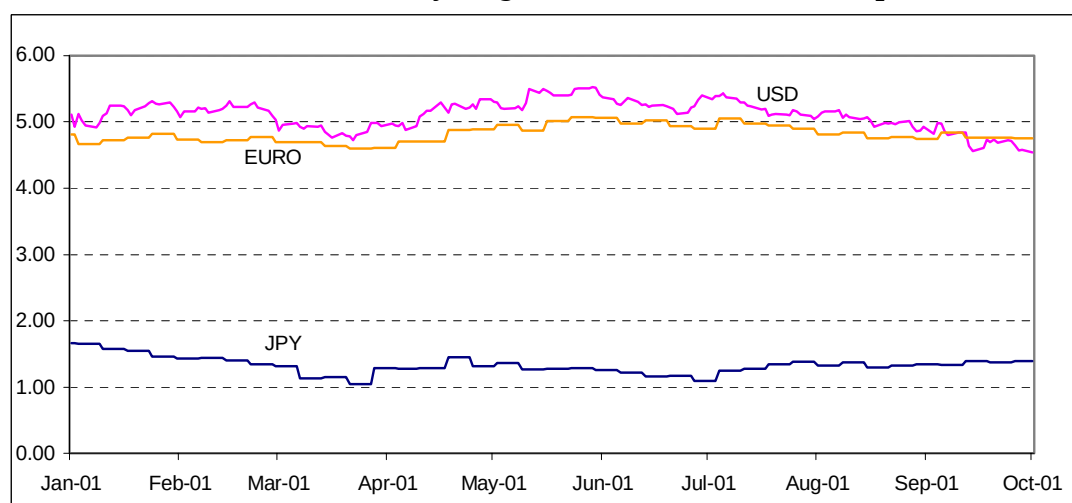
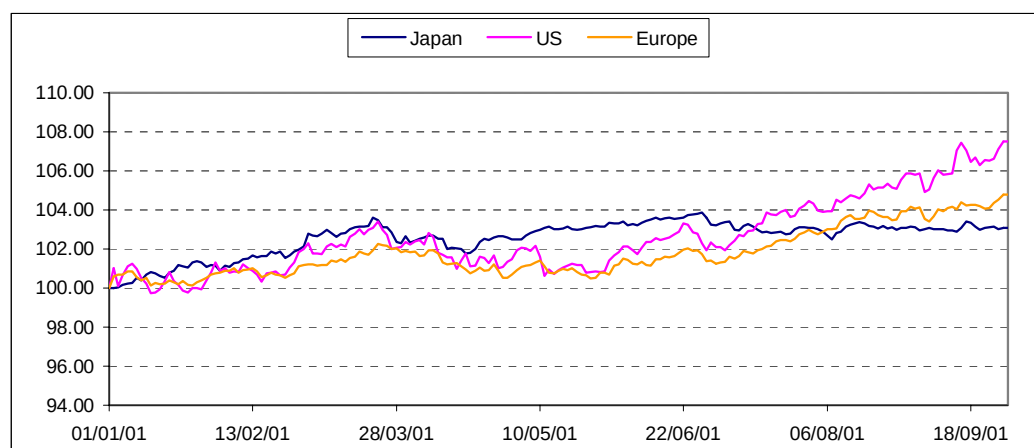


Chart 5: Movements in Schroder Salomon Smith Barney's government bond indices so far in 2001. 31.12.00 = 100



3. The management process

The market value of the Petroleum Fund's currency portfolio at the end of the third quarter was NOK 522.8 billion. On 31 August the Ministry of Finance transferred NOK 20 billion to the Fund's krone account, and on 28 September a further NOK 38 billion. Total transfers to the Petroleum Fund's portfolio of international securities in the third quarter thus amounted to NOK 58 billion. At the end of the quarter, the market value of the Petroleum Fund's combined securities portfolio was NOK 547.0 billion.

Three departments in Norges Bank Investment Management are involved with the investment of the Petroleum Fund's capital, both directly and by selecting external managers for the task. In addition to departments for managing equities and fixed income instruments, there is a Tactical Asset Allocation Department.

