

MAY 2004

Our experience with external active equity managers

This article summarises our experience with external equity management over a five-year period, with main emphasis on regional equity mandates. Managers with these kinds of mandates are expected to achieve an excess return through active management of a portfolio of companies in a geographical region, e.g. Europe or North America. The article shows that Norges Bank' experience with most of these managers has been favourable as they have made a substantial contribution to the excess return on the Petroleum Fund. The annual excess return has been 3.9 per cent since the establishment of these mandates. This is comparable to an information ratio of 1.0 based on the actual risk in the portfolio. The total excess return generated by these mandates, after transaction costs, has surpassed NOK 4.9 billion.

Background

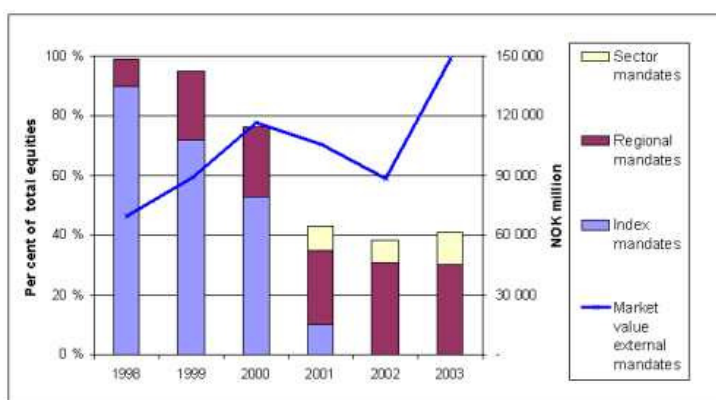
The Petroleum Fund began investing in international equity markets in January 1998. In the first years, all equity management was outsourced to external management organisations as index mandates. An index mandate implies that the actual portfolio is invested closely in line with the benchmark portfolio. In 1999, Norges Bank decided to take over responsibility for the management of the index portfolios. This is discussed in more detail in "From passive to enhanced index management of equities" published on Norges Bank's website in April 2002. The last external index mandate was terminated in 2002.

Towards the end of 1998, Norges Bank assigned the first external active mandates. These were divided into geographical regions (regional mandates). This process and implementation are described in more detail in "Equity investments and choice of external equity mandates", published on Norges Bank's website in March 1999. As a result of the Fund's future size and growth and our desire to avoid being too large a share of a manager's capital under management, we decided to expand the portfolio of external mandates in 2001 to include mandates for industry sectors and mandates for investments in small and medium-sized companies. Since the last external index mandate was terminated in 2002, Norges Bank has only had active external mandates, with an increasing degree of specialisation.

At the end of 2003, 41 per cent of the equity portfolio was managed externally. Norges Bank had contracts with 15 investment management organisations that had responsibility for 34 different mandates. Of these, 18 were regional mandates and 16 were sector mandates.

In the period since capital was transferred to the first active mandates, the portfolio value of the external mandates has risen from NOK 69 billion (9 per cent active mandates) at the end of 1998 to NOK 148.2 billion (100 per cent active mandates) at the end of 2003 (see Chart 1).

Chart 1: External managers – Per cent and value



Strategy behind the use of external managers

Mandate structure and investment strategy

The investment strategy behind the choice and composition of the external mandates is based on Norges Bank's overriding investment philosophy, which is described in more detail in "Strategy for achieving the best possible performance" published on Norges Bank's website in May 2000. An important element of this strategy is to diversify among many independent positions. For the external mandates, diversification has three dimensions:

1. Specialisation

Norges Bank has increasingly assigned specialist mandates, with focus on smaller segments of the investment universe. This is the case, for example, with mandates for industry sectors and mandates for investments in small and medium-sized companies. Since the range of investment possibilities for each manager is smaller, there will be fewer positions and thus less diversification for each mandate. However, Norges Bank's combination of mandates will have more independent equity positions than in the case of overlapping regional mandates because each individual mandate has a different universe of equities. Our liquidity problems and dependence on suppliers are also reduced since we have a number of smaller mandates that can be changed independently of one another.

