

## **Management of the Government Petroleum Fund Report for the first quarter 2002**

### **Summary**

The return on the Government Petroleum Fund in the first quarter of 2002 was 0.59 per cent measured by the currency basket that corresponds to the composition of the Fund's benchmark portfolio. Measured in NOK, the return in the first quarter was -2.05 per cent.

The first quarter return on the ordinary equity portfolio (excluding the Environmental Fund) was 2.26 per cent measured against the benchmark portfolio's currency basket. Share prices in the three main markets, the US, Europe and Japan, fell at the beginning of the quarter, but rose again towards the end of the quarter. Following the rise in interest rates in the US and Europe, a negative return of -0.63 per cent, measured in terms of the currency basket, was recorded for the fixed income portfolio.

The return on the Petroleum Fund's ordinary portfolio in the first quarter of 2002 was 0.24 percentage point higher than the return on the benchmark portfolio defined by the Ministry of Finance.

The return on Environmental Fund in the first quarter was 1.30 per cent measured in terms of the benchmark portfolio currency basket, and -1.36 per cent measured in NOK.

On 31 January, NOK 12.1 billion was transferred to the Petroleum Fund's international equity and fixed income portfolios, and a further NOK 12.2 billion was transferred on 28 February 2002, bringing the market value of the securities portfolio to NOK 625.0 billion at the end of the first quarter.

## 1. Main figures

The return on the Government Petroleum Fund in the first quarter of 2002 was 0.59 per cent measured in terms of the currency basket corresponding to the composition of the Fund's benchmark portfolio. This is somewhat lower than the average quarterly return since 1998. Chart 1 shows that the first quarter was the twelfth quarter to show a positive return, while the return has been negative in five quarters since 1998. The chart shows considerable fluctuations in the return figures. The return on the equity portfolio has fluctuated considerably more than the return on the fixed income portfolio.

**Chart 1: Quarterly return on the Petroleum Fund since 1998 measured in terms of the Fund's currency basket**

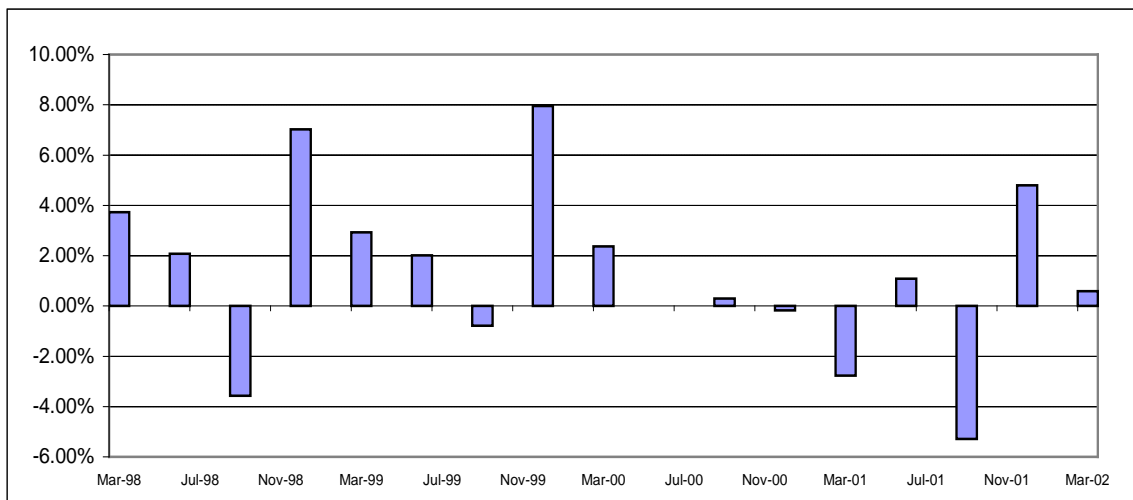
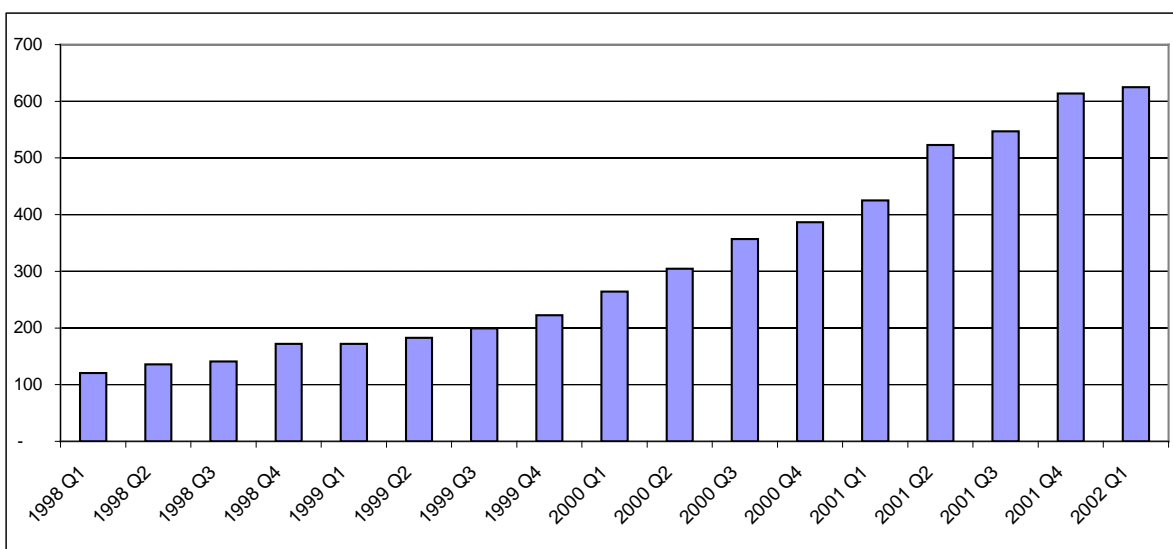


Chart 2 shows that the Petroleum Fund has grown from NOK 113bn to NOK 625bn since 1 January 1998. The transfer of funds from the Ministry of Finance accounts for most of this increase.

**Chart 2: Market value of the Petroleum Fund 1998-2002, measured in billions of NOK**



The annual net real return of the Petroleum Fund (after adjustments for management costs and price inflation) has been 3.6 per cent since 1 January 1998. Table 1 shows the return to the end of the first quarter 2002, calculated as an annual rate from 1 January in 1998, 1999, 2000 and 2001 respectively. Price inflation is a weighted average of the price inflation rates in the countries in the benchmark defined by the Ministry of Finance.

The right-hand column shows that the average excess return has been 0.43 percentage point per year. 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 annualised.

**Table 1: Annual rate of return to the end of the first quarter of 2002, measured in terms of the benchmark’s currency basket. Per cent**

	Gross annual return	Annual price inflation	Annual management costs	Annual net real return	Annual excess return
From 1 Jan 1998	5.11	1.47	0.08	3.56	0.43
From 1 Jan 1999	3.86	1.61	0.09	2.17	0.50
From 1 Jan 2000	0.27	1.69	0.09	-1.52	0.21
From 1 Jan 2001	-1.49	1.41	0.08	-2.98	0.21

Chart 3 shows cumulative rates of return from 1 January 1998 for the fixed income and equity portfolios. In these 17 quarters, there has been a cumulative nominal return on equity investments of 26.1 per cent and on fixed income investments of 22.4 per cent.