3.1. Management of the equity portfolio

NOK 7.6 billion was transferred to the equity portfolio at the end of August, and NOK 43.0 billion at the end of the third quarter. This brought the combined market value up to NOK 215.6 billion excluding the Environmental Fund.

During the quarter, the proportion managed internally remained stable at around 50 per cent of the equity portfolio. Most of this is index management, supplemented by various techniques for exploiting special pricing situations (see the previous quarterly report). In addition, selected sectors ("Financials", "Telecommunications" and "Non-cyclical services" are actively managed.

Table 2: Market value of the Petroleum Fund's equity and fixed income portfolios. In millions of NOK

	31.12.00	31.03.01	30.06.01	30.09.01
Equities	152 829	169 540	207 767	215 644
- external index	80 895	88 036	58 323	59 597
- external active	39 672	40 953	43 815	44 993
- internal sector	30 816	28 336	33 900	27 238
- internal active			879	28 759
- internal index			53 690	45 129
- internal futures and rebalancing accounts	1 446	12 215	17 160	9 928
Environmental Fund		863	899	721
Fixed income instruments	227 323	248 229	310 002	327 754
- external management	16 797	16 733	19 594	20 103
- internal management	210 526	231 496	290 408	307 651
Tactical asset allocation*	6 297	6 315	4 146	2 833
- external management	6 395	6 315	3 212	2 348
- internal management	-98	-	934	485
Total	386 450	424 947	522 814	546 952

* Tactical asset allocation comprises both equity and fixed income instruments.

During the third quarter agreements were entered into with four managers for management of “small cap mandates”, ie active mandates for investing in small companies with a view to achieving an excess return. These mandates were announced in November 2000, and will supplement the existing mandates, which are associated with indices dominated by large companies. In addition, investment in small companies allows more effective utilisation of the existing investment universe. Agreements have been signed with Deutsche Bank Asset Management and Sparx Asset Management for mandates in Japan, with Handelsbanken for a mandate in the Nordic countries (excluding Norway) and with Merrill Lynch Investment Managers for a mandate in Europe excluding the UK and the Nordic countries.

In November 2000, mandates were also announced for sector management and for enhanced indexing. An indexing mandate was awarded to Deutsche Bank Asset Management in the second quarter. The first sector mandates will be awarded in the fourth quarter.

3.2. Management of the fixed income portfolio

NOK 12.4 billion was transferred to the fixed income portfolio on 31 August. However, in connection with the rebalancing on 28 September, fixed income paper for around NOK 5 billion was sold in order to bring the equity share up to 40 per cent. This brought the market value of the fixed income portfolio to NOK 327.8 billion.

At the end of the third quarter, almost 94 per cent of the portfolio was managed internally in Norges Bank, while just over 6 per cent was managed externally. This is roughly the same distribution as before.

Part of the internal management takes place from Norges Bank’s office in New York. This office was evacuated during the terrorist attack on the World Trade Center on 11 September, and for a week responsibility for managing the portfolios was transferred to Oslo. From 18 September to 12 October there were problems with data transfer lines, and it was therefore necessary to enter trades carried out in New York into the data systems from Oslo. From 15 October, however the New York office was fully operational again. The break in operations had limited consequences for management.

Internal active management is based primarily on strategies designed to exploit price differences between fixed income securities with fairly similar properties as well as the difference in yield trends in different market segments. The four external fixed income managers employ the same general strategies.

3.3. Tactical asset allocation

In tactical allocation, managers seek to achieve an excess return by selecting a different combination of assets for their portfolio, ie a different distribution on aggregate markets, from that defined by the benchmark portfolio. The choice of countries in which to invest equities and fixed income instruments, respectively, is considered, the choice of what proportions of equities and bonds the portfolio should have, and the choice of currency composition.

Management takes place both by means of external managers and internally in Norges Bank. There is an internally managed portfolio consisting mainly of derivatives, ie equity and interest rate futures, which therefore has a low net market value.

In the third quarter an agreement was signed with a new external manager, Arrowstreet Capital L.P. Capital was transferred to the manager in August.