2. Different (diversifying) strategies

The same type of mandate is often assigned to several managers. This reduces Norges Bank's risk in connection with each individual choice of external manager and thus contributes to diversification. However, when the same type of mandate is assigned to several managers, the marginal contribution to risk-taking is lower for each new mandate assigned. Our first manager within a mandate will typically have an index deviation, i.e. a total weighting of companies that represents a higher share of the portfolio than of the benchmark, of about 65 per cent, while the second manager reduces the combined index deviation to 55 per cent and the third to roughly 45 per cent.

3. A large number of positions

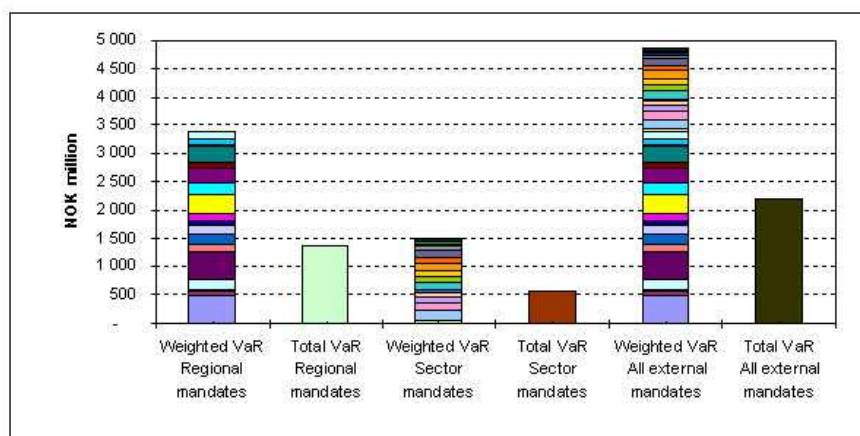
Norges Bank has selected managers that have an investment strategy based on individual company analyses. This implies searching for information that others do not have about company-relevant factors, or analysing available information more effectively than competitors. Therefore, our external equity managers generally base their investments on fundamental analyses of individual equities ("stock-picking") and not on broad analyses of market trends. As a result, each individual portfolio contains more independent positions than if the choice of equities had been based on a single assumption for the entire portfolio.

An analysis of the excess return from external managers also shows that in all the years since 1998, positions in individual companies have resulted in an excess return and not over or underweighting of sectors, regions or other factors. Such deviations that are not due to positions in individual companies are managed by means of a set of risk management portfolios that reduce deviations in size, regions and sectors.

Overall risk profile for the external mandates

Chart 2 shows the overall risk profile for the external mandates. In this chart, we have measured the risk in terms of "10 per cent Value at Risk" (VaR). "10 per cent VaR" means that one may expect to lose or gain a certain amount relative to the benchmark index in one out of ten years. Norges Bank has found that the total risk related to the sum of each individual mandate is reduced by 55 per cent when the portfolio of external mandates is considered as a whole. Before the effects of diversification are taken into account, "10 per cent VaR" is close to NOK 5 billion (see the second column from the right in the chart below). After the risk-reducing effects of diversification are taken into account, the overall portfolio of external mandates has a "10 per cent VaR" of approximately NOK 2.2 billion (see column on the right below).

Chart 2: Value at Risk for external mandates, measured by RiskMetrics



VaR for the overall portfolio of regional mandates is roughly 40 per cent of the sum of all mandates, while VaR for the overall portfolio of sector mandates is about 45 per cent of the sum of all mandates. The lower diversification gain for the sector mandates is probably due to specialisation of the investment universe, with fewer offsetting positions in the combined portfolio.

None of the individual mandates account for more than 10 per cent of the overall risk, and this is in accordance with the desire for different strategies (see point 2 above). The four mandates with the highest VaR account for 35 per cent of total risk-taking. There are several factors that explain why combining a number of external mandates in a portfolio reduces the overall risk:

- First, the correlation between various mandates' excess return will be low, i.e. the excess return is achieved in different periods and one mandate's excess return in a given period says little about the probability of another mandate's excess return in the same period. This type of diversification is positive because it reduces the risk in the overall portfolio without reducing the expected excess return.