**Chart 3: Index for cumulative return on sub-portfolios in the Petroleum Fund 1998-2002. The Fund’s currency basket as at 31 December 1997 = 100**

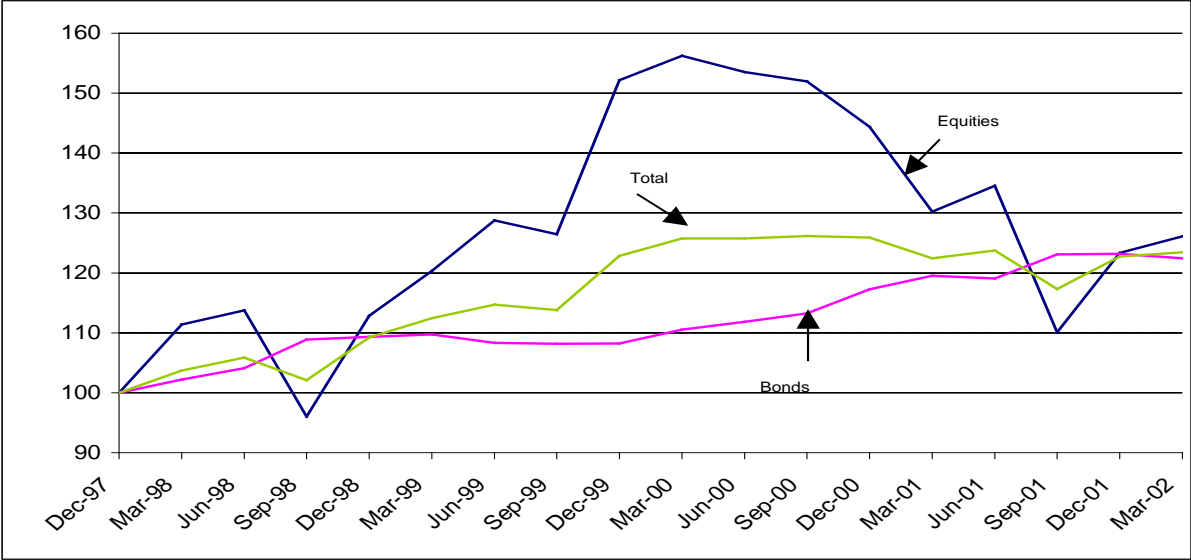


Chart 4 shows the cumulative return on the Petroleum Fund as a whole since 1 January 1998. The return to the end of the first quarter 2002 was 23.6 per cent. During the same period, the return on the benchmark was 21.5 per cent. The difference between the actual return and the return on the benchmark is the excess return achieved by Norges Bank. The cumulative excess return since 1998 is 2.1 percentage points.

**Chart 4: Index for cumulative return on the actual portfolio and on the benchmark, 1998-2002. The Fund's currency basket as at 31 December 1997 = 100**

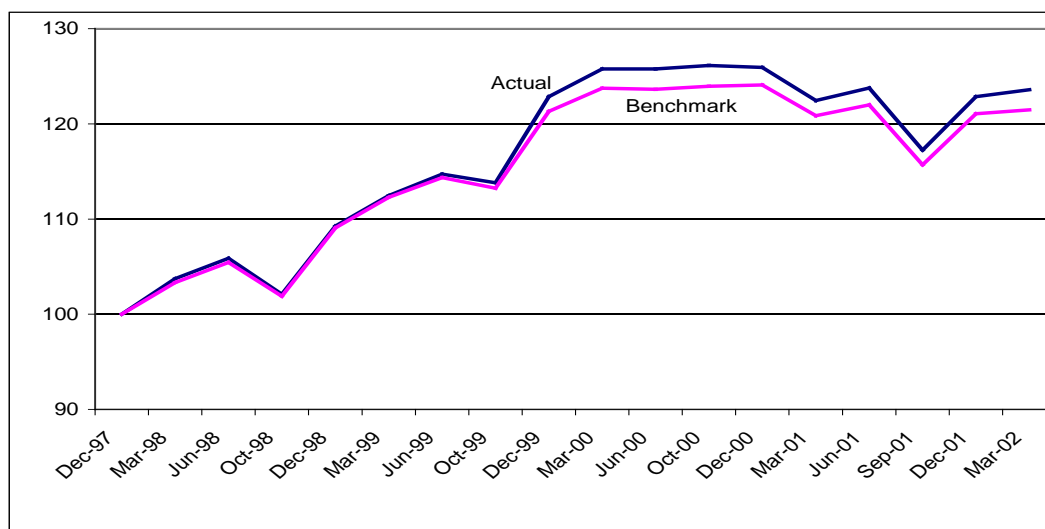
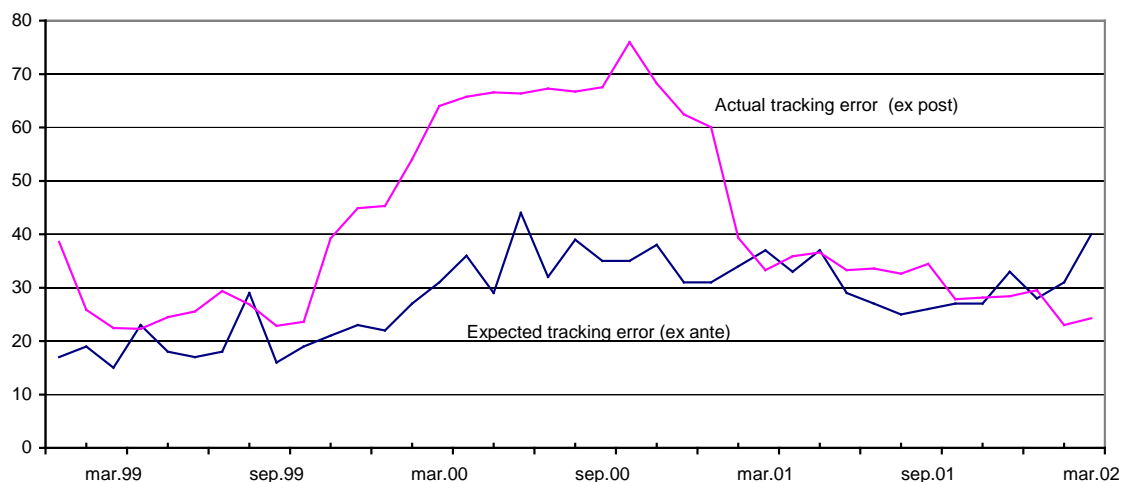


Chart 5 shows developments in relative market risk from December 1998, measured in two different ways. In the guidelines from the Ministry of Finance, 'expected tracking error' (which is explained in Chapter 6 below) is used as a measure of market risk. In retrospect, we can use the variation in the difference between the returns on the actual and benchmark portfolios (the excess return) as a measure of actual market risk in the period. In Chart 5, this tracking error is calculated as an annualised rate using 12-month moving windows.

**Chart 5: Relative market risk at the end of each month, measured ex ante by expected tracking error and ex post by calculated tracking error on the return differential for the past 12 months. Figures in basis points (hundredths of a percentage point)**



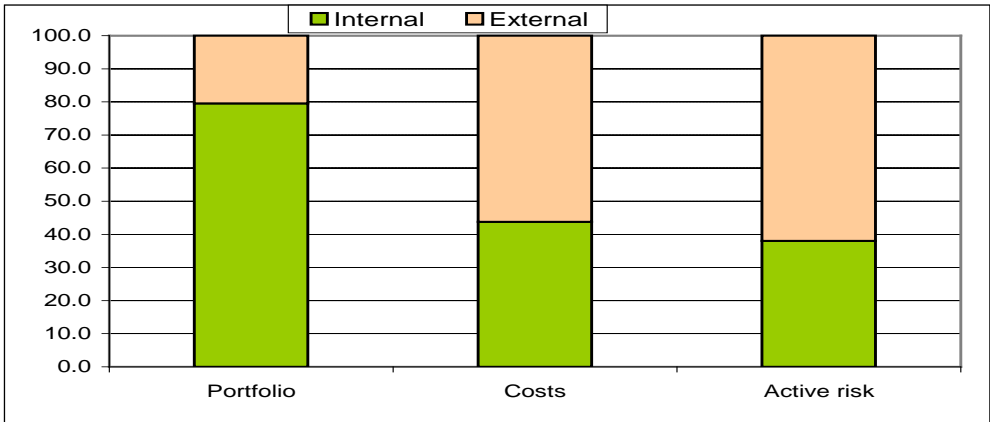
The actual variation in monthly excess return was considerably higher in 2000 than the expected tracking error. In the past year, however, the figures have been very similar. Both expected tracking error and actual tracking error may fluctuate considerably even when the degree of active management is unchanged. This is due to the fact that the measures are influenced by various market developments, such as changes in correlations between the various asset classes and securities. Expected tracking error has been well below the limit for market risk in the Petroleum Fund’s portfolio set by the Ministry of Finance.