4. The return on the Fund

In the first quarter of 2001 the Petroleum Fund, including the Environmental Fund, had a return of -5.29 per cent, measured in terms of the benchmark portfolio currency basket. Measured in NOK, the total return in the third quarter was -6.34 per cent. The somewhat lower figure is due to the fact that on average NOK appreciated against most of the currencies in the benchmark portfolio during the quarter. This has no effect on the international purchasing power of the Fund.

Table 3 shows that the Petroleum Fund's ordinary portfolio (excluding the Environmental Fund) had the same return for the quarter as the whole Fund (including the Environmental Fund). The return was negative in each of the three months in the third quarter, and most negative in September. Table 4 shows the returns on the equity and bond portions of the ordinary portfolio separately. In terms of the currency basket, the equity portfolio had a negative return of -18.18 per cent in the quarter, while the return on the fixed income portfolio was positive at 3.41 per cent.

Table 3: Return on the Petroleum Fund's ordinary portfolio. Actual and benchmark portfolios, third quarter 2001. Per cent

	Measured in terms of the benchmark portfolio's currency basket		Measured in NOK		
	Actual portfolio	Baseline portfolio	Actual portfolio	Baseline portfolio	Difference
First quarter	-2.77	-2.61	-4.18	-4.03	-0.16
Second quarter	1.09	0.95	2.00	1.85	0.14
July	-0.42	-0.44	-1.15	-1.18	0.03
August	-1.61	-1.60	-2.14	-2.13	-0.02
September	-3.33	-3.19	-3.17	-3.03	-0.14
Third quarter	-5.29	-5.16	-6.34	-6.22	-0.12
So far this year	-6.90	-6.76	-8.46	-8.32	-0.14

Table 4 also shows return figures measured in USD, which depreciated against both the currency basket and NOK in the third quarter. Measured in USD, the Fund's return was therefore less negative, at -1.41 per cent. If we instead measure against the euro or a currency basket based on import weights, we find more strongly negative returns of -8.36 and -6.69 per cent, respectively, for the period.

Table 4: Return on the Petroleum Fund's ordinary portfolio in the third quarter of 2001 measured against various benchmark currencies. Per cent

	Equity portfolio	Fixed income portfolio	Total portfolio
Benchmark portfolio's currency basket	-18.18	3.41	-5.29
Import-weighted currency basket	-19.39	1.89	-6.69
USD	-14.84	7.63	-1.41
Euro	-20.84	0.05	-8.36
NOK	-19.09	2.26	-6.34

In the third quarter the ordinary portfolio underperformed the benchmark portfolio by 0.12 per cent. The underperformance is attributable to September, when many of the active positions of both external and internal managers were loss-makers in the markets following the terrorist attack against the US on 11 September. There were losses in most external as well as internal portfolios, in equity and fixed income management and in tactical asset allocation alike.

Table 5 shows that in the third quarter the Environmental Fund had a return of -18.92 per cent measured in terms of the currency basket and -19.82 per cent measured in NOK. The return was nevertheless 0.55 percentage point higher than the return on the benchmark portfolio. A cumulative excess return of 0.40 percentage point has therefore been achieved so far this year, after transaction costs in connection with the establishment of the portfolio led to it underperforming the benchmark in the first quarter.

Table 5: Return on the Environmental Fund in the third quarter of 2001. Per cent

	Measured in terms of the benchmark portfolio's currency basket		Measured in NOK		
	Actual portfolio	Benchmark portfolio	Actual portfolio	Benchmark portfolio	Difference
First quarter	-12.97	-12.78	-13.69	-13.50	-0.19
Second quarter	3.23	3.13	4.16	4.06	0.10
Third quarter	-18.92	-19.48	-19.82	-20.37	0.55
Memo: Ordinary benchmark with country weights as in the Environmental Fund		-17.88		-18.79	
So far this year	-27.15	-27.57	-27.92	-28.33	0.40

In addition to ordinary returns, revenues from various types of securities lending are included in the figures in Tables 3-5. Lending from the equity portfolio takes place through J.P. Morgan Chase & Co., which is the Petroleum Fund's global custodian for equities. Securities from the fixed income portfolio are lent out both internally and through some of the external fixed income custodians. Table 6 shows that third quarter revenues from this type of activity amounted to an annualised 3.8 basis points (0.038 percentage point) of the total portfolio. This is equivalent to about NOK 49 million in the third quarter and NOK 177 million so far this year.