- Second, different mandates that invest in the same universe may take opposite positions in a given company. What appears to be active risk-taking in individual mandates becomes a position that virtually shadows the index in the overall portfolio. This type of risk reduction is unfavourable because it entails a reduction in the expected excess return. When there are many external mandates within the same universe, the end result may be an “average” portfolio. It would have been far more cost-effective to engage in index management instead.

To estimate how much of the risk reduction is due to such offsetting of active positions in a given company, one may use estimates for the sum of overweights (total weight of companies with a higher share in the portfolio than in the benchmark) in individual portfolios and in the overall portfolio. As shown in Table 1, the fall in the sum of overweights, i.e. the reduction in active positions, for the regional mandates is greater than for the sector mandates. This is because there is a large degree of overlap in the investment universes for the regional mandates (a number of managers have the same regional universe), whereas there is little overlap in the investment universes of the sector mandates (only a few sectors have two managers and most have only one).

Table 1: Reduction of positions and risk diversification. Per cent

	Average sum of overweighting in individual mandates	Combined portfolio's total overweighting	Reduction of positions	Risk diversification (from Chart 1)
Regional mandates	58	40	32	60
Sector mandates	42	36	15	55

Table 1 also shows that the risk diversification, as measured by VaR, is larger than the reduction in positions for both types of mandates. This is consistent with Norges Bank's objective of combining managers so as to reduce the risk without the same degree of offsetting of active positions.

Experience 1998-2003

Number and size of the mandates

At the end of 2003, 15 external investment management organisations managed equity portfolios for Norges Bank. These portfolios were spread over 34 different mandates. Chart 3 presents developments and the composition of these mandates.

The average size of the external mandates is NOK 4.4 billion, although there are relatively wide variations. The largest mandate is NOK 24.5 billion and the smallest is NOK 672 million. The wide differences are partly the result of an assessment of individual manager's ability to achieve an excess return, but are also due to the following three factors:

- the desired risk profile of the portfolio in question, as well the impact on the total portfolio's combined risk profile
- total market capitalisation in the investment universe or market segment in question
- the manager's capital under management, product range and concentration of ownership in the portfolios

The average size of the regional mandates is NOK 6.0 billion, whereas the average size of the sector mandates is NOK 2.5 billion. The difference is partly because the sector mandates are still developing and partly because they are more specialised. The risk in the sector mandates is also somewhat lower, with an average expected tracking error of 3.5 per cent compared with 3.9 per cent for the regional mandates.

Some organisations manage several mandates, and there are four management organisations that each manages more than 10 per cent of the total capital allocated to external managers. The four largest mandates account for 35 per cent of the external capital, whereas the four largest management organisations account for 66 per cent of the capital allocated to external managers.

In accordance with the regulation relating to the management of the Petroleum Fund, investments in a single company may not exceed 3 per cent of the equity capital. In practice, Norges Bank has managed this limitation by giving the external managers specific ownership limits. The limits set depend on the number of managers investing in a specific market segment.

In practice, the ownership limits mean that a smaller share of the equity portfolio is managed externally, that we have fewer managers than would otherwise have been the case and that managers that perform poorly for a period are removed more quickly. One consequence of this is higher risk in connection with the actual choice of manager. At the same time, the limitations on positions affect returns. Comparing our portfolio performance with that of other customers' portfolios is also difficult.