The information ratio is a widely used measure of the skill of operational managers. The information ratio 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). The average information ratio for the Fund from the third quarter of 1998 to the first quarter of 2002 has been 0.92, measured as an annualised rate. The management objective is to achieve an information ratio of at least 0.2-0.3.

Chart 6 shows some key figures associated with the distribution of external and internal management. It shows that at the end of the first quarter, 19 per cent of the Petroleum Fund was managed by external managers. At the same time, expenses in connection with external management accounted for 56 per cent of total management costs. The active risk associated with external management represented about 62 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 costs appreciably more than index management, and this is one reason that unit costs are far higher for external than for internal management. An additional 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. Please refer to 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 6: Distribution of portfolio, management costs and active risk\* between internal and external management. Per cent**



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

## 2. 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 16 January 2002. At that time, the rule that the issuer of fixed income instruments shall be registered in one of the 22 approved markets for the Fund or shall be an international organisation was eliminated, while the requirement concerning denomination in one of the 22 countries' currencies was kept.

On 16 January 2000, the Ministry of Finance issued new guidelines for credit risk. Credit rating requirements were changed to allow for investments in securities with either a Baa or higher rating from Moody's or a BBB or higher rating from Standard & Poor's. Both ratings represent the lowest rating in the investment grade class.

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 Lehman Global Aggregate bond indices in the currencies of the 22 countries that are approved for fixed income investments. The Lehman indices replaced the Salomon Smith Barney indices as at 31 January 2002. As from 28 February, the fixed income benchmark not only contains government bonds, but also includes other bonds issued by the public sector, bonds issued by international organisations, corporate bonds and mortgage-backed bonds.

Equities shall account for 40 per cent of the benchmark portfolio for the Petroleum Fund excluding the Environmental Fund, and fixed income instruments shall account for 60 per cent. In the equity portion of the benchmark, securities listed in Europe make up 50 per cent, in the Americas 30 per cent and in Asia/Oceania 20 per cent. In the fixed income portion of the benchmark, the distribution from mid-January 2002 was 55 per cent, 35 per cent and 10 per cent respectively. The Ministry of Finance reduced the share in Asia/Oceania based on an assessment of the credit risk associated with a single issuer, after Japanese government bonds were downgraded to AA by Standard & Poor's and to Aa3 by Moody's and placed under observation in anticipation of a further downgrade.

Asset classes and regional weightings are changed on an ongoing basis as a result of changes in market prices for the securities in the benchmark. Earlier, the weightings in the benchmark were always returned to the original weightings in connection with the quarterly transfers to the Fund. As from December 2001, the guidelines were changed to allow for monthly transfers. The monthly transfers shall be used to bring the asset class and regional weightings as close to the original weightings as possible, providing this does not necessitate selling anything from the existing benchmark. Thus, even after the transfer of new funds, the strategic benchmark described above may differ slightly from the actual benchmark. The latter provides the basis for managing risk and measuring performance in the Petroleum Fund. The weightings in the actual benchmark portfolio at 31 March 2002 are shown in Chart 2. The weightings in the fixed income benchmark apply to the currency in which the bonds are denominated. The share for each country in the euro area is therefore not listed.

Provisions regarding the Environmental Fund were changed on 16 January 2002 so that the size of this sub-portfolio is no longer specified in the regulation. On 31 January 2002, the Ministry of Finance allocated an additional NOK 1 bn to the Environmental Fund. This special 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 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 6 below.

**Table 2: Benchmark portfolio at 31.03.02 for the Petroleum Fund's ordinary portfolio (excluding the Environmental Fund). Per cent**

Country for equity benchmark Currency for fixed income benchmark	Equities		Interest	
	Strategic benchmark	Actual benchmark	Strategic benchmark	Actual benchmark
<b>Weightings asset classes</b>	<b>40.0</b>	<b>40.9</b>	<b>60.0</b>	<b>59.1</b>
Belgium		0.7		
Finland		1.3		
France		7.1		
Greece		0.3		
Ireland		0.5		
Italy		2.7		
Netherlands		4.2		
Portugal		0.3		
Spain		2.2		
Germany		5.3		
Austria		0.1		
<i>Euro area countries (EUR)</i>		24.6		45.8
UK (GBP)		18.5		6.0
Denmark (DKK)		0.5		1.3
Switzerland (CHF)		5.0		0.7
Sweden (SEK)		1.6		1.0
Turkey		0.1		
<b>Total Europe</b>	<b>50.0</b>	<b>50.4</b>	<b>55.0</b>	<b>54.9</b>
US (USD)		27.8		31.3
Brazil		0.2		
Canada (CAD)		1.0		3.5
Mexico		0.2		
<b>Total America</b>	<b>30.0</b>	<b>29.2</b>	<b>35.0</b>	<b>34.8</b>
Australia (AUD)		2.7		0.6
Hong Kong		1.7		
Japan (JPY)		13.5		9.3
New Zealand (NZD)		0.1		0.1
Singapore (SGD)		0.6		0.2
South Korea		1.1		
Taiwan		0.8		
<b>Total Asia and Oceania</b>	<b>20.0</b>	<b>20.4</b>	<b>10.0</b>	<b>10.3</b>

### 3. Market developments

#### 3.1. Main features

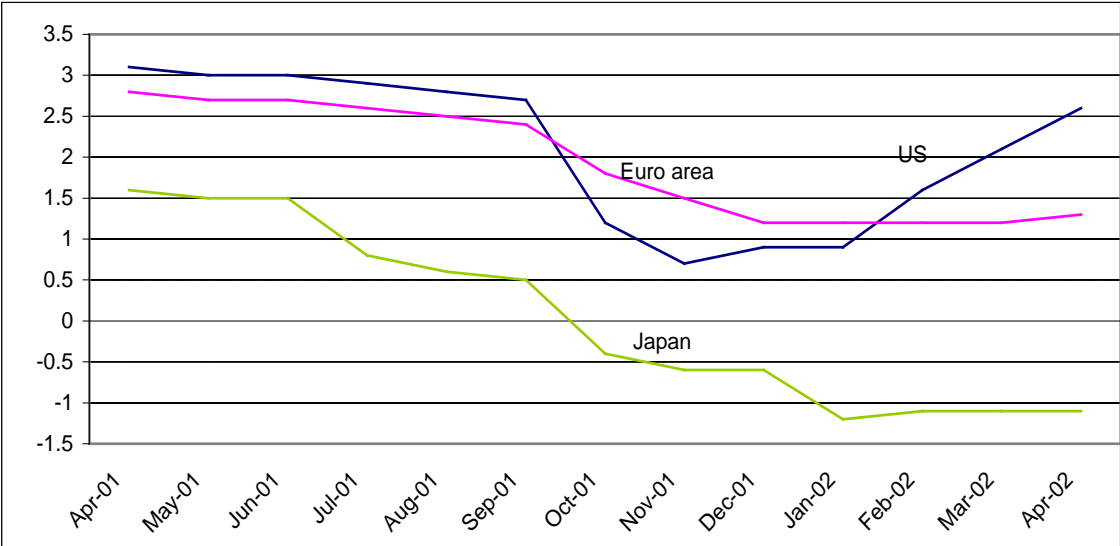
In the first quarter of 2002 the global economy showed clear signs of a recovery, but there is considerable uncertainty regarding its strength and path. An important uncertainty factor is the oil price, which rose markedly during the quarter.