Table 6: Income from securities lending in the third quarter of 2001 (relative figures as annualised ratios)

	Q1**	Q2**	Q3	So far in 2001	
	Basis points*	Basis points	Basis points	Basis points	1000s of NOK
Equity lending	2.30	4.41	1.57	2.76	90 885
Lending of fixed income instruments	2.45	3.11	2.19	2.58	85 994
Total lending income	4.75	7.51	3.76	5.34	176 880

* The figures are in basis points (hundredths of a percentage point) of the total portfolio, and are annualised.

**Note that the figures have been revised in relation to the previous quarterly report.

Some costs are charged directly to the Petroleum Fund's portfolio, and thus contribute negatively when the above return figures are calculated, whereas they are not included in the calculation of the benchmark return. These include brokerage costs in connection with equity transactions and turnover taxes in some equity markets. Another source of negative return differential is that in some countries tax is paid on dividends from the Petroleum Fund's investments, while the calculated return on the benchmark portfolio presupposes a tax status that does not imply a tax burden. Costs of this type will normally result in a passively managed portfolio achieving a lower return than the benchmark portfolio. See also a separate article on this subject on Norges Bank's website.

5. Risk exposure

The market risk associated with the Petroleum Fund is constantly monitored by both the departments responsible for the investments and a department with special supervisory responsibility. Various types of model are used in the work to analyse risk exposure. The guidelines from the Ministry of Finance place a limit on relative market risk, with reference to the BARRA model, and this is the measure reported here. The BARRA model provides an estimate of market volatility based on historical experience. At the end of each month, a new month is added to the underlying data, while the weighting of earlier months is reduced. This may cause changes in estimates of expected tracking error even though no change has taken place in the extent of active management.

Chart 6 shows expected tracking error for the entire ordinary portfolio, and for the equity and fixed income portfolios individually, so far this year. There is an appreciably higher relative risk associated with the equities portfolio than with the fixed income portfolio, reflecting both greater volatility in the equity markets and a higher degree of active management of the equities portfolio. At the end of the third quarter, the expected tracking error for the fixed income portfolio was just under 30 basis points. The tracking error of the equity portfolio was down to less than 60 at the end of the third quarter. Taking account of the risk in tactical asset allocation, the relative market risk associated with the total ordinary portfolio was 26 basis points at end-September. The Ministry of Finance has imposed an upper limit of 150 basis points.

Expected tracking error

The Ministry of Finance uses the risk measure *expected tracking error* to manage the market risk of the Petroleum Fund. This measure is defined as the expected value of the standard deviation of the difference between the annual return on actual investments and the return on the benchmark portfolio. When deviations from the benchmark portfolio are restricted by setting an upper limit to expected tracking error, there is a high probability that the actual return will vary within a range around the return on the benchmark portfolio. The lower the limit placed on the tracking error, the narrower this range will be. An expected tracking error of 1.5 percentage points or 150 basis points means that the actual return on a portfolio that remains unchanged over time will deviate by less than 1.5 percentage points from the return on the benchmark in two out of three years.

The relative market risk for the Environmental Fund at the end of September was 31 basis points, measured as expected tracking error in relation to the benchmark for this portfolio. The Ministry of Finance has imposed an upper limit of 100 basis points.

Table 7 shows the composition of the fixed income portfolio according to credit ratings by Moody's and Standard & Poor's respectively. In the table, government bonds and government-guaranteed bonds without credit ratings have been assigned the credit rating of the issuing country. For example, US government bonds have been assigned the rating Aaa/AAA, while government-guaranteed issues from the city of Yokohama, denominated in USD, have been rated AA/ Aa, which is the rating given to the Japanese state for bonds in a foreign currency.