Duration and liquidity in management

Since 1998, a number of the management institutions used by Norges Bank have changed ownership. Each time there is a change in ownership, Norges Bank evaluates:

- the risk that key personnel (and particularly the manager responsible for Norges Bank's portfolio) will leave the organisation, be given new responsibilities or lose focus on Norges Bank's investments for a shorter or longer period
- whether the new organisation will have difficulties maintaining the investment environment and process and be able to attract skilled employees
- the risk that the product range changes or that resources are reallocated

- whether there will be pressure to sell the equities in our portfolio as a result of the termination of other customer mandates
- other organisational changes that may have a bearing on the excess return or on the secure management of Norges Bank's portfolio

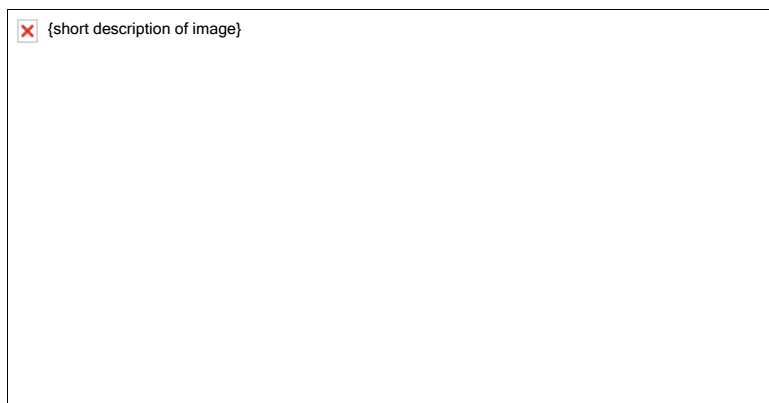
Experience shows that often a number of these changes will occur, at least for a shorter period. Our experience has been less favourable in those cases where we have chosen to retain the mandate for a period after the change in ownership in order to follow developments. Due to the structural changes occurring in the management market, we must assume that this will occur frequently in the years ahead.

Even if the organisations are not the object of acquisitions, key personnel in every organisation will regularly choose to change jobs. Losing a portfolio manager is considered to be very serious. How critical the loss is depends on the management style and the investment process in the organisation in question. We do not believe, however, that we can disregard the importance of the individual without adverse results. In practice, we have realised that we are inclined to buy services in the form of individuals rather than in the form of a process. External mandates are authorisations to make investment decisions on behalf of Norges Bank and are ultimately given to individuals. Even with the more industrialised passive indexing, we have experienced that the loss of a manager affects performance.

Since 1998, 14 regional mandates were terminated or reduced, seven of them due to a change in ownership or loss of portfolio manager in the management organisation. The value corresponds to an average annual termination rate of 4.7 per cent of the amount transferred to the regional mandates.

Poor performance is another important reason for terminating contracts. Since establishment of the Fund, we have used an information ratio, i.e. risk-adjusted excess return, of minus 1 during a rolling 12-month period as a signal for reassessment. The manager will then be subject to a thorough re-evaluation resulting in termination or renewed confidence. The value of terminated mandates due to poor performance corresponds to an annual termination rate of 2.0 per cent of the amount transferred to the regional mandates.

Chart 3: Number of external mandates

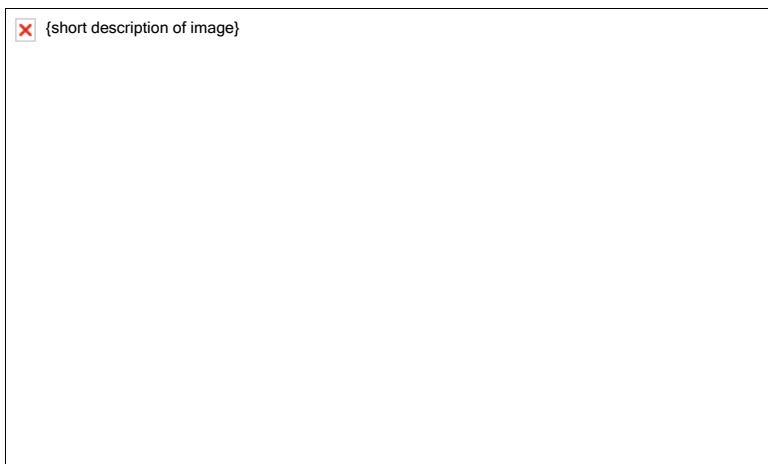


Termination may also be the result of miscellaneous factors. Managers may lose the mandate despite favourable performance because the level of risk is not in line with the agreement or because the investment process has been changed significantly. It is worth noting that it is primarily in connection with new mandates that such disparity arises between Norges Bank's understanding and the management organisation's understanding of the mandate. The value of terminated mandates due to various other factors corresponds to an annual termination rate of 2.3 per cent of the amount transferred to the regional mandates.