Following a fall in GDP in the third quarter of 2001, the growth rate in the US was positive in the fourth quarter. According to OECD figures, real GDP growth was 1.2 per cent in 2001. The improvement was due largely to growth in private and public consumption, whereas investment declined. Preliminary figures for the first quarter of 2002 indicated even stronger GDP growth. Index figures indicate that production increased sharply in both January and February, and that inventory run-downs appeared to have come to a halt. Chart 7 shows that financial market analysts have raised their growth projections for the US in 2002.

Unemployment has dropped, and employment has increased somewhat. Consumer confidence in continued growth strengthened in March, but is still weaker than before the events of 11 September. The annual rise in the consumer price index was 1.1 per cent in February.

There are still imbalances in the US economy, however, with large trade balance deficits, high import of capital and a high household debt/income ratio. Redressing these imbalances will have a negative impact on economic growth in the US and the rest of the world.

**Chart 7: Expected GDP growth in 2001 in the euro area, the US and Japan, measured at various times in 2001-2002. Per cent**



Source: Consensus Economics Inc.

GDP in the euro area fell slightly in the fourth quarter of 2001, while the growth rate for 2001 as a whole was a positive 1.6 per cent. Investments and inventories exhibited a sluggish trend towards the end of the year, but the depreciation of the euro against the dollar dampened the downturn in the European economy. Consumer confidence in future growth improved slightly in the first quarter of 2002, and Chart 7 shows that financial analysts expect continued growth in Europe, but with low growth rates. The year-on-year rise in the consumer price index was 2.4 per cent in February.



The Japanese economy remained weak. GDP dropped by 3.4 per cent in the second half of 2001. However, the decline in industrial production and exports appears to have stopped in the first quarter of 2002, although this had no major effect on analysts' expectations regarding Japan's GDP growth in 2002 (Chart 7).

3.2. Fixed income markets

Yields on government bonds with a residual maturity of about ten years increased in both Europe and the US in the first quarter of 2002. In the US, 10-year yields rose from about 4.8 per cent in January to about 5.4 per cent at end-March. The rise in yields is linked to the signs of improvement in the US economy. Yields on short US government paper also rose. A further decline in the yield level was not expected in Europe either, and in the first quarter of 2002 yields on short-term paper began to rise.

In Japan, ten-year yields have fallen since the end of the year, reflecting the perception that the outlook for the Japanese economy remains weak. Yields on short-term government paper are close to zero, and showed little change in the first quarter. The central bank is providing a steady supply of liquidity to stimulate the Japanese economy.

**Chart 8: Movements in Lehman Global Aggregate government bond indices in the main markets from March 2001 to March 2002 (31.12.01 = 100)**

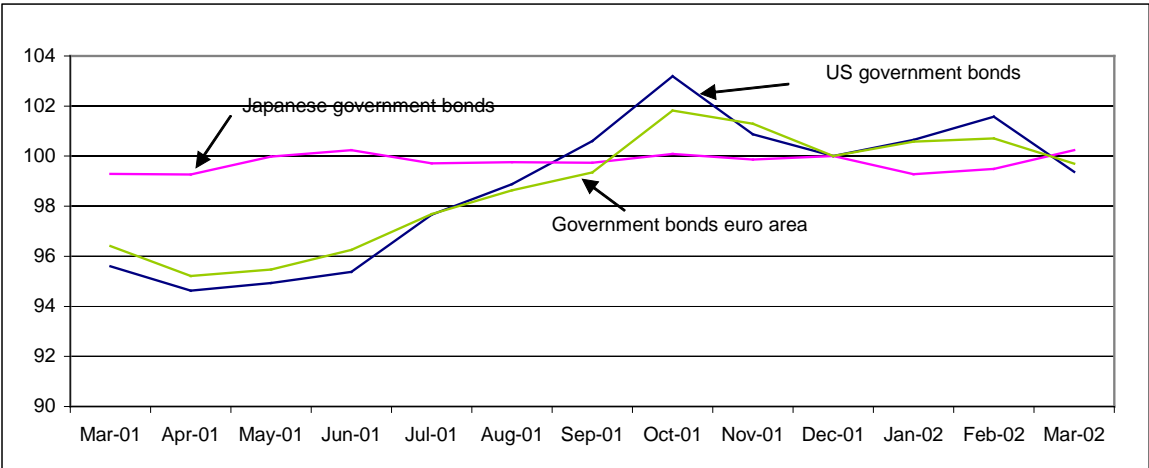
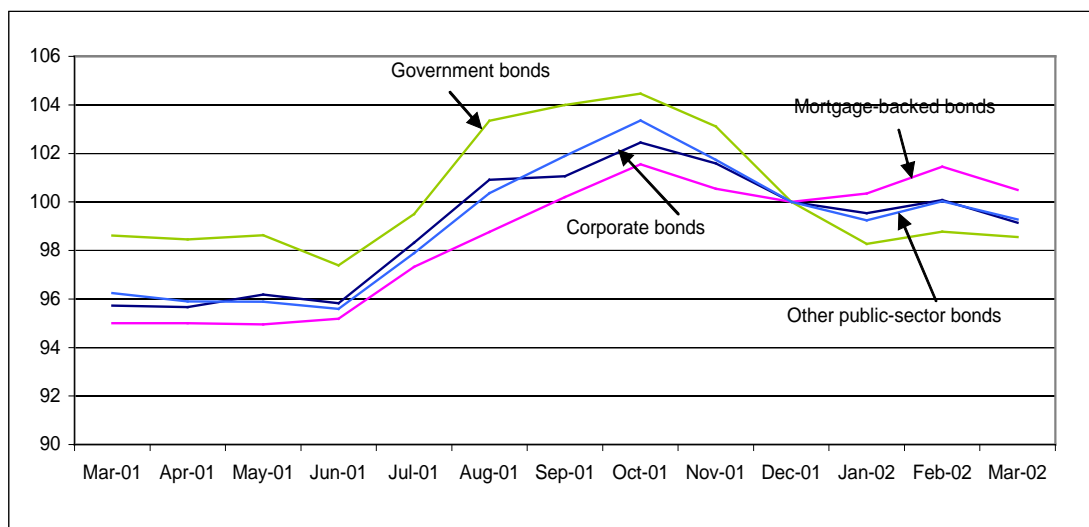


Chart 8 shows that as a result of the rise in yields, first quarter returns on government bonds were negative in both the US and the euro area. However, the return on Japanese government bonds was marginally positive.

Chart 9 shows movements in the Lehman Global Aggregate for each of the markets in which the Petroleum Fund's fixed income portfolio is invested as from February 2002. Prices for government bonds, bonds from other public sector issuers and corporate bonds fell in the first quarter, while prices for mortgage-backed bonds edged up. There were no major changes in the yield differential between government bonds and investment grade corporate bonds during the quarter.