Chart 6: Expected tracking error for the ordinary portfolio at the end of each month in 2001. In basis points (hundredths of a percentage point)

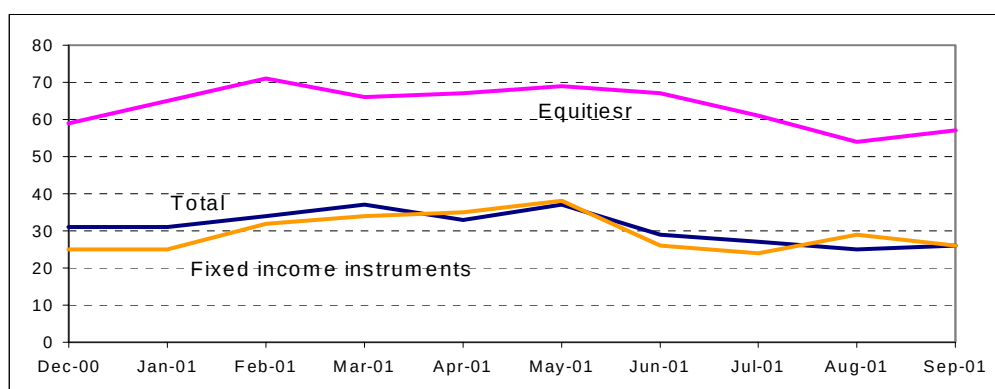


Table 7: The fixed income portfolio as at 30 September 2001, by credit rating. Percentages of market value

Moody's		Standard & Poor's	
Rating	Percentage of total	Rating	Percentage of total
Aaa	59.48	AAA	62.08
AA-	38.81	AA	36.21
A	1.64	A	1.64
Baa	0.07	BBB	0.03
Lower	0	Lower	0
No rating	0	No rating	0.04
Total	100	Total	100

Table 8 provides an overview of the risk limits stipulated in the Ministry of Finance's Regulation on the Management of the Government Petroleum Fund and guidelines for the ordinary portfolio, and of actual exposure during the quarter. The figures show that exposure at the end of each month has been within these limits. However, during the quarter an infringement of the Ministry of Finance's regulation was discovered. When capital was transferred to an external manager, the manager misinterpreted the mandate, and the result was exposure to NOK in the forward exchange market. The infringement, which was a limited one, was rapidly discovered, and the manager was ordered to reverse the position.

There were no infringements of the guidelines for the Environmental Fund.

Table 8 provides figures for interest rate risk in the fixed income portfolio. The Petroleum Fund's market risk is restricted by the limit on expected tracking error, by limits on the distribution of assets by asset class and region, and by a special limit on interest rate risk. According to the Petroleum Fund Regulation, the average modified duration of the fixed income portfolio is to be between 3 and 7. Modified duration is a measure of how sensitive the value of the portfolio is to changes in the interest rate, and indicates the percentage decline in the value of the portfolio should yields for all maturities rise by 1 percentage point.

Table 8: Risk exposure limits as defined in the regulation and guidelines

Section	Risk	Limits	Actual					
			31.12.00	31.03.01	30.06.01	31.07.01	31.08.01	30.09.01
4	Market risk	Maximum 1.5% tracking error	0.31%	0.37%	0.29%	0.27%	0.25%	0.26%
5	Asset distribution	Fixed income 50-70%	60.45%	60.02%	60.01%	61.20%	62.88%	60.00%
		Equities 30-50%	39.55%	39.98%	39.99%	38.80%	37.12%	40.00%
6	Currency distribution	Europe 40-60%	52.45%	50.94%	50.02%	50.92%	51.23%	49.90%
		The Americas 20-40%	29.19%	29.69%	30.10%	30.44%	29.86%	30.72%
		Asia/Oceania 10-30%	18.37%	19.37%	19.88%	18.64%	18.91%	19.37%
6	Share invested in emerging markets	Max 5% of equity portfolio		1.21%	1.33%	1.42%	1.39%	1.16%
7	Interest rate risk	Modified duration 3-7	5.27	5.64	5.47	5.42	5.48	5.45
8	Credit risk*	Max 20% in bank deposits	10.55%	8.01%	6.65%	6.28%	4.57%	4.58%
10	Maximum ownership interest	Max. 3% of a company	0.75%	1.02%	1.10%	1.43%	1.43%	1.56%

* In addition to ordinary bank deposits, reinvested cash collateral from securities lending is included in the table.