We have terminated an average of 9.0 per cent of the capital transferred to regional mandates each year since 2000. Of the capital terminated, 53 per cent is due to change of ownership or loss of portfolio manager, 22 per cent is due to poor performance while 26 per cent is due to disparity between Norges Bank's understanding and the manager's understanding of the mandate.

Chart 4 presents an overview of regional mandates that have been terminated and/or reduced since 2000, as well as the relationship between the mandate's duration and the information ratio at the time of termination and withdrawal of capital. The size of the circle indicates the size of the mandate. The average duration for the terminated and reduced regional mandates is 24 months. The average duration for mandates that have been terminated due to change of ownership or loss of manager is 26 months, while for mandates terminated due to poor performance the average duration is 19 months. While it is impossible to predict when we will have to terminate a mandate due to change of ownership or loss of manager, the duration of mandates that are terminated for other reasons is more predictable.

Chart 4: Terminated mandates and withdrawal of capital



If we only look at the cases where we have terminated contracts and not simply reduced the amount, we have terminated 8 of 26 contracts (30 per cent). Of these eight terminations, 4 were due to change of ownership or loss of portfolio manager in the management organisation. When we enter into a contract, our knowledge of the product is considerably less extensive than it is after we have followed the mandate for a period. It is not surprising, therefore, that the share of contracts that are terminated (30 per cent) is higher than the share of capital that is terminated (9 per cent). On the contrary, this is the point. The contract is awarded for a “test period” and large amounts are normally not transferred before a certain period has elapsed (see Chart 4 where the smaller mandates are to the left of the axis and the larger mandates are to the right).

Liquidation, costs, liquidity risk

Due to the size of the Petroleum Fund, the external mandates are unusually large in relation to what is normal in the market for management services. The size of the mandate provides a good negotiating position, but pricing of management services provides little scope for “volume discounts”. It is normal that larger customers subsidise smaller ones. “Comparable broker fees for all customers” results in higher brokerage in external management than, for example, in internal management.

The size of the mandates also implies considerable costs in connection with establishment and termination. When Norges Bank monitors its managers, costs in connection with terminating a mandate (liquidity risk) are an important consideration. Internal analyses show that the actual cost of terminating an active regional management mandate, transferring the portfolio internally in Norges Bank, restructuring the portfolio and then transferring the desired portfolio to a new external active manager is 1.1 per cent of the mandate’s value. This includes market effects, transaction costs, brokers’ fees and taxes.

In practice, liquidity risk sets a limit on how much capital we will allocate to a manager and leads to a desire for more mandates than a smaller fund would prefer. We take into account:

- the cost of restructuring Norges Bank’s portfolio in isolation
- capital under management in identical or overlapping portfolios
- the portfolio’s quantitative properties
- the probability of change in ownership, loss of manager, change of strategy, etc.
- client stability in the event of organisational changes

External management performance

On the whole, the external regional mandates have performed very well, outperforming the benchmark each year since capital was first transferred in 1998. On the whole, they have had an annual excess return of 3.9 since establishment. This corresponds to an information ratio of 1.0 based on actual standard deviation and considerably higher than this based on model-based risk. These mandates’ total gross excess return, i.e. including transaction costs, has surpassed NOK 4.9 billion (see Table 2).