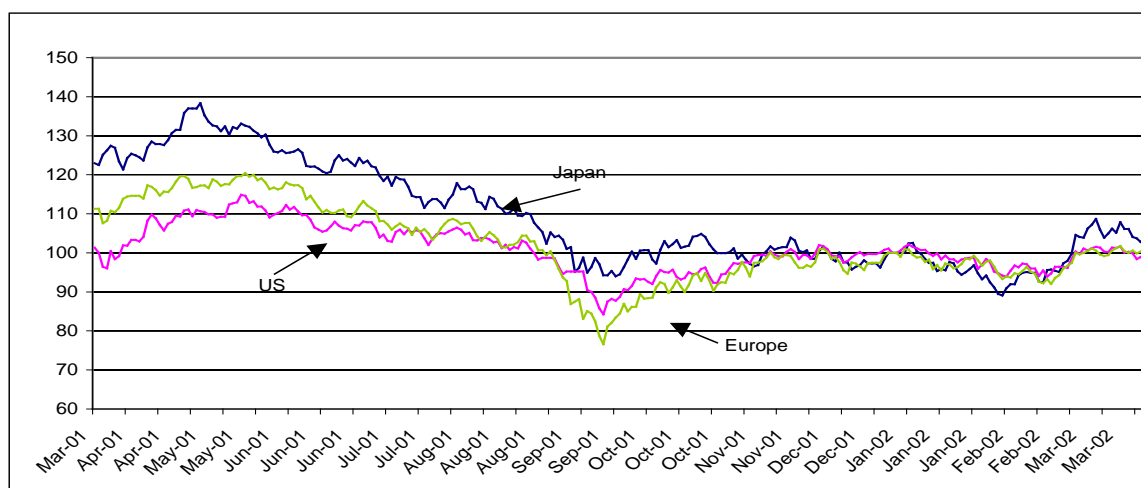
**Chart 9: Movements in Lehman Global Aggregate indices for bonds with credit risk in the main markets from March 2001 to March 2002 (31.12.01 = 100)**



### 3.3. Equity markets

Chart 10 shows that equity prices in Japan and Europe strengthened slightly in the first quarter of 2002, while US equity prices edged down. The strongest rise took place in the Japanese market, partly as a result of positive developments in Japanese exports in the first quarter. Outside the three main markets, price movements were most positive in Asian and some South American markets. The rebound in these emerging markets follows a period of sharp price falls in autumn 2001. The equity markets in Finland and Sweden represent the other extreme, with very weak price performance in the first quarter of 2002.

**Chart 10: Movements in FTSE equity indices in the main markets from March 2001 to March 2002 (31.12.01=100)**



This is partly because telecoms are a particularly important sector of the Finnish and Swedish equity markets. Chart 11 shows that price performance in this sector has been weaker than in the equity market generally. The telecoms sector has had problems with a high debt level after paying for the new mobile telephone licences in Europe. These companies have cut back on

investment in order to economise. Low investment demand has in turn had an impact on a number of companies that deliver infrastructure to the telecoms sector. Nor have revenues from mobile telephony increased at the anticipated rate. In addition to a weak telecoms performance, the technology sector has been affected by low demand for capital goods such as computers and software.

**Chart 11: The FTSE World Equity Index, 1999-2002: total and for the TMT sectors, technology, media and telecommunications (31.12.98 = 100)**

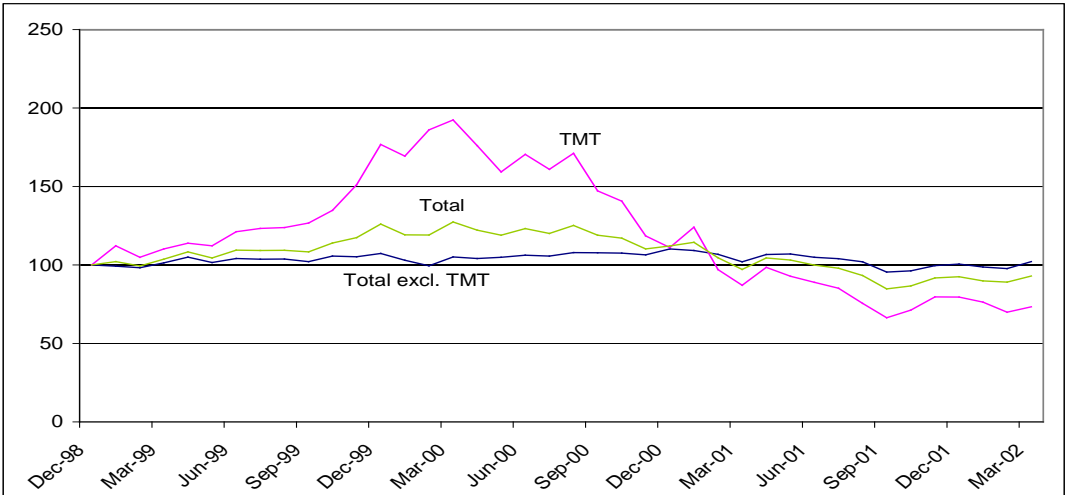


Table 3 shows the performance of the Petroleum Fund’s equity benchmark in the first quarter of 2002, by industry sector. Returns in the information technology and non-cyclical services sector were most sharply negative. Utilities and cyclical goods showed the strongest performance. This latter sector includes vehicles.

**Table 3: Performance of the FTSE World Index in the first quarter of 2002, measured in USD and in terms of the Fund’s currency basket**

*Per cent*

Sector	USD	The Petroleum Fund’s currency basket
Resources	10.61	11.85
Basic industries	7.47	8.67
General industrials	1.36	2.49
Cyclical consumer goods	12.38	13.65
Non-cyclical consumer goods	0.15	1.28
Cyclical services	-1.47	-0.37
Non-cyclical services	-9.93	-8.92
Utilities	-2.57	-1.48
Financials	0.33	1.46
Information technology	-5.64	-4.58

**4. The management process**

The market value of the Petroleum Fund's currency portfolio at the end of 2001 was NOK 613.7 billion. On 31 January 2002 the Ministry of Finance transferred NOK 12.1 billion to the Fund's krone account and on 28 February a further NOK 12.2 billion, and at the same time an equivalent amount in foreign currency was transferred to the securities portfolio. Because of expected weaker liquidity during the Easter weekend, the transfer that should normally have taken place at the end of March was postponed until 2 April. Total transfers to the Petroleum Fund's portfolio of international securities in the first quarter were thus equivalent to NOK 24.3 billion. At the end of the quarter, the market value of the Petroleum Fund's combined securities portfolio was NOK 625.0 billion.

**Table 4: Market value of the Petroleum Fund's sub-portfolios. In millions of NOK**

	Ordinary equity portfolio	Fixed income portfolio	TAA portfolio	Environmental Fund	Petroleum Fund total
31 March 2001	169 540	248 229	6 316	863	424 948
30 June 2001	207 767	310 023	4 146	899	522 835
30 Sept. 2001	215 644	327 754	2 833	721	546 952
31 Dec. 2001	245 796	362 945	4 153	792	613 686
<b>31 March 2002</b>	<b>258 179</b>	<b>360 718</b>	<b>4 341</b>	<b>1 794</b>	<b>625 032</b>

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

#### *4.1. Management of the fixed income portfolio*

In January the Ministry of Finance changed the strategic regional weightings of the benchmark so that the Asia/Oceania allocation was reduced from 20 to 10 per cent, while the portions for Europe and the US were increased to 55 per cent and 35 per cent respectively. The reason for the change was the increased credit risk associated with Japanese government bonds after Japan as issuer was downgraded to AA by Standard and Poor's and to Aa3 by Moody's. The sale of bonds in Asia took place gradually from 10 to 17 January, and in combination with the transfer to Lehman indices in the benchmark, involved gross transactions amounting to NOK 113 billion. The transactions took place over a week in order to minimise the impact on market prices. The transaction costs attached to this adjustment of the portfolio are estimated at NOK 76 million.