6. Management costs

Table 9 provides an overview of the costs of managing the Petroleum Fund in the first three quarters of 2001. The costs consist partly of fees to external managers and custodian institutions, and partly of Norges Bank's internal operating costs. In addition to the Petroleum Fund, Norges Bank Investment Management manages the Government Petroleum Insurance Fund and the bulk of Norges Bank's foreign exchange reserves. The total internal costs are distributed among the three funds by means of a set of internal prices. The internal costs pertain not only to Norges Bank Investment Management, but also to all support functions provided by other parts of Norges Bank. The internal costs are calculated according to the guidelines applying to business operations in Norges Bank.

Annualised, the costs in the table are equivalent to 0.098 per cent of the average equity portfolio, and 0.038 per cent of the average portfolio of fixed income instruments. A price of this type is of little relevance to tactical allocation, as management is based mainly on the equity and fixed-income portfolios, and in such a way that managers' own portfolios are small in relation to the risk taken.

In addition to the above costs come performance-based fees to external managers of NOK 27.1 million (0.020 per cent of the average equity portfolio) and performance-based fees to external fixed income managers of NOK 0.7 million. The amounts are determined by the managers' total excess returns over the past four quarters. Equity costs including these performance-related fees constitute 0.119 per cent and fixed income costs 0.038 per cent of average portfolios.

Table 9: Management costs in the first three quarters of 2001. In thousands of NOK and annualised basis points of the average portfolio

	2001		2000
	NOK 1000	Basis points	Basis points
Fee to external equity managers, excluding performance-related fees	52 908		
Costs of equity custodian and settlement	31 644		
Internal costs, equity management	46 347		
Total equity management	130 899	9.8	12.8
<i>Performance-related fees to external equity managers</i>	27 149		
Fees to external fixed-income managers, excluding performance-related fees	15 203		
Custodian costs fixed income	12 590		
Internal costs, fixed income management	46 885		
Total fixed income management	74 677	3.8	4.3
<i>Performance-related fees to external fixed-income managers</i>	696		
Fees to external managers, tactical asset allocation	5 177		
Custodian costs, tactical asset allocation	711		
Internal costs, tactical asset allocation	8 179		
Total, tactical asset allocation	14 068	-	-
Total management costs, excluding performance-related fees	219 644	6.6	7.7
Total management costs	247 489	7.4	10.8

Table 10: Costs of internal and external management in the first three quarters of 2001

	Average market value (in millions of NOK)	Management costs (in millions of NOK)
Internal management	304 211	93.0
External management	140 532	154.4

For the whole portfolio, including tactical allocation, annualised management costs excluding performance-based fees have amounted to 0.066 per cent of the average market value so far this year. Table 10 shows that more than 60 per cent of the costs accrued in external management.

The Management Agreement between the Ministry of Finance and Norges Bank lays down the principles for the remuneration Norges Bank is to receive for managing the Petroleum Fund's portfolios. The point of departure is that the remuneration is to cover the costs incurred by the Bank. Remuneration for 2001 comprises 0.072 per cent of the Petroleum Fund's average market value through the year. In addition to this remuneration, fees paid to external managers for the excess return achieved are to be recovered from the Ministry. Agreements on performance-based fees have been made with the majority of external active managers, and approved in each individual case by the Ministry of Finance.

7. Reporting of accounts

Table 11 shows the mix of different instruments as presented in Norges Bank's accounts at the ends of the last five quarters. Table 12 shows the book return, which in the third quarter was NOK -33 858.8 million prior to the deduction of Norges Bank's management fee. The accumulated recorded return so far this year is thus NOK -42 669.3 million.

The accounting figures are based on holdings including unsettled trades (with the exception of cash). The figures indicate market values based on verified price information. Investments in foreign currency are converted to NOK at market rates as at 28 September quoted on WM/Reuters London. The value of the Petroleum Fund's portfolio recorded in the accounts differs from the market value in Table 2 above because remuneration for management is not deducted in the table, and because different assessment principles are used for some items (see the appendix on methodology for calculating returns). Work is in progress to eliminate such differences. Similarly, there are small differences in the return figures.