Table 2: Regional mandates’ excess return since the time of establishment. In millions of NOK

Regional mandates	1999	2000	2001	2002	2003	Total
Europe	1055	801	649	190	-365	2330
Asia	1124	-492	-331	566	1519	2386
Americas		-30		-16	270	224
Total	2179	279	318	740	1424	4940

The regional mandates can also point to excess returns in all sub-regions since establishment. Initially, Norges Bank assumed that Japan and Europe, excluding the UK, would make the largest contribution. However, we have seen that the regional mandates in the UK and Asia, excluding Japan, have each contributed information ratios that are higher than 1. The regional US mandate received capital in the second half of 2002 and has achieved sound results in a relatively short period. Chart 3 presents the regional mandates’ performance as a percentage since the establishment of the mandates. These figures also include transaction costs.

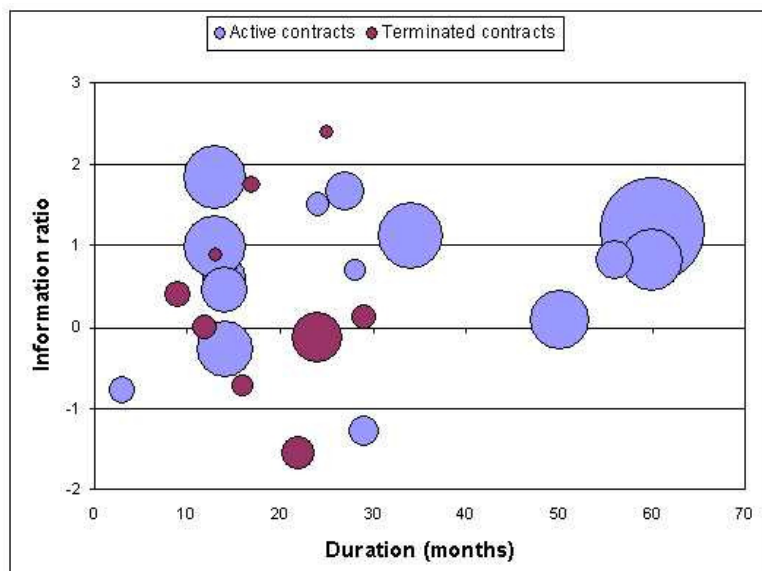
Table 3: Regional mandates’ excess return since the time of establishment. As a percentage

	Total per cent	Annualised per cent	Information ratio
Europe excluding the UK	18.2	3.4	0.82

UK	23.0	4.2	1.02
Japan	37.4	7.0	0.88
Asia excluding Japan	14.4	3.2	1.45
US	3.0	2.7	2.27
Total	21.3	3.9	1.00

The objective for the external active mandates is a net information ratio (i.e. risk-adjusted excess return) of 0.25, whereas the gross information ratio must be 0.44 before transaction costs and close to 0.6 when transaction costs are included. A model-based tracking error in the total portfolio of external mandates of about 1.3 per cent means that total annual excess return after transaction and management costs is 0.325 per cent net. Norges Bank has thus experienced a far higher excess return than the objective would imply. Chart 5 shows the relationship between the duration and information ratio of the mandates.

Chart 5: Regional managers – information ratio and duration



What characterises the organisations that achieve an excess return?

The results provide few obvious conclusions about which type of organisation has succeeded in achieving excess returns for Norges Bank. Mandate results, presented in Chart 6, seem to indicate that partnership organisations perform best and bank-owned management firms perform worst. In the partnerships selected, the partners have also been portfolio managers. Therefore, the results in Chart 6 are probably a consequence of individual performance rather than the type of organisation.

Chart 6: External managers – Contribution in millions of NOK per organisation type



We have mentioned organisational takeovers and loss of portfolio managers as warning signals. We can also mention a lack of clarity about who makes which decisions (including all committees), unclear incentive structures (including collective criteria) and below-market salaries. We find organisational stability and long experience in stagnant organisations just as often as in vibrant organisations. Our portfolio managers have from two to 40 years' experience.

In other words, it is difficult to make any generalisations about what characterises successful management companies. It is equally difficult to comment on the characteristics of a successful portfolio manager, even though we have generally placed considerable emphasis on finding such individuals. One lesson that we have learned is that some individuals have a very substantial impact on results. Of course, very few individuals perform well in an organisational vacuum. Organisations perform best when a skilled portfolio manager is faced with a challenging investment environment.



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