At the same time, the Ministry of Finance changed the country weightings in the benchmark from GDP weights to market capitalisation weightings in each region, with the exception that the weighting for Japan was made a fourth of market capitalisation. The changes in country weightings were originally to have been implemented from 31 January, but were brought forward in order to cut transaction costs. The necessary adjustments to the actual portfolio were thus made in tandem with the sale of fixed income instruments in Asia.

New capital in the amount of NOK 7.1 billion was transferred to the fixed income portfolio on 31 January, and a further NOK 3.1 billion on 28 February. On the same two days, the fixed income benchmark was partially rebalanced to bring the regional weightings as close to the strategic weightings as the actual portfolio could come without making it necessary to reduce investment volumes in any market.

With effect from 31 January, the benchmark is based on yields in the Lehman Global Aggregate bond indices instead of the Salomon Smith Barney indices. In itself, this change had few consequences for the fund management, but served as preparation for the expansion

of the fixed income benchmark to include fixed income instruments other than government bonds from 28 February. The other sub-indices for investment grade bonds in Lehman Global Aggregate also received positive weighting, and the weightings will be gradually increased until they reach the market capitalisation weightings in each region. This applies to bonds issued by international institutions or public institutions other than the government, corporate bonds and mortgage-backed bonds.

The market value of the fixed income portfolio at the end of the first quarter was NOK 360.7 billion. The bulk of the portfolio is managed internally in Norges Bank. No capital was transferred to new external managers in the first quarter, but one existing mandate was split into two new mandates.

A number of new mandates for external management were announced in the fourth quarter of 2001, with a deadline of 15 January 2002. The process of evaluating them is under way, and the first managers are expected to be chosen and capital transferred to them in the second quarter.

#### *4.2. Management of the equity and tactical asset allocation portfolios*

New capital in the amount of NOK 4.0 billion was transferred to the ordinary equity portfolio on 31 January, and a further NOK 9.1 billion on 28 February. The market value of the portfolio at the end of the first quarter was NOK 258.2 billion.

NOK 1 billion was transferred to the Environmental Fund on 31 January. At the end of the first quarter, the market value of this equity portfolio was NOK 1.8 billion.

During the quarter, the proportion managed internally increased from 57 to 63 per cent of the equity portfolio. One third of this is active indexing (or enhanced indexing), where various techniques are used to take advantage of special pricing situations (see the feature article on active index management in the Petroleum Fund on Norges Bank's website). Another third is sector management, where risk-taking is limited, while about one fifth is active management in selected sectors. In addition come portfolios that are being held internally prior to transfer to external active managers.

At the end of the quarter, almost 25 per cent of the equity portfolio was being managed by external active managers with regional mandates, and between 5 and 10 per cent by external managers with sector mandates. A further 5 per cent is managed by external index managers with active strategies (enhanced indexing). During the first quarter, no new managers received capital for management.

The scale of tactical asset allocation is moderate, and did not increase during the quarter. Management takes place partly by means of external managers and partly internally in Norges Bank. There is an internally managed portfolio consisting mainly of derivatives, i.e. equity and interest rate futures, which has a low net market value. During the first quarter, no new managers received capital for management.

## 5. The return on the Fund

In the first quarter of 2002 the Petroleum Fund, including the Environmental Fund, had a return of 0.59 per cent, measured in terms of the benchmark currency basket. Measured in NOK, the total return in the first quarter was -2.05 per cent. The somewhat lower figure is due to the fact that on average NOK appreciated against the currencies in the benchmark portfolio during the quarter, so that the Fund's currency basket was worth less in relation to NOK. This has no effect on the international purchasing power of the Fund.

**Table 5: Return on the Petroleum Fund's ordinary portfolio. Per cent Actual and benchmark portfolios, first quarter 2002**

	Measured in terms of the Fund's currency basket		Measured in NOK		
	Actual portfolio	Benchmark portfolio	Actual portfolio	Benchmark portfolio	Difference
Whole of 2001	-2.43	-2.45	-5.31	-5.33	0.02
January	-0.59	-0.69	-1.06	-1.15	0.09
February	0.11	0.06	-1.80	-1.85	0.04
March	1.08	0.97	0.81	0.70	0.11
First quarter	0.59	0.34	-2.05	-2.30	0.24
After adjustment items			-2.05	-2.34	0.28

Table 5 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 January, but positive in both February and March. Table 6 shows the returns on the equity and fixed income portions of the ordinary portfolio separately. In terms of the currency basket, the equity portfolio had a positive return of 2.26 per cent in the quarter, while the return on the fixed income portfolio was negative at -0.63 per cent.

Table 6 also shows return figures measured in USD, which appreciated against the currency basket in the first quarter. Measured in USD, the Fund's return was therefore negative, at -0.52 per cent. If we measure against the euro instead, we obtain a positive return of 1.53 per cent for the period. The return measured in terms of an import-weighted currency curve was 0.55 per cent.

In the first quarter, the ordinary portfolio outperformed the benchmark by 0.24 per cent. The largest contributions were due to external and internal active equity management.

When calculating the actual return figures in Tables 5 and 6, deductions were made for a number of costs for which deductions are not made when calculating the return on the benchmark. In the first quarter of 2002, these were primarily direct transaction and tax costs in connection with the phasing of non-government fixed income instruments into the portfolio and the sale of fixed income instruments in Asia/Oceania (see Section 4.1). Costs also include transaction and tax costs in connection with the investment of new capital in equity markets, and tax on dividends in some countries. If these cost components are taken into account, the benchmark return in the first quarter is 5 basis points lower.

On the other hand, the actual return includes income from securities lending, specifically short-term lending to counterparties that not only have high credit ratings but also supply full

collateral for the value of the securities they borrow, while the benchmark return does not. Lending income was more than NOK 65 million in the first quarter, accounting for 1 basis point of the average total portfolio. If this is added to the benchmark return, net adjustment items in the first quarter of 2002 will be about 4 basis points of the Fund's average total portfolio. The last line in Table 5 shows that Norges Bank's contribution to excess return was thus 28 basis points.

**Table 6: Return on the Petroleum Fund's total portfolio in the first quarter of 2002 measured against various benchmark currencies. Per cent**

	Equities	Interest	TAA	Environmental	Total
The Petroleum Fund's currency basket	2.26	-0.63	2.99	1.30	0.59
Import-weighted currency basket	2.22	-0.67	2.95	1.26	0.55
USD	1.12	-1.74	1.84	0.18	-0.52
EUR	3.21	0.29	3.95	2.24	1,53
NOK	-0.43	-3.24	0.28	-1.36	-2.05

Table 7 shows that in the first quarter the Environmental Fund had a return of 1.30 per cent measured in terms of the currency basket and -1.36 per cent measured in NOK. The return was 0.02 percentage point lower than the return on the benchmark, with 0.01 percentage point due to costs associated with phasing new capital into the portfolio on 31 January. The benchmark return in the first quarter was 0.14 percentage point lower than the return on a comparable benchmark from which no companies had been excluded according to environmental criteria.