Off the balance sheet, financial futures with a total market value of NOK 72 102.1 million had been purchased and financial futures with a market value of NOK 47 152.3 million had been sold at 30 September 2000. Interest rate swaps with a total market value of NOK 34 594.1 million were purchased and swaps for NOK 34 225.5 million were sold. Foreign exchange with a total contract value of NOK 12 724.5 million had also been bought and sold forward.

Income and costs in foreign currency are converted into NOK according to the exchange rate on the transaction date, and are recognised as they are earned or accrued, according to the accruals principle (see Table 12).

Table 11: The Petroleum Fund's international portfolio distributed by instrument.
In thousands of NOK

	30.09.00	31.12.00	31.03.01	30.06.01	30.09.01
Deposits in foreign banks	29 920 603	34 358 399	44 121 194	34 887 205	42 406 244
Money market placings in foreign financial institutions against collateral in the form of securities	66 003 651	79 461 351	111 282 119	106 908 470	105 857 427
Loans from foreign financial institutions against collateral in the form of securities	-78 294 783	-123 522 619	-132 289 675	-103 543 138	-117 779 691
Foreign interest-bearing securities	212 928 640	245 789 902	260 290 423	297 907 551	322 464 755
Foreign equities	126 407 521	150 175 494	141 639 807	186 712 315	194 013 322
Forward contract adjustments	-32 535	193 609	-121 631	-37 496	14 053
Total portfolio before remuneration for management	356 933 097	386 456 136	424 922 237	522 834 907	546 976 110
Accrued management remuneration	-238 715	-330 018	-80 338	-159 459	-253 831
Total portfolio, recorded value	356 694 382	386 126 118	424 841 899	522 675 448	546 722 279

Table 12: Book return on the Petroleum Fund's international portfolio as at 30 September. In thousands of NOK

Book return	30.09.00	31.12.00	31.03.01	30.06.01	30.09.01
Interest income	6 784 066	9 719 526	3 108 050	6 754 056	10 732 345
Dividends	1 247 786	1 552 377	524 548	1 579 770	2 246 593
Exchange rate adjustment	12 173 320	7 907 405	-6 373 350	-2 554 261	-8 438 760
Unrealised securities loss/gain	-2 669 982	-6 318 289	-14 851 795	-13 870 491	-41 743 938
Realised securities gain	2 338 275	1 661 195	1 054 981	-284 868	-2 757 605
Brokers' commissions	-10 792	-22 221	-11 947	-26 080	-40 087
Result forward exchange trading	-1 375	-1 741	1 452	-6 077	-3 362
Gains/losses futures	-205 884	-319 798	-185 668	-402 570	-2 619 463
Book return on investments	19 655 414	14 178 454	-16 723 190	-8 810 521	-42 719 477
Accrued management remuneration	-238 715	-330 018	-80 338	-159 459	-253 831
Net return market value	19 416 699	13 848 436	-16 803 528	-8 969 980	-42 923 108

APPENDIX: Methodology for calculating returns¹

Returns are calculated according to the market value principle, ie the opening and closing values of the portfolios are valued at the relevant market prices at the beginning and end of the period. Interest expenses and revenues, dividends, withholding tax, changes in holdings and changes in securities prices are accounted for on an accruals basis when calculating returns. The trade date is used for recognising income and expenses for agreed, unsettled transactions. The return is compared with the return on the benchmark portfolio. The return differential takes the form of an arithmetic difference between the returns on the actual and benchmark portfolios.

The time-weighted method should be used for calculating the return on a portfolio with incoming and outgoing payments. This method requires that the market value of the portfolio be calculated at the time of each incoming or outgoing payment, and the return found as the change in market value between one point in time and the next. Thus an index for the market value is arrived at for each point in time compared to the previous point in time for cash flow. By multiplying these index figures for the individual periods, the return for the total period is arrived at. Thus cash flow elements will only contribute to the return from the time of the incoming or outgoing payment¹.