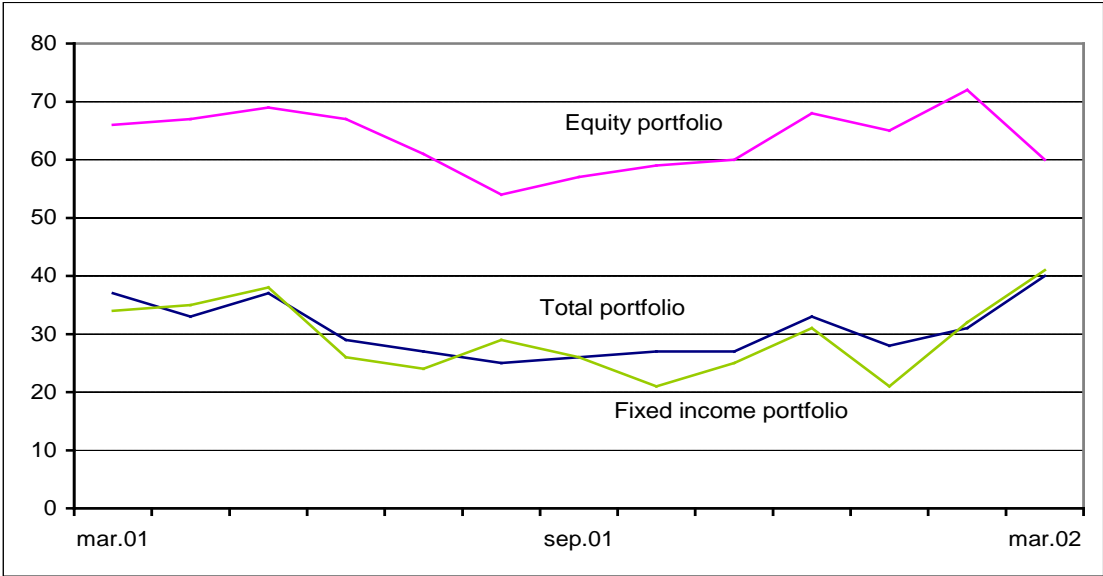
**Table 7: Return on the Environmental Fund in the first quarter of 2002. Per cent**

	Measured in terms of the Fund's currency basket		Measured in NOK		
	Actual portfolio	Benchmark portfolio portfolio	Actual portfolio	Benchmark portfolio portfolio	Difference
Whole of 2001	-18.94	-18.90	-20.83	-20.79	-0.04
January	-2.16	-2.15	-2.61	-2.60	-0.01
February	-0.96	-0.97	-2.85	-2.86	0.02
March	4.54	4.56	4.25	4.28	-0.02
<b>First quarter</b>	<b>1.30</b>	<b>1.32</b>	<b>-1.36</b>	<b>-1.35</b>	<b>-0.02</b>
Memorandum: Ordinary benchmark with country weights as in the Environmental Fund		1.46		-1.20	

## 6. Risk exposure

The Ministry of Finance has set a limit to the market risk associated with the actual portfolio relative to the benchmark. This relative market risk shall always be less than 1.5 percentage points (150 basis points) of expected tracking error, as measured in the Barra risk model. Chart 12 shows that in the first quarter of 2002, relative market risk remained well below the upper limit. The deviations made from the benchmark portfolio did not bring expected tracking error higher than approximately 40 basis points.

**Chart 12: Expected tracking error at each month-end the last months. In basis points (hundredths of a percentage point)**



Relative risk is considerably higher in equity management than in fixed income management. Equity markets fluctuate more than fixed income markets, so that there is more risk associated with an equity management position than with a fixed income position of the same size. Another contributing factor is that there has been relatively more active management of the equity portfolio.

The relative market risk for the Environmental Fund at the end of March was 44 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.

**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 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. 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.

Table 8 shows the composition of the bond portfolio (fixed income portfolio excluding cash) on the basis of credit ratings by Moody’s and Standard and Poor’s. In the table, government bonds and government-guaranteed bonds without credit ratings have been assigned the credit rating of the issuing country. For example, government-guaranteed issues from the city of Kobe, denominated in USD, have been rated Aa/AA, which is the rating given to the Japanese state for bonds in a foreign currency. According to the Ministry of Finance’s credit risk



guidelines, the Petroleum Fund may not normally invest in securities with a lower credit rating than Baa from Moody's or BBB from S&P. However, up to 0.5 per cent of the fixed income portfolio may be invested in securities with a Ba rating from Moody's or a BB rating from S&P. The Fund has complied with these guidelines in the first quarter of 2002.

**Table 8: The bond portfolio as at 31.03.02, by credit rating. Percentages of market value**

Moody's		Standard & Poor's	
Rating	Percentage of total	Rating	Percentage of total
Aaa	64.48	AAA	60.59
Aa	30.15	AA	33.61
A	3.39	A	3.44
Baa	1.95	BBB	2.12
Lower	-	Lower	-
No rating	0.03	No rating	0.24

Table 9 provides an overview of other 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.

**Table 9: Risk exposure limits as defined in the regulation and guidelines**

Section	Risk	Limits	Actual				
			31.03.01	30.06.01	30.09.01	31.12.01	31.03.02
§ 4	Market risk	Maximum tracking error 1.5 percentage point	0.4	0.3	0.3	0.3	0.4
§ 5	Asset distribution	Bonds 50-70%	60.0	60.2	60.0	59.2	57.9
		Equities 30-50%	40.0	39.8	40.0	40.8	42.1
§ 6	Currency distribution	Europe: 40-60%	50.9	50.0	49.9	50.4	52.8
		North America 20-40%	29.7	30.1	30.7	30.8	33.0
		Asia/Oceania: 10-30%	19.4	19.9	19.4	18.8	14.2
	New markets	< 5% of equity portfolio	1.2	1.3	1.2	1.9	2.2
§ 7	Interest rate risk	Modified duration 3-7	5.6	5.5	5.6	5.4	5.3
§ 8	Credit risk*	Max 20% in bank deposits	8.0	6.6	4.6	3.4	4.7
§ 10	Holding	Max. 3% of a company	1.0	1.1	1.7	2.0	2.6

\* In addition to ordinary bank deposits, reinvested cash collateral from securities lending is included in the table. For other credit risk limits, see Table 8.

## 7. Management costs

Table 10 provides an overview of the costs of managing the Government Petroleum Fund in the first quarter of 2002. 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 include not only Norges Bank Investment Management, but also all support functions provided by other parts of Norges Bank. The latter costs are calculated according to the guidelines applying to business operations in Norges Bank.

Annualised, the costs in the table are equivalent to 0.12 per cent (12 basis points) of the average equity portfolio, and 0.04 per cent (4 basis points) 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' net portfolios are small in relation to the risk taken.

In addition to the above costs come performance-based fees to external equity managers of NOK 16 million (2 basis points of the average equity portfolio) and performance-based fees to external fixed income managers of NOK 1 million. The amounts are determined by the managers' total excess returns over the past four quarters. Equity costs including these performance-related fees constitute 14 basis points and fixed income costs 4 basis points of average sub-portfolios.

**Table 10: Management costs in the first quarter. In thousands of NOK and annualised basis points of the average portfolio**

	Q1 2002		Q1 2001	
	NOK 1000	Basis points	NOK 1000	Basis points
Fee to external equity managers, excluding performance-related fees	35 569		19 786	
Costs of equity custodian and settlement	9 570		9 500	
<b>Internal costs, equity management</b>	27 887		15 127	
<b>Total equity management</b>	<b>73 026</b>	<b>12</b>	<b>44 413</b>	<b>12</b>
<i>Performance-related fees to external equity managers</i>	<i>16 083</i>		<i>12 275</i>	
Fees to external fixed-income managers, excluding performance-related fees	4 858		4 304	
Custodian costs fixed income	5 019		3 920	
Internal costs, fixed income management	25 673		11 577	
<b>Total fixed income management</b>	<b>35 549</b>	<b>4</b>	<b>19 801</b>	<b>4</b>
<i>Performance-related fees to external fixed-income managers</i>	<i>1 274</i>		<i>602</i>	
Fees to external managers, tactical asset allocation	1 850		2 338	
Custodian costs, tactical asset allocation	172		289	
Internal costs, tactical asset allocation	768		3 290	
<b>Total, tactical asset allocation</b>	<b>2 790</b>	<b>-</b>	<b>5 917</b>	<b>-</b>
<b>Total management costs, excluding performance-related fees</b>	<b>111 365</b>	<b>7</b>	<b>70 131</b>	<b>7</b>
<b>Total management costs</b>	<b>128 722</b>	<b>8</b>	<b>83 007</b>	<b>9</b>

For the whole portfolio, including tactical allocation, annualised management costs excluding performance-based fees have amounted to 7 basis points of the average market value so far this year.