To date, Norges Bank has performed a verification of market values only at month-end², and therefore does not calculate a time-weighted return at any other point during the month. Instead a money-weighted method (modified Dietz method) is used, whereby the monthly percentage return is calculated by distributing the various cash

¹ "Management of the Government Petroleum Fund – Feature Article 2" contains a more detailed presentation of the return calculations.

² Norges Bank also calculates daily market values, but these are not satisfactorily verified as yet. There is ongoing work to achieve verified daily market values.

flows between incoming and outgoing value, and the return is found by dividing the portfolio's adjusted outgoing value by the adjusted incoming value³.

The modified Dietz method can be described by means of the following formula:

$$R_M = \left[\frac{\left(\frac{MV_E - \frac{\sum_i i \cdot K_i}{T}}{MV_B + \frac{\sum_i (T-i) \cdot K_i}{T}} \right) - 1}{1} \right] \cdot 100$$

where R_M = Money-weighted return in the period (per cent)
 MV_B = Incoming value
 MV_E = Outgoing value
 T = No. of days in the period
 i = No. of days for cashflow K_i
 K_i = Cash flow on day i

The geometrical return is used for long periods, such as quarterly and annual return and return so far this year. In other words, the return indices for the individual periods are multiplied together. Thus the return is a time-weighted return on the returns for the individual months.

The return is calculated in both NOK and local currency. The total return in NOK is found by totalling the market values in NOK of all currencies and distributing total cash flows in NOK, as expressed in the formula above. WM/Reuters exchange rates⁴ are used for converting local currencies to NOK.

The NOK return on the benchmark portfolio is calculated as the geometrical difference between the returns in NOK and in local currency, measured in terms of the currency distribution of the benchmark portfolio. This indicates how much the Norwegian krone has appreciated or depreciated in relation to the currency distribution of the benchmark portfolio.

Return calculations are carried out in separate models, which are reconciled with the accounting system. Differences in calculated return between the models and the accounts occur as a result of the application of different assessment principles, for example in the treatment of accrued interest and tax withholdings that have not been repaid. In the accounts, allocations are also made to cover Norges Bank's management fee.

³ No transfers to or withdrawals from the Government Petroleum Fund take place in the middle of the month, nor are there any transfers between the fixed income and equity portfolios in the middle of the month. This means that the monthly return calculated for the fund as a whole, the fixed income portfolio and the equity portfolio will be independent of the return method used (modified Dietz or time-weighted method). When the returns on subportfolios (currency portfolios and individual mandates) are calculated, there may be differences in return depending on the method used.

⁴ WM/Reuter Closing Spot Rates, fixed at 4 pm London time.

The benchmark portfolio

The benchmark portfolio consists of an equity benchmark and a fixed income benchmark, which are based on internationally recognised market indices. At the beginning of each quarter, 60% of the benchmark portfolio is to consist of bonds and 40% of equities. During the quarter, the distribution between the two asset classes varies, depending on market developments.

The equity benchmark:

The equity benchmark portfolio is based on the FTSE World Index. It is distributed between Europe, North America and Asia and Oceania. At the beginning of each quarter the portions allocated to the regions are to be 50%, 30% and 20% respectively. Equity investments in each region are distributed among the approved countries⁵ according to market values measured by the FTSE indices. During the quarter, both country and regional weights change, depending on market developments. The principles on which the compositions of the FTSE indices are based are described in “Ground Rules for the Management of the FTSE All-World Index, Version 1.7 June 2001”.

The fixed income benchmark:

The fixed income benchmark portfolio is based on Schroder Salomon Smith Barney’s World Government Bond Indexes (WGBI). It is distributed between Europe, North America and Asia and Oceania. At the beginning of each quarter the portions allocated to the regions are to be 50%, 30% and 20% respectively. Within each region investments in approved countries are distributed⁵ on the basis of the IMF’s GDP weights and average exchange rates for the year for which the GDP figures are specified. During the quarter, both country and regional weights change depending on market developments. The principles for the composition of this index are found in “Salomon Smith Barney Global Index Catalog, February 2001”.

⁵ See Section 6 of the regulation of 3 October 1997 on the Management of the Government Petroleum Fund.