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 remuneration for 2002 shall be equal to the actual management costs, within an upper limit of 10 basis points of average total assets. Performance-based fees to external managers for excess return achieved shall nevertheless be covered even through they are over and above this upper limit. Agreements on performance-based fees have been concluded with the majority of external active managers, according to principles that have been approved by the Ministry of Finance.

## **8. Reporting of accounts**

Table 11 shows the mix of different instruments as presented in Norges Bank's accounts at the end of the last five quarters. Table 12 shows the book return, which in the first quarter was NOK -12 541.5 million prior to the deduction of Norges Bank's management remuneration.

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 March quoted on WM/Reuters London. The value of the Petroleum Fund's portfolio recorded in the accounts differs from the market value in Table 4 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). Similarly, there are small differences in the return figures.

Off the balance sheet, financial futures with a total market value of NOK 58 657.2 million had been purchased and financial futures with a market value of NOK 45 602.4 million had been sold at 31 March 2002. Interest rate swaps with a total market value of NOK 73 559.6 million were purchased and swaps for NOK 73 068.0 million were sold. Foreign exchange with a total contract value of NOK 15 213.3 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, at 31.03.02. In thousands of NOK**

	<b>31.03.01</b>	<b>30.06.01</b>	<b>30.09.01</b>	<b>31.12.01</b>	<b>31.03.02</b>
Short-term assets, incl. deposits in foreign banks	44 121 194	34 887 205	42 406 244	20 002 123	16 024 677
Money market placings in foreign financial institutions against collateral in the form of securities	111 282 119	106 908 470	105 857 427	121 848 011	117 783 989
Loans from foreign financial institutions against collateral in the form of securities	-132 289 675	-103 543 138	-117 779 691	-119 092 695	-130 281 198
Foreign interest-bearing securities	260 290 423	297 907 551	322 464 755	350 008 902	365 329 261
Foreign equities	141 639 807	186 712 315	194 013 322	240 884 381	256 209 363
Forward contract adjustments	-121 631	-37 496	14 053	39 018	4 703
<b>Total portfolio before remuneration for management</b>	<b>424 922 237</b>	<b>522 834 907</b>	<b>546 976 110</b>	<b>613 689 740</b>	<b>625 070 795</b>
Accrued management remuneration	-80 338	-159 459	-253 831	-372 255	-130 000
<b>Total portfolio, recorded value</b>	<b>424 841 899</b>	<b>522 675 448</b>	<b>546 722 279</b>	<b>613 317 485</b>	<b>624 940 795</b>

**Table 12: Book return on the Petroleum Fund's international portfolio. As at 31.03.02. In thousands of NOK**

Book return	<b>31.03.01</b>	<b>30.06.2001</b>	<b>30.09.01</b>	<b>31.12.01</b>	<b>31.03.02</b>
Interest income	3 118 589	6 754 056	10 732 345	14 911 191	4 927 613
Dividends	524 548	1 579 770	2 246 593	2 738 851	1 071 776
Exchange rate adjustment	-6 373 350	-2 554 261	-8 483 760	-16 242 683	-16 637 801
Unrealised securities loss/gain	-14 851 795	-13 870 491	-41 743 938	-19 308 721	3 344 879
Realised securities gain	1 054 981	-284 868	-2 757 605	-4 190 744	-5 350 807
Brokers' commissions	-11 947	-26 080	-40 087	-48 960	-2 487
Profit/loss forward exchange trading	1 452	-6 077	-3 362	1 477	-214
Gains/losses futures	-185 668	-402 570	-2 619 463	-1 816 099	105 566
<b>Book return on investments</b>	<b>-16 723 190</b>	<b>-8 810 521</b>	<b>-42 669 277</b>	<b>-23 955 688</b>	<b>-12 541 475</b>
Accrued management remuneration	-80 338	-159 459	-253 831	-372 255	-130 000
<b>Net return market value</b>	<b>-16 803 528</b>	<b>-8 969 980</b>	<b>-42 923 108</b>	<b>-24 327 943</b>	<b>-12 671 475</b>

## APPENDIX: METHODOLOGY FOR CALCULATING RETURNS<sup>1</sup>

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 payment<sup>1</sup>.

To date, Norges Bank has performed a verification of market values only at month-end<sup>2</sup>, 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 flows between incoming and outgoing value, and the return is found by dividing the portfolio's adjusted outgoing value by the adjusted incoming value<sup>3</sup>.

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

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

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

<sup>2</sup> 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.

<sup>3</sup> 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.

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 rates<sup>4</sup> 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.

## **Benchmark portfolio**

The benchmark portfolio consists of an equity benchmark and a fixed income benchmark, which are based on internationally recognised market indices. In the strategic benchmark, the distribution of assets is 60 per cent in fixed income instruments and 40 per cent in equities. In periods between two complete rebalancing operations, the Petroleum Fund's actual benchmark portfolio will move away from the stipulated weightings in the strategic benchmark as a result of actual market developments in each asset class. The actual benchmark portfolio is partially rebalanced in connection with the monthly transfers to the Petroleum Fund so that the asset mix in the actual benchmark will to the largest extent possible return to the weightings in the strategic benchmark.

### **The equity benchmark:**

The equity benchmark portfolio is based on the FTSE All-World Index. It is distributed between the three regions, Europe, North America, and Asia/Oceania. In the strategic benchmark portfolio, the regional distribution is 50 per cent, 30 per cent and 20 per cent respectively. Equity investments in each region are distributed among the approved countries<sup>5</sup> according to market values measured by the FTSE indices. Country and regional weightings in the actual benchmark follow market developments, but in connection with the monthly transfers will to the largest extent possible be returned to the weightings in the strategic benchmark.

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

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

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 benchmark portfolio for the Environmental Fund consists of those companies in the FTSE All-World Index which fulfil specific requirements regarding environmental reporting or environmental management systems. The benchmark portfolio comprises the same countries as the ordinary equity benchmark, with the exception of five emerging markets. The Ministry of Finance has given the British consulting company Ethical Investment Research Service (EIRIS) responsibility for identifying these companies. The regional weightings in the Environment Fund are not rebalanced but follow market developments in the benchmark portfolio.

### **Benchmark for fixed income instruments**

The benchmark for fixed income instruments is based on the Lehman Global Aggregate (LGA). It is distributed between the three regions, Europe, North America, and Asia/Oceania. In the strategic benchmark portfolio, the regional distribution is 55 per cent, 35 per cent and 10 per cent respectively. Investments in each region are apportioned among countries approved according to the market capitalisation weightings measured by the Lehman Index. However, an exception has been made for Japan, where the market capitalisation has been given a weighting of 0.25. The country and regional weightings in the actual benchmark follow market developments, but in connection with the monthly transfers will to the largest extent possible be returned to the weightings in the strategic benchmark. The “Guide to Lehman Family of Indices” (February 2002) provides an overview of the principles on which the composition of the LGA Index are based.